

Using

ADOBE® PHOTOSHOP® ELEMENTS 8 EDITOR

MAC OS X

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Using Adobe® Photoshop® Elements 8 for Mac OS®

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Chapter 1: Getting started

Adobe® Photoshop® Elements software combines power and simplicity so you can easily make your photos look their best. You can share them in imaginative ways, and easily find and view all your photos.

Installing Photoshop Elements

Requirements

To review the complete system requirements and recommendations for your Adobe® software, see the ReadMe file included with your software.

Install the software

- 1 Close any other Adobe applications open on your computer.
- 2 Insert the installation disc into your DVD drive, and then follow the on-screen instructions.

***Note:** You can specify the language and select the country while installing the application. If you want to change these settings after installing the application, you need to uninstall the application and then re-install it.*

For more information, see the ReadMe file included with your software.

Register

Register your product to receive complimentary installation support, notifications of updates, and other services.

- ❖ To register, follow the on-screen instructions in the Registration dialog box, which appears after you install.

ReadMe file

The installation disc contains the ReadMe file for your software. (This file is also copied to the application folder during product installation.) Open the file to read important information.

Using Help and getting support

Using Photoshop Elements Help

Photoshop Elements Help is available several ways. To access Help, select Help > Photoshop Elements Help (use the Command+? keys on your keyboard). If your computer is connected to the Internet, Photoshop Elements automatically launches Help on the web.

Help on the web The most comprehensive and up-to-date version of Photoshop Elements Help is available on the web. Your computer must be connected to the Internet to access Help on the web. Use the Search field to search within Photoshop Elements Help. To view Help on the web, see www.adobe.com/go/learn_pse_mac_en. For the most comprehensive and up-to-date version of Adobe Bridge Help, see www.adobe.com/go/learn_bridge_en.

Help in the application Help in the application provides access to key tasks and concepts. If you aren't connected to the Internet, Photoshop Elements launches Help in the application. Help in the application is a small subset of the complete Help available on the web.

Help PDF Help is also available as a PDF that is optimized for printing. Click the Help PDF link at the top of each Help page. The Help PDF is the best way to access the most comprehensive Help when you don't have an Internet connection. For more information, see www.adobe.com/go/learn_pse_mac_printpdf_en.

Links in the application Some Help links are within Photoshop Elements. Clicking these links takes you to the corresponding topic in either Help on the web or Help in the application.

***Note:** If you try to access a Help topic that only exists in Help on the web, Photoshop Elements displays the URL and a link to the complete Help on the web.*

Tips for searching Help

- If you search using a phrase, such as “shape tool,” place quotation marks around the phrase. The search returns only those topics containing all the words in the phrase.
- Make sure that the search terms are spelled correctly.
- If a search term doesn't yield results, try using a synonym, such as “web” instead of “Internet.”
- If you find a topic you want to view again, bookmark it for easy access later.

Print a Help topic To print a topic from Help, use the Print command in the browser.

How to search for troubleshooting topics You can view top issues and search for common problems and error messages by going to www.adobe.com/support/photoshopelements. You can also ask questions of other Photoshop Elements users at www.adobe.com/go/forums.

Customer support

Visit the Adobe Support website at www.adobe.com/support to find troubleshooting information for your product and to learn about free and paid technical support options.

New and enhanced features

What's new

To learn more about new and enhanced features, visit www.adobe.com/go/learn_pse_mac_features_en.

Make your photos look their best

Intelligent resizing The Recompose tool enables you to resize an image without changing important visual content, such as people, buildings, and animals.

Get a perfect blended photo You can blend photos together to get a perfectly exposed photo using Photomerge Exposure.

Get a perfect scenic photo Use Photomerge Scene Cleaner to create the perfect scenic photo from multiple photos.

Smart brushes Using Smart Brush tool, you can paint and change the adjustments as many times as you want without degrading your original photo.

Automated actions Photoshop Elements comes with a set of actions. The Action Player can play actions created in Photoshop if the actions use features supported by Photoshop Elements.

Do more with your photos

Share in many ways from one convenient place Quickly and easily share your photos in various ways—including e-mail, web galleries, and burning to CD.

Live up your photo projects Use great-looking new themes and artwork to give your photo projects a professional look.

Surface blur The Surface Blur filter blurs an image while preserving edges.

Easily find and view photos

Quick Fix preview You can preview how a photo looks after adjustments, before you apply the adjustment to the photo.

Working in Photoshop Elements

When you start Photoshop Elements, it displays a Welcome screen that provides a starting point for you to open a blank document, browse for files with Adobe Bridge, or open files from a camera or a scanner.

Downloading and organizing photos

With Photoshop Elements, you can download photos from your camera or a card reader to view them in Adobe Bridge CS4. You can start the Adobe Bridge photo downloader from either Photoshop Elements or Adobe Bridge. You can also set the photo downloader to start any time you plug in a camera or card reader.




Use Adobe Bridge to manage photo files.

When working in Photoshop Elements, use Adobe Bridge to find and manage your photos and Adobe PDF documents, even if they're stored in different locations. Adobe Bridge automatically organizes photos by date as they download. You can further sort and categorize photos by adding star ratings, stacking photos, and assigning keyword tags to help you identify people, places, and events. You can quickly view every photo you've taken of your dog. For example, click the keyword tag you have created in your dog's name to view every photo of your dog. You can also search for images based on date range, caption, filename, media type, and more. For the most comprehensive and up-to-date version of the Adobe Bridge Help, see [Adobe Bridge](#). You can also find video tutorials that teach you how to use Adobe Bridge. The Adobe Bridge Help document includes detailed information about the following:

- Working with Adobe Bridge
- Viewing and managing files
- Working with images and dynamic media
- Running automated tasks with Adobe Bridge
- Adobe Bridge keyboard shortcuts
- Workspace

Accessing Adobe Bridge from Photoshop Elements

❖ Do one of the following:

- Click File > Browse With Bridge
- Click the Bridge icon .

Editing photos

Photoshop Elements offers several levels of editing, from simple one-click fixes to advanced color correction and composition. The Photoshop Elements workspace provides three editing modes: Quick Fix, Guided Edit, and Full Edit. Quick Fix offers quick preview and slider controls for adjusting lighting and color and sharpening entire photos or selected areas of photos. Click the triangle beside Edit Full, and then select Edit Quick to navigate to Quick Fix mode. Edit Full mode provides a complete editing toolset and controls. You can adjust the exposure of specific areas of a photo using professional darkroom tools, such as dodge, burn, and sponge. You can also use fine-tune exposure with the enhanced Brightness/Contrast control, or use Color Curves adjustments to get the perfect exposure.

In Edit Full mode, you can also remove imperfections or unwanted elements, brush away wrinkles and flaws, and apply artistic filters and effects.

If you are not sure how to proceed, switch to Edit Guided mode. This mode provides step-by-step assistance on how to perform common tasks, such as rotating and straightening photos, correcting skin tone, and performing color corrections. Click the triangle beside Edit Full, and then select Edit Guided to navigate to Edit Guided mode.



Edit Guided mode walks you through each editing step to make improving your photos easier than ever.

You can feel free to experiment, too, because you can undo or redo multiple steps with a click.

Creating photo composites

You can create beautiful composites, including perfect group shots and seamless panoramas, with easy-to-use tools. New photo-blending technology, called *Photomerge*, lets you easily combine the best facial expressions from a series of group shots into one composite in which everyone looks their best. With Photomerge, you can also automatically stitch together a series of scenic photos to create smooth panoramic images.

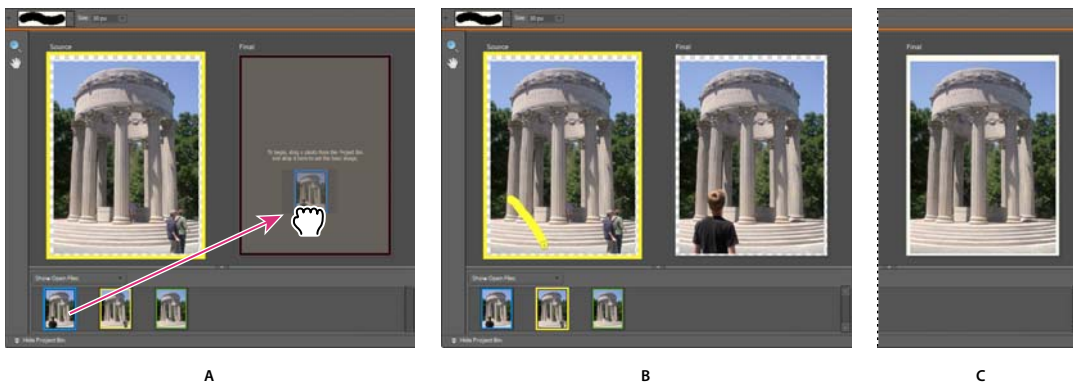
You can use Photomerge to create composites in all three modes. Simply choose File > New, and then select one of the Photomerge commands. Or choose one of the Photomerge commands in the Guided Edit tab.



Use a single tool to easily combine the best facial expressions and body language from a series of group shots to create a single composite in which everyone looks great.

Photomerge Exposure and Photomerge Scene Cleaner

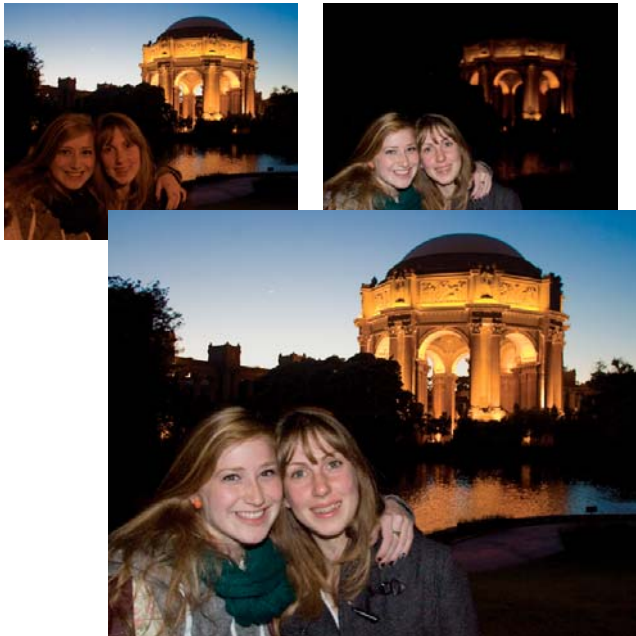
With Photomerge Scene Cleaner, you can create perfect scenic photos from multiple photos. For example, you can eliminate tourists that inadvertently wandered into the scenery. Select File > New > Photomerge Scene Cleaner, or choose Photomerge Scene Cleaner in the Guided Edit tab.



Photomerge Scene Cleaner

A. Dragging a photo to the Final window **B.** Using the Pencil tool to mark the area to be replaced in the Final window **C.** Result in the Final window

With Photomerge Exposure, you can blend two photos together to get a perfectly exposed photo. For example, you have a photo of your family and the background is dark, and a similar photograph with a bright background and dark foreground. You can use Photomerge Exposure to blend these photos, and create a perfectly exposed photo. Select File > New > Photomerge Exposure, or choose Photomerge Exposure in the Guided Edit tab.



Photomerge Exposure

Creating and sharing photo projects

After you've perfected your photos in Photoshop Elements, you can use them in various fun projects that you can share with family and friends. For example, you can create printed photo projects, such as albums, scrapbook pages, greeting cards, CD/DVD labels and jackets, and photo collages that you can print at home. Professionally designed templates feature color-coordinated, themed layouts for scrapbook pages, cards, and more. In the Create or Share tab, choose the type of project you'd like to create, and Photoshop Elements walks you through the process with the appropriate tools and instructions.



Make printed CD/DVD labels and jackets.

To give your projects a more personal look, you can customize the templates. Adjust layout colors to better complement your photos, for example, and add new graphical elements, text, and effects, such as drop shadows and glows. Use the Contents panel to quickly browse hundreds of frames, themes, backgrounds, clip art, and effects to apply to your photos and photo projects.



Create customized photo collages with graphical elements, such as frames, drop shadows, backgrounds, and text.

You can also use your photos in projects such as online photo galleries and photo slide shows. As with print photo projects, Photoshop Elements guides you through the process of creating your project by helping you design the page, arrange the photos, customize the layout, and burn the project to a disc or upload it to the web.

Chapter 2: Photoshop Elements workspace

Use the Photoshop Elements workspace for creating, editing, and fixing your images. You can add functionality with plug-in modules and expand system memory by using scratch disks.

Select a photo and then choose Quick Fix, Full Edit, or Guided Edit to edit it.

About the workspace

The Welcome screen

When you start Photoshop Elements, the Welcome screen opens by default. The Welcome screen is a convenient starting place, or hub, for major tasks.

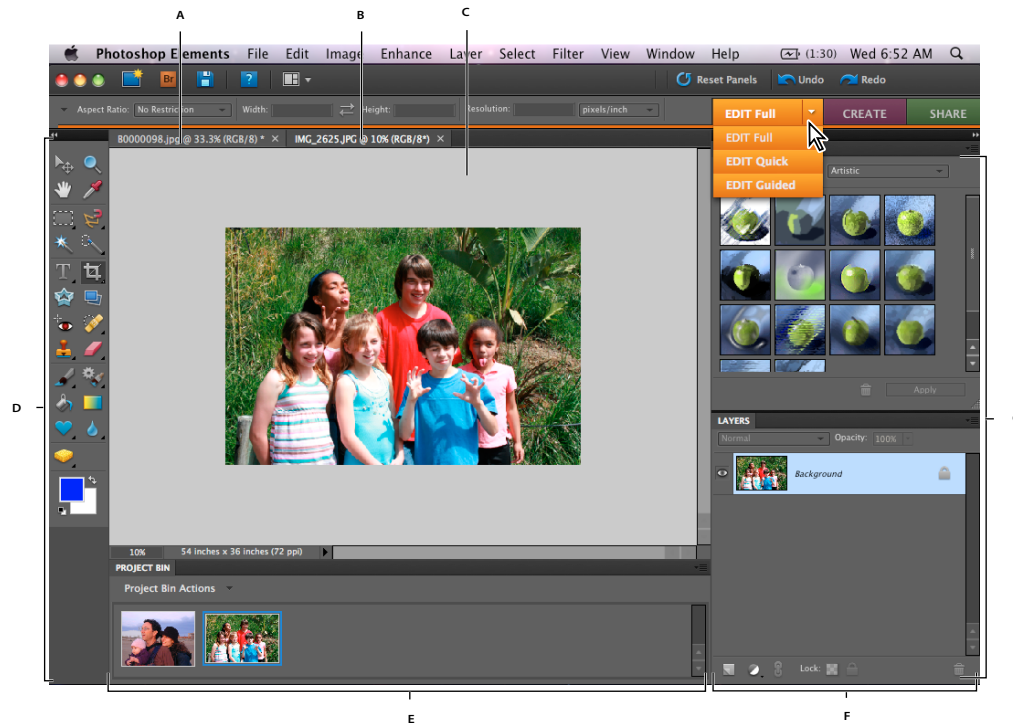
Click a button on the Welcome screen to open the workspace. You can browse with Adobe Bridge, start from scratch, or import photos from a camera or scanner.

You can close or reopen the Welcome screen at any time by choosing Window > Welcome. If you prefer to omit the Welcome screen when you start Photoshop Elements, deselect the Show At Startup box at the bottom of the Welcome screen.

The editing workspace

There are three ways to create and edit images: Full Edit, Edit Quick, and Guided Edit. The Full Edit workspace has tools to correct color problems, create special effects, and enhance photos. The Edit Quick workspace contains simple tools for correcting color and lighting, and commands to quickly fix common problems like red-eye. If you are new to digital imaging, Edit Quick or Guided Edit is a good place to start fixing photos.

If you've worked with image-editing applications before, you'll find that the Full Edit workspace provides a flexible and powerful image-correction environment. It has lighting and color-correction commands, along with tools for fixing image defects, making selections, adding text, and painting on your images. You can rearrange the Full Edit workspace to best suit your needs by moving, hiding, and showing panels; arranging panels in the Panel Bin; zooming in or out of the photo; scrolling to a different area of the document window; and creating multiple windows and views.



Full Edit workspace

A. Inactive tab B. Active tab C. Active image area D Tools E. Project Bin F. Panel bin G. Panels

Menu bar Contains menus for performing tasks. The menus are organized by topic. For example, the Enhance menu contains commands for applying adjustments to an image.

Workspace buttons Moves you between the Guided Edit, Quick Fix, and Full Edit workspaces. These buttons change according to the current workspace.

Toolbox Holds tools for editing images.

Options bar Provides options for the tool you select.

Project Bin Displays thumbnails of opened images, and lets you easily manage them.

Panels Help you monitor and modify images.

Panel Bin Helps you organize the panels in your work area.

More Help topics

[“Correct color in Quick Fix”](#) on page 99

Use Application frames

On the Mac, the Application frame groups all the workspace elements into a single, integrated window that enables you to treat the application as a single unit. When you move or resize the Application frame or any of its elements, all the elements within it respond to each other so that none overlap. Panels don't disappear when you switch applications or when you accidentally click out of the application. If you work with two or more applications, you can position each application side by side on the screen or on multiple monitors. If you prefer the traditional, free-form user interface of the Mac, you can turn off the application frame. You can show or hide the application frame using the Window menu. Select Window > Application Frame to toggle the application frame on or off. Similarly, you can show or hide the Application Bar using Window > Application Bar.

Exit Photoshop Elements

- 1 Choose Photoshop Elements > Quit Photoshop Elements.
- 2 Choose whether to save any open files.

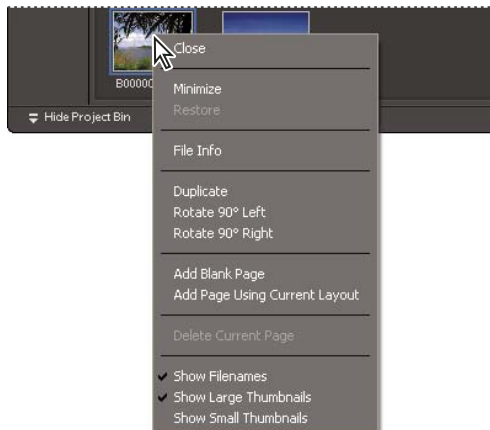
More Help topics

[“Save changes in different file formats”](#) on page 41

Context menus

Use context menus

You can use context menus to display commands that are relevant to the active tool, selection, or panel. These menus are often another way to access the commands in the window menus.



Control-click or right-click to open a context menu. This menu appears in the Project Bin in Full Edit.

- 1 Position the pointer over an image or a panel item.

Note: Not all panels offer context menus.

- 2 Right-click and choose a command from the menu.

Using keyboard commands and modifier keys

Keyboard commands let you quickly execute commands without using a menu; modifier keys let you alter how a tool operates. When available, the keyboard command appears to the right of the command name in the menu.

More Help topics

[“Keys for selecting and moving objects”](#) on page 283

[“Keys for selecting tools”](#) on page 281

Tools

About the toolbox

Use tools in the toolbox to select, edit, and view images; some tools let you paint, draw, and type. The toolbox appears on the left side of the Full Edit and Quick Fix workspaces. In the Full Edit workspace, you can move the toolbox by dragging the gripper bar at the top of the box.

You must select a tool in the toolbox before you can use it. Once selected, the tool is highlighted in the toolbox, and optional settings for the tool appear in the options bar, which is located below the shortcuts bar at the top of the workspace. Some tools in the toolbox have additional tools beneath them. These are called *nested tools*. A small triangle at the lower right of the tool icon signals that there are nested tools. When you select a tool, any additional nested tools appear in the options bar.

Note: *You cannot deselect a tool—once you select a tool, it remains selected until you select a different tool. For example, if you’ve selected the Lasso tool, and you want to click your image without selecting anything, select the Hand tool.*

You can view information about any tool in the toolbox by positioning the pointer over it. The name of the tool appears below the pointer—this is called the *tool tip*. You can click a link in some tool tips to see additional information about the tool.

Toolbox overview

A Navigation and measuring tools

- Move (V)
- Zoom (Z)
- Hand (H)
- Eyedropper (I)

B Selection tools

- Rectangular Marquee (M)
- Elliptical Marquee (M)
- Lasso (L)
- Magnetic Lasso (L)
- Polygonal Lasso (L)
- Magic Wand (W)
- Quick Selection (A)
- Selection Brush (A)

C Crop tools

- Crop (C)
- Cookie Cutter (Q)
- Straighten (P)
- Recompose (C+C)

D Retouching tools

- Red Eye Removal (Y)
- Spot Healing Brush (J)
- Healing Brush (J)
- Clone Stamp (S)
- Pattern Stamp (S)
- Eraser (E)
- Background Eraser (E)
- Magic Eraser (E)
- Blur (R)
- Sharpen (R)
- Smudge (R)
- Sponge (O)
- Dodge (O)
- Burn (O)

E Painting and drawing tools

- Brush (B)
- Pencil (N)
- Impressionist Brush (B)
- Color Replacement (B)
- Smart Brush (F)
- Detail Smart Brush (F)
- Paint Bucket (K)
- Gradient (G)

F Shape tools

- Rectangle (U)
- Rounded Rectangle (U)
- Ellipse (U)
- Polygon (U)
- Line (U)
- Custom Shape (U)
- Shape Selection (U)

G Type tools

- Horizontal Type (T)
- Vertical Type (T)
- Horizontal Type Mask (T)
- Vertical Type Mask (T)

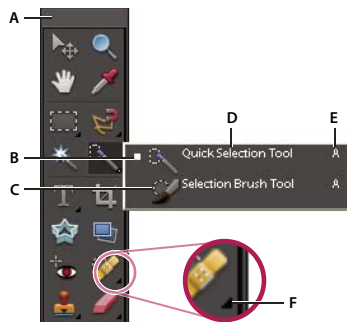
■ Indicates default tool * Keyboard shortcuts appear in parenthesis

Toolbox Overview

Select a tool

❖ Do one of the following:

- Click a tool in the toolbox. If there is a small triangle in a tool's lower-right corner, hold down the mouse button to view the hidden tools nested with the tool. Then click the tool you want to select.
- Press the tool's keyboard shortcut. The keyboard shortcut is displayed in its tool tip. For example, you can select the Move tool by pressing the V key.
- To open a nested tool, use the tool's keyboard shortcut several times to cycle through all nested tools.



Using tools

A. Toolbox B. Active tool C. Hidden tools D. Tool name E. Tool shortcut F. Hidden tool triangle

More Help topics

[“Keys for selecting tools”](#) on page 281

Set tool preferences

- 1 Choose Photoshop Elements > Preferences > General.
- 2 Set one or more of the following options, and click OK.
 - Select Show Tool Tips to show or hide tool tips.
 - Select Use Shift Key For Tool Switch to cycle through a set of hidden tools by holding down the Shift key. When this option is deselected, you can cycle through a set of hidden tools by pressing the shortcut key (without holding down Shift).

Set the appearance of a tool pointer

- 1 Choose Photoshop Elements > Preferences > Display & Cursors.
- 2 Select a setting for the Painting Cursors:

Standard Displays pointers as tool icons.

Precise Displays pointers as cross-hairs.

Note: When not in Preferences, use the Caps Lock key to toggle the appearance of the Precise cursors.

Normal Brush Tip Displays the pointers as circles at 50% of the size you specify for the brush.

Full Size Brush Tip Displays the pointers as circles at the full size you specify for the brush.

Show Crosshair In Brush Tip Displays cross-hairs in the circles when you choose either Normal Brush Tip or Full Size Brush Tip.

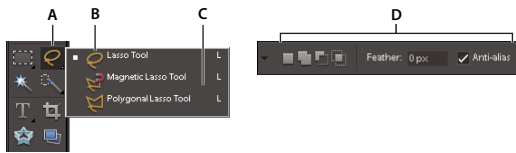
- 3 Select a setting for Other Cursors:

Standard Displays pointers as tool icons.

Precise Displays pointers as cross-hairs.

Set tool options

The options bar appears below the shortcuts bar at the top of the workspace. The options bar is context sensitive—it changes as you select different tools. Some settings in the options bar are common to several tools, and some are specific to one tool.



Lasso options bar

A. Tool icon B. Active tool C. Hidden tools D. Tool options

- 1 Select a tool.
- 2 Look in the options bar to see the available options. For more information on setting options for a specific tool, search for the tool's name in Photoshop Elements Help.

Note: To return a tool or all tools to their default settings, click the tool icon, and then click the triangle in the options bar, then choose *Reset Tool* or *Reset All Tools* from the context menu.

More Help topics

[“Keys for selecting tools”](#) on page 281

Set a completed operations alert

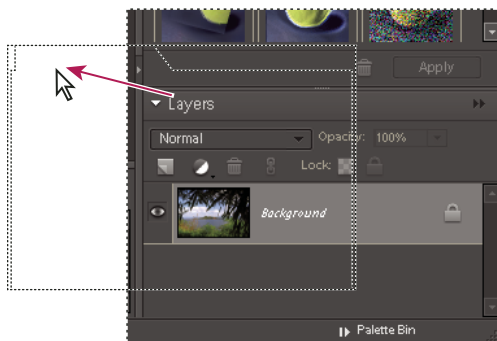
- 1 Choose Photoshop Elements > Preferences > General.
- 2 Select Beep When Done, and click OK.

Panels and bins

About panels

Panels help you manage, monitor, and modify images. Some panels have menus that provide additional commands and options. You can organize panels in the workspace in many different ways. You can store panels in the Panel Bin to keep them out of your way, but easily accessible, or you can keep frequently used panels open in the workspace. Another option is to group panels or dock one panel at the bottom of another panel. Panels are stored in the Panel Bin, which is accessible in Full Edit mode.

Note: Drag a panel out of the Panel Bin if you want to remove it from the Panel Bin and keep it open.




Dragging a panel

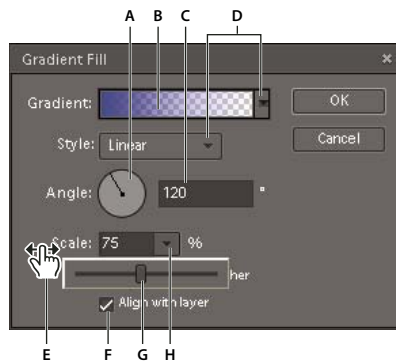
Panel menus

Some commands appear in both the panel menu and the menu bar. Other commands are exclusive to panel menus. Click panel menu to view the different commands in each panel.

Pop-up sliders within panels

Some panels and dialog boxes contain settings that use pop-up sliders (for example, the Opacity option in the Layers panel). If there is a triangle next to the text box, you can activate the pop-up slider by clicking the triangle. Position the pointer over the triangle next to the setting, hold down the mouse button, and drag the slider or angle radius to the desired value. Click outside the slider box or press Enter to close the slider box. To cancel changes, press Esc.

 To increase or decrease values in 10% increments when the pop-up slider box is open, hold down Shift and press the Up Arrow or Down Arrow key.

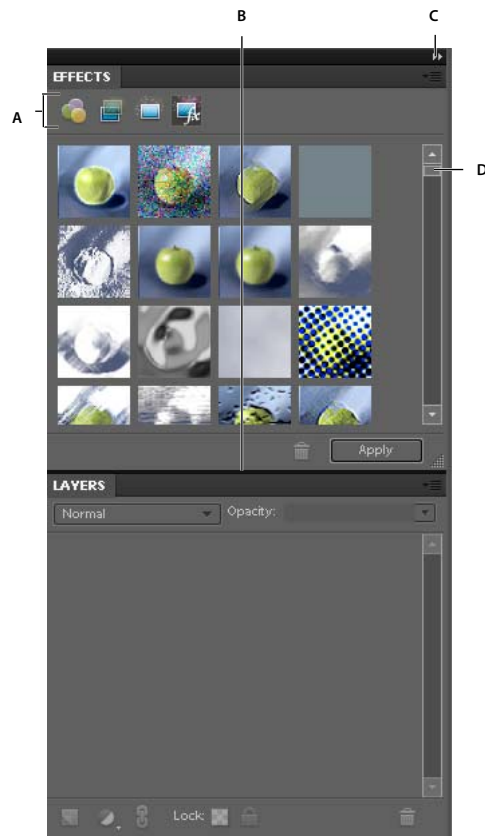


Different ways to enter values

A. Dial B. Click to open window C. Text box D. Menu arrow E. Scrubby slider F. Check box G. Slider H Pop-up slider triangle

Work with panels

The Panel Bin lets you store multiple panels in a single area that you can easily configure, close, or keep open for easy and fast access. By default, the Panel Bin appears on the right side of the workspace. When you adjust panels, they remain as you leave them until you reset or change them.



The Panel Bin

A. Change panel tools B. Adjust panel height C. Panel menu D. Scroll to view rest of panel

- 1 To show or hide the bin, choose Window > Panel Bin.
- 2 To use panels in the Panel Bin, do any of the following:
 - To remove a panel from the Panel Bin, drag the panel's title bar out of the Panel Bin.
 - To add a panel to the Panel Bin, drag the panel's title bar into the Panel Bin.
 - To rearrange panels in the Panel Bin, drag the panel's title bar to a new location.
- 3 To use panels outside of the Panel Bin, do any of the following:
 - To open a panel, choose the panel's name from the Window menu.
 - To close a panel, choose the panel's name from the Window menu. Or click the Close option in the panel's menu.
 - To change the size of a panel, drag any corner of the panel.
 - To group panels together (one panel with multiple tabs), drag another panel's tab onto the body of the target panel. A thick line appears around the body of the target panel when the pointer is over the correct area for grouping to occur. If you want to move a panel to another group, drag the panel's tab to that group. To separate a panel from a group, drag the panel's tab outside the group.
 - To move a panel group, drag the title bar.
 - To expand or collapse a panel or panel group, double-click the panel's tab or title bar.
 - To reset panels to their default positions, choose Window > Reset Panels.

Note: If you want panels to always open in their default positions, choose *Photoshop Elements > Preferences > General*, and then deselect *Save Panel Locations*. The change takes effect the next time you start the application.

- To move a panel and keep it open, drag the panel. To reset the panel to its default position, select *Window > Reset Panels*.

Work with the Panel Bin

The Panel Bin appears on the right side of the workspace. It contains a tab for each of the basic steps of photo editing: Edit, Create, and Share. You can open the Panel Bin to access the tabs, or close it to expand the workspace.



Tabs on the Panel Bin

Show or hide the Panel Bin

- ❖ Select *Window > Panel Bin*.

Use tools in the Edit, Create, and Share tabs

- 1 In the Panel Bin, click the Edit, Create, or Share tab.
- 2 Click a button for any of the tools listed on that tab.

Use the Project Bin

Located at the bottom of the edit workspaces, the Project Bin displays thumbnails of open photos. It's useful for switching between multiple open photos in your workspace. The Project Bin has controls that let you open or close images, hide images, navigate through open images, make a specific image the frontmost, duplicate an image, rotate an image, or view file information. Because the Project Bin appears in both Full Edit and Quick Fix, you can easily bring open images into Quick Fix for editing. Multiple-page projects are highlighted by a gray frame around the page thumbnails. To show or hide the individual pages, click the right edge of the frame.

- ❖ Do any of the following:
 - To open an image, use *File > Open*.
 - To bring an opened image forward as the frontmost image, double-click a thumbnail.
 - To rearrange photos, drag thumbnails in the Project Bin.
 - To close an image, right-click a thumbnail in the Project Bin and choose *Close*.
 - To hide an image, right-click the thumbnail and choose *Minimize* from the context menu.

Note: To show an image after hiding it, double-click its thumbnail in the Project Bin, or right-click the thumbnail and choose *Restore* from the context menu.

- To view a photo's file information, right-click a thumbnail and choose *File Info* from the context menu.
- To duplicate an image, right-click a thumbnail, choose *Duplicate* from the context menu, and name the file.
- To rotate an image, right-click a thumbnail and choose *Rotate 90° Left* or *Rotate 90° Right* from the context menu.
- To show filenames, right-click in the Project Bin and choose *Show Filenames* from the context menu.
- To open or close the Project Bin, choose *Window > Project Bin*.
- To manually show or hide Project Bin, click the title bar of the Project Bin.

Undo, redo, and cancel

Undo, redo, or cancel operations

Many operations can be undone or redone. For instance, you can restore all or part of an image to its last saved version. Available memory may limit your ability to use these options.

- 1 To undo or redo an operation, Choose Edit > Undo or choose Edit > Redo.
- 2 To cancel an operation, hold down the Esc key until the operation in progress has stopped.

Using the Undo History panel

The Undo History panel (Window > Undo History) lets you jump to any recent state of the image created during the current work session. Each time you apply a change to pixels in an image, the new state of that image is added to the Undo History panel. You don't need to save a change in order for the change to appear in the History.

For example, if you select, paint, and rotate part of an image, each of those states is listed separately in the panel. You can then select any of the states, and the image reverts to how it looked when that change was first applied. You can then work from that state.

Actions, such as zooming and scrolling, do not affect pixels in the image and do not appear in the Undo History panel. Nor do program-wide changes, such as changes to panels, color settings, and preferences.



*The Undo History panel
A. Original state B. State C. Selected state and state slider*

Note the following guidelines when using the Undo History panel:

- By default, the Undo History panel lists 50 previous states. Older states are automatically deleted to free more memory for Photoshop Elements. You can change the number of states displayed in the Undo History panel in Performance Preferences (Photoshop Elements > Preferences > Performance). The maximum number of states is 1000.
- The original state of the photo is always displayed at the top of the Undo History panel. You can always revert an image to its original state by clicking this top state. Clicking the original state is also handy for comparing before and after versions of your editing.
- When you close and reopen the document, all states from the last working session are cleared from the panel.
- States are added to the bottom of the list. That is, the oldest state is at the top of the list, the most recent one at the bottom.
- Each state is listed with the name of the tool or command used to change the image.
- Selecting a state dims those below. This way you can easily see which changes will be discarded if you continue working from the selected state.
- Selecting a state and then changing the image eliminates all states that came after it. Likewise, deleting a state deletes that state and those that came after it.



Revert to the last saved version


When editing a photo in Full Edit or Quick Fix, you can revert to the last saved version.

- ❖ Choose Edit > Revert.

***Note:** Revert is added as a history state in the Undo History panel and can be undone.*

Revert to a previous state of an image

- ❖ In Full Edit, do any of the following:
 - Click the name of the state in the Undo History panel.
 - Drag the slider at the left of the state up or down to a different state in the Undo History panel.
 - Click the Undo  or Redo  buttons on the shortcuts bar.
 - Choose Undo or Redo from the Undo History panel menu or the Edit menu.

 To set the keyboard command for Step Forward and Step Backward, choose Photoshop Elements > Preferences > General, and choose from the Step Back/Fwd menu.

Delete one or more states from the Undo History panel

- ❖ Do one of the following:
 - To delete a state, click the name of the state, and choose Delete from the Undo History panel menu. States following the one you selected are also deleted.
 - To delete the list of states from the Undo History panel, without changing the image, choose Clear Undo History from the panel menu or choose Edit > Clear > Undo History. Clearing is useful for freeing up memory, especially if you get an alert that Photoshop Elements is low on memory.

***Note:** Clearing the Undo History panel cannot be undone.*

Clear memory used by the clipboard and the Undo History panel

You can delete items copied to the clipboard or states in the Undo History panel to free up memory.

- ❖ In Full Edit, do one of the following:
 - To clear memory used by the clipboard, choose Edit > Clear > Clipboard Contents.
 - To clear memory used by the Undo History panel, choose Edit > Clear > Undo History or choose Clear Undo History from the Undo History panel menu.
 - To clear the memory used in both the clipboard and the Undo History panel simultaneously, choose Edit > Clear > All.

***Note:** Clearing the Undo History panel or clipboard cannot be undone.*

Restore default preferences

Preference settings control how Photoshop Elements displays images, cursors, and transparencies; saves files; uses plug-ins and scratch disks, and so on. If the application exhibits unexpected behavior, the preferences file may be damaged. You can restore all preferences to their defaults.

- ❖ Press and hold Option+Command+Shift immediately after Photoshop Elements begins launching. Click Yes to delete the Adobe Photoshop Elements settings file.

A new preferences file is created the next time you start Photoshop Elements. For information on a specific preference option, search for the preference name in Help.

Redisplay disabled warning messages

In certain situations, messages containing warnings or prompts are displayed. You can disable the display of these messages by selecting the Don't Show Again option in the message, and reset the messages you've disabled at a later time.

- 1 Choose Photoshop Elements > Preferences > General.
- 2 Click Reset All Warning Dialogs, and click OK.

Scratch disks and plug-ins

About scratch disks

When your system does not have enough RAM to perform an operation, Photoshop Elements uses scratch disks. A scratch disk is any drive or partition of a drive with free memory. By default, Photoshop Elements uses the hard drive on which the operating system is installed as its primary scratch disk.

You can change the primary scratch disk or designate a second, third, or fourth scratch disk to be used when the primary disk is full. Your primary scratch disk should be your fastest hard disk and have plenty of defragmented space available.

For best performance, use the following guidelines when assigning scratch disks:

- Scratch disks should not be on the same physical drive as Photoshop Elements or any large files you are editing.
- Scratch disks should not be on the same physical drive as the one used for the operating system's virtual memory.
- Scratch disks should be on a local drive. That is, they should not be accessed over a network.
- Scratch disks should be conventional (non-removable) media.
- RAID disks/disk arrays are good choices for dedicated scratch disk volumes.
- Drives with scratch disks should be defragmented regularly. Or better yet, use an empty drive or a drive with plenty of unused space to avoid fragmentation issues.

Change scratch disks

Photoshop Elements needs contiguous hard drive space to create a scratch disk. For this reason you should frequently defragment your hard drive. Adobe recommends that you use a disk tool utility to defragment your hard drive on a regular basis.

- 1 Choose Photoshop Elements > Preferences > Performance.
- 2 Select the desired disks from the Scratch Disks menu (you can assign up to four scratch disks), and click OK.
- 3 Restart Photoshop Elements for the change to take effect.

About plug-in modules

Plug-in modules are software programs developed by Adobe Systems and other software developers to add functionality to Photoshop Elements. A number of importing, exporting, and special-effects plug-ins come with your program; they are inside the Photoshop Elements Plug-ins folder. You can select an additional plug-ins folder in which to load compatible plug-ins stored with another application. You can also create a shortcut for a plug-in stored in another folder on your system. You can then add the shortcut or alias to the Plug-ins folder to use that plug-in with Photoshop Elements. Once installed, plug-in modules appear as options added to the Import or Export menu, as filters

added to the Filter menu, or as file formats in the Open and Save As dialog boxes. If you install a large number of plug-ins, Photoshop Elements may not be able to list them all in their appropriate menus. If so, newly installed plug-ins appear in the Filter > Other submenu. To prevent a plug-in or folder of plug-ins from loading, add a tilde character (~) at the beginning of the plug-in name, folder, or directory. That file (or all files in the folder) is ignored by the application when you restart it. To view information about installed plug-ins, choose Photoshop Elements > About Plug-In and select a plug-in from the submenu.

More Help topics

[“Plug-in filters”](#) on page 202

Install plug-in modules

❖ Do one of the following:

- Use the plug-in installer, if provided.
- Follow the installation instructions that came with the plug-in module.
- Make sure the plug-in files are uncompressed, and then copy them to the appropriate Plug-ins folder in the Photoshop Elements folder.

Select an additional plug-ins folder

You can select an additional plug-ins folder in which to load compatible plug-ins stored with another application.

- 1 Choose Photoshop Elements > Preferences > Plug-Ins.
- 2 In the Preferences dialog, select Additional Plug-ins Folder, select a folder from the list, and click Choose.
- 3 To display the contents of a folder, double-click the directory. The path to the folder appears in the preferences window.

Note: Do not select a location inside the Plug-ins folder for Photoshop Elements.

- 4 Restart Photoshop Elements to load the plug-ins.

Chapter 3: Import photos

Importing photos

About getting photos

When you begin to use Photoshop Elements, you can use media files from many sources, whether a camera, scanner, CD, or a folder on your hard disk. If you simply want to start editing a photo on your hard disk, and you know its filename and location, use the File > Open command to browse to the file. To open photos from another source, use the Photo Downloader in Adobe Bridge, or use the Photoshop Elements Import option or the Welcome screen to select the image's source.

Open a file for editing on your hard disk

- ❖ Choose File > Open and browse to the file.

Open a file from a device

- ❖ Choose File > Import, select the camera or scanner, and browse to the file.

Open a file from the Welcome screen

- 1 Choose Window > Welcome to open the Welcome screen.
- 2 Click Import From Camera or Import From Scanner to open Adobe Bridge.

Open a file from Adobe Photo Downloader

- ❖ Choose File > Adobe Photo Downloader to open Adobe Bridge Photo Downloader.

Guidelines for getting photos from devices

When downloading image files from a camera or a scanner, follow these guidelines:

1. Use the Adobe Photo Downloader

For some devices, you may need to install the device software on your computer before downloading files. During installation, the software may ask whether a specific program will be used to edit the images files. If asked, specify Photoshop Elements.

Some device software starts automatically when you connect and switch on the device. However, using Adobe Photo Downloader enables you to perform a variety of functions not offered by device software. To obtain image files with the Adobe Photo Downloader, close any device software that starts automatically.

2. Organize photos during the import process

The Adobe Photo Downloader Advanced dialog box enables you to improve and organize photos while importing them to your computer. Properly organizing photos during import makes finding and improving them later much easier and faster.

For example, you might have many pictures from a recent vacation stored in your digital camera. Some of the pictures are from a family reunion, and the rest are pictures of tourist attractions visited along the way. During the import process, you can divide these photos into Place and Family folders, and then name them accordingly.

Import keywords attached to photos

When you receive photos that contain keyword metadata, you can import them with the photo. You can decide whether to keep the attached keyword, rename the keyword, or map it to one of your own keywords. If you import a new keyword, it appears in the Adobe Bridge Keyword Tags panel, and you can use it to tag other photos.

Cameras and card readers

About cameras and card readers

You can download (copy) photos from cameras and card readers in several ways:

- Copy photos from your camera and import them into Photoshop Elements using the Adobe Photo Downloader. This method is recommended because it is quick and easy, and allows you to improve and organize your photos when importing them.
- Open the Welcome screen and click the Import From Camera option.
- If your camera or card reader displays as a drive, you can open the files from there and place them directly into Photoshop Elements.

In some cases, you need to install the software driver that came with your camera before you can download pictures to your computer.

Get photos from a digital camera or card reader

- 1 Connect your camera or card reader to your computer. (See the documentation that came with your device, if necessary.)
- 2 Do either of the following:
 - If the Adobe Photo Downloader appears, choose the name of the camera or card reader from the Get Photos From menu. Usually, the connected device's name automatically appears, and Photoshop Elements automatically detects your camera.

Note: Your camera or card reader must be switched on to appear in the Get Photos From list. If the menu doesn't display the specific device name, choose *Untitled*. If no option for the device is available, choose *Refresh List*.

- If the downloader does not appear, use Photoshop Elements File > Adobe Photoshop Downloader or Bridge File > Get Photos From Camera to open it.

- 3 In the Import Settings area, set the following options:

Location Specifies the folder to which images are downloaded. To change the default folder location, click Choose, and specify a new location.

Create Subfolder(s) Creates a subfolder using the format selected from the pop-up menu. If you choose Custom Name, type a subfolder name in the box.

Rename Files Changes the filenames using the format selected from the pop-up menu. If you choose Custom Name, type a filename in the box.

***Note:** If the name you entered already exists, the copied image filename is appended with “-1” or another appropriately numbered designator.*

Apply Metadata (Optional) Select the options to use for adding metadata to the photos.

4 Click Get Photos.

The photos are copied to your hard drive.

Set advanced photo downloading options

The Advanced dialog box of the Adobe Photo Downloader offers several options not available in the Standard dialog box. For example, it lets you view all of the photos stored on a device, preview videos before importing them, and add copyright metadata. The settings you specify in this dialog box retain their values until you reset them.

1 In the Standard Adobe Photo Downloader dialog box, click Advanced Dialog.

Thumbnail images of every file on your device appear.

2 Select photos to download by doing any of the following:

- To select individual photos, click the boxes below each thumbnail.
- To select multiple photos, drag a rectangle around their thumbnails, and then right-click and select Check Selected, or click a box below one of the selected images to check them all.
- To select all photos, click Check All in the bottom left of the dialog box. To deselect all images, click Uncheck All.

3 In the Save Options section, choose an option for naming subfolders from the Create Subfolder(s) menu. The Custom Name option creates a subfolder with the group name format you type in the Name box.

4 In the Advanced Options section, select any of the following:

- Open Adobe Bridge
- Convert to DNG
- Delete Original Files
- Save Copies To

5 In the Apply Metadata section, select a template to use and type in the following fields:

- Creator

Specifies the file creator. Information typed into this field is appended to the author metadata in the file.

- Copyright

Specifies the date and other relevant information to protect your photos. Information typed into this field overwrites any data already in the copyright metadata in the file.

6 Click Get Photos.

Scanners

About scanning

Photoshop Elements connects to your scanner so that you can get images of your photos, negatives, and slides. You can get images from scanners in several ways:

- Use the scanner driver plug-in module that came with your scanner. This software is either compatible with Photoshop Elements or uses the TWAIN® interface to scan and open images directly in Photoshop Elements.
- Open the Welcome screen from the Window menu and click the Import From Scanner option.
- In Photoshop Elements, use File > Import and select your scanner.
- Use the stand-alone scanning software that came with your scanner to scan and save your images. You can then bring the images into Photoshop Elements using the File > Open command.

You can also import scanned images directly from any scanner that has a Photoshop-compatible plug-in module or that supports the TWAIN interface. To import the scan using a plug-in module, choose the scanner name from the File > Import submenu. See your scanner documentation for instructions on installing the scanner plug-in.

If your scanner does not have Photoshop-compatible scanner driver, import the scan using the TWAIN interface.

Before you try to scan and open your photos in Photoshop Elements, make sure that you've installed all the software that came with your scanner. Carefully read any documentation that came with your scanner to make sure that it's connected properly to your computer.

Get photos from scanners

- 1 Make sure that your scanner is connected and switched on.
 - To import the scan using a plug-in module, choose the scanner name from the File > Import submenu. (See your scanner documentation for instructions on installing the scanner plug-in.)
 - If your scanner does not have Photoshop-compatible scanner driver, import the scan using the TWAIN interface.
 - If you can't import the scan using the TWAIN interface, use the scanner manufacturer's software to scan your images, and save the images as TIFF, PICT, or BMP files.
- 2 Select File > Open.
- 3 Choose Browse to select a location for saving the photos.
- 4 Choose a file format from the Save As menu. JPEG, the default format, is usually the best choice.
 - Select a Matte color to simulate the appearance of background transparency.
 - Set the image quality by entering a value between 0 (lowest) to 12 (highest); selecting Low, Medium, High, or Maximum; or by dragging the Quality slider to the setting you want. The higher the quality, the larger the file size.
 - In Formats Options, set the format for the image.

Baseline causes images to display line-by-line on the screen.

Baseline Optimized applies optimized Huffman encoding to keep file size as small as possible.

Progressive causes the image to display in multiple passes on the screen. Set the number of passes in the Scans box.

- 5 Click OK. If you're using a scanner with a TWAIN driver, Photoshop Elements launches the driver that came with your scanner. Follow the instructions that came with the driver software to scan your photo. Typically, you can also select an area to scan or correct any color issues that you may see.

After the image is scanned, it appears in an untitled Photoshop Elements window.

More Help topics

[“File formats for saving”](#) on page 40

[“About image size and resolution”](#) on page 137

Local files, CDs, DVDs, and video

Get photos from files and folders

You can bring photos into Photoshop Elements from a hard disk or optical disc drive in your computer, either by dragging them, or by browsing to them using the File > Open or the File > Browse With Bridge command.

Browse to files on your computer

- 1 Select File > Open or File > Browse With Bridge.
- 2 In the dialog box, navigate to the folder that contains the files you want.
- 3 Do one of the following to select photos:
 - To get a single photo, select it.
 - To get multiple photos, Command-click to select the files you want. Or, click the first file, and then Shift-click the last file in the list that you want.
 - To get all the photos in a folder, navigate up one level from your current level, select the desired fold, and click Open.



You can import a PDF file or a Photoshop Elements project in PDF format. Text in imported PDF files becomes part of the image (you can't edit the text).

Search for files on your computer

- ❖ From Adobe Bridge, choose Edit > Find.

About preview files

When you import photos, you can choose to download either high-quality or quick thumbnails (sometimes called preview files). Thumbnail files appear as space-saving copies of the high-resolution originals.

Use the Thumbnails and Advanced options on the Bridge Preferences menu to specify settings for thumbnail files.

Get photos from a CD or DVD

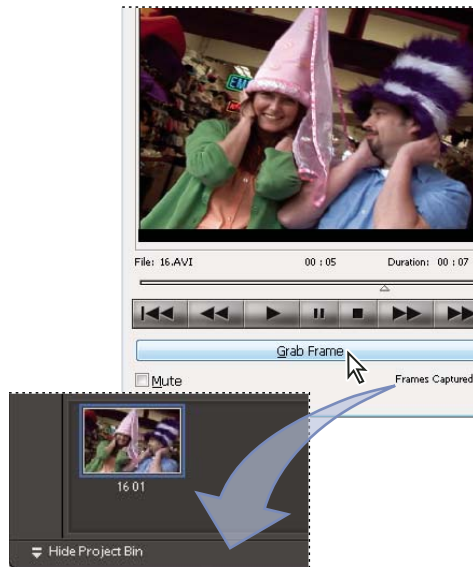
You can copy photos from a CD or DVD onto your hard disk. You can make high-quality copies, as you might for editing purposes, or, to save disk space, quick thumbnail files.

- 1 Select File > Open.
- 2 From the list of devices, select your CD or DVD drive, and select the photos you want to copy.
- 3 Click Open to bring in the photos.


Get photos from video



You can capture frames from your digital videos if they are saved in a file format that Photoshop Elements can open, including AVI, MPEG, MPG, and MOV. Captured photos are saved with the name of the video file plus a number (for example, videoclip01, videoclip02, and so forth).

Note: To create photos from the broadest range of video formats, install the latest version of standard video software.



Getting still photos from a video clip

- 1 Choose File > Import > Frame From Video.
- 2 In the Frame From Video dialog box, click the Browse button to navigate to the video from which you want to acquire still frames, and then click Open.
- 3 To start the video, click Play .
- 4 To get a frame of the video as a still image, click the Grab Frame button or press the spacebar when the frame is visible on the screen. You can move forward and backward in the video to capture additional frames.

Note: Some video formats don't support rewinding or fast-forwarding. In these cases, the Rewind  and Fast Forward  buttons are not available.

- 5 When you have all the frames you want, click Done.
- 6 Select File > Save to save each still file to a folder on your computer.

Chapter 4: Working with files

When working in Adobe® Photoshop® Elements the format that you save the file in is very important. For example, you often might have a file in one format, such as JPEG that you edit and then save to another format, such as PSD (the Photoshop Elements native file format, which preserves layer information and applies no compression).

Understanding the differences between formats is therefore an important part of photo editing and sharing. You have several choices about working with files. You can set options for opening, saving, and exporting files by type, by file size, and resolution. You can also process and save camera raw files. These tools make it easy to combine files of different types and optimize them in Photoshop Elements. When creating a new document, you also need to decide what format, and what resolution, might be required. All this information will be covered in this chapter.

Opening files

Create a new blank file

To create a web graphic, banner, or company logo and letterhead, or to create a photo collage or scrapbook page by mixing parts of different images, start from a new blank file.

- 1 From the File menu, choose New > Blank File. Or, on the Welcome screen, click Start From Scratch.
- 2 Enter options for the new image.

Name Names the new image file.

Preset Provides options for setting the width, height, and resolution of images that you intend to print or to view on-screen. Select Clipboard to use the size and resolution of data that you copied to the clipboard. You can also base a new image on the size and resolution of any open image by choosing its name from the bottom of the Preset menu.

Width, Height, and Resolution Sets these options individually. The default values are based on the last image you created, unless you've copied data to the clipboard.

Color Mode Sets an image to RGB color, grayscale, or bitmap (1-bit mode). You usually should select RGB.

Background Contents Sets the color of the image Background layer. White is the default. Select Background Color to use the current background color (shown in the toolbox). Select Transparent to make the default layer transparent, with no color values—the new image will have a Layer 1 instead of a Background layer.



Be sure to choose the correct size and resolution before beginning to edit. Changing those settings after editing could introduce blurriness or require pixels to be removed. Other settings can be changed after editing.

More Help topics

[“About projects”](#) on page 247

Open a file

You can open and import images in various file formats. The available formats appear in the Open dialog box and the Import submenu.

- 1 Choose File > Open.
- 2 Locate and select the file you want to open.

3 Click Open. In some cases, a dialog box appears, letting you set format-specific options.

There may be instances when Photoshop Elements cannot determine the correct format of a file. For example, transferring a file between Mac OS® and Windows® can cause the format to be mislabeled. In such cases, you must specify the correct format in which to open the file.

More Help topics

“[Save changes in different file formats](#)” on page 41

Open a recently used file

❖ Choose File > Open Recently Edited File, and select a file from the submenu.

***Note:** To specify the number of files that are available in the Open Recently Edited File submenu, choose Photoshop Elements > Preferences > Saving Files, and enter a number in the Recent File List Contains text box.*

Open a PDF file

Portable Document Format (PDF) is a versatile file format that can represent both vector and bitmap data and can contain electronic document search and navigation features. PDF is the primary format for Adobe® Acrobat®.

With the Import PDF dialog box, you can preview the pages and images in a multipage PDF file, then decide if you want to open them. You can choose to import full pages (including text and graphics), or you can import just the images from a PDF file. If you import only the images, the resolution, size, and color mode of the images remains unchanged. If you import pages, you can change the resolution and color mode.

Each page is shown as a thumbnail. To increase the size, choose an option from the Thumbnail Size menu.



Importing pages from a PDF file

- 1 Choose File > Open.
- 2 Select the name of the file, and click Open.
- 3 To import just the images from a PDF file, choose Image from the Select menu in the Import PDF dialog box. Select the image or images you want to open. (To select multiple images, Command-click each image.)
- 4 To import pages from a PDF file, choose Page from the Select menu, and then do any of the following:
 - If the file contains multiple pages, select the page or pages you want to open, and click OK. (To select multiple pages, Command-click each page.)
 - Under Page Options, accept the existing name, or type a new filename in the Name box.
 - Choose an option from the Mode menu (RGB Color to keep the photos in color, or Grayscale to automatically make them black and white). If the file has an embedded ICC (International Color Consortium) profile, you can choose the profile from the menu.

- For Resolution, accept the default (300 ppi) or type a new value. A higher resolution increases the file size.
 - Select Anti-aliased to minimize the jagged edges as the image is rasterized (bitmapped).
- 5 Select Suppress Warnings to hide any error messages during the import process.
 - 6 Click OK to open the file.

Open an EPS file

Encapsulated PostScript® (EPS) can represent both vector and bitmap data and is supported by virtually all graphics, illustration, and page-layout programs. Adobe applications that produce PostScript artwork include Adobe Illustrator®. When you open an EPS file containing vector art, it is *rasterized*—the mathematically defined lines and curves of the vector artwork are converted into the pixels or bits of a bitmap image.

- 1 Choose File > Open.
- 2 Select the file you want to open, and click Open.
- 3 Indicate the desired dimensions, resolution, and mode. To maintain the same height-to-width ratio, select Constrain Proportions.
- 4 Select Anti-aliased to minimize the jagged appearance of edges, and then click OK.



Anti-aliasing lets you produce smooth-edged objects by blending the edges of the objects into the background.



You can also bring PostScript artwork into Photoshop Elements using the Place command and the Paste command.

Place a PDF, Adobe Illustrator, or EPS file in a new layer


If you don't have the program that created the image file, and you can't open, copy and paste it, use the Place command to insert the image into Photoshop Elements. You can place PDF, Adobe® Illustrator®, or EPS files into a new layer in an image. Because the placed artwork is rasterized (bitmapped), you cannot edit text or vector data in placed artwork. The artwork is rasterized at the resolution of the file into which it is placed.

- 1 Open the image into which you want to place the artwork.
- 2 Choose File > Place, select the file you want to place, and click Place.
- 3 If you are placing a PDF file that contains multiple pages, select the page you want to place from the provided dialog box, and click OK.

The placed artwork appears inside a bounding box at the center of the Photoshop Elements image. The artwork maintains its original aspect ratio; however, if the artwork is larger than the Photoshop Elements image, it is resized to fit.

- 4 (Optional) Reposition the placed artwork by positioning the pointer inside the bounding box of the placed artwork and dragging.
- 5 (Optional) Scale the placed artwork by doing one or more of the following:
 - Drag one of the handles at the corners or sides of the bounding box. Hold down Shift as you drag a corner handle to constrain the proportions.
 - In the options bar, enter values for W and H to specify the width and height of the artwork. By default, these options represent scale as a percentage; however, you can enter a different unit of measurement—in (inches), cm (centimeters), or px (pixels). To constrain the proportions of the artwork, click the Constrain Proportions box.


6 (Optional) Rotate the placed artwork by doing one or more of the following:


- Position the pointer outside the bounding box of the placed artwork (the pointer turns into a curved arrow), and drag.
- In the options bar, enter a value (in degrees) for the Rotation option .

7 (Optional) Skew the placed artwork by holding down Command and dragging a side handle of the bounding box.

8 Set the Anti-alias option in the options bar. To blend edge pixels during rasterization, select the Anti-alias option. To produce a hard-edged transition between edge pixels during rasterization, deselect the Anti-alias option.

9 To commit the placed artwork to a new layer, do one of the following:

- Click the Commit button .
- Press Enter.

To cancel the placement, click the Cancel button , or press Esc.

Process multiple files

The Process Multiple Files command applies settings to a folder of files, open images, files selected in Adobe Bridge, or files that you select to import. If you have a digital camera or a scanner with a document feeder, you can also import and process multiple images. (Your scanner or digital camera may need an *acquire* plug-in module that supports actions. TWAIN is the most common protocol for scanners or cameras.)

When processing files, you can leave all the files open, close and save the changes to the original files, or save modified versions of the files to a new location (leaving the originals unchanged). If you are saving the processed files to a new location, you may want to create a new folder for the processed files before starting the batch.

Note: The Process Multiple Files command does not work on multiple page PDF or PSE files.

1 Choose File > Process Multiple Files.

2 Choose the source of the files to process from the Process Files From pop-up menu:

Folder Processes files in a folder you specify. Click Browse to locate and select the folder.

Import Processes images from a digital camera or scanner.

Opened Files Processes all open files.

Bridge Processes files that are in Adobe Bridge.

3 Select Include All Subfolders if you want to process files in subdirectories of the specified folder.

4 For Destination, click Browse and select a folder location for the processed files.

5 If you chose Folder as the destination, specify a file-naming convention and select file compatibility options for the processed files:

- For Rename Files, select elements from the pop-up menus or enter text into the fields to be combined into the default names for all files. The fields let you change the order and formatting of the components of the filename. You must include at least one field that is unique for every file (for example, filename, serial number, or serial letter) to prevent files from overwriting each other. Starting Serial Number specifies the starting number for any serial number fields. If you select Serial Letter from the pop-up menu, serial letter fields always start with the letter “A” for the first file.
- For Compatibility, choose Windows, Mac OS, and UNIX® to make filenames compatible with the Windows, Mac OS, and UNIX operating systems.

- 6 Under Image Size, select Resize Images if you want each processed file resized to a uniform size. Then type in a width and height for the photos, and choose an option from the Resolution menu. Select Constrain Proportions to keep the width and height proportional.
- 7 To apply an automatic adjustment to the images, select an option from the Quick Fix panel.
- 8 To attach a label to the images, choose an option from the Labels menu, then customize the text, text position, font, size, opacity, and color. (To change the text color, click the color swatch and choose a new color from the Color Picker.)
- 9 Select Log Errors That Result From Processing Files to record each error in a file without stopping the process. If errors are logged to a file (to a location that you specify), a message appears after processing. To review the error file, open with a text editor after the Batch command has run.
- 10 Click OK to process and save the files.

Close a file

- 1 Do one of the following:
 - Choose File > Close or File > Close All.
 - Choose Command W to close the file or Option+Command W to close all files.
- 2 Choose whether or not to save the file.

Managing and organizing files

View or add file information

The File Info dialog box displays camera data, caption, and copyright and authorship information that has been added to the file. Using this dialog box, you can modify or add information to files saved in Photoshop Elements. The information you add is embedded in the file using XMP (Extensible Metadata Platform). XMP provides Adobe applications and workflow partners with a common XML framework that standardizes the creation, processing, and interchange of document metadata across publishing workflows. If you have metadata that you repeatedly enter for different files, you can create metadata templates to expedite the adding of information to files.

You cannot edit the information displayed for the Keywords, Camera Data 1, and Camera Data 2 metadata categories.











- 1 With an image open, choose File > File Info.
- 2 Click the Description attribute to display specific information. In Description, you can add or modify the document title, file authorship, caption, caption authorship, and copyright information. Type in the appropriate text boxes and click OK to embed the information. For copyright status, choose from the Copyright Status menu.

Use the Info Panel

In the Full Edit workspace, the Info panel displays file information about an image and also provides feedback as you use a tool. Make sure the Info panel is visible in your work area if you want to view information while dragging in the image.

- 1 Display the Info panel by clicking its title bar if it's in the Panel Bin. If the Info panel isn't visible in the Panel Bin or the work area, choose Window > Info to display the panel.
- 2 Select a tool.

3 Move the pointer into the image, or drag within the image to use the tool. The following information may appear, depending on which tool you're using:


-  The numeric values for the color beneath the pointer.
-  The x- and y-coordinates of the pointer.
-  The width (W) and height (H) of a marquee or shape as you drag, or the width and height of an active selection.
-  The x- and y-coordinates of your starting position (when you click in the image).
-  The change in position along the x-coordinate, , and y-coordinate, , as you move a selection, layer, or shape.
-  The angle (A) of a line or gradient; the change in angle as you move a selection, layer, or shape; or the angle of rotation during a transformation. The change in distance (D) as you move a selection, layer, or shape.
-  The percentage of change in width (W) and height (H) as you scale a selection, layer, or shape.
-  The angle of horizontal skew (H) or vertical skew (V) as you skew a selection, layer, or shape.

More Help topics

[“About color”](#) on page 164

[“About image modes”](#) on page 166

Set color modes and units of measurement in the Info panel


- ❖ Do one of the following:
 - To change the mode of color values displayed, click an eyedropper icon  in the Info panel, and choose a color mode from the pop-up menu. You can also choose Panel Options from the More menu in the Info panel, then choose a color mode for First Color Readout and/or Second Color Readout:

Grayscale Displays the grayscale values beneath the pointer.

RGB Color Displays the RGB (red, green, blue) values beneath the pointer.

Web Color Displays the hexadecimal code for the RGB values beneath the pointer.

HSB Color Displays the HSB (hue, saturation, brightness) values beneath the pointer.

- To change the unit of measurement displayed, click the cross hair , in the Info panel, and choose a unit of measurement from the pop-up menu. You can also choose Panel Options from the More menu in the Info panel. Choose a unit of measurement from the Ruler Units menu, and click OK.

Use keywords and metadata to identify files





Keyword tags are personalized keywords, such as “Dad” or “Florida,” that you attach to photos, PDFs, and photo projects so that you can easily organize and find them. When you use keyword tags, there’s no need to manually organize your photos in subject-specific folders or rename files with content-specific names. Instead, you simply attach one or more keyword tags to each photo and then retrieve the photos you want by selecting one or more keyword tags. To apply keywords, use Adobe Bridge.

Stacking files

Stacking files lets you put files together under a single thumbnail. To stack files, use the Stacks menu in Adobe Bridge.


Viewing images

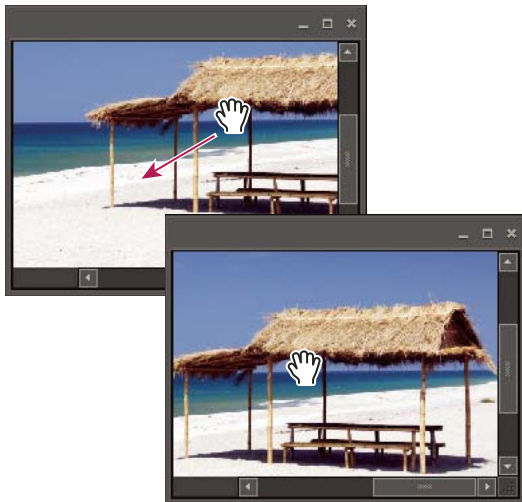
Viewing images

In Full Edit, Guided Edit, or Quick Fix, the Hand tool , the Zoom tools   , the Zoom commands, and the Navigator panel let you view different areas of an image at different magnifications. The document window is where your image appears. You can open additional windows to display several views of an image at once (such as different magnifications).

You can magnify or reduce your view using various methods. The window's title bar displays the zoom percentage (unless the window is too small for the display to fit).

If you want to view another area of an image, either use the window scroll bars or select the Hand tool and drag to pan over the image. You can also use the Navigator panel.




 *To use the Hand tool while another tool is selected, hold down the spacebar as you drag within the image.*



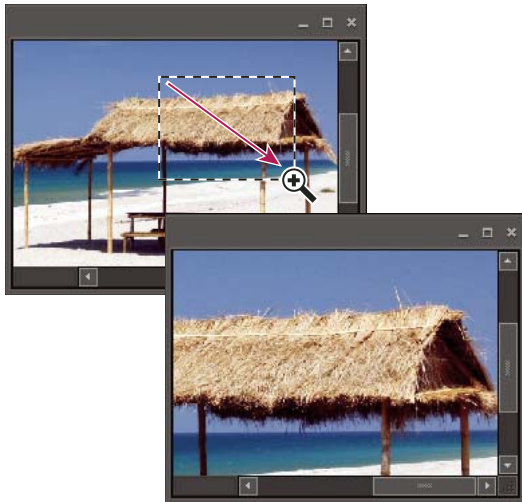
Dragging the Hand tool to view another area of an image. (The appearance of scroll bars can vary from those in the example.)

Zoom in or out



❖ Do one of the following:


- Select the Zoom tool , and click either the Zoom In  or Zoom Out  button in the options bar. Click the area you want to magnify. Each click magnifies or reduces the image to the next preset percentage, and centers the display around the point you click. When the image has reached its maximum magnification level of 3200% or minimum reduction level of 1 pixel, the magnifying glass appears empty.

Note: You can drag a Zoom tool over the part of an image you want to magnify. Make sure that the Zoom In button is selected in the options bar. To move the zoom marquee around the image, begin dragging a marquee, and then hold down the spacebar while dragging the marquee to a new location.




Dragging the Zoom tool to magnify the view of an image


- Click the Zoom In  or Zoom Out  button in the Navigator panel.
- Choose View > Zoom In or View > Zoom Out.
- Enter the desired magnification level in the Zoom text box, either in the status bar or in the Navigator panel.

 *When using a Zoom tool, hold down Option to switch between zooming in and zooming out.*

Display an image at 100%

- ❖ Do one of the following:
 - Double-click the Zoom tool  in the toolbox.
 - Select a Zoom tool, and click the 1:1 button in the options bar.
 - Choose View > Actual Pixels, or right-click (or Control-click, depending on the mouse design) the image and choose Actual Pixels.
 - Enter 100% and press Enter.

Fit an image to the screen

- ❖ In Full Edit or Quick Fix, do one of the following:
 - Double-click the Hand tool  in the toolbox.
 - Select a Zoom tool or the Hand tool, and then click the Fit Screen button in the options bar. Or, right-click the image and choose Fit On Screen.
 - Choose View > Fit On Screen.

These options scale both the zoom level and the window size to fit the available screen space.

Resize the window while zooming

- ❖ With a Zoom tool active, select Resize Windows To Fit in the options bar. The window changes size as you magnify or reduce the view of the image.

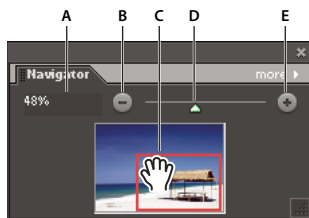
When Resize Windows To Fit is deselected, the window maintains a constant size regardless of the image's magnification. This can be helpful when you are using smaller monitors or working with tiled images.

Note: To automatically resize the window when using keyboard shortcuts to reduce or magnify an image view, choose *Photoshop Elements > Preferences > General*, and then select the *Zoom Resizes Windows* preference and click OK.

Using the Navigator panel

The Navigator panel lets you adjust the image's magnification and area of view. Typing a value in the text box, clicking the Zoom Out or Zoom In button, or dragging the zoom slider changes the magnification. Drag the view box in the image thumbnail to move the view of an image. The view box represents the boundaries of the image window. You can also click in the thumbnail of the image to designate the area of view.

Note: To change the color of the view box, choose *Panel Options* from the *Navigator panel* menu. Choose a color from the *Color* menu or click the color swatch to open the *Color Picker* and select a custom color. Click OK.



The Navigator panel

A. Zoom text box B. Zoom Out C. Drag the view box to move the view D. Zoom slider E. Zoom In

More Help topics

[“Fit an image to the screen”](#) on page 36

Open multiple windows of the same image

In Full Edit, you can open multiple windows to display different views of the same file. A list of open windows appears in the Window menu, and thumbnails of each open image appear in the Photo Bin. Available memory may limit the number of windows per image.


- ❖ Choose *View > New Window For [image filename]*. Depending on the position of the first window, you may have to move the second window to view both simultaneously.

💡 You can use the *New Window* command when you're working with a zoomed image to see what the image will look like at 100% size in a separate window.

View and arrange multiple windows

- ❖ In Full Edit, do one of the following:
 - To display windows stacked and cascading from the upper left to the lower right of the screen, choose *Window > Images > Cascade*.
 - To display windows edge to edge, choose *Window > Images > Tile*. As you close images, the open windows are resized to fill the available space.
 - To view all open images at the same magnification as the active image, choose *Window > Images > Match Zoom*.
 - To view the same section (upper-left corner, center, lower-right corner, and so on) of all open photos, choose *Window > Images > Match Location*. The view in all windows shifts to match the active (frontmost) image. The zoom level does not change.

Close windows

- ❖ In Full Edit, do one of the following:
 - Choose File > Close to close the active window.
 - Click the Close button  on the title bar of the active window.
 - Right-click a thumbnail and choose Close.
 - Choose File > Close All to close all open windows.

Guides, grids, and rulers

About rulers, grids, and guides

In Full Edit, rulers, grids, and guides help you position items (such as selections, layers, and shapes) precisely across the width or length of an image. In Quick Fix, only guides and grids are available.

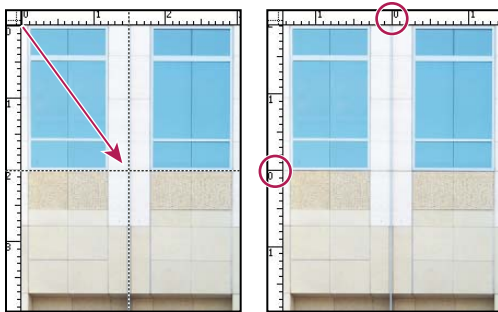
When visible, rulers appear along the top and left side of the active window. Markers in the ruler display the pointer's position when you move it. Changing the ruler origin (the 0, 0 mark on the top and left rulers) lets you measure from a specific point on the image. The ruler origin also determines the grid's point of origin.

Use the View menu to show or hide the rulers (Full Edit only), the grid, or guide. The View menu also helps you to enable or disable the snapping of items to the grid or guide.

Change the rulers' zero origin and settings

- ❖ In Full Edit, do one of the following:
 - To change the rulers' zero origin, position the pointer over the intersection of the rulers in the upper-left corner of the window, and drag diagonally down onto the image. A set of cross hairs appears, marking the new origin on the rulers. The new zero origin will be set where you release the mouse button.

Note: To reset the ruler origin to its default value, double-click the upper-left corner of the rulers.



Dragging to create a new ruler origin

- To change the rulers' settings, double-click a rule, or choose Photoshop Elements > Preferences > Units & Rulers. For Rulers, choose a unit of measurement. For Column size, enter values for Width and Gutter. Click OK.

Some layout programs use the column width setting to specify the display of an image across columns. The Image Size and Canvas Size commands also use this setting.

Note: Changing the units on the Info panel automatically changes the units on the rulers.

More Help topics

[“Change the size of the canvas”](#) on page 134

[“Change print dimensions and resolution without resampling”](#) on page 138

Change the grid settings

- 1 In Full Edit or Quick Fix, choose Photoshop Elements > Preferences > Guides And Grid.
- 2 For Color, choose a preset color, or click the color swatch to choose a custom color.
- 3 For Style, choose the line style for the grid. Choose Lines for solid lines, and choose Dashed Lines, or Dots for broken lines.
- 4 For Gridline Every, enter a number value, and then choose the unit of measurement to define the spacing of major grid lines.
- 5 For Subdivisions, enter a number value to define the frequency of minor grid lines.

Change the guide settings

- 1 In Full Edit or Quick Fix, choose Photoshop Elements > Preferences > Guides And Grid.
- 2 For Color, choose a preset color, or click the color swatch to choose a custom color.
- 3 For Style, choose the line style for the grid. Choose Lines for solid lines, and Dashed Lines or Dots for broken lines.

Saving and exporting images

About saving images and file formats

After you edit an image, you need to save it, or you'll lose your work. To ensure that all the image data is preserved, save regular images in Photoshop (PSD) format. Multiple-page creations are always saved in Photo Project (PSE) format. These formats don't compress your image data.

Your digital camera may save photos in JPEG format, but it's better to use the PSD format rather than resave a photo in JPEG format unless you are ready to share it or use it on a web page. Each time you save in JPEG format, the image data is compressed, potentially causing some data to be lost. You may start to notice reduced image quality after saving the file as a JPEG 2-3 times. The disadvantage of saving in PSD format is that the file size will increase significantly because the file is not compressed.

Photoshop Elements can save images in several file formats, depending on how you plan to use it. If you are working with web images, the Save For Web command provides many options for optimizing images. If you need to convert several images to the same file format, or the same size and resolution, use the Process Multiple Files command.

More Help topics

[“Using the Save For Web dialog box”](#) on page 261

[“Process multiple files”](#) on page 32

File formats for saving

Photoshop Elements can save images in the following file formats:

BMP A standard Windows image format. You can specify either Windows or OS/2* format, and a bit depth for the image. For 4-bit and 8-bit images using Windows format, you can also specify RLE compression.

CompuServe GIF (Graphics Interchange Format) Multiple layer documents can be saved as animated GIFs, using the Save For Web command. Commonly used to display graphics and small animations in web pages, GIF is a compressed format designed to minimize file size and transfer time. GIF supports only 8-bit color images (256 or fewer colors). You can also save an image as a GIF file using the Save For Web command.

JPEG (Joint Photographic Experts Group) Used to save photographs, JPEG format retains all color information in an image, but compresses file size by selectively discarding data. You can choose the level of compression. Higher compression results in lower image quality and a smaller file size; lower compression results in better image quality and a larger file size. JPEG is a standard format for displaying images over the web.

PCX A bitmap format widely supported on various platforms.

Photoshop (PSD) The standard Photoshop Elements format for images. Use this format for edited images to save your work and preserve all your image data and layers in a single page file.

Photo Project Format (PSE) The standard Photoshop Elements format for multiple page creations. Use this format for photo creations to save your work and preserve all your image data and layers in a multiple page file.

Photoshop PDF (Portable Document Format) A cross-platform and cross-application file format. PDF files accurately display and preserve fonts, page layouts, and both vector and bitmap graphics.

Note: PDF and PDP are the same except that PDPs are opened in Adobe Photoshop® and PDFs are opened in Acrobat.

Photoshop EPS (Encapsulated PostScript) Used to share Photoshop files with many illustration and page-layout programs. For best results, print documents with EPS images to PostScript-enabled printers.

PICT Used with Mac OS® graphics and page-layout applications to transfer images between applications. PICT is especially effective at compressing images with large areas of solid color.

When saving an RGB image in PICT format, you can choose either 16-bit or 32-bit pixel resolution. For a grayscale image, you can choose from 2, 4, or 8 bits per pixel.

Pixar Used for exchanging files with Pixar image computers. Pixar workstations are designed for high-end graphics applications, such as those used for three-dimensional images and animation. Pixar format supports RGB and grayscale images.

PNG (Portable Network Graphics) Used for lossless compression and for displaying images on the web. Unlike GIF, PNG supports 24-bit images and produces background transparency without jagged edges; however, some web browsers do not support PNG images. PNG preserves transparency in grayscale and RGB images.

Photoshop Raw Used for transferring images between applications and computer platforms when other formats don't work.

Scitex CT Used in the prepress industry.

TGA (Targa) Designed for systems using the Truevision video board. When saving an RGB image in this format, you can choose a pixel depth of 16, 24, or 32 bits per pixel and RLE compression.

TIFF (Tagged-Image File Format) Used to exchange files between applications and computer platforms. TIFF is a flexible bitmap image format supported by most paint, image-editing, and page-layout applications. Most desktop scanners can produce TIFF files.

In addition, Photoshop Elements can open files in several other older formats: Photoshop 2.0, Pixel Paint, Alias Pix, IFF format, Portable bitmap, SGI® RGB, Soft Image, Wavefront RLA, and ElectricImage. You can also save files in the following formats: Alias PIX, IFF format, Photoshop 2.0, and PICT Resource.

More Help topics

[“Optimized file formats for the web”](#) on page 262

Save changes in different file formats

You can set options for saving image files, such as the format and whether to preserve layers in an image. Depending on the format you select, other options may be available to set.

More Help topics

[“Set file-saving preferences”](#) on page 44

[“About transparent and matted web images”](#) on page 269

[“About the JPEG format”](#) on page 263

[“Optimized file formats for the web”](#) on page 262

[“About the GIF format”](#) on page 264

[“Convert an image to indexed color”](#) on page 168

[“About the PNG-8 format”](#) on page 264

[“About the PNG-24 format”](#) on page 265


Change file-saving options

- 1 Choose File > Save.
- 2 To change file-saving options, such as the filename or format, choose File > Save As and set any of the following file-saving options.

Note: Some file formats open another dialog box with additional options.

File Name Specifies the filename for the saved image.

Format Specifies the file format for the saved image.

Layers Preserves all layers in the image. If this option is disabled or unavailable, there are no layers in the image. A warning icon  at the Layers check box indicates that the layers in your image will be flattened or merged for the selected format. In some formats, all layers are merged. To preserve layers, select another format.

As a Copy Saves a copy of the file while keeping the current file open. The copy is saved to the folder containing the currently open file.

Embed Color Profile Embed a color profile in the image for certain formats.

Thumbnail Saves thumbnail data for the file. This option is available when the Ask When Saving option for Image Previews is set in the Preferences dialog box.

Note: NIX file servers are often used to help send information over networks and the Internet. Some of these servers do not recognize uppercase extensions. To make sure your images arrive at their destinations, use lowercase extensions.

Save a file in GIF format

- 1 Choose File > Save As.
- 2 Specify a filename and location, and choose CompuServe GIF Format from the format list.

Your image is saved as a copy in the specified directory (unless it's already in indexed-color mode).

- 3 If you are creating an animated GIF, select the Layers As Frames option. Each layer in the final file will play as a single frame in the animated GIF.
- 4 Click Save. If your original image is RGB, the Indexed Color dialog box appears.
- 5 If necessary, specify indexed color options in the Indexed Color dialog box and click OK.
- 6 In the GIF Options dialog box, select a row order for the GIF file and click OK:

Normal Displays the image in a browser only when the image is fully downloaded.

Interlaced Displays as a series of low-resolution versions of the image while the full image file is downloaded to the browser. Interlacing can make downloading time seem shorter and assures viewers that downloading is in progress. However, interlacing also increases file size.

Save a file in JPEG format

- 1 Choose File > Save As, and choose JPEG from the format list.

Note: You cannot save indexed-color and bitmap mode images in JPEG format.

- 2 Specify a filename and location, select file-saving options, and click Save.

The JPEG Options dialog box opens.

- 3 If the image contains transparency, select a Matte color to simulate the appearance of background transparency.
- 4 Specify image compression and quality by choosing an option from the Quality menu, dragging the Quality slider, or entering a value between 0 and 12.
- 5 Select a format option:

Baseline (Standard) Uses a format that is recognizable to most web browsers.

Baseline Optimized Optimizes the color quality of the image and produces a slightly smaller file size. This option is not supported by all web browsers.

Progressive Creates an image that is gradually displayed as it is downloaded to a web browser. Progressive JPEG files are slightly larger in size, require more RAM for viewing, and are not supported by all applications and web browsers.

- 6 To view the estimated download time of the image, select a modem speed from the Size pop-up menu. (The Size preview is available only when Preview is selected.)

Note: If a Java application cannot read your JPEG file, try saving the file without a thumbnail preview.

- 7 Click OK.


Save a file in Photoshop EPS format

- 1 Choose File > Save As, and choose Photoshop EPS from the format list.
- 2 Specify a filename and location, select file-saving options, and click Save.
- 3 In the EPS Options dialog box, set the following options:
 - For Preview, choose TIFF (8 bits/pixel) for better display quality, or choose TIFF 1-bit/pixel for a smaller file size.
 - For Encoding, choose an encoding method: ASCII, Binary, or a JPEG option.

- 4 To display white areas in the image as transparent, select Transparent Whites. This option is available only for images in bitmap mode.
- 5 If you want to apply anti-aliasing to a printed low-resolution image, select Image Interpolation.
- 6 Click OK.

Save a file in Photoshop PDF format

- 1 Choose File > Save As, and choose Photoshop PDF from the format list.
- 2 Specify a filename and location, select file-saving options, and click Save.
- 3 In the Save Adobe PDF dialog box, select a compression method. (See “[Understanding file compression](#)” on page 44.)
- 4 Choose an option from the Image Quality menu.
- 5 To view the PDF file, select View PDF After Saving to launch Adobe Acrobat® or Adobe® Reader (depending on which application is installed on your computer).
- 6 Click Save PDF.

 *If you've made changes to an Acrobat Touchup file, but the changes are not reflected when you open the file, check the Saving File preferences dialog box. Choose Photoshop Elements > Preferences > Saving Files, and then choose Save Over Current File from the On First Save menu.*

Save a file in PNG format

- 1 Choose File > Save As, and choose PNG from the format list.
- 2 Specify a filename and location, select file-saving options, and click Save.
- 3 In the PNG Options dialog box, select an Interlace option and click OK.

None Displays the image in a web browser only after it is completely downloaded.

Interlaced Displays low-resolution versions of the image while the full image file is downloading to the browser. Interlacing can make downloading time seem shorter and assures viewers that downloading is in progress. However, interlacing also increases file size.

Save a file in TIFF format

- 1 Choose File > Save As, and choose TIFF from the format list.
- 2 Specify a filename and location, select file-saving options, and click Save.
- 3 In the TIFF Options dialog box, select options:

Image Compression Specifies a method for compressing the composite image data.

Pixel Order Writes the TIFF file with the channels data interleaved or organized by plane. Theoretically, the Planar order file can be read and written faster, and offers a little better compression.

Byte Order Most recent applications can read files using Mac or Windows byte order. However, if you don't know what kind of program the file may be opened in, select the platform on which the file will be read.

Save Image Pyramid Preserves multiresolution information. Photoshop Elements does not provide options for opening multiresolution files; the image opens at the highest resolution within the file. However, Adobe InDesign® and some image servers provide support for opening multiresolution formats.

Save Transparency Preserves transparency as an additional alpha channel when the file is opened in another application. (Transparency is always preserved when the file is reopened in Photoshop Elements.)

Layer Compression Specifies a method for compressing data for pixels in layers (as opposed to composite data).

Many applications cannot read layer data and skip it when opening a TIFF file. Photoshop Elements can read layer data in TIFF files. Although files that include layer data are larger than those that don't, saving layer data eliminates the need to save and manage a separate PSD file to hold the layer data.

Understanding file compression

Many image file formats compress image data to reduce file size. *Lossless* compression preserves all image data without removing detail; *lossy* compression removes image data and loses some detail.

The following are commonly used compression techniques:

RLE (Run Length Encoding) Lossless compression technique that compresses the transparent portions of each layer in images with multiple layers containing transparency.

LZW (Lemple-Zif-Welch) Lossless compression that provides the best results in compressing images that contain large areas of single color.

JPEG Lossy compression that provides the best results with photographs.

CCITT A family of lossless compression techniques for black-and-white images.

ZIP Lossless compression technique that is most effective for images that contain large areas of a single color.

Set file-saving preferences

❖ Choose Photoshop Elements Preferences > Saving Files, and set the following options.

On First Save Gives you the ability to control how files are saved:

- Save Over Current File (default) does not open the Save As dialog box. If you open either the original file or the edited copy, the first save overwrites the original (as do all subsequent saves in that edit session).
- Always Ask opens the Save As dialog box the first time you edit and save the original file. All subsequent saves overwrite the previous version until you close the file and then reopen it to make further edits. If you open the edited copy, the first save opens the Save As dialog box.

Image Previews Saves a preview image with the file. Select any one of the following:

- Never Save to save files without previews.
- Select Always Save to save files with specified previews.
- Ask When Saving to assign previews on a file-by-file basis.

Append File Extension Specifies an option for the three-character file extensions that indicate a file's format. Generally it's a good idea to keep this option set to Use Lower Case.

Prefer Adobe Camera Raw For Supported Raw Files Ensures that all the supported raw files are opened with Adobe Raw instead of other software. Select this option if you have added other plug-ins to Plug-Ins folder.

Ignore Camera Data (EXIF) Profiles Select this option to automatically discard any color profiles used by your digital camera. The color profile you use in Photoshop Elements is saved with the image.

Maximize PSD File Compatibility Saves a composite image in a layered Photoshop file so that it can be imported or opened by a wider range of applications: Select Never to skip this step, Always to automatically save the composite, or Ask if you'd like to be prompted each time you save a file.

Recent File List Contains: _ Files Specifies how many files are available in the File > Open Recently Edited File submenu. Enter a value from 0 to 30. The default value is 10.

More Help topics

[“Save changes in different file formats”](#) on page 41

Guided Edit

The Guided Edit mode provides more structure around specific tasks, helping you accomplish those tasks more easily, and with explanation throughout the process. The Guided Edit tab is located in the Edit tab of the Panel Bin.

With Guided Edit, you can do the following:

Basic Photo Edits Crop, recompose, rotate, straighten, and sharpen photos.

Lighting And Exposure Lighten, darken, adjust brightness and contrast, and adjust levels.

Color Correction Enhance colors, remove a color cast, and correct skin tone.

Guided Activities Touch up scratches, blemishes or tear marks, guide for a photo editing, and fix keystone distortion.

Photomerge Intelligently merge multiple images of group shots or faces.

Note: Sometimes the Guided Edits available vary in your version of Photoshop Elements.

Automated Actions The Action Player in the Automated Actions Guided Edit can play actions created in Photoshop.

Photographic Effects You can give special effects to a photo. For example, you can convert a photo to an old-fashioned photo.

Use the Guided Edit options

- 1 On the Edit Full tab, click the triangle and select Edit Guided button.
- 2 Choose from the list of Guided Edits.
- 3 Do one of the following:
 - Follow the steps that appear and click Done.
 - Click Cancel to choose a different Guided Edit, or go back to regular editing.

Note: If you enter a Guided Edit, then click on the “After Only” button at the bottom of the Guided Edit panel to see the Before and After view of your photo, when you exit the Guided Edit, that view will remain. To reset the view back to After only (the default), go into another Guided Edit and change it there, or simply click on either Full or Quick modes to reset to a single view.

The Crop Photo Guided Edit

Use the Crop Photo Guided Edit to crop an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

Note: You can also use the Cookie Cutter tool to crop an image. For more on the Cookie Cutter tool, see [“Use the Cookie Cutter tool”](#) on page 134.

For more information on cropping, see [“Cropping”](#) on page 132.

The Recompose Photo Guided Edit

For more information on the features used in the Recompose Photo Guided Edit, see [“Recomposing”](#) on page 160.

The Rotate and/or Straighten Guided Edit

Use the Rotate and/or Straighten Guided Edit to rotate a picture in 90-degree increments or draw a line through an image to realign it.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on rotating an image, see [“Rotate or flip an item”](#) on page 156.

For more on straightening an image, see [“Straighten an image”](#) on page 135

The Sharpen Photo Guided Edit

Use the Sharpen Photo Guided Edit to sharpen an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on sharpening images, see [“Sharpening overview”](#) on page 153 or [“Sharpen an image”](#) on page 153.

The Lighten or Darken Guided Edit

Use the Lighten or Darken Guided Edit to lighten or darken an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on lightening or darkening an image, see [“Adjusting shadows and light”](#) on page 108.

The Brightness and Contrast Guided Edit

Use the Brightness or Contrast Guided Edit to adjust brightness or contrast in an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on adjusting brightness and contrast, see [“Adjusting shadows and light”](#) on page 108.

The Adjust Levels Guided Edit

For more information on using Levels, see [“About Levels adjustments”](#) on page 110.

The Fix Keystone Guided Edit

For more information on the features used in the Fix Keystone Guided Edit, see [“Correct camera distortion”](#) on page 145 and [“Freely transform an item”](#) on page 159.

The Enhance Colors Guided Edit

Use the Enhance Colors Guided Edit to enhance the hue, saturation, and lightness in an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on enhancing colors, see [“Adjusting color saturation and hue”](#) on page 119.

The Remove a Color Cast Guided Edit

Use the Remove a Color Cast Guided Edit to correct color casts in an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on correcting color casts, see [“Correcting color casts”](#) on page 115.

The Correct Skin Tone Guided Edit

Use the Correct Skin Tone Guided Edit to correct skin tones (tan, blush, and ambient light) in an image.

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on correcting color casts, see [“Adjust the color of skin tone”](#) on page 121.

The Touch Up Photo Guided Edit

Use the Touch Up Photo Guided Edit to fix (large or small) flaws in an image (using the Healing Brush or the Spot Healing Brush).

You can view the after image only, or view both the before and after images either vertically or horizontally.

For more on correcting color casts, see [“Fix large imperfections”](#) on page 141 or [“Remove spots and small imperfections”](#) on page 141.

The “Guide for Editing a Photo” Guided Edit

Use the “Guide for Editing a Photo” Guided Edit to follow the recommended sequence of applying common editing steps to your photos. This sequence is how Adobe recommends you make your various edits, and the order in which you should do them. This will help you get the best results for all of your basic photo retouching tasks.

The Photomerge Group Shot Guided Edit

For more information on Photomerge Group Shot, see [“Use Photomerge Group Shot”](#) on page 147.

The Photomerge Faces Guided Edit

For more information on Photomerge Faces, see [“Use Photomerge Faces”](#) on page 148.

The Photomerge Scene Cleaner Guided Edit

For more information on Photomerge Scene Cleaner, see [“Use Photomerge Scene Cleaner”](#) on page 149.

The Photomerge Exposure Guided Edit

For more information on Photomerge Exposure, see [“Photomerge Exposure”](#) on page 151.

The Automated Actions Guided Edit

An action is a series of tasks that Photoshop Elements performs with a click of a button. Photoshop Elements comes with a set of actions. You can also play actions that are created in Photoshop as long as the actions use features supported by Photoshop Elements. Keep in mind that the Automated Actions does not work on all file types or layers.

- 1 In the Editor with the Guided tab selected, make sure that Automated Actions is expanded, and then click Action Player.
- 2 Follow the instructions, and choose an action from the menu.
- 3 Click Play Action.

Install actions created in Photoshop

The Action Player in the Automated Actions Guided Edit can play actions created in Photoshop. Keep in mind that you can only play actions that use features supported in Photoshop Elements.

- ❖ Copy the .atn file to the following location, System library/Application Support /Adobe /Photoshop Elements /8.0/Locale/en_US/Workflow Panels/actions.

The next time you start Photoshop Elements, the action appears in the Automated Actions Guided Edit menu.

The Line Drawing Guided Edit

For more information on the features used in Line Drawing Guided Edit, see “[Precisely convert to black and white](#)” on page 123, “[About Levels adjustments](#)” on page 110, “[Add Noise](#)” on page 192, and “[Adjust saturation and hue](#)” on page 119.

The Old Fashioned Photo Guided Edit

For more information on the features used in the Old Fashioned Guided Edit, see “[Using the Effects panel](#)” on page 173, “[Specify the opacity of a layer](#)” on page 61, and “[About Levels adjustments](#)” on page 110.

The Saturated Slide Film Effect Guided Edit

For more information on saturation adjustment, see “[Adjust saturation and hue](#)” on page 119.

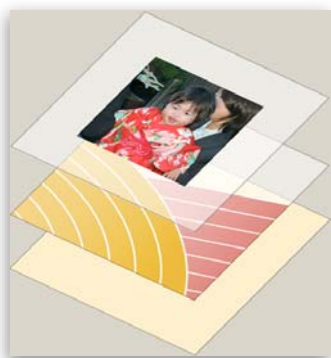
Chapter 5: Using layers

Layers are useful because they let you add components to an image and work on them one at a time, without permanently changing your original image. For each layer, you can adjust color and brightness, apply special effects, reposition layer content, specify opacity and blending values, and so on. You can also rearrange the stacking order, link layers to work on them simultaneously, and create web animations with layers.

Creating layers

Understanding layers

Layers are like stacked, transparent sheets of glass on which you can paint images. You can see through the transparent areas of a layer to the layers below. You can work on each layer independently, experimenting to create the effect you want. Each layer remains independent until you combine (merge) the layers. The bottommost layer in the Layers panel, the Background layer, is always locked (protected), meaning you cannot change its stacking order, blending mode, or opacity (unless you convert it into a regular layer).



Transparent areas on a layer let you see through to the layers below.

Layers are organized in the Layers panel. It's a good idea to keep this panel visible whenever you're working in Photoshop Elements. With one glance, you can see the active layer (the selected layer that you are editing). You can link layers, so they move as a unit, helping you manage layers. Because multiple layers in an image increases the file size, you can reduce the file size by merging layers that you're done editing. The Layers panel is an important source of information as you edit photos. You can also use the Layer menu to work with layers.

Ordinary layers are pixel-based (image) layers. There are several other layer types you can use to create special effects:

Fill layers Contain a color gradient, solid color, or pattern.

Adjustment layers Enable you to fine-tune color, brightness, and saturation without making permanent changes to your image (until you flatten, or collapse, the adjustment layer).

Type layers and shape layers Let you create vector-based text and shapes.

You can't paint on an adjustment layer, although you can paint on its mask. To paint on fill or type layers, you first convert them into regular image layers.

More Help topics

[“About adjustment and fill layers”](#) on page 62

[“About layer clipping masks”](#) on page 67

[“Lock or unlock a layer”](#) on page 54

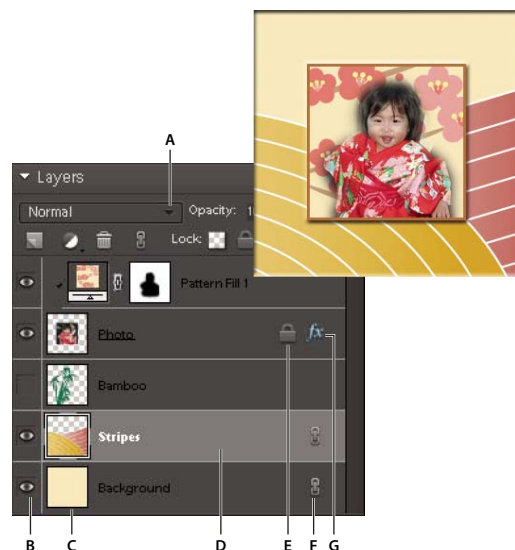
[“About opacity and blending options in layers”](#) on page 60

About the Layers panel

The Layers panel lists all layers in an image, from the top layer to the Background layer at the bottom. You can drag the panel by its title out of the Panel Bin to keep it visible as you work with it.

The active layer, or the layer that you are working on, is highlighted for easy identification. As you work in an image, it's a good idea to check which layer is active to make sure that the adjustments and edits you perform affect the correct layer. For example, if you choose a command and nothing seems to happen, check to make sure that you're looking at the active layer.

Using the icons in the panel, you can accomplish many tasks—such as creating, hiding, linking, locking, and deleting layers. With some exceptions, your changes affect only the selected, or active, layer, which is highlighted.



Layers panel

A. Blending mode menu B. Show/Hide layer C. Layer thumbnail D. Highlighted layer is active layer E. Locked layer F. Layer is linked to another layer G. Layer has style applied

In the list of layers, the panel shows a thumbnail, a title, and one or more icons that give information about each layer:

The layer is visible. Click the eye to show or hide a layer. (Hidden layers are not printed.)







The layer is linked to the active layer.

The layer has a style applied to it. Click to edit the layer style in the Style Settings dialog box.

The layer is locked.

The image contains layer groups and was imported from Photoshop. Photoshop Elements doesn't support layer groups and displays them in their collapsed state. You must simplify them to create an editable image.

You use the buttons at the bottom of the panel to perform actions:

-  Create a new layer.
-  Create a new fill or adjustment layer.
-  Delete a layer.
-  The layer is linked to another layer.
-  Lock transparency.
-  Lock all layers.

Also at the top are the panel Blending Mode menu (Normal, Dissolve, Darken, and so on), an Opacity text box, and panel options.

More Help topics

[“About adjustment and fill layers”](#) on page 62

[“About opacity and blending options in layers”](#) on page 60

[“Simplify a layer”](#) on page 55

Adding layers

Newly added layers appear above the selected layer in the Layers panel. You can add layers to an image by using any of the following methods:

- Create new, blank layers or turn selections into layers.
- Convert a background into a regular layer or vice versa.
- Paste selections into the image.
- Use the Type tool or a shape tool.
- Duplicate an existing layer.

You can create up to 8000 layers in an image, each with its own blending mode and opacity. However, memory constraints may lower this limit.

More Help topics


[“About text”](#) on page 234

[“About shapes”](#) on page 241

[“Delete a layer”](#) on page 55

Create and name a new blank layer

❖ Do any of the following:

- To create a new layer with default name and settings, click the Create A New Layer button  at the bottom of the Layers panel. The resulting layer uses Normal mode with 100% opacity, and is named according to its creation order. (To rename the new layer, double-click it and type a new name.)
- To create a new layer and specify a name and options, choose Layer > New > Layer, or choose New Layer from the panel menu in the Layers panel. Specify a name and other options, and then click OK.

The new layer is automatically selected and appears in the panel above the layer that was last selected.

More Help topics

[“Copy a layer from one image to another”](#) on page 56

[“Delete a layer”](#) on page 55

[“Duplicate a layer within an image”](#) on page 56

[“Specify a blending mode for a layer”](#) on page 61

[“Specify the opacity of a layer”](#) on page 61

Create a new layer from part of another layer

You can move part of an image from one layer to a newly created one, leaving the original intact.

- 1 Select an existing layer, and make a selection.
- 2 Choose one of the following:
 - Layer > New > Layer Via Copy to copy the selection into a new layer.
 - Layer > New > Layer Via Cut to cut the selection and paste it into a new layer.

The selected area appears in a new layer in the same position relative to the image boundaries.



Creating a new layer by copying part of another layer and pasting it into a new layer

More Help topics

[“Duplicate a layer within an image”](#) on page 56


[“About selections”](#) on page 80

Convert the Background layer into a regular layer


The Background layer is the bottom layer in an image. Other layers stack on top of the Background layer, which usually (but not always) contains the actual image data of a photo. To protect the image, the Background layer is always locked. If you want to change its stacking order, blending mode, or opacity, you must first convert it into a regular layer.

- 1 Do one of the following:
 - Double-click the Background layer in the Layers panel.
 - Choose Layer > New > Layer From Background.

- Select the Background layer, and choose Duplicate Layer from the More menu in the Layers panel to leave the Background layer intact and create a copy of it as a new layer.

 You can create a duplicate layer of the converted Background layer no matter how you convert the layer; simply select the converted Background layer and choose Duplicate Layer from the More menu.

- 2 Name the new layer.

 If you drag the background eraser tool onto the Background layer, it is automatically converted into a regular layer, and erased areas become transparent.

Make a layer the Background layer

You can't convert a layer into the Background layer if the image already has a Background layer. In this case, you must first convert the existing Background layer into a regular layer.

- 1 Select a layer in the Layers panel.
- 2 Choose Layer > New > Background From Layer.

Any transparent areas in the original layer are filled with the background color.


Editing layers

Select a layer

Any change you make to an image only affects the active layer. If you don't see the desired results when you manipulate an image, make sure that the correct layer is selected.

❖ Do one of the following:

- In the Layers panel, select a layer's thumbnail or name.
- To select more than one layer, hold down the Command key and click each layer.

 To select layers interactively as you use the Move tool, select Auto Select Layer in the options bar. To see which layer will be highlighted, select Show Highlight On Rollover. Drag to select multiple layers at a time.


More Help topics

[“Understanding layers”](#) on page 49

[“Select all opaque areas in a layer”](#) on page 62

[“Copy selections with the Move tool”](#) on page 95

Show or hide a layer

In the Layers panel, the eye icon  in the leftmost column next to a layer means that the layer is visible.

- 1 Choose Window > Layers if the Layers panel is not already open.
- 2 Do one of the following:
 - To hide a layer, click its eye icon. Click in the eye column again to show the layer.
 - Drag through the eye column to show or hide more than one layer.

- To display just one layer, Option-click the eye icon for that layer. Option-click in the eye column again to show all the layers.

More Help topics

[“About the Layers panel”](#) on page 50

Resize or hide layer thumbnails



- 1 Choose Panel Options from the More menu in the Layers panel.
- 2 Select a new size, or select None to hide the thumbnails. Then click OK.

More Help topics

[“About the Layers panel”](#) on page 50

Lock or unlock a layer

You can fully or partially lock layers to protect their contents. When a layer is locked, a lock icon appears to the right of the layer name, and the layer cannot be deleted. Except for the Background layer, you can move locked layers to different locations in the stacking order of the Layers panel.

- ❖ Select the layer in the Layers panel, and do one of the following:
 - Click the Lock All icon  at the bottom of the Layers panel to lock all layer properties. Click the icon again to unlock them.
 - Click the Lock Transparency icon  at the bottom of the Layers panel to lock the transparent areas of the layer, so that no painting occurs in them. Click the icon again to unlock.

Note: For type and shape layers, transparency is locked by default and cannot be unlocked without first simplifying the layer.

More Help topics

[“About the Layers panel”](#) on page 50

Rename a layer

As you add layers to an image, it's helpful to rename layers according to their content. Use descriptive layer names so that you can easily identify layers in the Layers panel.

Note: You can't rename the Background layer unless you change it into a normal layer.

- ❖ Double-click the layer's name in the Layers panel, and enter a new name.

More Help topics

[“Understanding layers”](#) on page 49

[“About the Layers panel”](#) on page 50

[“Convert the Background layer into a regular layer”](#) on page 52

Simplify a layer

You simplify a smart object, frame layer, type layer, shape layer, solid color layer, gradient layer, or pattern fill layer (or a layer group imported from Photoshop) by converting it into an image layer. You need to simplify these layers before you can apply filters to them or edit them with the painting tools. However, you can no longer use the type- and shape-editing options on simplified layers.

- 1 Select a type layer, shape layer, fill layer, or a Photoshop layer group in the Layers panel.
- 2 Simplify the layer or imported layer group:
 - If you selected a shape layer, click Simplify in the options bar.
 - If you selected a type, shape, or fill layer, or a Photoshop layer group, choose Simplify Layer from either the Layer menu or the Layers panel More menu.


More Help topics

[“About adjustment and fill layers”](#) on page 62

[“Understanding layers”](#) on page 49

Delete a layer

Deleting layers that you no longer need reduces the size of your image file.

- 1 Select the layer in the Layers panel.
- 2 Do one of the following:
 - Drag the layer to the Delete Layer icon  at the bottom of the Layers panel.
 - Click the Delete Layer icon at the bottom of the Layers panel, and click Yes in the delete confirmation dialog box. To bypass this dialog box, press Option as you click the Delete icon.
 - Choose Delete Layer from either the Layer menu or the Layers panel More menu, and click Yes.

More Help topics

[“Understanding layers”](#) on page 49

[“Create and name a new blank layer”](#) on page 51

Sample color from all visible layers

By default, when you work with certain tools, the color you apply is sampled only from the active layer. With this default behavior, you can smudge or sample in a single layer even when other layers are visible, and you can sample from one layer and paint in another one.

If you want to paint using sampled data from all visible layers, do the following:

- 1 Select the Magic Wand tool, Paint Bucket tool, Smudge tool, Blur tool, Sharpen tool, or Clone Stamp tool.
- 2 In the options bar, select Sample All Layers.

More Help topics


[“Understanding layers”](#) on page 49

[“About painting tools”](#) on page 204

Copying and arranging layers

Duplicate a layer within an image

You can duplicate any layer, including the Background layer, within an image.

- ❖ Select one or more layers in the Layers panel, and do one of the following to duplicate it:
 - To duplicate and rename the layer, choose Layer > Duplicate Layer, or choose Duplicate Layer from the Layers panel More menu. Name the duplicate layer, and click OK.
 - To duplicate without naming, select the layer and drag it to the New Layer button  at the bottom of the Layers panel.
 - Right-click the layer name or thumbnail, and choose Duplicate Layer.

More Help topics

[“Understanding layers”](#) on page 49

Duplicate one or more layers in another image

You can take any layer, including the Background layer, from one image and duplicate it in another. Keep in mind that the pixel dimensions of the destination image determine how large the printed copy of the duplicated layer can be. Also, if the pixel dimensions of the two images are not the same, the duplicated layer may appear smaller or larger than you’d expect.

- 1 Open the source image. If you plan to copy a layer to an existing image rather than a new one, open the destination image as well.
- 2 In the source image’s Layers panel, select the name of the layer or layers you want to duplicate. To select more than one layer, hold down the Command key and click each layer’s name.
- 3 Choose Layer > Duplicate Layer, or choose Duplicate Layer from the More menu in the Layers panel.
- 4 Type a name for the duplicate layer in the Duplicate Layer dialog box, and choose a destination document for the layer, and then click OK:
 - To duplicate the layer in an existing image, choose a filename from the Document pop-up menu.
 - To create a new document for the layer, choose New from the Document menu, and enter a name for the new file. An image created by duplicating a layer has no background.

More Help topics

[“Understanding layers”](#) on page 49


[“About image size and resolution”](#) on page 137

Copy a layer from one image to another


You can copy any layer, including the Background layer, from one image to another. Keep in mind that the resolution of the destination image determines how large the printed copy of the layer can be. Also, if the pixel dimensions of the two images are not the same, the copied layer may appear smaller or larger than you’d expect.

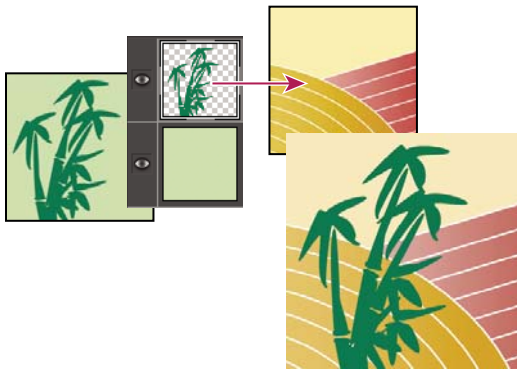
- 1 Open the two images you want to use.
- 2 In the Layers panel of the source image, select the layer that you want to copy.

3 Do one of the following:

- Choose Select > All to select all of the pixels in the layer, and choose Edit > Copy. Then make the destination image active, and choose Edit > Paste.
- Drag the layer's name from the Layers panel of the source image into the destination image.
- Use the Move tool  to drag the layer from the source image to the destination image.

The copied layer appears in the destination image, above the active layer in the Layers panel. If the layer you're dragging is larger than the destination image, only part of the layer is visible. You can use the Move tool to drag other sections of the layer into view.

 *Hold down Shift as you drag a layer to copy it to the same position it occupied in the source image (if the source and destination images have the same pixel dimensions) or to the center of the destination image (if the source and destination images have different pixel dimensions).*



Dragging the bamboo layer to another image



More Help topics

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[“About image size and resolution”](#) on page 137

Move the content in a layer

Layers are like stacked images on panes of glass. You can “slide” a layer in a stack to change what portion of its content is visible in relation to the layers above and below.

- 1 Select a layer in the Layers panel. To move multiple layers at the same time, link the layers together in the Layers panel by selecting the layers and then clicking the Link Layers icon .
- 2 Select the Move tool .
- 3 Do one of the following:
 - Drag within the image to slide the selected layer or layers to the desired position.
 - Press the arrow keys on your keyboard to move the layer or layers in 1-pixel increments, or press Shift and an arrow key to move the layer in 10-pixel increments.
 - Hold down Shift as you drag to move the layer or layers directly up or down, directly to either side, or on a 45° diagonal.

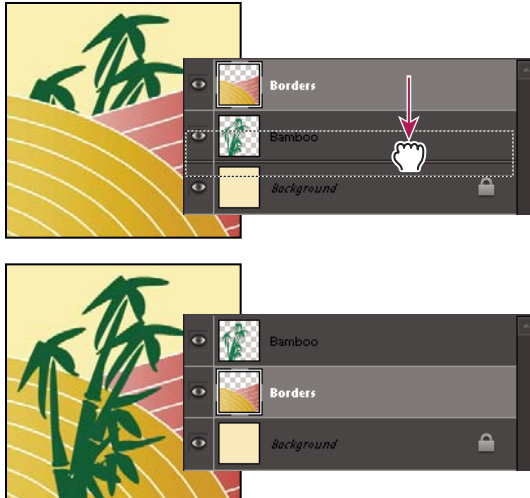
More Help topics

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Change the stacking order of layers

The stacking order determines whether a layer appears in front of or behind other layers.

By default, the Background layer must remain at the bottom of the stack. To move the Background layer, you need to convert it into a regular layer first.



Dragging a layer below another layer changes the stacking order

- 1 In the Layers panel, select one or more layers. To select more than one layer, hold down the Command key and click each layer.
- 2 To change the stacking order, do one of the following:
 - Drag the layer or layers up or down the Layers panel to the new position.
 - Choose Layer > Arrange, and then choose Bring To Front, Bring Forward, Send Backward, or Send To Back.



More Help topics

[“Understanding layers”](#) on page 49

[“Convert the Background layer into a regular layer”](#) on page 52

Link and unlink layers

When layers are linked, you can move their contents together. You can also copy, paste, merge, and apply transformations to all linked layers simultaneously. At some point, you may want to edit or move one linked layer. You can simply unlink the layers to work on one layer at a time

- 1 Select the layers you’d like to link in the Layers panel. To select more than one layer, hold down the Command key and click each layer.
- 2 Click the Link Layer icon  at the bottom of the Layers panel. The linked icon  appears in the linked layers.
- 3 To unlink layers, select a linked layer in the Layers panel and click the Link Layers icon at the bottom of the Layers panel.

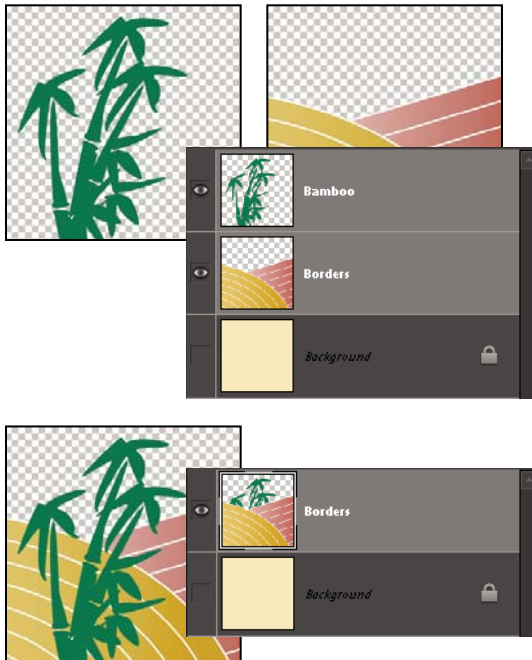
More Help topics

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[“About layer clipping masks”](#) on page 67

Merge layers


Layers can greatly increase the file size of an image. Merging layers in an image reduces file size. You should merge layers only after you have finished manipulating them to create the image you want.



Example of merging

You can choose to merge only the linked layers, only the visible layers, only a layer with the layer below it, or only selected layers. You can also merge the contents of all visible layers into a selected layer, yet not delete the other visible layers (in this case, there is no reduction in file size).

When you complete work on an image, you can flatten it. Flattening merges all visible layers, discards all hidden layers, and fills transparent areas with white.

- 1 Go to the Layers panel and make sure that an eye icon  appears next to each of the layers you want to merge.
- 2 Do one of the following:
 - To merge selected layers, select more than one layer by holding down the Command key and clicking each layer. Then choose Merge Layers from the Layers panel More menu.
 - To merge a layer with the one below, select the top layer of the pair and choose Merge Down from either the Layer menu or the Layers panel More menu.

Note: If the bottom layer in the pair is a shape, type, or fill layer, you must simplify the layer. If the bottom layer in the pair is linked to another layer or is an adjustment layer, you can't choose Merge Down.

- To merge all visible layers, hide any layers you don't want to merge and choose Merge Visible from the Layer menu or Layers panel More menu.

***Note:** If the bottom-most merged layer is a type, shape, solid color fill, gradient fill, or pattern fill layer, you must first simplify the layer.*

More Help topics

[“Merging adjustment layers”](#) on page 65

[“Simplify a layer”](#) on page 55

Merge layers into another layer

Use this procedure when you want to keep the layers you are merging intact. The result is a new merged layer plus all the original layers.

- 1 Click the eye icon next to layers you don’t want to merge, and make sure that the eye icon is visible for the layers you do want to merge.
- 2 Specify a layer in which to merge all visible layers. You can either create a new layer in which to merge or select an existing layer in the Layers panel.
- 3 Hold down Option, and choose Merge Visible from either the Layers menu or the Layers panel More menu. Photoshop Elements merges a copy of all visible layers into the selected layer.

More Help topics

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Flatten an image

When you flatten an image, Photoshop Elements merges all visible layers into the background, greatly reducing the file size. Flattening an image discards all hidden layers, and fills any transparent areas with white. In most cases, you won’t want to flatten a file until you’ve finished editing individual layers.

- 1 Make sure that the layers you want to keep in your image are visible.
- 2 Choose Flatten Image from either the Layer menu or the Layers panel More menu.



You can see the difference between your image’s layered file size and its flattened file size by choosing Document Sizes from the status bar pop-up menu at the bottom of the image window.

More Help topics

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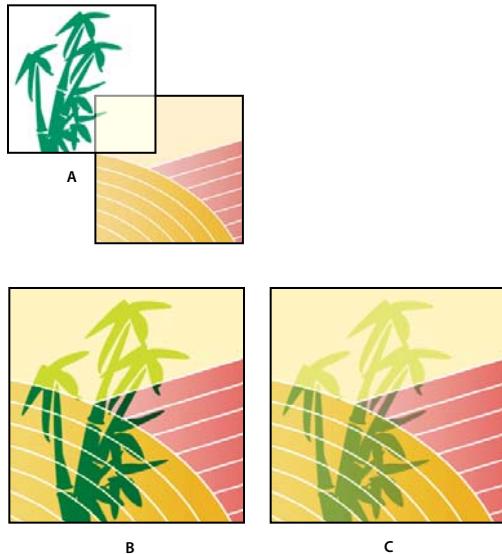
Opacity and blending modes

About opacity and blending options in layers

A layer’s opacity determines the degree to which it obscures or reveals the layer beneath it. A layer with 1% opacity is nearly transparent, while a layer with 100% opacity is completely opaque. Transparent areas remain transparent regardless of the opacity setting.

You use layer blending modes to determine how a layer blends with the pixels in layers beneath it. Using blending modes, you can create a variety of special effects.

Keep in mind that a layer's opacity and blending mode interact with the opacity and blending mode of painting tools. For example, if a layer uses Dissolve mode at 50% opacity, and you paint on this layer with the Paintbrush tool set to Normal mode at 100% opacity, the paint appears in Dissolve mode at 50% opacity. Similarly, if a layer uses Normal mode at 100% opacity, and you use the Eraser tool at 50% opacity, only 50% of the paint disappears from the layer as you erase.



Blending layers.

A. Bamboo layer and Borders layer B. Bamboo layer with 100% opacity and Color Burn mode C. Bamboo layer with 50% opacity and Color Burn mode

More Help topics

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[“About blending modes”](#) on page 205

[“About painting tools”](#) on page 204

Specify the opacity of a layer

- 1 Select the layer in the Layers panel.
- 2 In the Layers panel, enter a value between 0 and 100 for Opacity, or click the arrow at the right of the Opacity box and drag the Opacity slider that appears.

More Help topics

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Specify a blending mode for a layer

- 1 Select the layer in the Layers panel.
- 2 Choose an option from the Blending Mode menu.

More Help topics

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[“About blending modes”](#) on page 205

Select all opaque areas in a layer

You can quickly select all the opaque areas in a layer. This procedure is useful when you want to exclude transparent areas from a selection.

- 1 In the Layers panel, Command-click the layer thumbnail.
- 2 To add the pixels to an existing selection, press Command+Shift and click the layer thumbnail in the Layers panel.
- 3 To remove the pixels from an existing selection, press Command+Option and click the layer thumbnail in the Layers panel.
- 4 To load the intersection of the pixels and an existing selection, press Command+Option+Shift and click the layer thumbnail in the Layers panel.

More Help topics

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[“About selections”](#) on page 80

Customize the transparency grid

The checkerboard grid identifies transparency in a layer. You can change the appearance of this grid; however, do not change it to solid white because you’ll eliminate the visual distinction between opaque (white) and transparent (checkerboard).

- 1 Choose Photoshop Elements > Preferences > Transparency.
- 2 Choose a pattern size from the Grid Size menu.
- 3 Choose a pattern color from the Grid Colors menu. To choose a custom color instead, click one of the two boxes below the Grid Colors menu and select a color from the Color Picker.

More Help topics

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[“Use the Adobe Color Picker”](#) on page 211

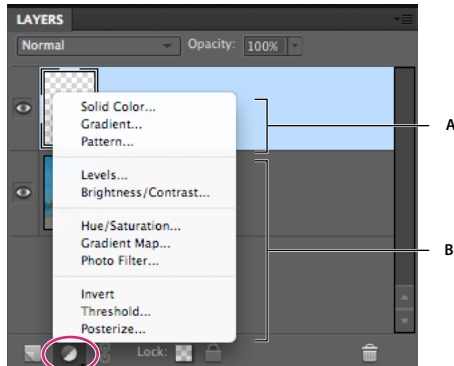
Adjustment and fill layers

About adjustment and fill layers

Adjustment layers let you experiment with color and make tonal adjustments without permanently modifying the pixels in an image. You can think of an adjustment layer as a veil coloring the underlying layers. By default, an adjustment layer affects all layers below it, although you can change this behavior. When you create an adjustment layer, the Layers panel displays a white box representing the adjustment for that layer.

Fill layers let you fill a layer with a solid color, gradient, or pattern. Unlike adjustment layers, fill layers do not affect the layers below them. To paint on a fill layer, you must first convert it (simplify it) into a regular layer.

Adjustment and fill layers have the same opacity and blending mode options as image layers, and you can move and reposition them just as you do image layers. By default, adjustment and fill layers are named for their type (for example, Solid Color fill layer and Invert adjustment layer).



Create Adjustment Layer menu
A. Fill layers B. Adjustment layers


More Help topics

[“Edit the layer masks”](#) on page 65

[“About opacity and blending options in layers”](#) on page 60

[“Simplify a layer”](#) on page 55

Create adjustment layers

- 1 In the Layers panel, select the topmost layer you want to affect.
- 2 To confine the effects of the adjustment layer to a selected area in that layer, make a selection.
- 3 Do one of the following:
 - To affect all the layers below the adjustment layer, click the Create New Fill or Adjustment Layer button  at the bottom of the Layers panel. Then, choose one of the following adjustment types. (The first three options in the menu are fill layers, not adjustment layers.)



Original image, and image with Hue/Saturation adjustment applied. Only the layers under the adjustment layer are affected.

- To affect only one layer or several successive layers below the adjustment layer, choose Layer > New Adjustment Layer > [adjustment type]. In the New Layer dialog box, select Use Previous Layer To Create Clipping Mask.

Levels Corrects tonal values in the image.

Brightness/Contrast Lightens or darkens the image.

Hue/Saturation Adjusts colors in the image. (Available only in color mode or on color layers.)

Gradient Map Maps pixels to the color in the selected gradient.

Photo Filter Adjusts the color balance and color temperature of the image.


Invert Produces a photo negative effect by creating a negative based on the brightness values of the image.

Threshold Renders the image in monochrome, with no gray, so that you can locate the lightest and darkest areas.

Posterize Gives a flat, poster-like appearance to a photo by reducing the number of brightness values (levels) in the image, thus reducing the number of colors.

- 4 In the dialog box, specify your options, and click OK. (Invert has no options.)

Selecting Use Previous Layer To Create Clipping Mask in step 3 groups the adjustment layer with the layer immediately below it and the effect is confined to the group.

- 5 To add more layers to the group, press Option and position the pointer over the line dividing the bottommost layer in the group from the layer below it. Click when the pointer changes to two overlapping circles .

More Help topics


[“About histograms”](#) on page 105

Create fill layers

- 1 In the Layers panel, select the layer above which the fill layer should be.

- 2 To confine the effects of the fill layer to a selected area, make a selection.


- 3 Do one of the following:

- Click the New Fill or Adjustment Layer button  at the bottom of the Layers panel, and choose the fill type you want to create. (The first three options listed in the panel are fill layers, the others are adjustment layers.)
- Choose Layer > New Fill Layer > [fill type]. In the New Layer dialog box that appears, click OK.

Solid Color Creates a layer filled with a solid color chosen from the Color Picker.

Gradient Creates a layer filled with a gradient. You can choose a predefined gradient from the Gradient menu. To edit the gradient in the Gradient Editor, click the color gradient. You can drag within the image window to move the center of the gradient.

You can also specify the shape of the gradient (Style) and the angle at which it is applied (Angle). Select Reverse to flip its orientation, Dither to reduce banding, and Align With Layer to use the layer’s bounding box to calculate the gradient fill.

Pattern Creates a layer filled with a pattern. Click the pattern, and choose a pattern from the pop-up panel. You can scale the pattern and choose Snap To Origin to position the origin of the pattern with that of the document window. To specify that the pattern moves with the Fill layer as it is relocated, select Link With Layer. When this option is selected, you can drag within the image to position the pattern while the Pattern Fill dialog box is open. To create a new preset pattern after editing pattern settings, click the New Preset button .

Edit an adjustment or fill layer

- 1 Open the adjustment or fill options dialog box by doing one of the following:
 - Double-click the adjustment or fill layer's leftmost thumbnail in the Layers panel.
 - Select the layer in the panel and choose Layer > Layer Content Options.
- 2 Make your changes, and click OK.

Merging adjustment layers

You can merge an adjustment or fill layer in several ways: with the layer below it, with other selected layers, with the layers in its own group, with the layers it's linked to, and with all other visible layers. You cannot, however, use an adjustment layer or fill layer as the base or target layer for a merge.

When you merge an adjustment layer or fill layer with the layer below it, the adjustments are simplified and permanently applied to the merged layer. The adjustment no longer affects other layers below the merged adjustment layer. You can also convert (simplify) a fill layer into an image layer without merging it.

Adjustment layers and fill layers with masks (the layer's rightmost thumbnail in the Layers panel) that contain only white values do not add significantly to the file size, so you don't need to merge these adjustment layers to conserve file space.

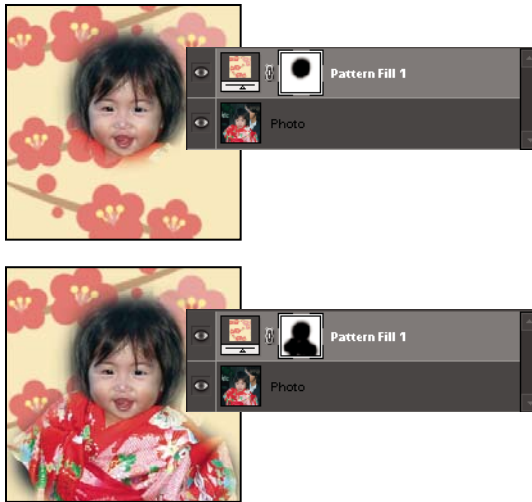
More Help topics

[“Merge layers”](#) on page 59

[“Simplify a layer”](#) on page 55

Edit the layer masks

A layer mask prevents sections of a layer, or an entire layer, from being visible. You use the mask to show or hide sections of an image or an effect. When the layer mask (right thumbnail) attached to an adjustment layer is completely white, the adjustment effect is applied to all underlying layers. If you don't want to apply the effect to certain portions of the underlying layers, paint the corresponding area of the mask with black. When attached to a fill layer, the mask defines the filled-in area in the fill layer.



Painting a mask with black increases the area protected.

- 1 Select the adjustment or fill layer in the Layers panel.
- 2 Select the Paintbrush tool, or any painting or editing tool.
- 3 Use the following methods to view the layer mask:
 - To view only the mask, Option-click the Layer Mask's thumbnail (the rightmost thumbnail). Option-click the thumbnail again to redisplay the other layers.
 - To view the mask in a red masking color, hold down Option+Shift and click the Layer Mask's thumbnail (the rightmost thumbnail). Hold down Option+Shift and click the thumbnail again to turn off the red display.
 - To constrain editing to part of the mask, select the corresponding pixels.
- 4 Edit the layer mask:
 - To remove areas of the adjustment effect or fill, paint the layer mask with black.
 - To add areas to the adjustment effect or fill, paint the layer mask with white.
 - To partially remove the adjustment effect or fill so that it shows in various levels of transparency, paint the layer mask with gray. (Single-click the foreground color swatch in the toolbox to choose a gray shade from the Swatches panel.) The extent to which the effect or fill is removed depends on the tones of gray you use to paint. Darker shades result in more transparency; lighter shades in more opacity.

💡 Shift-click the mask thumbnail (the layer's rightmost thumbnail) in the Layers panel to turn off the mask; click the thumbnail again to turn on the mask.


More Help topics

“[About selections](#)” on page 80

Layer masks

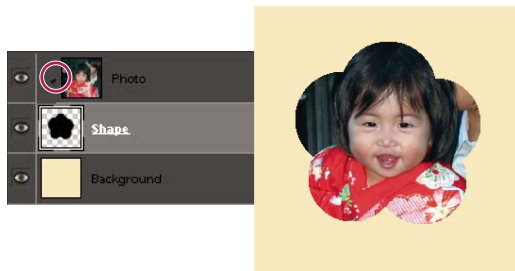
About layer clipping masks

A clipping mask is a group of layers to which a mask is applied. The bottommost layer, or base layer, defines the visible boundaries of the entire group. For example, sometimes you have a shape in the base layer, a photograph in the layer above it, and text in the topmost layer. If you group them, the photograph and text appear only through the shape outline in the base layer. They also take on the opacity of the base layer.

You can group only successive layers. The name of the base layer in the group is underlined, and the thumbnails for the overlying layers are indented. Additionally, the overlying layers display the clipping mask icon .



You can link the layers in a clipping mask so that they move together.



The shape in the bottom layer of the clipping mask determines what area of the photo layer above shows through.


More Help topics

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[“Link and unlink layers”](#) on page 58

Create a clipping mask

1 Do one of the following:

- Hold down Option, position the pointer over the line dividing two layers in the Layers panel (the pointer changes to two overlapping circles ) , and then click.
- In the Layers panel, select the top layer of a pair of layers you want to group, and choose Layer > Create Clipping Mask.

2 When making a clipping mask from an existing layer and one you are about to create, first select the existing layer in the Layers panel. Then choose New Layer from the Layer menu or the Layers panel More menu. In the New Layer dialog box, select Use Previous Layer To Create Clipping Mask.

The layers in the clipping mask have the opacity and mode attributes of the bottommost base layer in the group.



To change the stacking order of the clipping mask relative to other layers in the image, select all layers in the group. Then drag the group’s base layer up or down in the Layers panel. (Dragging a layer without selecting all the layers in the group removes that layer from the group.)


More Help topics

[“Link and unlink layers”](#) on page 58

Remove a layer from a clipping mask

Ungrouping the base layer from the layer above it ungroups all layers in the clipping mask.

❖ Do one of the following:

- Hold down Option, position the pointer over the line separating two grouped layers in the Layers panel (the pointer changes to two overlapping circles ) , and click.
- In the Layers panel, select a layer in the clipping mask, and choose Layer > Release Clipping Mask. This command removes the selected layer and any layers above it from the clipping mask.
- In the Layers panel, select any layer in the group except the base layer, and do one of the following:
 - Drag the layer below the base layer.
 - Drag it between two ungrouped layers in the image.

Release clipping masks

- 1 In the Layers panel, select any layer other than the base layer in the clipping mask.
- 2 Choose Layer > Release Clipping Mask.

Layer styles

About layer styles


Layer styles let you quickly apply effects to an entire layer. In the Effects panel, you can view a variety of predefined layer styles and apply a style with just a click of the mouse.



Three different layer styles applied to text

The boundaries of the effect are automatically updated when you edit that layer. For example, if you apply a drop shadow style to a text layer, the shadow changes automatically when you edit the text.

Layer styles are cumulative, which means that you can create a complex effect by applying multiple styles to a layer. You can apply one style from each style library per layer. You can also change a layer's style settings to adjust the final result.

When you apply a style to a layer, a style icon  appears to the right of the layer's name in the Layers panel. Layer styles are linked to the layer contents. When you move or edit the contents of the layer, the effects are modified correspondingly.

Once you choose Layer > Layer Style > Style Settings, you can edit the settings of a layer's style or apply other style settings or attributes available in the dialog box.

Lighting Angle Specifies the lighting angle at which the effect is applied to the layer.

Shadow Distance Specifies the distance of a drop shadow from the layer's content. You can also set the size and opacity with the sliders.

Outer Glow Size Specifies the size of a glow that emanates from the outside edges of the layer's content. You can also set the opacity with the slider.

Inner Glow Size Specifies the size of a glow that emanates from the inside edges of the layer's content. You can also set the opacity with the slider.

Bevel Size Specifies the size of beveling along the inside edges of the layer's content.

Bevel Direction Specifies the direction of the bevel, either up or down.

Stroke Size Specifies the size of the stroke.

Stroke Opacity Specifies the opacity of the stroke.

More Help topics

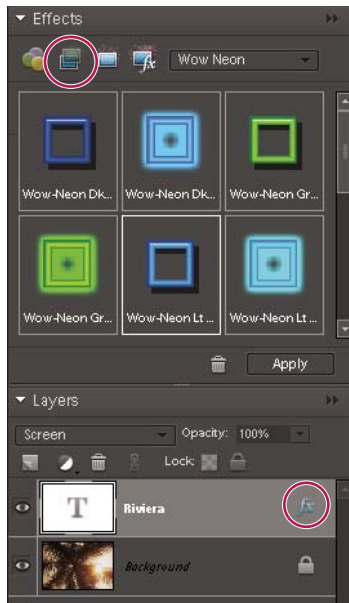
[“Using the Effects panel”](#) on page 173

Work with layer styles

You can apply special effects to a layer, hide or show the styles in a layer, and even change the scale of a layer style (for example, decrease or increase the size of a glow effect). It's easy to copy a style from one layer to another.

Apply a layer style

- 1 Select a layer in the Layers panel.
- 2 In the Effects panel, choose Layer Styles from the category menu.
- 3 Do any of the following:
 - Select a style, and click Apply.
 - Double-click a style.
 - Drag a style onto a layer.



A style icon indicates a layer style is applied to the layer.

If you don't like the result, press Command+Z to remove the style, or choose Edit > Undo.



You can also drag the style to the image, where it is applied to the selected layer.

Hide or show all layer styles in an image


❖ Choose one of the following:

- Layer > Layer Style > Hide All Effects.
- Layer > Layer Style > Show All Effects.

Edit a layer's style settings

You can edit a layer's style settings to adjust the effect. You can also copy style settings between layers and remove a style from a layer.

1 Do one of the following:

- Double-click the style icon  in the Layers panel.
- Choose Layer > Layer Style > Style Settings.

2 To preview the changes in your image, select Preview.

3 Adjust one or more of the layer style settings or add new ones, and click OK.

Change the scale of a layer style

1 In the Layers panel, select the layer containing style effects you want to scale.

2 Choose Layer > Layer Style > Scale Effect.

3 To preview the changes in your image, select Preview.

4 Specify how much you want to scale the effects. For example, if you are increasing the size of an outer glow, 100% is the current scale; 200% doubles the glow size. Then click OK.

Copy style settings between layers

- 1 In the Layers panel, select the layer containing the style settings you want to copy.
- 2 Choose Layer > Layer Style > Copy Layer Style.
- 3 Select the destination layer in the Layers panel, and choose Layer > Layer Style > Paste Layer Style.

Remove a layer style

- 1 In the Layers panel, select the layer containing the style you want to remove.
- 2 Choose Layer > Layer Style > Clear Layer Style.

Chapter 6: Camera raw files

You can process camera raw files from within Photoshop Elements and set certain values that are common to all image file formats (such as contrast, tonal range, and sharpness). After you process the raw image files, you can open the file, edit it, and then save it in any format supported by Photoshop Elements. By processing the raw files, which are like digital negatives, and then working on them in Photoshop Elements, you can experiment with your images while keeping the original “raw” files.

Processing camera raw image files

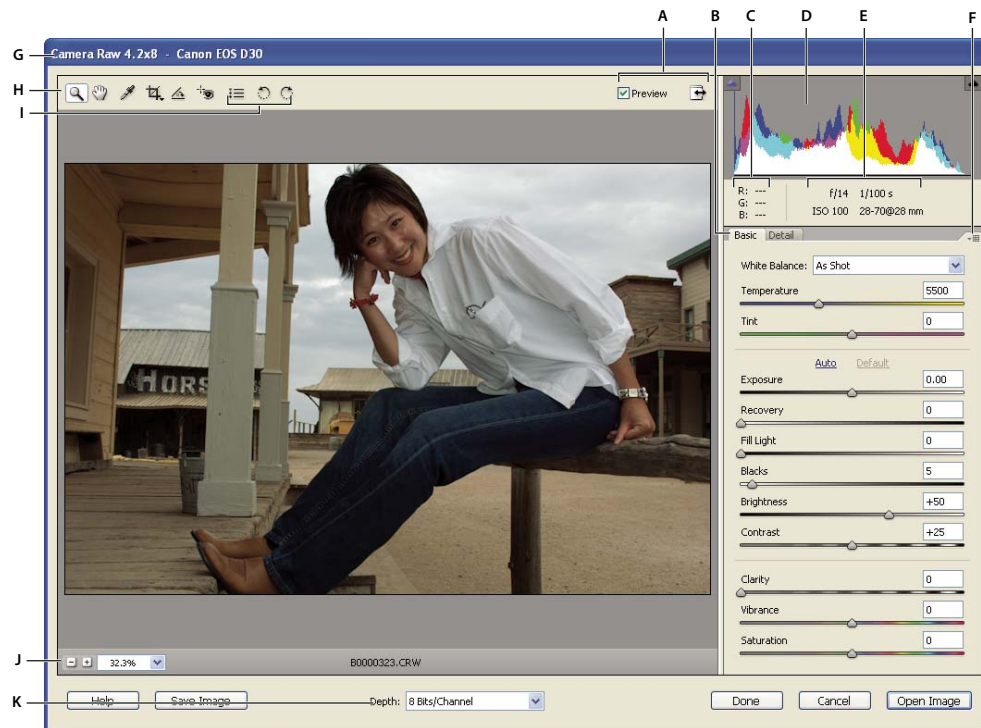
About camera raw image files

A camera raw file contains unprocessed picture data from a camera’s image sensor. Think of camera raw files as photo negatives. Many digital cameras can save raw format files. You can open a raw file in Photoshop Elements, process it, and save it, rather than relying on the camera to process the file. Working with camera raw files lets you set the proper white balance, tonal range, contrast, color saturation, and sharpness.

You can reprocess the file repeatedly to achieve the results you want. Photoshop Elements doesn’t save your changes to the original raw file; it saves the last settings you specified before importing the file from your camera to your computer.

After processing the raw image file using the features of the Camera Raw dialog box, you open the image in Photoshop Elements, where you can edit it in the same way that you edit any photo, such as fixing red eye or making color adjustments. Then, you can save the file in any format supported by Photoshop Elements. It’s best to use PSD.

To use raw files, you need to set your camera to save files in its own raw file format. When you download the files from the camera, they have file extensions like NEF, CRW, and so on. Photoshop Elements can open raw files only from supported cameras. Visit the Adobe website to view a list of supported cameras.



Camera Raw dialog box

A. View options B. Click the Basic or Detail tab to access different controls C. RGB values D. Histogram E. Image settings F. More menu
G. Camera and some EXIF information H. Tools I. Rotate buttons J. Zoom levels K. Bit depth options



Open and process camera raw files


- 1 Choose File > Open.
- 2 Browse to select one or more camera raw files, and click Open.

The histogram in the Camera Raw dialog box shows the tonal range of the image at the current settings. As you make settings adjustments, the histogram automatically updates.

- 3 (Optional) Adjust the image view using the controls, such as the Zoom tool, and options, such as Shadows and Highlights, which reveal clipping in the preview area. (See “[Camera raw controls](#)” on page 75.)

Note: Selecting Preview displays a preview of the image with the settings changes you make. Deselecting Preview displays the camera raw image at the original settings of the current tab combined with the settings in the hidden tabs.

- 4 To rotate the image 90° counter clockwise or 90° clockwise, click the Rotate Image buttons  .
- 5 To apply the settings used in the previous camera raw image or the default settings for your camera, choose an option from the Settings menu. Using the same options is useful, for example, if you want to quickly process images with similar lighting conditions. (See “[Set custom camera settings](#)” on page 76.)
- 6 (Optional) Set options to adjust the white balance. (See “[White balance controls for camera raw](#)” on page 77.)

 You can monitor the RGB values of pixels in your image as you adjust them in the Camera Raw dialog box. Position the Zoom tool, Hand tool, White Balance tool, or Crop tool over the preview image to display the RGB values directly beneath the pointer.

- 7 Make tonal adjustments using the Exposure, Shadow, Brightness, Contrast, and Saturation sliders. (See “[Tonal and image adjustments in camera raw files](#)” on page 78.)

To undo your manual adjustments and make the adjustments automatically, select Auto. To restore all options to their initial settings, press Option and click Reset.

Note: By default, Auto is always selected. To change this default, deselect one or more Auto options, click the triangle to the right of the Settings menu, and choose Save New Camera Raw Defaults.

8 Do one of the following:


- To open a copy of the camera raw image file (with the camera raw settings applied) in Photoshop Elements, click Open. You can edit the image and save it in a Photoshop Elements-supported format. The original camera raw file remains unaltered.
- To save the adjustments to a DNG file, click Save Image. (See “[Save changes to camera raw images](#)” on page 75.)
- To cancel the adjustments and close the dialog box, click Cancel.

Note: The Digital Negative (DNG) format is Adobe’s proposed standard format for camera raw files. DNG files are useful for archiving camera raw images because they contain the raw camera sensor data and data specifying how the image should look. Camera raw image settings can be stored in DNG files instead of in sidecar XMP files or the camera raw database.

Adjust sharpness in camera raw files

The Sharpness slider adjusts the image sharpness to provide the edge definition you want. The Sharpness adjustment is a variation of the Photoshop Unsharp Mask filter, which locates pixels that differ from surrounding pixels based on the threshold you specify and increases the pixels’ contrast by the amount you specify. When opening a camera raw file, the Camera Raw plug-in calculates the threshold to use based on the camera model, ISO, and exposure compensation. You can choose whether sharpening is applied to all images or just to previews.

- 1** Zoom the preview image to at least 100%.
- 2** Click the Details tab.
- 3** Move the Sharpness slider to the right to increase sharpening and to the left to decrease it. A value of zero turns off sharpening. In general, set the Sharpness slider to a lower value for cleaner images.

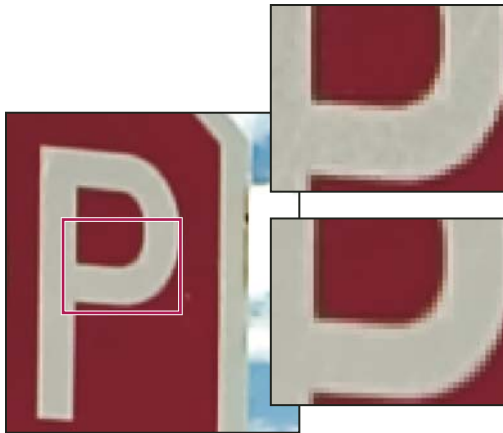
 If you don’t plan to edit the image extensively in Photoshop Elements, use the camera raw Sharpness slider. If you do plan to edit the image extensively in Photoshop Elements, turn off camera raw sharpening. Then use the sharpening filters in Photoshop Elements as the last step after all other editing and resizing is complete.

Reducing noise in camera raw images

The Detail tab in the Camera Raw dialog box contains controls for reducing image noise—the extraneous visible artifacts that degrade image quality. Image noise includes luminance (grayscale) noise, which makes an image look grainy, and chroma (color) noise, which is usually visible as colored artifacts in the image. Photos taken at high ISO speeds or with less sophisticated digital cameras can have noticeable noise.

Moving the Luminance Smoothing slider to the right reduces grayscale noise, and moving the Color Noise Reduction slider to the right reduces chroma noise.

When making Luminance Smoothing or Color Noise Reduction adjustments, it’s a good idea to preview images at 100% for a better view.



Moving the Luminance Smoothing slider to the right reduces grayscale noise.

Save changes to camera raw images

The Camera Raw dialog box lets you save changes you've made to a camera raw file. Be aware that saving the file does not open it in Photoshop Elements. (To open a camera raw file, just use the Open command, like you would with any other file. Then you can edit and save the file like any other image.)

- 1 In the Camera Raw dialog box, apply adjustments to one or more camera raw images.
- 2 Click the Save button.
- 3 In the Camera Raw Save Options dialog box, specify where to save the file and how to name the file if you're saving more than one camera raw file.
- 4 Click Save.

Open a camera raw image


After you process a camera raw image in the Camera Raw dialog box, you can open the image and edit it.


- 1 In the Camera Raw dialog box, apply adjustments to one or more camera raw images.
- 2 Click the Open Image button. The Camera Raw dialog box closes, and the photo opens.


Settings and controls


Camera raw controls


Zoom tool  Sets the preview zoom to the next preset zoom value when you click within the preview image. Option-click to zoom out. Drag the Zoom tool in the preview image to zoom in on a selected area. To return to 100%, double-click the Zoom tool.

Hand tool  Moves the image in the preview window if the preview image is set at a zoom level higher than 100%. Hold down the spacebar to access the Hand tool while using another tool. Double-click the Hand tool to fit the preview image in the window.

White Balance tool  Sets the area you click to a neutral gray tone to remove color casts and adjust the color of the entire image. The Temperature and Tint values change to reflect the color adjustment.

Crop tool  Removes part of an image. Drag the tool within the preview image to select the portion you want to keep, and then press Enter.

Straighten tool  You can use the Straighten tool to realign an image vertically or horizontally. This tool also resizes or crops the canvas to accommodate straightening the image.

Red Eye Removal  Removes red eye in flash photos of people and green or white eye in pets.

Open Preferences Dialog  Opens the preferences dialog.

Rotate buttons  Rotates the photo either counterclockwise or clockwise.

Set custom camera settings

When you open a camera raw file, Photoshop Elements reads information in the file to see which model of camera created it, and then applies the appropriate camera settings to the image. If you are always making similar adjustments, you can change the default settings of your camera. You can also change settings for each model of camera you own, but not for multiple cameras of the same model.

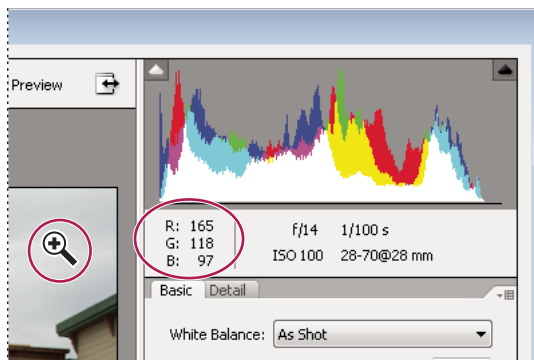
- 1 Open a camera raw file and adjust the image.
- 2 To save the current settings as the default for the camera that created the image, click the triangle next to the Settings menu and choose Save New Camera Raw Default.
- 3 To use the Photoshop Elements default settings for your camera, click the triangle next to the Settings menu and choose Reset Camera Raw Default.

Color and camera raw

Using the histogram and RGB values in camera raw

The Camera Raw histogram shows all three channels (red, green, and blue) of the image simultaneously. The histogram changes automatically as you adjust the settings in the Camera Raw dialog box.

As you move the Zoom tool, Hand tool, or White Balance tool over the preview image, you see the RGB values in the upper-right corner of the dialog box.



RGB values of an image

White balance controls for camera raw

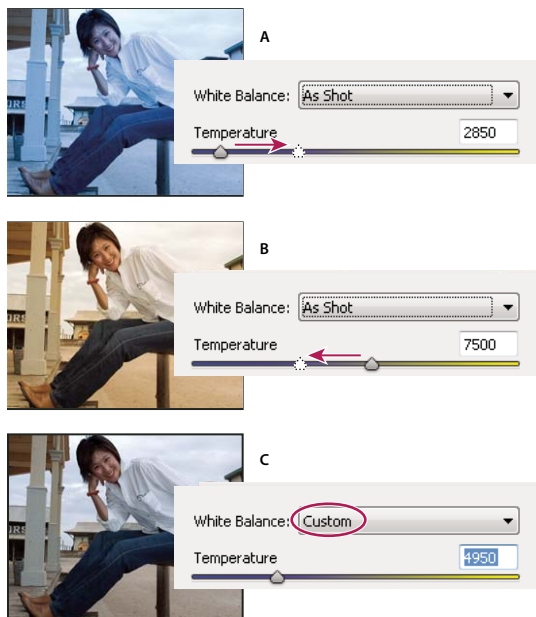
A digital camera records the white balance at the time of exposure as metadata, which you can see when you open the file in the Camera Raw dialog box. This setting usually yields the correct color temperature. You can adjust it if the white balance is not quite right.

The Adjust tab in the Photoshop Camera Raw dialog box includes the following three controls for correcting a color cast in your image:

White Balance Sets the color balance of the image to reflect the lighting conditions under which the photo was taken. In some cases, choosing a white balance from the White Balance menu provides satisfactory results. In many cases, you may want to customize the white balance using the Temperature and Tint adjustments.

***Note:** The Camera Raw plug-in can read the white balance settings of some cameras. Leave White Balance set to As Shot to use the camera's white balance settings. For cameras whose white balance settings are not recognized, selecting As Shot is the same as choosing Auto: the Camera Raw plug-in reads the image data and automatically adjusts the white balance.*

Temperature Fine-tunes the white balance to a custom color temperature. Set the color temperature using the Kelvin color temperature scale. Move the slider to the left to correct a photo taken at a lower color temperature of light: the plug-in makes the image colors cooler (bluish) to compensate for the lower color temperature (yellowish) of the ambient light. Conversely, move the slider to the right to correct a photo taken at a higher color temperature of light: the plug-in makes the image colors warmer (yellowish) to compensate for the higher color temperature (bluish) of the ambient light.



Correcting the white balance

A. Moving the Temperature slider to the right corrects a photo taken at a higher color temperature of light. B. Moving the Temperature slider to the left corrects a photo taken at a lower color temperature of light. C. Photo after the color temperature has been adjusted.

Tint Fine-tunes the white balance to compensate for a green or magenta tint. Move the slider to the left (negative values) to add green to the photo; move it to the right (positive values) to add magenta.

💡 To adjust the white balance quickly, select the White Balance tool, and then click an area in the preview image that should be a neutral gray or white. The Temperature and Tint sliders automatically adjust to make the selected color exactly neutral (if possible). If you're clicking whites, choose a highlight area that contains significant white detail rather than a specular highlight.



Using White Balance to click a neutral white area, and resulting correction

Tonal and image adjustments in camera raw files

Exposure Adjusts the brightness or darkness of an image. Move the slider to the left to darken the image; move it to the right to brighten the image. The values are in increments equivalent to f-stops. An adjustment of +1.50 is similar to widening the aperture one and one-half stops. Likewise, an adjustment of -1.50 is similar to reducing the aperture one and one-half stops.

💡 *Hold down Option while moving the Exposure slider to preview where the highlights are clipped. (Clipping is the shifting of pixel values to either the highest highlight value or the lowest shadow value. Clipped areas are either completely white or completely black and have no image detail.) Move the slider until the highlights (not specular highlights) are completely clipped, and then reverse the adjustment slightly. Black indicates unclipped areas, and color indicates areas clipped in only one or two channels.*



Hold down Option while moving the Exposure slider to show clipped highlights.

Recovery Attempts to recover details from highlights. Camera Raw can reconstruct some details from areas in which one or two color channels are clipped to white.

Fill Light Attempts to recover details from shadows, without brightening blacks. Camera Raw can reconstruct some details from areas in which one or two color channels are clipped to black. Using Fill Light is similar to using the shadows portion of the Photoshop Shadow/Highlight filter or the After Effects Shadow/Highlight effect.

Blacks Specifies which input levels are mapped to black in the final image. Increasing Blacks expands the areas that are mapped to black. This sometimes creates the appearance of increased contrast in the image. The greatest change is in the shadows, with less change in the midtones and highlights. Using the Blacks slider is similar to using the black point slider for input levels when using the Photoshop Levels command or the After Effects Levels effect.

Brightness Adjusts the brightness of the image, much as the Exposure slider does. However, instead of clipping the image in the highlights (areas that are completely white, with no detail) or shadows (areas that are completely black,

with no detail), Brightness compresses the highlights and expands the shadows when you move the slider to the right. In general, use the Brightness slider to adjust the overall brightness after you set the white and black clipping points with the Exposure and Shadow sliders.

Contrast Adjusts the midtones in an image. Higher values increase the midtone contrast, and lower values produce an image with less contrast. Generally, use the Contrast slider to adjust the contrast of the midtones after setting the Exposure, Shadow, and Brightness values.

Clarity Sharpens the clarity of edges in the image. This process helps restore detail and sharpness that tonal adjustments may reduce.

Vibrance Adjusts the saturation so that clipping is minimized as colors approach full saturation, changing the saturation of all lower-saturated colors with less impact on the higher-saturated colors. Vibrance also prevents skin tones from becoming oversaturated.

Saturation Adjusts the color saturation of the image from –100 (pure monochrome) to +100 (double the saturation).

Sharpening Sharpening enhances the definition of edges in an image. Additional controls are available in the Detail panel. The zoom level must be set to 100% or greater in order to view the effects of these controls.

- **Amount:** Adjusts edge definition. Increase the Amount value to increase sharpening. A value of zero turns off sharpening. In general, set Amount to a lower value for cleaner images. The adjustment locates pixels that differ from surrounding pixels based on the threshold you specify and increases the pixels' contrast by the amount you specify.
- **Radius:** Adjusts the size of the details that sharpening is applied to. Photos with very fine details may need a lower radius setting. Photos with larger details may be able to use a larger radius. Using too large a radius generally results in unnatural results.
- **Detail:** Adjusts how much high-frequency information is sharpened in the image and how much the sharpening process emphasizes edges. Lower settings primarily sharpen edges to remove blur. Higher values are useful for making the textures in the image more pronounced.
- **Masking:** Controls an edge mask. At a setting of zero, everything in the image receives the same amount of sharpening. At a setting of 100, sharpening is mostly restricted to areas near the strongest edges.

Noise Reduction Adjusts the color saturation of the image from –100 (pure monochrome) to +100 (double the saturation).

- **Luminance:** Adjusts grayscale noise.
- **Color:** Adjusts chroma noise.

Chapter 7: Selecting parts of an image

A *selection* defines the editable area in a photo (for example, you might want to lighten one part of a photo without affecting the rest). You can make a selection with either a selection tool or a selection command. A selection border, which you can hide, surrounds the selection. You can change, copy, or delete pixels inside the selection border, but you can't touch areas outside the selection border until you deselect the selection.

Making selections

About selections

Photoshop Elements contains several selection tools that suit different kinds of selections. For example, the Elliptical Marquee tool selects circular and elliptical areas, and the Magic Wand tool can select an area of similar colors with one click. More complex selections can be made with one of the Lasso tools. You can even smooth the edges of a selection with feathering and anti-aliasing.

Note: Selections are limited to the active layer—to make changes to all layers at once, you first need to flatten the image.



Selection made with Elliptical Marquee tool, color adjusted in selected area

More Help topics



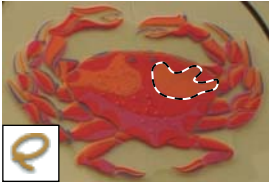





[“Flatten an image”](#) on page 60

[“Define a feathered edge for a selection tool”](#) on page 93

[“Smooth the edges of a selection by anti-aliasing”](#) on page 93

About the selection tools

The selection tools are located in the Tools panel, which is located, by default, on the left side of your screen.

 Rectangular Marquee tool Draws square or rectangular selection borders.	 Elliptical Marquee tool Draws round or elliptical selection borders.	 Lasso tool Draws freehand selection borders. This tool is great for making very precise selections.
 Polygonal Lasso tool Draws multiple straight-edged segments of a selection border.	 Magnetic Lasso tool Draws a selection border that automatically snaps to edges you drag over in the photo.	 Magic Wand tool Selects pixels of similar color with one click.
 Quick Selection tool Quickly and automatically makes selection based on color and texture when you click or click-drag an area.	 Selection Brush tool Automatically selects or deselects the area you paint, depending on whether you're in selection or mask mode.	



Use the Rectangular and Elliptical Marquee tools

The Rectangular Marquee tool draws square or rectangular selection borders, and the Elliptical Marquee tool draws round or elliptical selection borders.




Rectangular and Elliptical Marquee tool options

A. Rectangular Marquee tool B. Elliptical Marquee tool C. New selection D. Add to selection E. Subtract from a selection F. Intersect with a selection

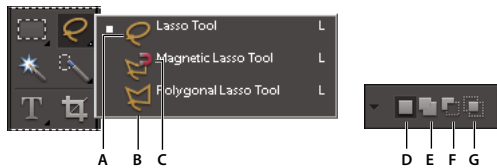
- 1 Select the Rectangular Marquee tool  or the Elliptical Marquee tool  in the toolbox.
- 2 (Optional) Set marquee tool options in the options bar located above your image:
 - Specify whether to create a new selection, add to a selection, subtract from a selection, or select an area intersected by other selections.
 - To soften the selection border so that it blends into the area outside the selection, enter a Feather value.

- To smooth the edges of your selection, select Anti-aliased (Elliptical Marquee tool only).
 - From the Mode pop-up menu, choose Normal to visually set the size and proportions of the selection border; Fixed Ratio to set a width-to-height ratio for the selection border; or Fixed Size to specify the marquee's height and width.
- 3 Drag over the area you want to select. Hold down the Shift key as you drag to constrain the selection marquee to a square or circle.

 To reposition a marquee tool selection border, click the border, hold down the spacebar as you drag with the selection tool. Release the mouse once the selection border is in the correct area.





Use the Lasso tool

The Lasso tool draws freehand selection borders. This tool lets you make very precise selections.



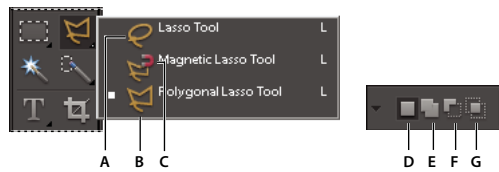
Lasso tool options

A. Lasso tool B. Polygonal Lasso tool C. Magnetic Lasso tool D. New selection E. Add to selection F. Subtract from selection G. Intersect with selection


- 1 Select the Lasso tool  from the toolbox.
- 2 (Optional) Set Lasso tool options in the options bar located above your image:
 - Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
 - To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
 - To smooth the edges of your selection, select Anti-aliased.
- 3 Drag to draw a freehand selection border:
 - To add to the selection, release the mouse button; then press Shift and, when the pointer changes to , drag.
 - To subtract from the selection, release the mouse button; then press Option and when the pointer changes to , drag.
 - To add straight-edge segments, press Option (while pressing the mouse); then release the mouse button and, when the pointer changes to , click where you want to position the end of the segment.
- 4 To close the selection border, release the mouse button. A straight selection segment is drawn from where you released the mouse button to the starting point of your selection.

Use the Polygonal Lasso tool

The Polygonal Lasso tool draws straight-edged segments of a selection border. You can create as many segments as you need to draw a selection border.

Selecting parts of an image*Polygonal Lasso tool options*


A. Lasso tool **B.** Polygonal Lasso tool **C.** Magnetic Lasso tool **D.** New selection **E.** Add to selection **F.** Subtract from selection **G.** Intersect with selection

- 1 Select the Polygonal Lasso tool  from the toolbox.
- 2 (Optional) Set Polygonal Lasso tool options in the options bar located above your image:
 - Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
 - To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
 - To smooth the edges of your selection, select Anti-aliased.
- 3 Click where you want the first straight segment to begin, and click a second time where you want the segment to end and the next one to begin. Continue clicking to create segments.

If you make a mistake, press the Delete key to erase segments. You can switch from creating straight-edge segments to drawing freehand by pressing Option.

- 4 Close the selection border by doing one of the following:
 - Position the pointer over the starting point and click. A closed circle appears next to the pointer when you are over the starting point.
 - If the pointer is not over the starting point, double-click, or Command-click. A straight selection segment is drawn from your pointer to the starting point of your selection.

Use the Magnetic Lasso tool

The Magnetic Lasso tool draws a selection border that automatically snaps to the edges of objects you drag over in the photo. This makes it easy to draw precise selection borders. The Magnetic Lasso tool  is useful for quickly selecting objects with complex edges set against high-contrast backgrounds.

*Magnetic Lasso tool options*

A. Lasso tool **B.** Polygonal Lasso tool **C.** Magnetic Lasso tool **D.** New selection **E.** Add to selection **F.** Subtract from selection **G.** Intersect with selection


- 1 Select the Magnetic Lasso tool from the toolbox.

To switch between the Magnetic Lasso and other lasso tools when the Magnetic Lasso tool is selected, do one of the following:

- To activate the Lasso tool, Option-drag. Or press L on the key board.
- To activate the Polygonal Lasso tool, Option-click. Or press L on the key board.

2 (Optional) Set Magnetic Lasso tool options in the options bar located above your image:

- Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased.
- To specify the area of edge detection, enter a pixel value between 1 and 256 for Width. The tool detects edges only within the specified distance from the pointer.

 To change the Magnetic Lasso pointer so that it indicates the area of edge detection (the Width value), press the Caps Lock key.

- To specify the Magnetic Lasso tool's sensitivity to edges in the photo, enter a value between 1% and 100% for Edge Contrast. A higher value detects only edges that contrast sharply with their surroundings; a lower value detects lower-contrast edges.
- To specify the rate at which the Magnetic Lasso tool sets fastening points, enter a value between 0 and 100 for Frequency. A higher value anchors the selection border in place more quickly.

3 Add segments of a selection border by doing one of the following:

- Click points along the edge.
- Drag along the edge while pressing the mouse button.

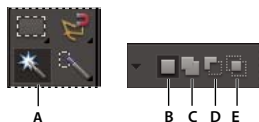
The selection border snaps to the edge in the photo. If the border doesn't snap to the desired edge, click once to add a point manually; then continue tracing the border and clicking points as needed. If you make a mistake, press the Delete key to erase points along the border.

4 Close the selection border by doing one of the following:

- To close the border manually, drag back over the starting point and click. A closed circle appears next to the pointer when you are over the starting point.
- To close the border with a freehand magnetic segment, double-click or press Enter.
- To close the border with a straight segment, double-click while pressing Option.


Use the Magic Wand tool

The Magic Wand tool selects pixels within a similar color range with one click. You specify the color range, or tolerance, for the Magic Wand tool's selection. Use the Magic Wand tool when you have an area of similar colors, like a blue sky.



Magic Wand tool options

A. Magic Wand tool B. New selection C. Add to selection D. Subtract from selection E. Intersect with selection

1 Select the Magic Wand tool .

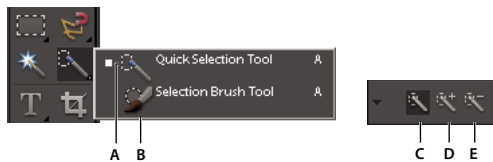
2 (Optional) Set Magic Wand tool options in the options bar located above your image:

- For Tolerance, enter a value between 0 to 255. Enter a low value to select colors very similar to the pixel you click, or enter a higher value to select a broader range of colors.
- To define a smooth selection edge, select Anti-aliased.

- To select only adjacent areas using the same colors, select Contiguous. When this option is deselected, pixels using the same colors are selected throughout the entire photo.
 - To select colors using data from all the visible layers, select Sample All Layers. When this option is deselected, the Magic Wand tool selects colors from only the active layer.
- 3 In the photo, click the color you want to select.
 - 4 To add to the selection, Shift+click unselected areas. To remove an area from the selection, Option+click the area you want to remove.


Use the Quick Selection tool

The Quick Selection tool makes a selection based on color and texture similarity when you click or click-drag the area you want to select. The mark you make doesn't need to be precise, because the Quick Selection tool automatically and intuitively creates a border.






Quick Selection / Selection Brush tool options

A. Quick Selection tool B. Selection Brush tool C. New selection D. Add to selection E. Subtract from selection

- 1 Select the Quick Selection tool .
- 2 In the options bar, choose one of the following:
New Selection Lets you draw a new selection. This option is selected by default.
Add To Selection Lets you add to an existing selection.
Subtract From Selection Lets you subtract from an existing selection. This option is only available after you make a selection.
- 3 Choose a brush from the Brush Picker in the options bar. If you want to select a large area, you can use a larger brush. For more precise selections, choose a smaller brush size.
- 4 Click or click-drag over the area that covers the range of colors in the object you want to select, and then release the mouse button.

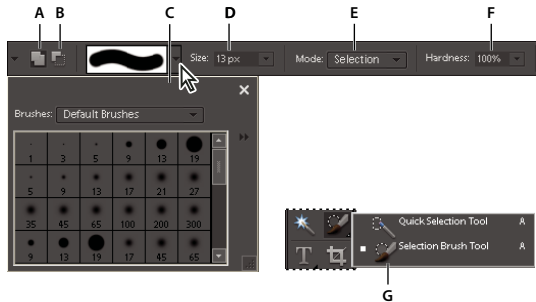
The selection border appears.

- 5 Do any of the following to refine the selection:
 - To add to the selection, click the Add To Selection button  in the options bar, and click or click-drag across the area you want to add.
 - To remove an area from the selection, click the Subtract From Selection button  in the options bar, and click or click-drag across the area you want to subtract from the selection.
 - To start a new selection, click the New Selection brush  in the options bar, and click or draw to specify the new selection area.

Use the Selection Brush tool




The Selection Brush tool makes selections two ways: you can paint over the area you want to select in Selection mode, or you can paint over areas you don't want to select using a semiopaque overlay in Mask mode.

You can first make a rough selection with a marquee tool, Quick Selection Brush, or other selection tool, and then fine-tune your selection with the Selection Brush tool. You can add to the selection using the Selection Brush tool in Selection mode, or subtract from it in Mask mode.



Selection Brush tool options

A. Add to selection B. Subtract from selection C. Brush pop-up panel D. Brush size E. Mode F. Hardness G. Selection Brush tool

- 1 Select the Selection Brush tool  from the toolbox. You may need to click the Quick Selection tool in the toolbox and select the Selection Brush from the list of hidden tools that appears.
- 2 By default, the tool is set to Add To Selection . To subtract from the selection, click Subtract From Selection  in the options bar.
- 3 (Optional) Set Selection Brush tool options in the options bar located above your image:
 - Choose a brush from the brush presets pop-up panel.
 - Specify the brush size.
 - Choose Selection (to add to the selection) or Mask (to subtract from the selection) from the Mode menu.
 - Set the brush tip's hardness to a value between 1% and 100%.



If you use a soft-edged brush with the Selection Brush tool, changing the Mode option to Mask can help you see the soft edges of the selection.

- When using Mask mode, specify an Overlay Opacity between 1% and 100%.
 - When using Mask mode, click the Overlay Color swatch and select a color in the Color Picker to set the mask color. This is useful when the mask color (Overlay Color) is too similar to the colors in the photo.
- 4 Draw in your photo to select or deselect areas.

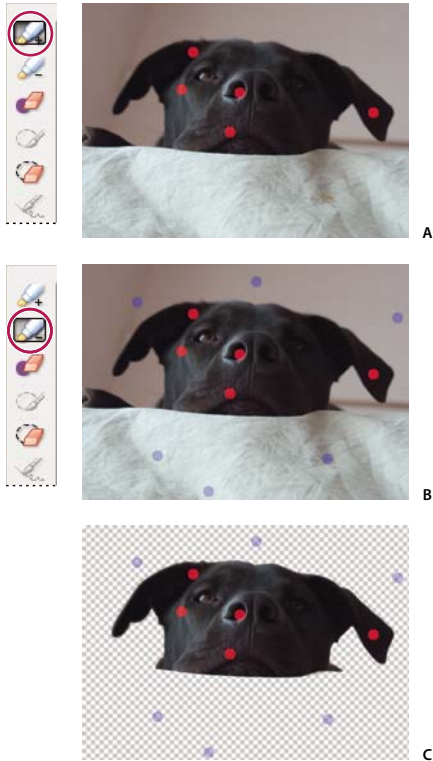


Adding to a selection while in Selection mode (left), and subtracting from a selection while in Mask mode (right)

Use the Magic Extractor

Use the Magic Extractor to make accurate selections based on the appearance of foreground and background areas that you specify. You can specify these areas by placing colored marks in the areas you want to select. After you mark the areas and close the dialog box, only the foreground area appears in the photo.

The Magic Extractor makes it easy to select people or objects so that you can superimpose them on other backgrounds. For example, you can remove yourself from a photo of you on your bicycle at home, and superimpose it on a photo of cyclists in the Tour de France. You can save the extracted image as a file that you can use again and again.





Using the Magic Extractor



A. Area you want to extract marked with red dots B. Background marked with blue dots C. Extracted image

- 1 Open the photo containing the object you want to extract.
- 2 To limit what appears in the Magic Extractor dialog box, make a preliminary selection using the Oval or Rectangular selection tool.
- 3 Choose Image > Magic Extractor.

The Magic Extractor dialog box opens with the Foreground Brush tool  selected by default.

- 4 Click multiple times or draw lines to mark the area you want to extract.
- 5 Click the Background Brush tool  and click multiple times or draw lines to mark the area that you do not want included in your selection.

 *When selecting objects with varied colors and textures, drag across all the colors and textures to ensure a more accurate selection.*

- 6 To help mark your selection, use the Zoom tool  or the Hand tool  to magnify and navigate around the photo. Press Option as you use the Zoom tool to zoom out.
- 7 To specify a different brush size or color, do any of the following:
 - Choose a new size from the Brush Size menu.
 - Click the Foreground Color or Background Color swatch, choose a new color in the Color Picker, and then click OK.
- 8 Click Preview to see the current selection.






9 To specify preview settings, do any of the following:

- To change what is displayed in the preview area, choose either Selection Area or Original Photo from the Display menu. Or press the X key on your keyboard to switch between the two views.
- To specify a different background, choose an option from the Background menu.

10 Do any of the following to fine-tune the selection, and then preview the results again:

- To add to or subtract from the selection, draw more dots or lines using either the Foreground or Brush tool.

Note: When you change the foreground or background color, the related brush tool becomes active.

- To erase foreground or background dots, select the Point Eraser tool  and click or drag over the marks you want to remove.
- To add areas to a selection, select the Add To Selection tool , and click or drag over the area you want to add.
- To remove areas from the selection, select the Remove From Selection tool  and drag over the areas you want to remove.
- To smooth the edges of your foreground selection, select the Smoothing Brush tool  and drag over the areas you want to smooth.
- To soften the edges of your selection, specify a higher value in the Feather box.
- To fill remaining holes in the main selection, click Fill Holes.
- To separate and remove an area from the main selection, select the Remove From Selection Tool  and drag a line between the main selection and the area you want to remove. Then click Fill Holes.
- To remove fringe colors left between the foreground and background, click Defringe. To increase or decrease the amount of fringe removed, specify a value from the Defringe Width menu.

11 Click OK to extract the selected areas. If you want to start over, click Reset to remove all marks.

Delete a selected area

If you delete a selection on a Background layer or a layer that uses the Lock Transparency option, the selected area is replaced with the background color or checkerboard background pattern.

❖ Do any of the following:

- Choose Edit > Delete to remove the selection. (If you delete a selection by mistake, you can choose Edit > Undo to get it back.)
- Press the Backspace or Delete key to remove the selection.
- Choose Edit > Cut to cut the selection to the Clipboard. You can then paste it elsewhere.

More Help topics

[“Understanding layers”](#) on page 49

[“Lock or unlock a layer”](#) on page 54

Select and deselect areas using commands

1 Do any of the following:

- To select all pixels in a layer, select the layer in the Layers panel and choose Select > All.
- To deselect selections, choose Select > Deselect. This is the safest way to deselect the area.



- To reselect the most recent selection, choose Select > Reselect.
- 2 To show or hide selection borders, choose View > Selection.

Note: You can also deselect by clicking anywhere in the photo outside the selected area. However, you might accidentally make further selections if you're using a selection tool that selects based on clicking, such as the Magic Wand tool.

Modifying selections

Move a selection border

Moving a selection border repositions just the border without altering the photo.

- 1 Using any selection tool, click New Selection  in the options bar, and position the pointer inside an existing selection border. The pointer changes to indicate that you can move the selection .

Note: The New Selection option appears in the options bar when any selection tool is selected—except the Selection Brush tool. Switch to another selection tool temporarily, if necessary, to select this option.

- 2 Do one of the following:
- Drag the border to enclose a different area of the photo. You can drag a selection border beyond the canvas boundaries; however, this makes it hard to get back. You can also drag the selection border to another image window.
 - To move the selection in 1-pixel increments, use an arrow key.
 - To move the selection in 10-pixel increments, hold down Shift, and use an arrow key.
 - To constrain the direction to multiples of 45°, begin dragging, and then hold down Shift as you continue to drag.


More Help topics

[“Move a selection”](#) on page 94

Invert a selection



Inverting a selection changes the unselected areas into selected areas, protecting the area you previously selected.

- ❖ In a photo with an existing selection border, choose Select > Inverse.

 You can use this command to easily select an object that appears against a solid-colored area. Select the solid color using the Magic Wand tool, and then choose Select > Inverse.

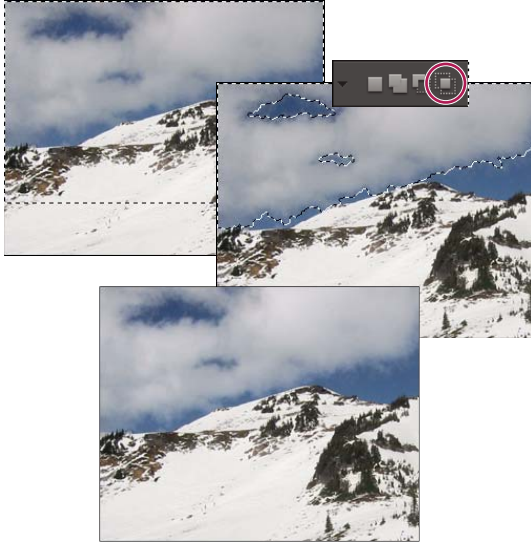
Add to or subtract from a selection

You can add to or subtract from an existing selection to fine-tune selection borders. For example, you could make a donut-shaped selection by first making a circular selection and then subtracting a circular selection within it.


- ❖ Select a selection tool, and do one of the following:
- Hold down Shift (a plus sign appears next to the pointer) to add to the selection, or hold down Option (a minus sign appears next to the pointer) from a selection. Then select the area to add or subtract and make another selection.
 - Click Add To Selection  or Subtract From Selection  in the options bar, and make another selection. (The Add To Selection and Subtract From Selection options appear in the options bar when any selection tool is selected.)

Select an area that intersects an existing selection

You can limit the area a selection affects. For example, in a picture of snow-capped mountains, you can select white clouds in the sky without selecting parts of the white mountain below them by selecting the entire sky, and then using the Magic Wand tool with Intersect With Selection selected and Contiguous deselected to select only the white areas included within the existing sky selection.



Selecting the sky and top of mountains with the Rectangular Marquee tool (top). Selecting the Intersect With Selection option and using the Magic Wand tool to select the clouds (middle). Resulting image after increasing the brightness of the clouds (bottom).

- ❖ Select a selection tool, and do one of the following:
 - Select Intersect With Selection  in the options bar, and select an area that intersects the existing selection.
 - Hold down Option+Shift so that cross hairs appear next to the pointer, and select an area that intersects the existing selection.

Expand or contract a selection by a specific number of pixels

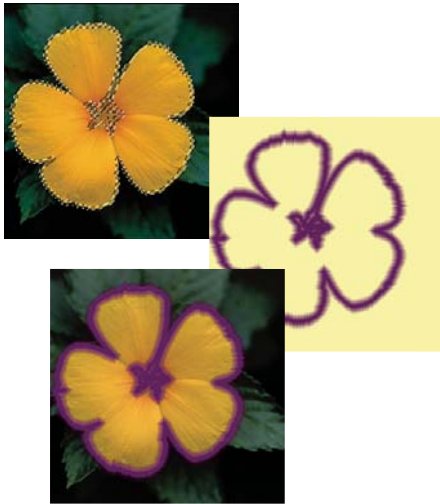
You can use commands in the Select menu to increase or decrease the size of an existing selection and to clean up stray pixels left inside or outside a color-based selection.

- 1 Use a selection tool to make a selection.
- 2 Choose Select > Modify > Expand or Contract.
- 3 For Expand By or Contract By, enter a pixel value between 1 and 100, and click OK.

The selection border is moved outward or inward by the specified number of pixels. Any portion of the selection border that runs along the canvas edge is unaffected.

Frame an existing selection with a new selection border

The Border command creates a soft-edged, anti-aliased selection border. When you add the new selection border, only pixels between the two selection borders are selected.



Using the Border command to create a 4-pixel border selection (top). Copying the selection to a new layer and filling to make an outline of the image (center). Filling the selection into the original image to create an outline around the image (bottom).

- 1 Use a selection tool to make a selection.
- 2 Choose Select > Modify > Border.
- 3 Enter a value between 1 and 200 pixels in the Width text box, and click OK.

More Help topics

[“Blur the edges of a selection by feathering”](#) on page 93

Include areas of similar color in a selection

- 1 Make a selection with a selection tool and do one of the following:
 - Choose Select > Grow to include all adjacent pixels falling within the tolerance range specified in the options bar. (You may have to switch to a selection tool that includes a tolerance range, such as the Magic Wand tool.) A higher Tolerance value adds a broader range of colors.
 - Choose Select > Similar to include pixels throughout the photo, not just adjacent ones, that fall within the tolerance range.
- 2 To increase the selection incrementally, choose either command multiple times.

Note: You cannot use the Grow and Similar commands on photos in bitmap mode.

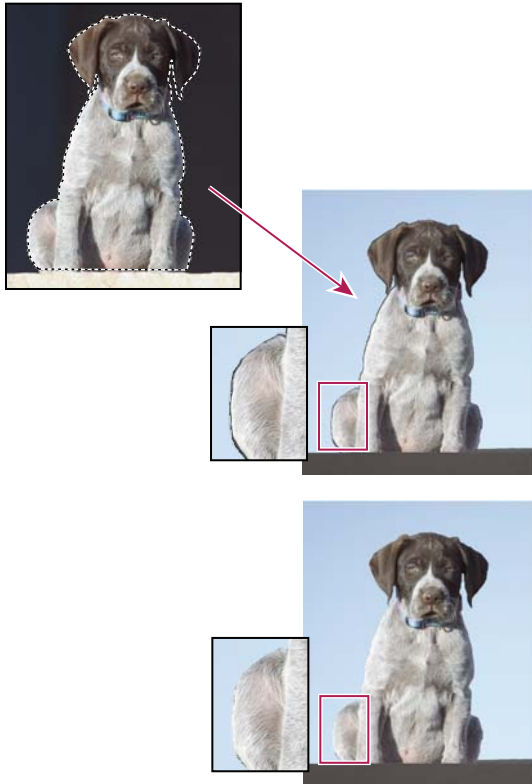
Remove stray pixels from a color-based selection

The Smooth command searches around each selected pixel for other pixels within the specified color range and selects them.

- 1 Make a selection with a selection tool and choose Select > Modify > Smooth.
- 2 For Sample Radius, enter a pixel value between 1 and 100, and click OK.

Defringe a selection

When you move or paste a selection, some of the pixels surrounding the selection border are included with the selection. These extra pixels can result in a fringe or halo around the edges of the selection. The Defringe Layer command replaces the color of any fringe pixels with the colors of nearby pixels containing pure colors (those without background color). For example, if you select a yellow object on a blue background and then move the selection, some of the blue background is moved with the object. Defringe Layer replaces the blue pixels with yellow pixels.



Dog selected and copied to a new image where artifacts from the dark background are visible (top). Image after using the Defringe Layer command (bottom).

- 1 Copy and paste a selection into a new or existing layer.
- 2 Choose Enhance > Adjust Color > Defringe Layer.
- 3 In the Defringe dialog box, type the number of pixels you'd like to replace around the object. A value of 1 or 2 should be sufficient.
- 4 Click OK.

Smoothing selection edges with anti-aliasing and feathering

Smooth the edges of a selection by anti-aliasing

You can smooth the hard edges of a selection by anti-aliasing or feathering. Anti-aliasing smooths the jagged edges of a selection by softening the color transition between edge pixels and background pixels. Because only the edge pixels change, no detail is lost. Anti-aliasing is useful when cutting, copying, and pasting selections to create composite images.

You can select anti-aliasing with the Lasso, Polygonal Lasso, Magnetic Lasso, Elliptical Marquee, and Magic Wand tools. To anti-alias, you must select the Anti-Alias option before making the selection; you cannot add anti-aliasing to an existing selection.

- 1 Select the Lasso, Polygonal Lasso, Magnetic Lasso, Elliptical Marquee, or Magic Wand tool.
- 2 Select Anti-aliased in the options bar.
- 3 Make a selection in the image window.

Blur the edges of a selection by feathering

- ❖ You can smooth the hard edges of a selection by feathering. Feathering blurs edges by building a transition between the selection and surrounding pixels. This blurring can cause some loss of detail at the edge of the selection.

You can create a feathered selection with the Elliptical Marquee, Rectangular Marquee, Lasso, Polygonal Lasso, or Magnetic Lasso tool. You can also add feathering to an existing selection by using the Select menu. Feathering effects are apparent when you move, cut, copy, or fill the selection.



Original image (left), and after making a feathered selection, applying the Inverse command, and filling with white (right)

Define a feathered edge for a selection tool

- 1 Do one of the following:
 - Select any of the lasso or marquee tools from the toolbox, and enter a Feather value in the options bar to define the width of the feathering. The feathering begins at the selection border.
 - Select the Selection Brush tool, and select a soft-edged brush from the brushes pop-up panel in the options bar.
- 2 Make a selection in the image window.


Define a feathered edge for an existing selection

- 1 Use a selection tool from the toolbox to make a selection.

- 2 Choose Select > Feather.
- 3 Type a value between .2 and 250 in the Feather Radius text box, and click OK. The feather radius defines the width of the feathered edge.


Moving and copying selections


Move a selection

The Move tool  lets you cut and drag a pixel selection to a new location in the photo. You can also use the tool to move or copy selections between photos and between photos in other applications.




Moving a selection from one photo into another using the Move tool

 To activate the Move tool when another tool is selected, hold down the Command key. (This technique does not work with the Hand tool.)

- 1 Make a selection with a selection tool and select the Move tool  from the toolbox.
- 2 (Optional) Change Move tool settings in the options bar.
- 3 Move the pointer inside the selection border, and drag the selection to a new position. If you've selected multiple areas, all pixel selections move as you drag.

Move tool options

When you select the Move tool , you can change the following settings in the options bar:

Auto Select Layer Selects the topmost layer that has pixels under the Move tool, rather than the selected layer.

Show Bounding Box Displays the bounding box around the selected item. The boxes on the sides and corners of the selection border allow you to resize the selection.

Show Highlight On Rollover Highlights individual layers as the mouse hovers over the image. Click on a highlighted layer to select and move it. Layers that are already selected do not highlight on rollover.

Arrange menu Moves the selected layer in front, in between, or in back of other layers. Options include Bring To Front, Bring Forward, Send Backward, and Send To Back. To arrange a layer, select the layer, and then choose an item from the Arrange menu.

Align menu Aligns the selected layers. Options include aligning on the Left, Center, Right, Top, Middle, and Bottom. Multiple layers can be aligned simultaneously. To align layers, select a layer, hold down Shift, select another layer, and then choose an item from the Align menu.

Distribute menu Spaces selected layers apart. Options include spacing on the Left, Center, Right, Top, Middle, and Bottom. Multiple layers can be spaced simultaneously. To space layers apart, select a layer, hold down Shift, select another layer, and then choose an item from the Distribute menu.

Copying selections or layers

You can copy and paste selections using the Move tool or the Copy, Copy Merged, Cut, Paste, or Paste Into Selection commands in the Edit menu.


Keep in mind that when a selection or layer is pasted between photos 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 to make the source and destination photos the same resolution before copying and pasting.

Selections that you cut or copy are stored in the Clipboard. Only one selection is stored in the Clipboard at a time.

When you exit Photoshop Elements, anything in the Clipboard is lost unless Export Clipboard is selected in the General Preferences.

Copy selections with the Move tool

When copying between photos, drag the selection from the active image window into the other image window. A border highlights the image window when you can drop the selection into it.

- 1 Select the part of the image you want to copy.
- 2 Select the Move tool  from the toolbox.
- 3 Press the Option key while dragging the selection you want to copy and move.
- 4 To make additional copies of the same selection, do one of the following:
 - Hold down the Option key while dragging the selection to each new location.
 - To offset the duplicate by 1 pixel, hold down the Option key, and press an arrow key. (This moves the pixels and copies the pixels, creating a blur effect.)
 - To offset the duplicate by 10 pixels, press Option+Shift and press an arrow key. (This moves the pixels rather than copies them.)

Copy a selection using commands

- 1 Use a selection tool to select the area you want to copy.
- 2 Do one of the following:
 - Choose Edit > Copy to copy the selection to the Clipboard.
 - Choose Edit > Copy Merged to copy all layers in the selected area to the Clipboard.

When you exit Photoshop Elements, anything in the Clipboard is lost unless Export Clipboard is selected in the General Preferences.

Paste one selection into another

You can use the Paste Into Selection command to paste one selection into another. This command lets you take advantage of elements within the selected area and prevent the pasted image from looking flat and unnatural. For example, you can use a Hard Light blending mode at 85% opacity to retain the reflection in a pair of sunglasses. When using blending modes this way, you need to create a new layer and paste the selection into that layer.



Copying a selection from one image to another

A. Part of the original photo selected B. Photo to copy and paste into original C. Resulting image

- 1 Use the Copy command to copy the part of the photo you want to paste. (You can even copy from photos in other applications.)
- 2 Make a selection in the photo into which you want to paste the copied photo.

Note: *The copied photo appears only within the selection border. You can move the copied photo within the border, but if you move it completely out of the border, it won't be visible.*

- 3 Choose Edit > Paste Into Selection.
- 4 With your pointer within the selection border, drag the pasted image to the proper location.
- 5 When you're satisfied with the results, deselect the pasted image to commit the changes.

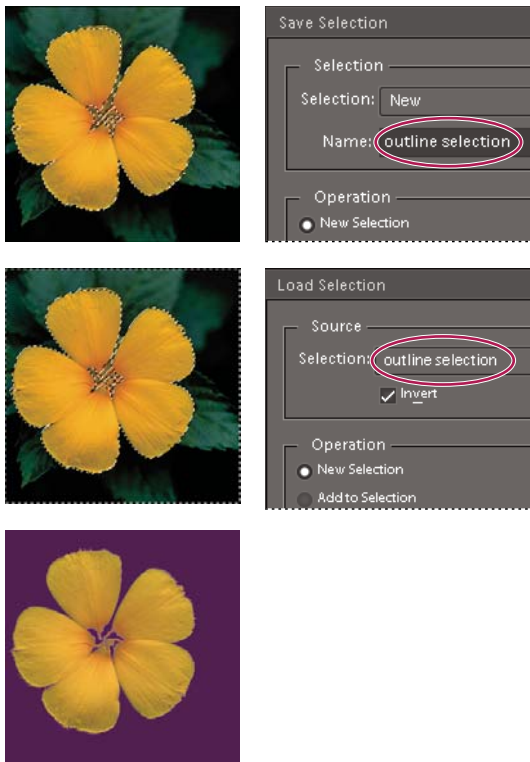


To activate the Move tool when another tool is selected, hold down the Command key. (This technique does not work with the Hand tool.)

Saving selections

Save, load, or delete a selection

Saving a selection allows you to edit a selected area of a photo at a later time. You can work on other parts of the photo before loading the saved selection.



Saving selection (top), loading selection (center), and using the selection to fill with a solid color (bottom)

- 1 Make a selection in your photo.
- 2 Choose Select > Save Selection.
- 3 In the Save Selection dialog box, choose New from the Selection pop-up menu.
- 4 Enter a name for the selection in the Name box, and then click OK.
- 5 To load the selection, choose Select > Load Selection, choose the saved selection from the Selection menu, and then click OK.
- 6 To delete a selection, choose Select > Delete Selection, choose a saved selection from the Selection menu, and then click OK.

Modify a saved selection

You can modify saved selections by replacing, adding to, or subtracting from them.


- 1 Make a selection in your photo.
- 2 Choose Select > Save Selection.
- 3 In the Save Selection dialog box, choose the selection you want to modify from the Selection menu.
- 4 Select one of the following and click OK:

Replace Selection Replaces the saved selection with the current selection.

Add To Selection Adds the current selection to the saved selection.

Subtract From Selection Subtracts the current selection from the saved selection.

Intersect With Selection Replaces the saved selection with the intersection between the current selection and the saved selection.

 You can also modify a saved selection by loading it and using selection tools to add to it (Shift-drag) or subtract from it (Option-drag). (See “[Add to or subtract from a selection](#)” on page 89.)

Modify a new selection with a saved selection

- 1 Open a photo that contains a saved selection.
- 2 Make a new selection in your photo.
- 3 Choose Select > Load Selection.
- 4 Choose a saved selection from the Selection menu.
- 5 Select one of the following operations:

Add To Selection Adds the saved selection to the current selection.

Subtract From Selection Subtracts the saved selection from the current selection.

Intersect With Selection Replaces the current selection with the intersection between the current selection and the saved selection.

- 6 To invert the selected area, select Invert and click OK.

Chapter 8: Color and tonal correction

Adobe® Photoshop® Elements has tools that let you adjust the tonal range, color, and sharpness of your photos. You can also remove dust spots or other defects from your photos. You can accomplish these tasks in different modes, depending on your experience and needs.

Color and tonal correction basics

Color correction overview



Photoshop Elements provides several tools and commands for fixing the tonal range, color, and sharpness in your photos, and for removing dust spots or other defects. You can work in one of three workspaces, depending on your experience and needs.

Guided Edit If you are new to digital imaging and Photoshop Elements, you can use Guided Edit to guide you through the color correction task. It is also a good way to increase your understanding of the workflow.

Quick Fix If you have limited knowledge of digital imaging, Quick Fix is a good place to start fixing photos. It has many of the basic tools for correcting color and lighting.

Full Edit If you've worked with images before, you'll find that the Full Edit workspace provides the most flexible and powerful image-correction environment. It has the lighting and color-correction commands, along with tools for fixing image defects, making selections, adding text, and painting on your images.

When working with some of the adjustment commands, you can make adjustments directly to the image pixels. Or you can use adjustment layers to make nondestructive adjustments that you can easily tweak until your image is right.

In Full Edit, the Smart Brush tool  and Detail Smart Brush tool  automatically create an adjustment layer for the correction you're applying.

Camera Raw If you shoot digital images in your camera's raw format, you can open and correct raw files in the Camera Raw dialog box. Because your camera has not yet processed the raw files, you can adjust the color and exposure to improve the images. Often you don't have to make other adjustments in Photoshop Elements. To open camera raw files in Photoshop Elements, first save them in a supported file format.

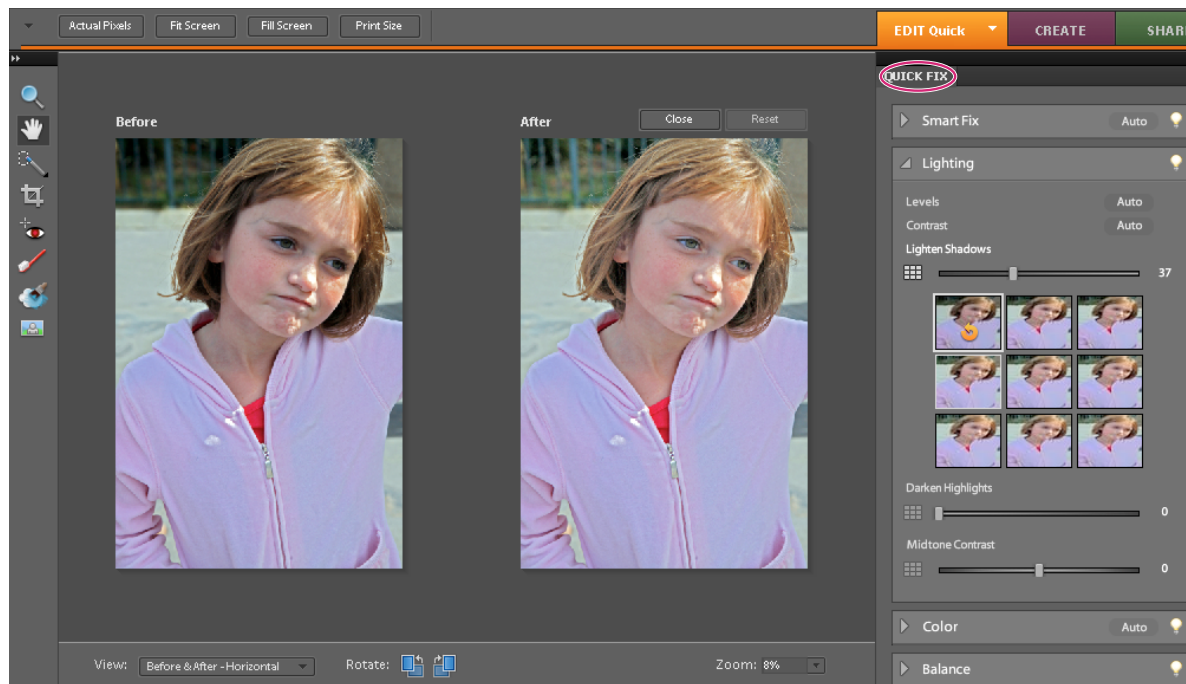
More Help topics

[“About camera raw image files”](#) on page 72



[“Adjust color and tonality using the Smart Brush tools”](#) on page 108

Correct color in Quick Fix


Quick Fix conveniently assembles many of the basic photo-fixing tools in Photoshop Elements. As you work in Quick Fix, limit the number of color and lighting controls that you apply to a photo. Generally, you use only one of the Auto controls on a photo. If that control doesn't achieve what you want, click the Reset button and try another one. You can also adjust your image using the slider controls, whether you've used an Auto control or not. Perform the Sharpening fix last on an image.



Using the Auto Lighten Shadows adjustment in Quick Fix to instantly fix a photo

- 1 With a photo open in the Editor, click the arrow beside Edit, and select Edit Quick.
- Any photos that you have stored in the Photo Bin are accessible while you are in Quick Fix.
- 2 (Optional) Set preview options by making a selection from the View menu (located under the image preview). You can set the preview to show how the photo looks before and after you make a fix, or to show both previews side by side.
- 3 (Optional) Use the Quick Fix tools to zoom, move, and crop the image. You can also make a selection, fix red eye, whiten teeth, and make dull skies blue.
- 4 To rotate the image in 90° increments, click either the Rotate Left  or Rotate Right  button at the bottom of the window.
- 5 Set any of the image fixing options on the right side of the window. Click the Reset button if you don't get the result you are looking for, and then try the other controls. If necessary, click the triangle to view the image fixing options in a panel.

Quick Fix preview

Photoshop Elements enables you to preview how a photo looks after adjustments, before you apply the adjustment to the image. Use Quick Fix preview icon  to preview how a photo looks after adjustments, before you apply the adjustment to the image. For example, you can preview a color change in an image before you apply the change.

- 1 In the Quick Fix panel, click the Quick Fix preview icon beside the slider.

You can view thumbnails of the variations available.

- 2 Hover the mouse over the thumbnails to preview the adjustment on the photo.
- 3 Click the thumbnail to apply the adjustment on the image temporarily.
- 4 Click Commit to save the adjustment, or Cancel to cancel the change.

To fine-tune a picture using a preview as the starting point, click and hold the mouse button, and then drag right or left.

The Quick Fix panel provides the following tools to refine your photos:

Smart Fix Adjusts lighting and color. Smart Fix corrects overall color balance and improves shadow and highlight detail, if necessary. Click the Auto button to apply this command.

- **Amount** Drag the slider to vary the amount of the adjustment.

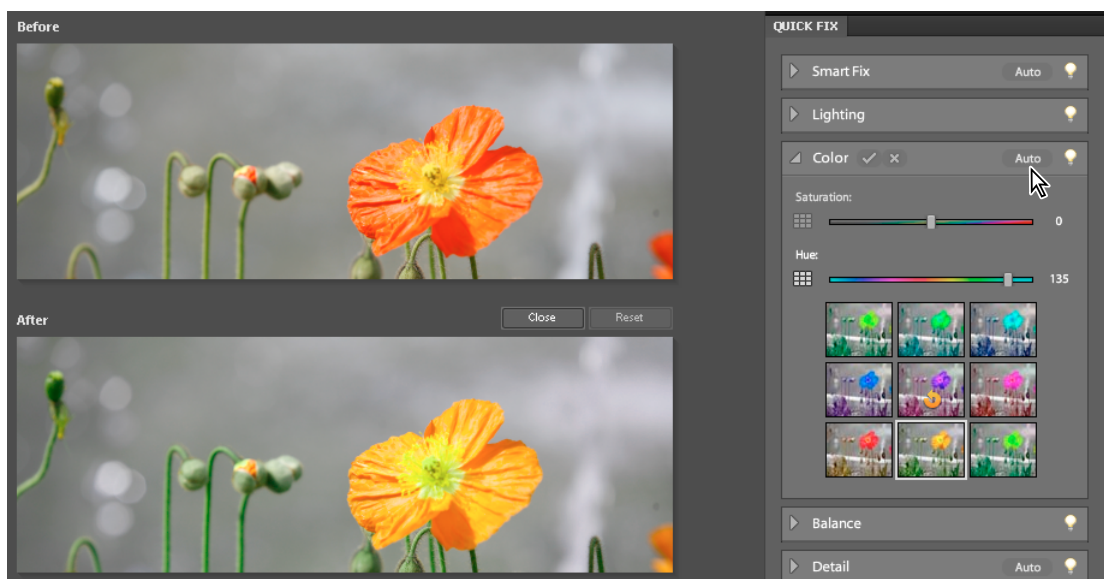
Lighting Adjusts the overall contrast of an image, and could affect its color. If your image needs more contrast and it has a color cast, you can use the following two options:

- Levels
- Contrast

These options work by individually mapping the lightest and darkest pixels in each color channel to monochrome. To apply the settings, click the Auto button beside any of these options.

- **Lighten Shadows** Drag the slider to lighten the darkest areas of your photo without affecting the highlights. Pure black areas are not affected.
- **Darken Highlights** Drag the slider to darken the lightest areas of your photo without affecting the shadows. Pure white areas are not affected.
- **Midtone Contrast** Adjusts the contrast within the middle tonal values (values that are about half way between pure white and pure black). It does not affect the extreme highlights and shadows.

Color Adjusts the color by identifying shadows, midtones, and highlights in the image rather than in individual color channels. It neutralizes the midtones, and clips the white and black pixels using a default set of values. Click the Auto button to apply this command.



Adjusting color values in Quick Fix

- **Saturation** Drag the slider to make colors more vivid or more muted.
- **Hue** Shifts all colors in an image. This control is best used in small amounts or with selected objects whose color you want to change.

Balance Adjusts the color balance of an image without affecting its contrast.

- **Temperature** Drag the slider to make the colors warmer (red) or cooler (blue). Use this control to enhance sunsets or skin tones, or when the color balance set by your camera is off.
- **Tint** Drag the slider to make the color more green or more magenta. Use this control to fine-tune the colors after using the Temperature control.

Detail Adjusts the sharpness of your image. Click Auto to use the default amount of sharpening.

- **Sharpen** Drag the slider to vary the amount of sharpening. Zoom your preview at 100% to get a more accurate view of the amount of sharpening you are trying to apply.

More Help topics





[“About Levels adjustments”](#) on page 110

[“The Adjust Levels Guided Edit”](#) on page 46



Fix photos with Touch Up buttons in the Quick Fix Tools panel

The Touch Up buttons in Quick Fix tools panel enable you to apply corrections and adjustments to selected parts of an image. Except for Red Eye Removal, all Touch Up button adjustments are applied to an adjustment layer. As a result, they do not discard, or permanently edit any information on the image layer. You can always change adjustment settings without degrading the original image. The Whiten Teeth, Make Dull Skies Blue, and Black And White - High Contrast Touch Up buttons apply adjustments found in the Smart Brush tool.

1 In the Quick Fix Tools panel, do any of the following:

- Click the Red Eye Removal button  to remove red eye from a photo. This tool removes red eye in flash photos of people, and green or white eye in pets. Drag the tool in the image around an eye you want to fix, or click the Auto button in the options bar.
- Click the Whiten Teeth button  to apply a Pearly Whites adjustment. Drag in the image area with the teeth that you want to brighten.
- Click the Make Dull Skies Blue button  to apply a Blue Skies adjustment. Drag in the image where you want to add blueness to the sky.
- Click the Black And White - High Contrast button  to apply a High Contrast Red Filter adjustment. Drag in the image area that you want to convert to a high-contrast monochrome image. This adjustment simulates the image effects that photographers produce by placing a red filter over the camera lens and using monochrome film.

2 (Optional) If you carried out Pearly Whites, Blue Skies, or a High Contrast Red Filter adjustment, you can do any of the following:

- Add the adjustment to more parts of the photo, by clicking the Add To Selection button , and dragging in the image.
- Remove the adjustment from parts of the photo, by clicking the Subtract From Selection button , and dragging in the image.

More Help topics


[“Adjust color and tonality using the Smart Brush tools”](#) on page 108


[“About adjustment and fill layers”](#) on page 62


[“Precisely remove red eye”](#) on page 140


Quick Fix and Editor options

These tools work the same way in Quick Fix and the Editor.

Zoom tool  Sets the magnification of the preview image. Controls and options work like the Zoom tool in the toolbox.

Hand tool  Moves the image around in the preview window if the entire image is not visible. Press and hold the spacebar to access the Hand tool when another tool is selected.

Quick Selection tool  Selects portions of the image based on where you click or drag the tool.

Crop tool  Removes part of an image. Drag the tool within the preview image to select the portion you want to keep, and then press Enter.

More Help topics

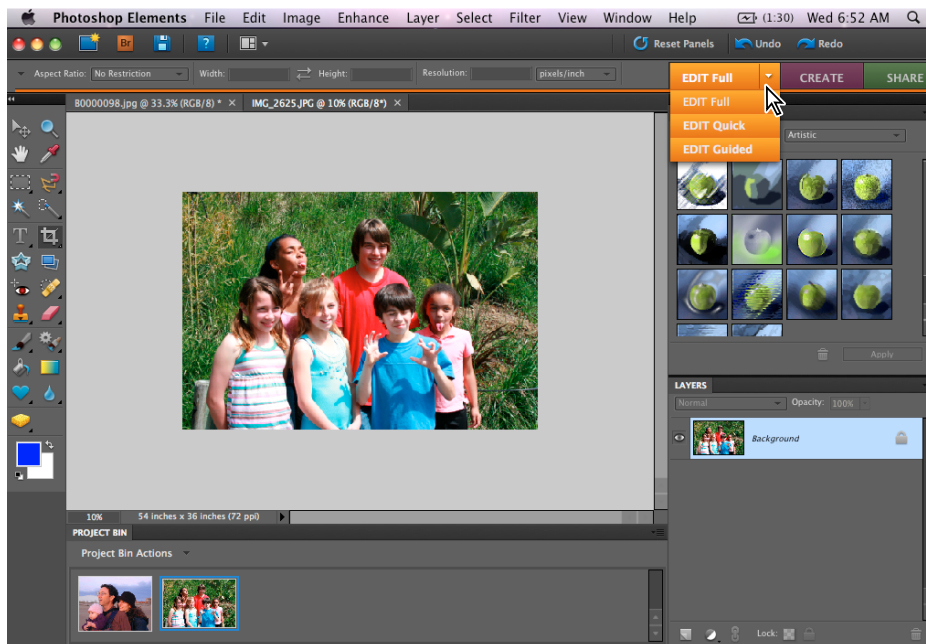
[“Zoom in or out”](#) on page 35

[“Use the Quick Selection tool”](#) on page 85

[“Crop an image”](#) on page 132

Correcting color in Full Edit

If you’ve worked with images before, you’ll find that the full workspace provides the most flexible and powerful image-correction environment. It has lighting and color-correction commands, along with tools for fixing image defects, making selections, adding text, and painting on your images. When working with some of the adjustment commands, you can make adjustments directly on the image pixels. Or you can use adjustment layers to make nondestructive adjustments that you can easily tweak until your image is right.



Editing in Full Edit

As you work on your photos, perform the following tasks that apply to your image. Not all tasks are required for every image, but the following list is a recommended workflow:

1. Specify a color management option.

Specify color management options.

2. View the image at 100% and crop, if necessary.

Before making any color corrections, view the image at a zoom percentage of 100%. At 100%, Photoshop Elements displays the image most accurately. You can also check for image defects, such as dust spots and scratches. If you plan to crop the file, do it now to reduce memory requirements and to ensure that the histogram uses only relevant information. Using the Zoom tool to zoom out may optimize the view before cropping an image, so that you crop a well-centered selection.

3. Check the scan quality and tonal range.

Look at the image's histogram to evaluate whether the image has sufficient detail to produce high-quality output.

4. Resize your image, if necessary.

Resize your image to the size that you need if you are going to use it in another application or project. If you are going to print it or use it in a Photoshop Elements project, you generally don't need to resize it.

5. Adjust the highlights and shadows.

Begin corrections by adjusting the values of the extreme highlight and shadow pixels in the image (also known as the tonal range). Setting an overall tonal range allows for the most detail possible throughout the image. This process is known as setting the highlight and shadow or setting the white and black points.

6. Adjust the color balance.

After correcting the tonal range, you can adjust the image's color balance to remove unwanted color casts or to correct oversaturated or undersaturated colors. With some Photoshop Elements auto commands, both the tonal range and color are corrected in one step.

7. Make other special color adjustments.

Once you have corrected the overall color balance of your image, you can make optional adjustments to enhance colors. For example, you can increase the vividness of color in your image by increasing its saturation.

8. Retouch the image.

Use the retouching tools, like the Spot Healing Brush, to remove any dust spots or defects in the image.

9. Sharpen the clarity of the image.

As a final step, sharpen the clarity of edges in the image. This process helps restore detail and sharpness that tonal adjustments may reduce.

More Help topics

[“About camera raw image files”](#) on page 72

[“Set up color management”](#) on page 172

[“About image size and resolution”](#) on page 137

[“About Levels adjustments”](#) on page 110

[“Adjust saturation and hue”](#) on page 119

[“Remove spots and small imperfections”](#) on page 141

[“Sharpening overview”](#) on page 153

Automatically correct lighting and color

Photoshop Elements provides several automatic lighting and color-correction commands in both Full Edit and Quick Fix. The command you choose depends on the needs of your image.

You can experiment with each of the auto commands. If you don’t like the result of one, undo the command by choosing Edit > Undo, and try another command. You will rarely need to use more than one auto command to fix an image.

- 1 To adjust a specific image area, select it with one of the selection tools. If no selection is made, the adjustment applies to the entire image.
- 2 Choose one of the following commands from the Enhance menu:

Auto Smart Fix Corrects overall color balance and improves shadow and highlight detail, if necessary.

Auto Levels Adjusts the overall contrast of an image and may affect its color. If your image needs more contrast, and it has a color cast, try this command. Auto Levels works by individually mapping the lightest and darkest pixels in each color channel to black and white.

Auto Contrast Adjusts the overall contrast of an image without affecting its color. Use when your image needs more contrast, but the colors look right. Auto Contrast maps the lightest and darkest pixels in the image to white and black, which makes highlights appear lighter and shadows appear darker.

Auto Color Correction Adjusts the contrast and color by identifying shadows, midtones, and highlights in the image, rather than in individual color channels. It neutralizes the midtones and sets the white and black points using a default set of values.

Auto Sharpen Adjusts the sharpness of the image by clarifying the edges and adding detail that tonal adjustments may reduce.

Auto Red Eye Fix Automatically detects and repairs red eyes in an image.

More Help topics

[“Precisely remove red eye”](#) on page 140

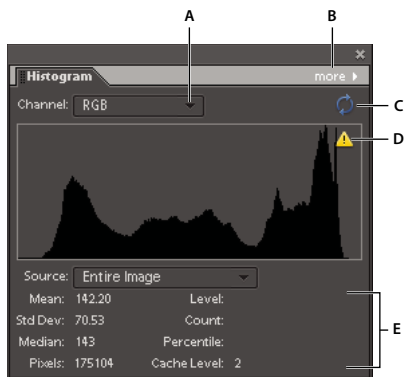
[“Replace colors in an image”](#) on page 144

[“Sharpen an image”](#) on page 153

About histograms

You can use the histogram to analyze the image’s tonal distribution to see if you need to correct it. A histogram shows the distribution of an image’s pixel values in a bar chart. The left side of the chart shows the values of the image shadow (starting at level 0), and the right side shows the highlight (level 255). The vertical axis of the chart represents the total number of pixels within a given level.

You can view an image’s histogram in the Histogram panel. Histograms are also available in the Levels dialog box and the Camera Raw dialog box. You can update the histogram as you work so that you can see how your adjustments are affecting the tonal range. When the cached data warning icon appears, click it to refresh the histogram’s data.



Histogram panel

A. Channel menu B. Panel menu C. Uncached Refresh button D. Cache Data Warning icon E. Statistics

If many pixels are bunched up at either the shadow or highlight ends of the chart, it may indicate that image detail in the shadows or highlights may be clipped—blocked up as pure black or pure white. There is little you can do to recover this type of image. If you are working with a scanned image, you can try rescanning to produce a better tonal range. If your digital camera can display an image histogram, check it to see whether your exposure is correct and make exposure adjustments if necessary. See your camera’s documentation for more information.

The histogram may show that an image is not using the full tonal range available if some pixels aren’t available in the shadows and highlights. You can fix an image with limited tonal range by stretching the tonal range using either the Levels command or one of the Enhance > Auto commands.



How to read a histogram

A. Overexposed photo with clipped highlights B. Properly exposed photo with full tonality C. Underexposed photo with clipped shadows

More Help topics

[“About camera raw image files”](#) on page 72

[“Using the histogram and RGB values in camera raw”](#) on page 76

View a histogram

1 If the Histogram panel is not open in the Panel Bin, choose Window > Histogram.

2 Choose the source of the histogram’s display from the Source menu:

Entire Image Displays a histogram of the entire image, including all layers in the multilayered document.

Selected Layer Displays a histogram of the selected layer in the Layers panel.

Adjustment Composite Displays a histogram of an adjustment layer selected in the Layers panel, including all the layers below the adjustment layer.

3 To view the histogram for a portion of your image, make a selection in your image, and choose an option from the Channel menu:

RGB Displays a histogram that is a composite of individual color channels placed on top of each other.

Red, Green, and Blue Displays the histograms for the individual color channels.

Luminosity Displays a histogram representing the luminance or intensity values of the composite channel.

Colors Displays the composite RGB histogram individually by color. Red, green, and blue represent the pixels in those channels. Cyan, magenta, and yellow represent where the histograms of two channels overlap. Gray represents areas where all three color channel histograms overlap.

Grayscale images have a single channel option: Gray.

4 To view the following statistical information about a range of values, drag and hold in the histogram to highlight the range, or to view information about a specific area of the histogram, place the pointer over the area:

Mean Represents the average intensity value.

Standard Deviation (Std Dev) Represents how widely intensity values vary.

Median Shows the middle value in the range of intensity values.

Pixels Represents the total number of pixels used to calculate the histogram.

Level Displays the intensity level of the area underneath the pointer.



Count Shows the total number of pixels at the intensity level underneath the pointer.

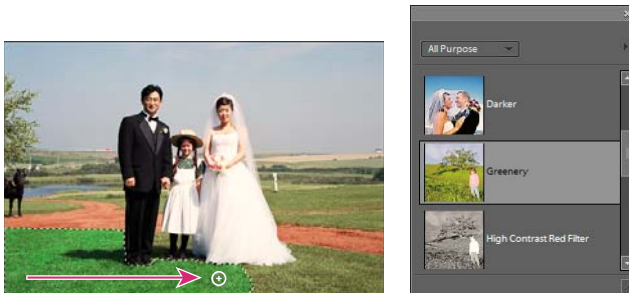
Percentile Displays the percentage of pixels at and below the level underneath the pointer. This value is expressed as a percentage of all the pixels in the image, from 0% at the far left to 100% at the far right.

Cache Level Shows the setting for the image cache. If Use Cache For Histograms is selected in the Preferences dialog box, Photoshop Elements displays histograms more quickly but less accurately. To display more accurate histograms, deselect this option.

Adjusting shadows and light

Adjust color and tonality using the Smart Brush tools

The Smart Brush tool  and the Detail Smart Brush tool  apply tonal and color adjustments to specific areas of a photo. Certain effects can also be applied using these tools. You simply pick a preset adjustment and apply the correction. Both tools automatically create adjustment layers. This feature offers you flexibility in working with your photos because the original image layer is not altered. You can go back and tweak the adjustments and no image information is discarded.



Smart Brush tool applying an adjustment selection

When you apply the Smart Brush tool, it makes a selection based on color and texture similarly. The adjustment is simultaneously applied to the selected area.

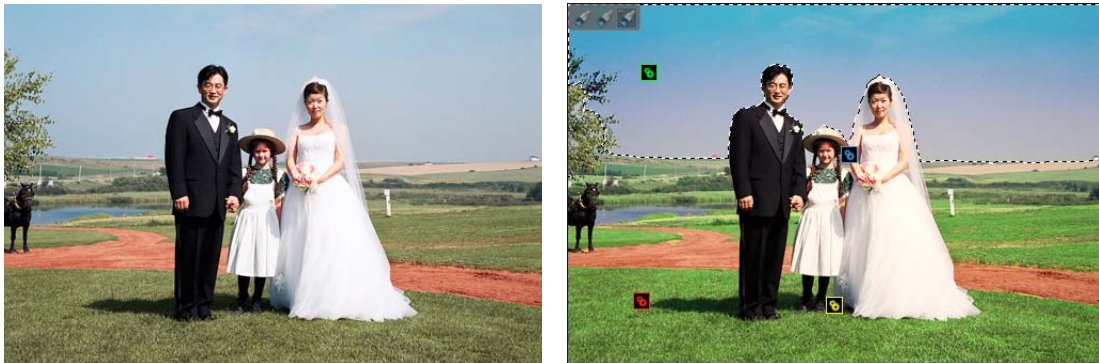
The Detail Smart Brush tool lets you paint the adjustment to specific areas of the photo. Use this tool to modify finer details.



Detail Smart Brush tool applying an adjustment stroke

Both brush tools let you add to or subtract from the areas being adjusted. You can also have more than one adjustment preset applied to a photo. Each preset adjustment is applied to its own adjustment layer. You can tweak the settings for each correction separately.

When a correction is made, a pin appears where you first applied the adjustment. The pin provides a reference for the specific adjustment. A new pin appears when a different adjustment preset is applied. This feature makes it easier to modify a specific correction, especially if you apply different adjustments.




Pins showing different adjustments in a photo

Apply the Smart Brush tools

1 In the Editor, select the Smart Brush tool or the Detail Smart Brush tool from the toolbox.

A pop-up panel opens displaying adjustment presets.

2 Choose an adjustment from the preset pop-up panel.

 Choose an option from the pop-up panel menu to view different sets of adjustments.




3 (Optional) Adjust the size and quality of the brush tool by doing one of the following:

- If you selected the Smart Brush tool, open the Brush Picker in the options bar and adjust the settings.
- If you selected the Detail Smart Brush tool, select a preset brush tip from the Brush presets pop-up panel. Then adjust the brush size setting in the options bar.

4 Paint or drag the tool in the image.

The correction is applied on its own adjustment layer and a color pin appears where you first applied the brush tool.

5 (Optional) Do any of the following:

- To add the current adjustment to more areas of the photo, paint or drag in the image. If necessary, make sure Add To Selection  is selected.
- To remove parts of the current adjustment, select Subtract From Selection , and paint in the image.
- To apply a different type of adjustment, select New Selection , select a preset from the pop-up panel, and then paint in the image.
- To smooth the edges of the selection, click Refine Edges in the options bar, adjust the settings in the dialog box, and then click OK.

Note: If you use another tool from the toolbox and return to Smart Brush tool or Detail Smart Brush tool, previously applied adjustment is active.

6 (Optional) If you have multiple adjustments, do one of the following to select the adjustment you want to add to, subtract from, or modify:

- Click a pin.
- Right-click in the photo, and choose the adjustment listed at the bottom of the menu.

More Help topics

[“About presets”](#) on page 230

[“Smoothing selection edges with anti-aliasing and feathering”](#) on page 93

Modify Smart Brush tool correction settings

- 1 Do any of the following:
 - In the image, right-click a pin or an active selection, and choose Change Adjustment Settings.
 - If the Adjustment panel is not open, then in the Layers panel, double-click the layer thumbnail for the specific adjustment layer. However, if the Adjustment panel is open, click the layer thumbnail for the specific adjustment layer.
 - Double-click a pin.
- 2 Adjust the settings in the Adjustment panel.

Change the Smart Brush tool correction preset



- 1 Click a pin or active selection, and open the preset pop-up panel in the options bar.
- 2 Choose an adjustment preset from the pop-up panel.

Delete a Smart Brush tool correction

❖ Right-click a pin or an active selection, and choose Delete Adjustment.

Note: In the Layers panel, you can also delete a Smart Brush tool correction by deleting the specific adjustment layer.

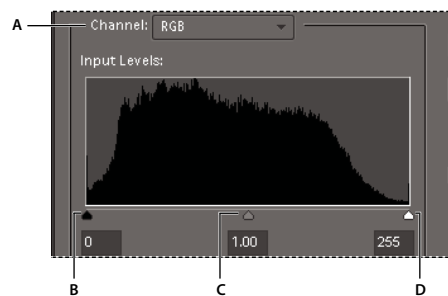
Smart Brush pop-up panel

Photoshop Elements lets you apply many different preset adjustments using the Smart Brush tool  and the Detail Smart Brush tool . You pick an adjustment from the preset pop-up panel in the options bar. Like all pop-up panels, the Smart Brush preset pop-up panel can be configured. Use the panel menu to display the adjustments as thumbnails or in a list. You can also drag the picker out of the options bar so it floats where you want it in the workspace.

Specific sets of adjustments or all adjustments can be viewed by choosing from a menu near the upper-left area of the panel. The adjustments range from tonal and corrections.

About Levels adjustments

The Levels dialog box is a powerful tonal and color-adjustment tool. You can make levels adjustments in the entire image or a selected portion. (To access the dialog box, choose Enhance > Adjust Lighting > Levels.)



Levels dialog box

A. Channels to adjust color B. Shadow values C. Middle tones D. Highlight values

You can do any of the following with the Levels dialog box:

- Set the shadow and highlight values to make sure that your image uses the full tonal range.
- Adjust the brightness of the image's middle tones without affecting the shadow and highlight values.
- Fix a color cast by making grays neutral. You can also enhance an image by adding a slight color cast, for example, by adding a warming effect on a sunset.
- Target shadow and highlight RGB values if you are preparing images for commercial printing.

When you work with Levels, you can work directly on the image pixels or through an adjustment layer. Adjustment layers give you flexibility in the following ways:

- You can modify an adjustment at any time by double-clicking the adjustment layer to reopen the Levels dialog box.
- You can reduce the effect of an adjustment by lowering the adjustment layer's opacity in the Layers panel.
- You can stack adjustment layers to make multiple adjustments without degrading the image because of too many successive adjustments.
- You can use the adjustment layer's layer mask to confine an adjustment to a portion of your image.

More Help topics

[“About adjustment and fill layers”](#) on page 62

Improve shadow and highlight detail

1 Choose Enhance > Adjust Lighting > Shadow/Highlights.

2 Drag any of the adjustment sliders or enter values in the text boxes, then click OK.

Lighten Shadows Brightens the dark areas of your photo and reveals more of the shadow detail that was captured in your image.

Darken Highlights Darkens the light areas of your photo and reveals more of the highlight detail that was captured in your image. Pure white areas of your photo don't have any detail and aren't affected by this adjustment.

Midtone Contrast Adds or reduces the contrast of the middle tones. Use this slider if the image contrast doesn't look right after you've adjusted shadows and highlights.

To reset the image to how it looked when you opened the dialog box, hold down Option and click the Reset button.



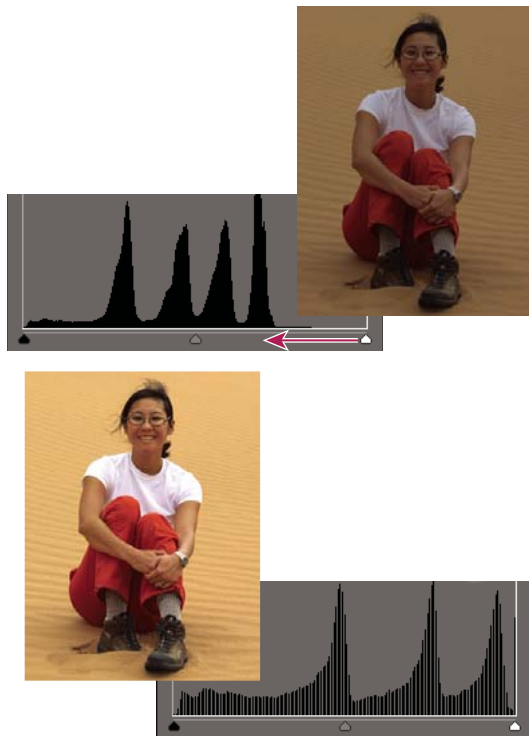
Before adjusting shadows and highlights (top) and after (bottom). Adjusting softens the face and reveals more detail behind sunglasses.

More Help topics

[“Remove a color cast automatically”](#) on page 117

Adjust shadows and brightness using Levels

- 1 Do one of the following:
 - Choose Enhance > Adjust Lighting > Levels.
 - Choose Layers > New Adjustment Layer > Levels, or open an existing Levels adjustment layer.
- 2 Choose RGB from the Channel menu. When set to RGB, your adjustment affects all three (red, green, and blue) channels. If you are working on a grayscale image, it will only have the gray channel.
- 3 Set the shadow and highlight values by dragging the black and white Input Levels sliders (the left and right sliders directly under the histogram) to the edge of the first group of pixels on either end of the histogram. You can also enter values directly into the first and third Input Levels text boxes.



Dragging the highlight slider to the left lightens the photo.



Option-drag the Shadow slider to see which areas will be clipped to black (level 0). Option-drag the Highlight slider to see which areas will be clipped to white (level 255). Colored areas show clipping in individual channels.

- 4 To adjust the brightness of the middle tones without affecting the shadow and highlight values, drag the gray Input Levels (middle) slider. You can also enter values directly in the middle Input Levels text box. (A value of 1.0 represents the current unadjusted midtone value.) Click OK.

You can see the adjustment reflected in the Histogram panel.

Note: You can click *Auto* to move the Highlight and Shadow sliders automatically to the brightest and darkest points in each channel. This is the same as using the *Auto Levels* command and may cause a color shift in your image.

More Help topics

[“Setting target values for print”](#) on page 129

[“Adjust saturation and hue”](#) on page 119

[“Automatically correct lighting and color”](#) on page 105

Adjust brightness and contrast in selected areas

The Brightness/Contrast command is best used on selected portions of an image. Use this command to adjust the brightness of an entire image or to reduce contrast results in an image that doesn’t use the entire available tonal range. The Levels and Shadow/Highlight commands are better choices for making tonal adjustments.

- 1 Do one of the following:

- Choose Enhance > Adjust Lighting > Brightness/Contrast to make adjustments directly to image pixels.

- Choose Layer > New Adjustment Layer > Brightness/Contrast to make adjustments to a layer.

2 Drag the sliders to adjust the brightness and contrast, then click OK.




Dragging to the left decreases the level; dragging to the right increases it. The number at the right of each slider displays the brightness or contrast value.

Quickly lighten or darken isolated areas

The Dodge tool and the Burn tool lighten or darken areas of the image. You can use the Dodge tool to bring out details in shadows and the Burn tool to bring out details in highlights.



Original image (left), after using the Burn tool (top center), and after using the Dodge tool (bottom right)

1 Select the Dodge tool  or the Burn tool . If you do not see these tools, look for the Sponge tool .

2 Set tool options in the options bar:

Brushes pop-up menu Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush, in pixels. Drag the Size slider or enter a size in the text box.

Range Sets the image tonal range that the tool adjusts. Select Midtones to change the middle range of grays, Shadows to change the dark areas, and Highlights to change the light areas.

Exposure Sets the effect of the tool with each stroke. A higher percentage increases the effect.



To dodge or burn an area gradually, set the tool to a low exposure value and drag several times over the area you want to correct.

3 Drag over the part of the image you want to modify.

More Help topics

[“Adjust saturation and hue”](#) on page 119

Quickly saturate or desaturate isolated areas

The Sponge tool saturates or desaturates areas of the image. You can use the Sponge tool to bring out or mute the color on an object or area.

- 1 Select the Sponge tool . If you do not see the Sponge tool, look for the Dodge  or Burn  tool.
- 2 Set the tool options in the Options bar.

Brushes pop-up menu Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush, in pixels. Drag the Size slider or enter a size in the text box.

Mode Sets whether to saturate or desaturate.

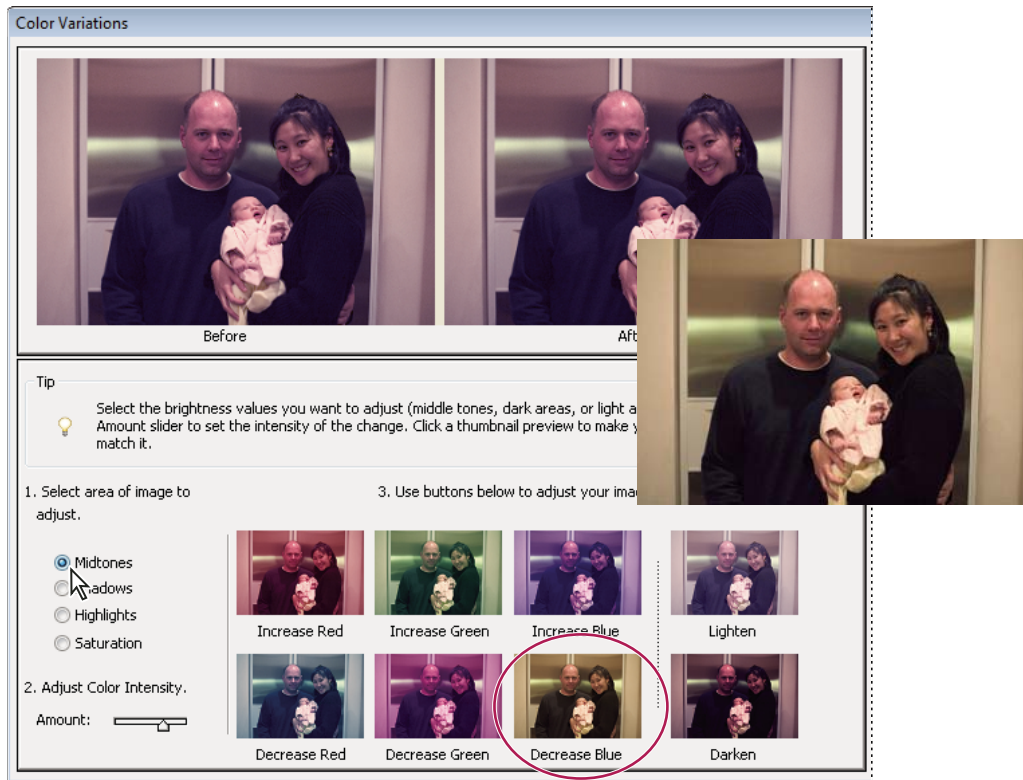
Flow Sets the strength of the tool with each stroke. In Saturate mode, a higher percentage increases the saturation. In Desaturate mode, a higher percentage increases the desaturation.

Correcting color casts

Correct color casts by comparing variations of an image

You can make color and tonal adjustments in the Color Variations dialog box by comparing and choosing different thumbnail variations of the photo. Color Variations works best for average tone images that don't require precise color adjustments.

***Note:** You can't use the Color Variations command with images in Indexed Color mode.*



Comparing color adjustments in the Color Variations dialog box

1 Choose Enhance > Adjust Color > Color Variations.

The two preview images show the original image (Before) and the adjusted image after you've made changes (After).

2 Select an option to choose what you want to adjust in the image:

Midtones, Shadows, or Highlights Specify which part of the tonal range to adjust: dark, middle, or light areas.

Saturation Makes the image colors more vivid (more saturation) or muted (less saturation).

3 Set the amount, or intensity, of each adjustment by using the Adjust Color slider. Dragging the slider to the left decreases the amount, and dragging to the right increases it.

4 If you are adjusting the color of midtones, shadows, or highlights, do either of the following:

- To add a color to the image, click the corresponding Increase color thumbnail.
- To subtract a color, click the corresponding Decrease color thumbnail.

Each time you click a thumbnail, all thumbnails are updated.

5 If you are adjusting color saturation, click either the Less Saturation or More Saturation buttons.

6 To undo or redo adjustments, do any of the following, then click OK to apply the adjustments to your image.

- Click Reset Image to start over and undo all adjustments.
- Click Undo once or multiple times for each successive adjustment you want to undo. You cannot undo the Reset Image option.
- After undoing a new adjustment, click Redo once or multiple times for each adjustment you want to redo.

More Help topics

[“Improve shadow and highlight detail”](#) on page 111

[“Adjust shadows and brightness using Levels”](#) on page 112

Remove a color cast automatically

A *color cast* is an unpleasant color shift in a photo. For example, a photo taken indoors without a camera flash may have too much yellow. The Remove Color Cast command changes the overall mixture of colors to remove color casts from an image.



Original (left), and after removing the green color cast (right)

- 1 Choose Enhance > Adjust Color > Remove Color Cast.
- 2 In your image, click an area that should be white, black, or neutral gray. The image changes based on the color you selected.
- 3 To start over, and undo the changes made to the image, click the Reset button.
- 4 Click OK to accept the color change.


More Help topics

[“Automatically correct lighting and color”](#) on page 105

Remove a color cast using Levels

This technique requires color correction experience and some knowledge of the RGB color wheel.

- 1 Do one of the following:
 - Choose Enhance > Adjust Lighting > Levels.
 - Choose Layers > New Adjustment Layer > Levels, or open an existing Levels adjustment layer.
- 2 Choose a color channel to adjust from the Channel pop-up menu:
 - Red to add red or cyan to the image.
 - Green to add green or magenta to the image.
 - Blue to add blue or yellow to the image.
- 3 Drag the middle input slider left or right to add or subtract color.
- 4 Click OK when you are satisfied with the overall color.

 You can use the gray eyedropper in the Levels dialog box to quickly remove a color cast. Double-click the eyedropper and make sure that the RGB values are equal. After you close the Color Picker, click an area in your image that should be a neutral gray.

More Help topics

[“Color wheel”](#) on page 165

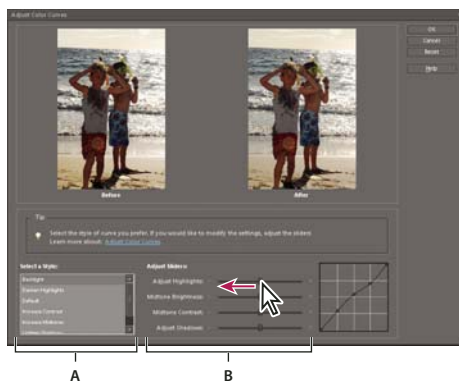
[“Adjust shadows and brightness using Levels”](#) on page 112

[“Remove a color cast automatically”](#) on page 117

Adjust color curves


The Adjust Color Curves command improves color tones in a photo by adjusting highlights, midtones, and shadows in each color channel. For example, this command can fix photos with silhouetted images resulting from strong backlighting, or slightly washed-out objects that were too close to the camera’s flash.

In the Adjust Color Curves dialog box, you can compare and choose different tonal presets by selecting from the list of styles in the Select A Style box. To fine-tune the adjustment, adjust the highlights, midtone brightness and contrast, and shadows.



Adjusting color curves in an image

A. Select a Style (choose from presets) **B.** Adjust Sliders (custom options)

- 1 Open an image.
- 2 To adjust a specific image area or layer, select it with one of the selection tools. (If no selection is made, the adjustment applies to the entire image.)
 To preserve the original photo while experimenting with tonal adjustments, adjust the color curves in a duplicate layer.
- 3 Choose Enhance > Adjust Color > Adjust Color Curves.
- 4 Select a style (for example, Backlight or Solarize).
- 5 Adjust the sliders for Highlights, Midtone Brightness, Midtone Contrast, and Shadows.
- 6 To apply the adjustment to your image, click OK. To cancel the adjustment and start over, click Reset. To close the Adjust Color Curves dialog box, click Cancel.

More Help topics

[“Understanding layers”](#) on page 49

Adjusting color saturation and hue

Adjust saturation and hue

The Hue/Saturation command adjusts the hue (color), saturation (purity), and lightness of the entire image or of individual color components in an image.

Use the Hue slider to add special effects, to color a black and white image (like a sepia effect), or to change the range of colors in a portion of an image.



Changing colors in an image using the Hue/Saturation command

A. Original B. Entire image changed to sepia using the Colorize option C. Magenta colors targeted in the Edit menu and changed using the Hue slider

Use the Saturation slider to make colors more vivid or more muted. A good use of this adjustment would be to add a color punch to a landscape by adding saturation to all the colors, or to tone down a distracting color, like a vivid red sweater in a portrait.



Before and after adjusting color saturation

Use the Lightness slider in conjunction with the other adjustments to lighten or darken a portion of an image. Take care not to use it on an entire image—this adjustment reduces the overall tonal range.

More Help topics

[“Color wheel”](#) on page 165

Change color saturation or hue

1 Do one of the following:

- Choose Enhance > Adjust Color > Adjust Hue/Saturation.

- Choose Layer > New Adjustment Layer > Hue/Saturation, or open an existing Hue/Saturation adjustment layer.

The two color bars in the dialog box represent the colors in their order on the color wheel. The upper bar shows the color before the adjustment; the lower bar shows how the adjustment affects all hues at full saturation.

2 In the Edit drop-down menu, choose which colors to adjust:

- Choose Master to adjust all colors at once.
- Choose one of the other preset color ranges listed for the color you want to adjust. An adjustment slider appears between the color bars, which you can use to edit any range of hues.

3 For Hue, enter a value or drag the slider until the colors appear as you want.

The values displayed in the text box reflect the number of degrees of rotation around the color wheel from the pixel's original color. A positive value indicates clockwise rotation, a negative value counterclockwise rotation. Values range from -180 to +180.

4 For Saturation, enter a value or drag the slider to the right to increase the saturation or to the left to decrease it. Values range from -100 to +100.

5 For Lightness, enter a value or drag the slider to the right to increase the lightness or to the left to decrease it. Values range from -100 to +100. Be careful when using this slider on an entire image. It will reduce the tonal range of the overall image.

6 Click OK. Or, to cancel your changes and start over, hold down Option, and click Reset.

Modify the range of Hue/Saturation sliders

1 Do one of the following:

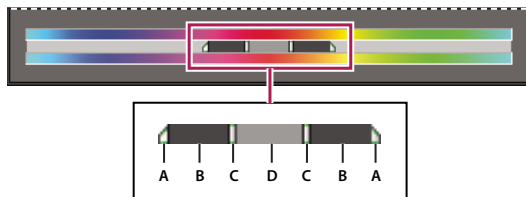
- Choose Enhance > Adjust Color > Adjust Hue/Saturation.
- Choose Layer > New Adjustment Layer > Hue/Saturation, or open an existing Hue/Saturation adjustment layer.

2 Choose an individual color from the Edit menu.

3 Do any of the following to the adjustment slider:

- Drag one of the triangles to adjust the amount of color fall-off without affecting the range.
- Drag one of the gray bars to adjust the range without affecting the amount of color fall-off.
- Drag the gray center part to move the entire adjustment slider, selecting a different color area.
- Drag one of the vertical white bars next to the dark gray center part to adjust the range of the color component. Increasing the range decreases the color fall-off, and vice versa.

To move the color bar and the adjustment slider bar together, Command-drag the color bar.



Adjustment slider

A. Adjusts color fall-off without affecting range B. Adjusts range without affecting color fall-off C. Adjusts the range of color component D. Moves entire slider

If you modify the adjustment slider so that it falls into a different color range, the name changes to reflect this. For example, if you choose Yellow and alter its range so that it falls in the red part of the color bar, the name changes to Red 2. You can convert up to six of the individual color ranges to varieties of the same color range (for example, Red 1 through Red 6).

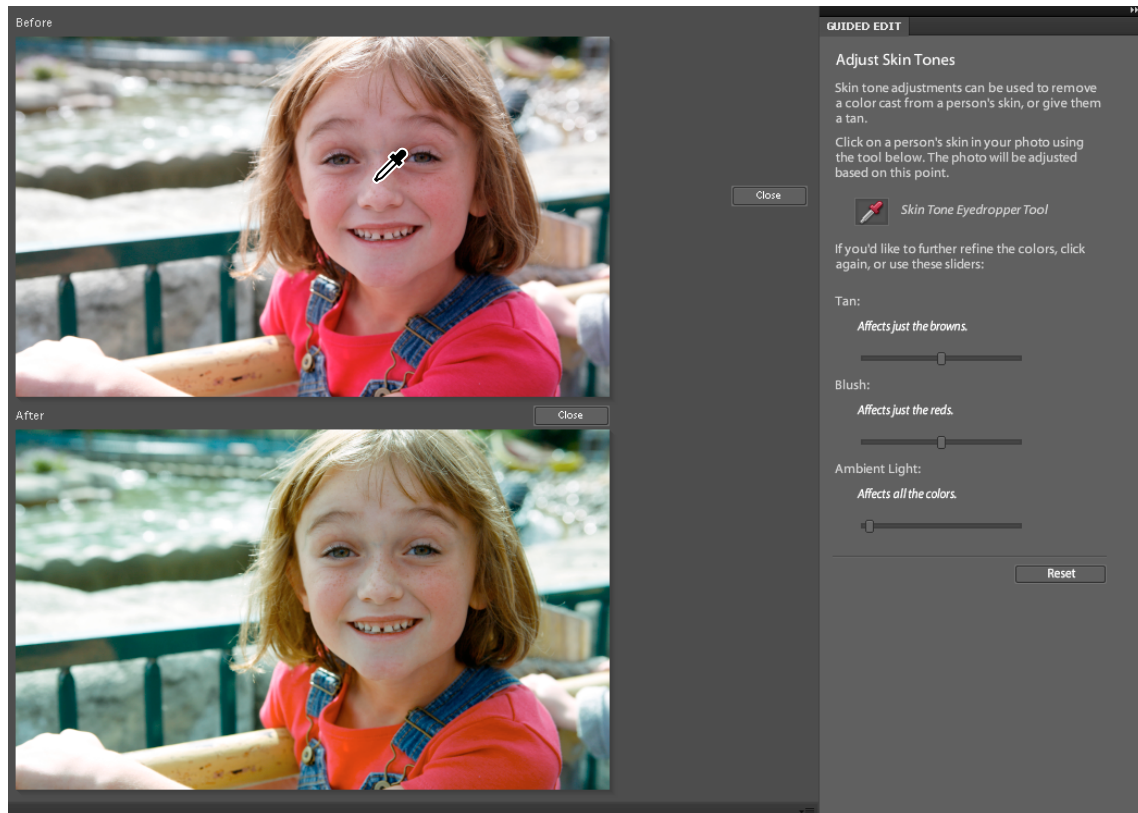
Note: By default, the color range selected when you choose a color component is 30° wide, with 30° color fall-off on either side. Setting the fall-off too low can produce banding in the image.

- 4 To edit the range by choosing colors from the image, select the eyedropper, and click the image. Use the eyedropper + tool to add to the range; use the eyedropper - tool to subtract from the range.

While the eyedropper tool is selected, you can also press Shift to add to the range or press Option to subtract from it.

Adjust the color of skin tone

The Adjust Color For Skin Tone command adjusts the overall color in a photo to bring out more natural skin tones. When you click an area of skin in the photo, Photoshop Elements adjusts the skin tone—as well as all other colors in the photo. You can manually adjust the brown and red colors separately to achieve the final color you want.



Original (top), and after adjusting skin tone (bottom)

- 1 Open the photo and select the layer that needs correction.
- 2 Choose Enhance > Adjust Color > Adjust Color For Skin Tone.
- 3 Click an area of skin.

Photoshop Elements automatically adjusts the colors in the image. Changes might be subtle.

Note: Make sure Preview is selected so that you can see the color changes as they occur.

4 (Optional) Drag any of the following sliders to fine-tune the correction:

Tan Increases or decreases the level of brown in skin tones.

Blush Increases or decreases the level of red in skin tones.

Temperature Changes the overall color of skin tones.

5 When you're finished, click OK. Or, to cancel your changes and start over, click Reset.

Adjust saturation in isolated areas

The Sponge tool changes the color saturation or vividness of an area.



Increasing saturation by scrubbing with the Sponge tool

1 Select the Sponge tool .

2 Set tool options in the options bar:

Brushes pop-up menu Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush, in pixels. Drag the Size slider or enter a size in the text box.

Mode Increases or decreases color saturation. Choose Saturate to intensify the color's saturation. In grayscale, Saturate increases contrast. Choose Desaturate to dilute the color's saturation. In grayscale, Desaturate decreases contrast.

Flow Sets the rate of saturation change. Drag the Flow pop-up slider or enter a value in the text box.

3 Drag over the part of the image you want to modify.

Change the color of an object

The Replace Color command replaces a specific color in an image. You can set the hue, saturation, and lightness of the color.

1 Choose Enhance > Adjust Color > Replace Color.

2 Select a display option under the image thumbnail:

Selection Displays the mask, which looks like a black and white version of the image, in the preview box.

Image Displays the image in the preview box. This option is useful when you are working with a magnified image or have limited screen space.

3 Click the Eyedropper button, and then click the color you want to change in the image or in the preview box. Use the eyedropper + tool to add colors, or use the eyedropper - tool to remove colors to keep them from changing.

4 Drag the Fuzziness slider to control the degree to which related colors are included in the selection.

5 Do one of the following to specify a new color:

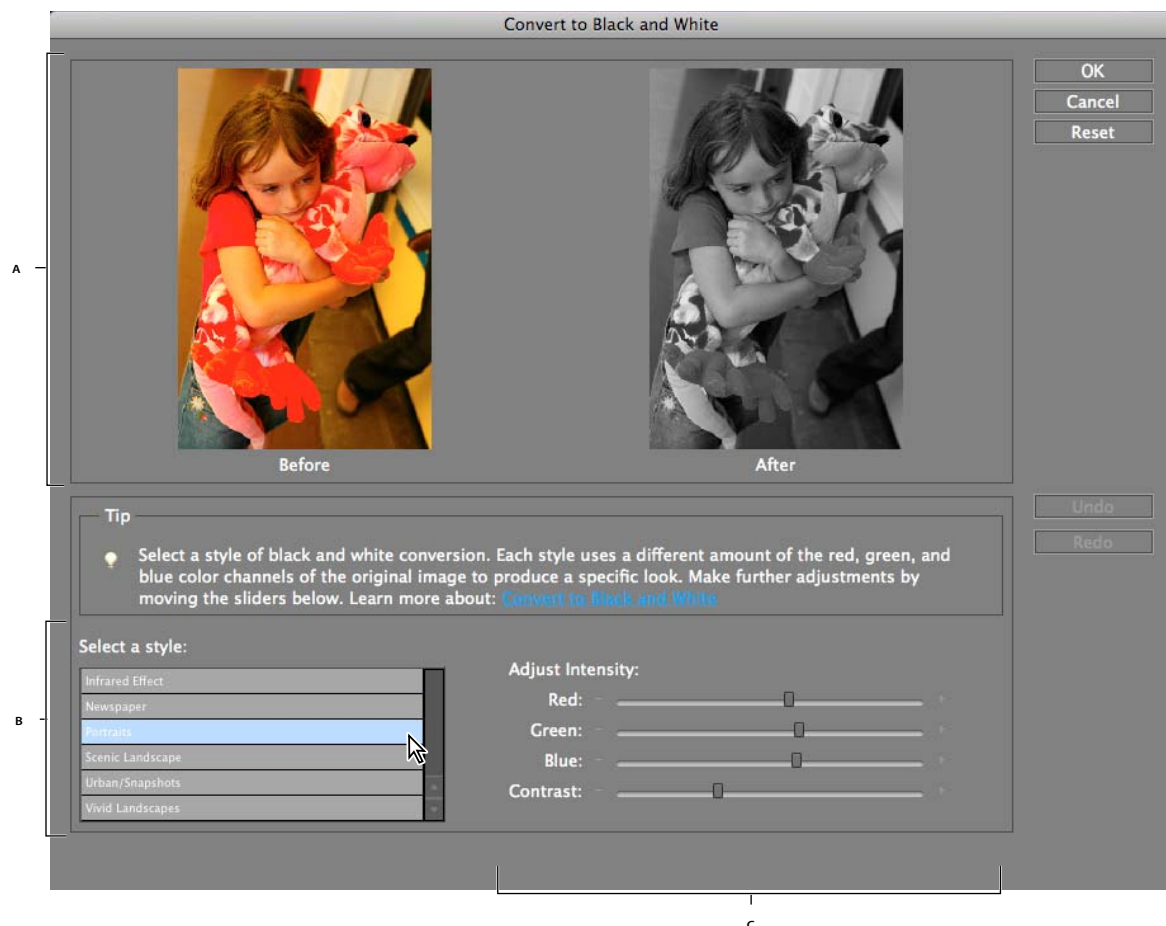
- Drag the Hue, Saturation, and Lightness sliders (or enter values in the text boxes) Hue and Saturation are available only in color mode or on color layers.
- Click the Results box and specify a new color in the Color Picker, then click OK.

6 To cancel your changes and start over, hold down Option, and click Reset.

Precisely convert to black and white

The Convert To Black And White command lets you choose a specific conversion result, unlike the Remove Color command, which automatically converts to black and white for you.

In the Convert To Black And White dialog box, you compare and choose different conversion presets represented by image styles. Select a style and then use the available sliders to fine-tune the conversion.



Convert to black and white

A. Displays Before and After views B. Select a style C. Adjust intensity

1 Open an image.

2 Select an area or layer to convert. If you do not select an area or layer, the entire image is converted.

💡 *To experiment with black and white conversion while preserving the original photo, convert a duplicate layer.*

- 3 Choose Enhance > Convert To Black And White.
- 4 Select a style option that reflects the content of your image (for example, Portraits or Scenic Landscape).
- 5 Drag the Adjustment Intensity sliders to adjust red, green, blue, or contrast.

Note: *The Adjustment Intensity sliders for red, green, and blue don't colorize your image; they simply include more or less data from the original color channels in the new black and white image.*

- 6 To convert your image, click OK. Or, to cancel your changes and start over, click Reset. To close the Convert To Black And White dialog box, click Cancel.

More Help topics

[“Understanding layers”](#) on page 49

Automatically convert to black and white

The Remove Color command converts to black and white by assigning equal red, green, and blue values to each pixel in an RGB image. The overall brightness of each pixel remains constant. This command has the same effect as setting Saturation to -100 in the Hue/Saturation dialog box.

- 1 To adjust a specific image area, select it with one of the selection tools. If no selection is made, the adjustment applies to the entire image.
- 2 Choose Enhance > Adjust Color > Remove Color.

Add custom presets for black and white conversion

You can manually add custom presents to the black and white converter by editing a specific text file.

Note: *This is a task for advanced users.*

- 1 Navigate to the folder /Applications/Photoshop Elements 8.
- 2 Command-click Adobe Photoshop Elements and select Show Package Contents.
- 3 Navigate to the folder Contents/Required.
- 4 Open the bwconvert.txt file in a plain text editor (such as TextEdit).
- 5 Following the same naming convention as the presets already in the file, add your new preset and give it a unique name.
- 6 Save the file (keeping the original filename).
- 7 Choose Enhance > Convert To Black And White to view the presets.

Add color to a grayscale image

You can colorize an entire grayscale image, or select areas to colorize with different colors. For example, you can select a person's hair and color it brown, and then add pink to the person's cheeks after making another selection.

Note: *If the image you are coloring is in grayscale mode, convert it into RGB by choosing Image > Mode > RGB Color.*

- 1 Choose Enhance > Adjust Color > Adjust Hue/Saturation, or Layer > New Adjustment Layer > Hue/Saturation to work on an adjustment layer.
- 2 Select Colorize. If the foreground color isn't black or white, Photoshop Elements converts the image into the hue of the current foreground color. The lightness value of each pixel does not change.

- 3 Use the Hue slider to select a new color if desired. Use the Saturation slider to adjust the saturation. Then click OK.

Adjustment filters

Apply the Equalize filter

The Equalize filter redistributes the brightness values of the pixels in an image so that they more evenly represent the entire range of brightness levels. When you apply this command, Photoshop Elements finds the brightest and darkest values in the composite image and remaps them so that the brightest value represents white and the darkest value represents black. Photoshop Elements then equalizes the brightness—that is, distributes the intermediate pixel values—evenly throughout the grayscale.

- 1 Select an image, layer, or area.
- 2 Choose Filter > Adjustments > Equalize.
- 3 If you selected an area of the image, select what to equalize in the dialog box, and click OK:
 - Equalize Selected Area Only to evenly distribute only the selection's pixels.
 - Equalize Entire Image Based On Selected Area to evenly distribute all image pixels based on those in the selection.

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Apply the Gradient Map filter

The Gradient Map filter maps the grayscale range of an image to the colors of a specified gradient fill.



Using the Gradient Map filter to simulate a sepia tone

- 1 Select an image, layer, or area.
- 2 Do one of the following:
 - Choose Filter > Adjustments > Gradient Map.
 - Using the Layers panel or Layer menu, create a new Gradient Map adjustment layer, or open an existing Gradient Map adjustment layer.

3 Specify the gradient fill you want to use:

- To choose from a list of gradient fills, click the triangle to the right of the gradient fill displayed in the Gradient Map dialog box. Click to select the desired gradient fill, and then click in a blank area of the dialog box to dismiss the list.
- To edit the gradient fill currently displayed in the Gradient Map dialog box, click the gradient fill. Then modify the existing gradient fill or create a new gradient fill.

By default, the shadows, midtones, and highlights of the image are mapped respectively to the starting (left) color, midpoint, and ending (right) color of the gradient fill.

4 Select neither, one, or both of the Gradient Options:

- Dither adds random noise to smooth the appearance of the gradient fill and reduce banding effects.
- Reverse switches the direction of the gradient fill, reversing the gradient map.

5 Click OK.

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Apply the Invert filter

The Invert filter inverts the colors in an image. You might use this command to make a positive black-and-white image negative or to make a positive from a scanned black-and-white negative.

Note: *Because color print film contains an orange mask in its base, the Invert command cannot make accurate positive images from scanned color negatives. Be sure to use the proper settings for color negatives when scanning film on slide scanners.*

When you invert an image, the brightness value of each pixel is converted into the inverse value on the 256-step color-values scale. For example, a pixel in a positive image with a value of 255 is changed to 0.

- 1 Select an image, layer, or area.
- 2 Choose Filter > Adjustments > Invert.

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Apply the Posterize filter

The Posterize filter lets you specify the number of tonal levels (or brightness values) for each channel in an image and then maps pixels to the closest matching level. For example, choosing two tonal levels in an RGB image gives six colors, two for red, two for green, and two for blue.

This command is useful for creating special effects, such as large, flat areas in a photograph. Its effects are most evident when you reduce the number of gray levels in a grayscale image. But it also produces interesting effects in color images.

 If you want a specific number of colors in your image, convert the image to grayscale and specify the number of levels you want. Then convert the image back to the previous color mode, and replace the various gray tones with the colors you want.

- 1 Select an image, layer, or area.
- 2 Do one of the following:
 - Choose Filter > Adjustments > Posterize.
 - From the Layers panel or Layer menu, create a new Posterize adjustment layer, or open an existing Posterize adjustment layer.
- 3 Enter the number of tonal levels you want, and click OK.

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Apply the Threshold filter

The Threshold filter converts grayscale or color images into high-contrast, black-and-white images. You can specify a certain level as a threshold. All pixels lighter than the threshold are converted to white; and all pixels darker are converted to black. The Threshold command is useful for determining the lightest and darkest areas of an image.

- 1 Select an image, layer, or area.
- 2 Do one of the following:
 - Choose Filter > Adjustments > Threshold.
 - From the Layers panel or Layer menu, create a new Threshold adjustment layer, or open an existing Threshold adjustment layer.

The Threshold dialog box displays a histogram of the luminance levels of the pixels in the current selection.

- 3 Select Preview and do any of the following:
 - To change the image to black and white, drag the slider below the histogram until the threshold level you want appears at the top of the dialog box, and click OK. As you drag, the image changes to reflect the new threshold setting.
 - To identify a representative highlight, drag the slider to the right until the image is pure black. Then drag the slider back until some solid white areas appear in the image.
 - To identify a representative shadow, drag the slider to the left until the image is pure white. Then drag the slider back until some solid black areas appear in the image.
- 4 (Optional) To return to default settings, hold down Option and click Reset.
- 5 (Optional) Click Cancel to close the Threshold dialog box without applying changes to the image.

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Apply the Photo filter

The Photo Filter command mimics the technique of putting a colored filter in front of the camera lens to adjust the color balance and color temperature of the light transmitted through the lens and exposing the film. The Photo Filter command also lets you choose a color preset to apply a hue adjustment to an image. If you want to apply a custom color adjustment, the Photo Filter command lets you specify a color using the Adobe Color Picker.



Original image (left), and Warming Filter (81) with 60% Density applied (right)

1 Do one of the following:

- Choose Filter > Adjustments > Photo Filter.
- Choose Layer > New Adjustment Layer > Photo Filter. Click OK in the New Layer dialog box.

2 To choose the filter color, do one of the following in the Photo Filter dialog box:

Warming Filter (85) and Cooling Filter (80) Color conversion filters that tune the white balance in an image. If an image was photographed at a lower color temperature of light (yellowish), the Cooling Filter (80) makes the image colors bluer to compensate for the lower color temperature of the ambient light. Conversely, if the photo was taken at a higher color temperature of light (bluish), the Warming Filter (85) makes the image colors warmer to compensate for the higher color temperature of the ambient light.

Warming Filter (81) and Cooling Filter (82) Light balancing filters for minor adjustments in the color quality of an image. The Warming Filter (81) makes the image warmer (yellowier), and the Cooling Filter (82) makes the image cooler (bluer).

Individual Colors Apply a hue adjustment to the image depending on the color preset you choose. Your choice of color depends on how you're using the Photo Filter command. If your photo has a color cast, you can choose a complement color to neutralize the color cast. You can also apply colors for special color effects or enhancements. For example, the Underwater color simulates the greenish-blue color cast caused when photographing underwater.

- Select the Filter option, and choose a preset from the Filter menu.
- Select the Color option, click the color square, and use the Adobe Color Picker to specify the color of a custom color filter.

Make sure Preview is selected to view the results of using a color filter.

If you don't want the image darkened by adding the color filter, be sure that the Preserve Luminosity option is selected.

3 To adjust the amount of color applied to the image, use the Density slider or enter a percentage in the Density text box. A higher Density applies a stronger color adjustment.

4 Click OK.

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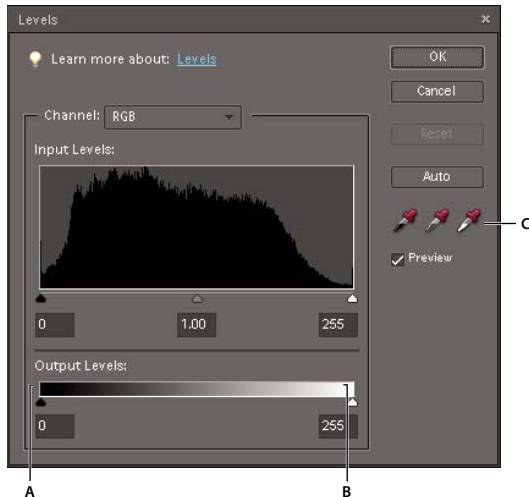
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Setting press target values

Setting target values for print

If you are preparing an image for printing by a commercial press, you can set target values for shadows and highlights. The values that you use depend on the ink percentages that the press can accommodate. For example, if you know that the press can't reproduce detail in shadows at an ink percentage greater than 90%, set the target value of the image shadow to 90%. Similarly, if the press can't reproduce detail in highlights at an ink percentage below 5%, set the highlight value to 5% or higher.

When you set your highlight and shadow points, Photoshop Elements compresses the tonal scale so that detail in shadows and highlights is preserved rather than rendered as (“blown out” to) pure black or white.



Using Output sliders to set target values

A. Shadow point output slider B. Highlight point output slider C. Shadow and highlight eyedroppers

You can set target values in two ways:

- Using the Output sliders in the Levels dialog box is the most straightforward way; however, the Output slider doesn't work if you have specular highlights in the image that need to remain as pure white. Specular white has no detail, and so no ink is printed on the paper. For example, a spot of glare is specular white, not a printable highlight.
- Using the shadow and highlight eyedroppers in the Levels dialog box.

Set press target values for images without specular highlights

Use this press targeting method if you don't have specular highlights in your image. If you do have specular highlights, use the Levels eyedropper method.

- 1 Do one of the following:
 - Choose Enhance > Adjust Lighting > Levels.
 - Choose Layers > New Adjustment Layer > Levels, or open an existing Levels adjustment layer.
- 2 Enter the press target values for the shadow in the left output box and the highlight in the right output box, or drag the output sliders to set the target values, then click OK.

Note: Press values are typically given as percentages of cyan, magenta yellow, and key (black)—CMYK. Photoshop Elements only supports RGB values of 0-256. So you will need to supply RGB equivalent values to enter in the Levels text boxes (for example, RGB of 10, 10, 10 may be used for shadows, and RGB of 244 may be used for highlights).

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Set press target values for images with specular highlights

- 1 Select the eyedropper tool, and choose 3 By 3 Average from the Sample Size menu in the eyedropper tool options. This ensures a representative sample of an area rather than the value of a single screen pixel.
- 2 Choose View > Actual Pixels to make sure you view the true color and tonal values of your image as you make adjustments to it.
- 3 Do one of the following:
 - Choose Enhance > Adjust Lighting > Levels.
 - Choose Layers > New Adjustment Layer > Levels, or open an existing Levels adjustment layer.

When you open the Levels dialog box, you still have access to the scroll controls in the document window, the View menu, and to the Hand and Zoom tools by using keyboard shortcuts.

- 4 To identify areas of representative highlights and shadows in the image, move the pointer around the image, and look at the Info panel to find the lightest and darkest areas. If the Info panel isn't open, choose Window > Info.



To identify the darkest pixels, press Option and move the Black point slider; to identify the brightest pixels, press Option and move the White point slider.

- 5 Double-click the Set White Point eyedropper tool in the Levels dialog box to display the Color Picker. Enter the color values to assign to the lightest area in the image, and click OK. Follow these guidelines:
 - When you are printing on white paper, you can achieve a good highlight in an average-key image using RGB values of 244, 244, 244. An approximate grayscale equivalent is a 4% dot.
 - You can approximate these target values quickly by entering 96 in the Brightness (B) text box under the HSB section of the Color Picker.
 - With a low-key image, you might want to set the highlight to a lower value to avoid too much contrast. Experiment with Brightness values between 96 and 80.
- 6 In the image, click the highlight area that you identified. If you accidentally click the wrong highlight, click Reset and try again.

The pixel values throughout the image are adjusted proportionately to the new highlight values. Any pixels lighter than the area you clicked become specular white. The Info panel shows the values both before and after the color adjustment.

7 Double-click the Set Black Point eyedropper tool in the Levels dialog box to open the Color Picker. Enter the values to assign to the darkest area in the image, and click OK. Follow these guidelines:

- When you're printing on white paper, you can achieve a good shadow in an average-key image by using RGB values of 10, 10, 10. An approximate grayscale equivalent is a 96% dot.
- You can approximate these same values quickly by entering 4 in the Brightness (B) text box under the HSB section of the Color Picker.
- With a high-key image, you might want to set the shadow to a higher value to maintain detail in the highlights. Experiment with Brightness values between 4 and 20.

8 In the image, click the shadow area that you identified, then click OK.

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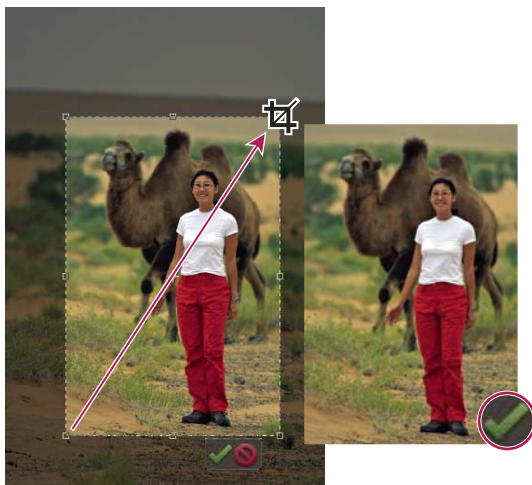
Chapter 9: Cropping, resizing, retouching, and transforming photos

To create a customized image composition, you can crop and resize images. Cropping a photo can create a focal point for a picture, or remove distracting background images. Resizing a photo lets you include more pictures on a page, or fit photos better into a layout. You can retouch certain areas of a photo to fix red eye, replace colors, and soften, blur, and sharpen an image. You can also rotate, resize, distort or apply perspective to a photo, layer, or selection, and even manipulate a flat, two-dimensional image as if it were a solid, three-dimensional object.


Cropping

Crop an image

The Crop tool removes the part of an image surrounding the crop marquee, or selection. Cropping is useful for removing distracting background elements and creating a focus for your photo. By default, when you crop a photo, the resolution remains the same as the original photo. Using the Photo Ratio option allows you to view and modify the size and resolution when cropping a photo. If you use a preset size, the resolution changes to fit the preset.



Crop a photo to remove some of the distracting background.



- 1 Select the Crop tool , select Image, and click the green check mark.
- 2 If you want to use a resolution other than that of the original photo, select one of the following options from the Aspect Ratio menu or specify new custom values in the Width and Height boxes in the options bar:

No Restriction Lets you resize the image to any dimension.



Use Photo Ratio Displays the original aspect ratio of the photo when you crop. The Width and Height boxes show the values that are used for the cropped image. The Resolution box allows you to change the image resolution.

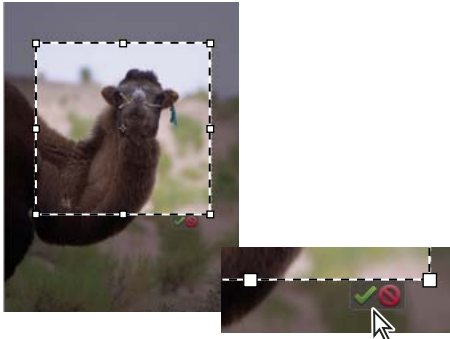
Preset Size Specifies a preset size for the cropped photo. If you want your final output to be a specific size, such as 4 x 6 inches to fit a picture frame, choose that preset size.

Note: When you specify values for the Width and Height boxes, the Aspect Ratio menu changes to Custom.

- 3 Drag over the part of the image you want to keep. When you release the mouse button, the crop marquee appears as a bounding box with handles at the corners and sides.
- 4 (Optional) Adjust the crop marquee by doing any of the following:
 - To change the preset size or aspect ratio, choose new values from the Aspect Ratio menu in the options bar.
 - To move the marquee to another position, place the pointer inside the bounding box and click-drag, or hold down Alt and use the arrow keys to move the marquee.
 - To resize the marquee, drag a handle. (If you choose No Restriction from the Aspect Ratio menu, you can constrain the proportions while scaling by holding down Shift as you drag a corner handle.)
 - To swap Width and Height values, click the Swap icon  in the options bar.
 - To rotate the marquee, position the pointer outside the bounding box (the pointer turns into a curved arrow ) and drag. (You can't rotate the crop marquee for an image in Bitmap mode.)

Note: You can change the color and opacity of the crop shield (the cropped area surrounding the image) by changing the Crop tool preferences. Choose Photoshop Elements > Preferences > Display & Cursors and specify a new Color and Opacity value in the Crop Tool area of the Preferences dialog box. If you don't want to see a colored shield while cropping, deselect Use Shield.

- 5 Click the green Commit button  located in the lower-right corner of the marquee, or press Enter to finish the cropping. If you want to cancel the cropping operation, click the red Cancel button  or press Esc.




Click the Commit button to accept a crop.

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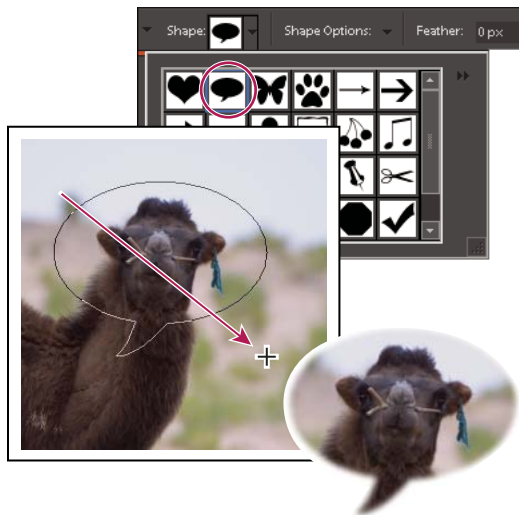
Crop to a selection boundary

Using the Crop command, you can remove the areas that fall outside of the current selection. When you crop to a selection boundary, Photoshop Elements trims the image to the bounding box that contains the selection. (Irregularly shaped selections, such as those made by using the Lasso tool, are cropped to a rectangular bounding box that contains the selection.) If you use the Crop command without first making a selection, Photoshop Elements trims the image by 50 pixels from each visible edge.


- 1 Use any selection tool, such as the Rectangular Marquee tool , to select the part of the image you want to keep.
- 2 Choose Image > Crop.

Use the Cookie Cutter tool

The Cookie Cutter tool crops a photo into a shape that you choose. After you drag the shape in your photo, you can move and resize the bounding box until you have just the area you want.



Use the Cookie Cutter tool to clip a photo into a fun shape.

- 1 Select the Cookie Cutter tool .
- 2 Click the Shapes menu in the options bar to view a library of shapes from which to choose. To view other libraries, click the triangle on the right side of the currently open library and choose a new library from the list that appears.
- 3 Double-click a shape to select it.
- 4 Set Shape Options:

Unconstrained Draws the shape to any size or dimension.

Defined Proportions Keeps the height and width of the cropped shape in proportion.



Defined Size Crops the photo to the exact size of the shape you chose.

Fixed Size Specifies the exact measurements of the finished shape.

From Center Draws the shape from the center.

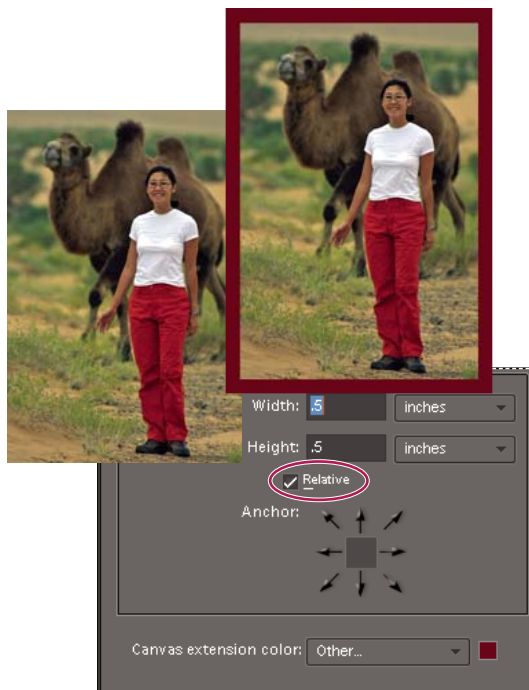
- 5 Enter a value for Feather to soften the edges of the finished shape.

***Note:** Feathering softens the edges of the cropped image so that the edges fade out and blend into the background.*

- 6 Drag within the image to create the shape boundary and move it to the desired location in the image.
- 7 Click the Commit button , or press Enter to finish the cropping. If you want to cancel the cropping operation, click the Cancel button  or press Esc.

Change the size of the canvas

You can add space to one or all sides of an image. Added canvas appears in the currently selected background color on the Background layer; in other layers, the added canvas is transparent. In the new canvas space, you can add text or resize your photo to fit the space.




Increasing the size of the canvas makes room for a colored border.

- 1 Choose Image > Resize > Canvas Size.
- 2 Do one of the following:
 - In the Width and Height boxes, enter the full dimensions of the new canvas. Choose the units of measurement you want from the adjacent menus. The Columns option measures width in terms of the columns specified in the Units & Rulers preferences, and only applies to size reductions, not size increases.
 - Select Relative, and enter the amount by which you want to increase or decrease the size of the canvas. Enter a negative number to decrease the size of the canvas. Use this option if you want to increase the canvas by a specified amount, such as 2 inches on each side.
- 3 For Anchor, click an arrow to indicate where to position the existing image on the new canvas.
- 4 To change the color of the added canvas, choose an option from the Canvas Extension Color menu and click OK.

Straighten an image

You can use the Straighten tool to realign an image vertically or horizontally. When the resulting image is bigger than the original image, this tool also resizes or crops the canvas to accommodate straightening the image.

Manually straighten an image

- 1 Select the Straighten tool .
- 2 To straighten all of the layers in the image, select Rotate All Layers, and then choose an option from the Canvas Options menu (this menu is available only if you select Rotate All Layers):

Grow Or Shrink Canvas To Fit Resizes the canvas to fit the rotated image. Straightening causes corners of the image to fall outside of the current canvas. The straightened image will contain areas of blank background, but no pixels are clipped.

Crop To Remove Background Crops the image to remove any blank background area that becomes visible after straightening. Some pixels will be clipped.

Crop To Original Size Keeps the canvas the same size as the original image. The straightened image will include areas of blank background and some pixels will be clipped.



Straightening and cropping to remove the background

3 To straighten the image, do one of the following:

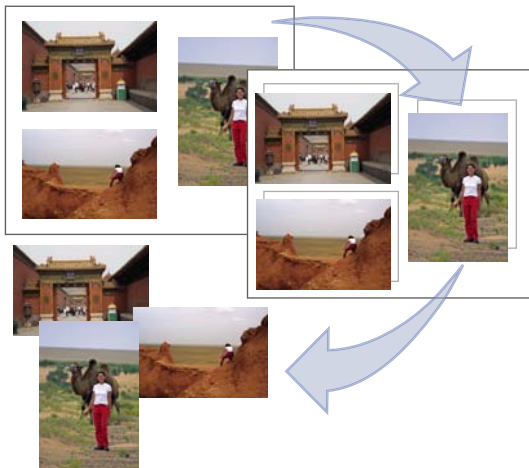
- To align horizontally, draw a line in the image to represent the new straight horizontal edge.
- To align vertically, click the starting point, hold down the Command key, and drag to represent the new straight vertical line.

Automatically straighten an image

- To automatically straighten the image and leave the canvas around the image, choose Image > Rotate > Straighten Image. The straightened image will contain areas of blank background, but no pixels are clipped.
- To automatically straighten and crop the image, choose Image > Rotate > Straighten And Crop Image. The straightened image will not contain areas of blank background, but some pixels will be clipped.

Divide a scanned image containing multiple photos

If you scanned several pictures at once on a flatbed scanner, you can automatically divide and straighten the scanned image into its component photos. The photos must have a clear separation between them.



Separating images scanned from one page into three separate images

- ❖ Choose Image > Divide Scanned Photos. Photoshop Elements automatically divides the image and places each photo in a separate file.

💡 For images with white around the border (images of light skies, snow, and so on), this command works best if you cover the image on the scanner with a piece of dark paper.

Image size and resolution

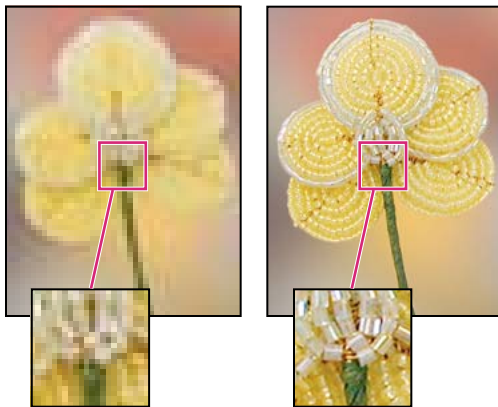
About image size and resolution

The image size (or pixel dimensions) of an image is a measure of the number of pixels along an image's width and height. For example, your digital camera may take a photo that is 3000 pixels wide and 2000 pixels high. These two measurements have a direct correlation to the image's file size, and both are an indication of the amount of image data in a photo.

Resolution is the fineness of detail you can see in an image. It is measured in pixels per inch (ppi). The more pixels per inch, the greater the resolution. Generally, the higher the resolution of your image, the better the printed image quality.

Although a digital image contains a specific amount of image data, it doesn't have a specific physical output size or resolution. As you change the resolution of a file, its physical dimensions change, and as you change the width or height of an image, its resolution changes.

You can see the relationship between image size and resolution in the image size dialog box (choose Image > Resize > Image Size). Deselect Resample Image, because you don't want to change the amount of image data in your photo. Then change the width, height, or resolution. As you change one value, the other two values change accordingly.



The same image printed at 72 ppi and 300 ppi; inset zoom at 200%

If you need to print at a specific resolution, or if you want to print an image significantly smaller or larger than the image's pixel dimensions allow, you can resample the image. Resampling involves either removing or adding pixels to the image to achieve the desired dimensions or resolution.

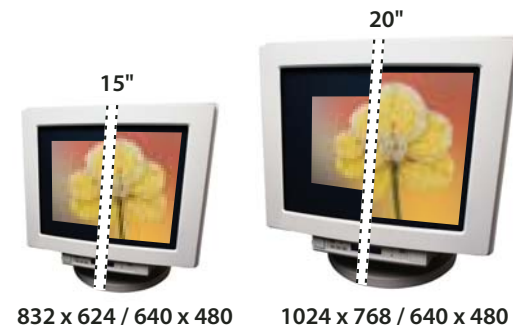
About printer resolution

Printer resolution is measured in ink dots per inch (dpi). Generally, the more dots per inch, the finer the printed output you'll get. Most inkjet printers have a resolution of 720 to 5760 dpi, the latter being the smallest dot size a printer can use.

Printer resolution is different from, but related to, image resolution. To print a high-quality photo on an inkjet printer, an image resolution of about 220 ppi should provide good results. Using a lower resolution, you can print a slightly larger photo—if you are willing to accept some image degradation. You'll see a warning if you chose a print size that causes the photo to print at less than 150 ppi.

About monitor resolution

Your monitor's resolution is described in pixel dimensions. For example, if your monitor resolution is set to 1600 x 1200 and your photo's pixel dimensions are the same size, at 100%, the photo will fill the screen. The size an image appears on-screen depends on a combination of factors: the pixel dimensions of the image, the monitor size, and the monitor resolution setting. In Photoshop Elements, you can change the image magnification on-screen, so you can easily work with images of any pixel dimensions.



A 620 x 400-pixel image displayed on monitors of various sizes and resolutions

When preparing images for on-screen viewing, you should consider the lowest monitor resolution that your photo is likely to be viewed on.

Display the image size of an open file

- ❖ Click-hold the file information box at the bottom of the document. The box displays the width and height of the image (in the unit of measurement currently selected for the rulers), dimensions in total image pixels, the number of color channels, and the image resolution (ppi).

View the print size on-screen

- ❖ Do one of the following:
 - Choose View > Print Size.
 - Select the Hand tool or Zoom tool, and click Print Size in the options bar.

The magnification of the image is adjusted to display its approximate printed size, as specified in the Document Size section of the Image Size dialog box. Keep in mind that the size and resolution of your monitor affect the on-screen print size.

Change print dimensions and resolution without resampling

You might need to change the print dimensions and resolution if you are sending the image to a print shop that requires files to be at a specific resolution.

If you are printing directly from Photoshop Elements, you don't have to perform this procedure. Instead, you can choose a size in the Print dialog box and Photoshop Elements applies the appropriate image resolution.

Note: To change only the print dimensions or the resolution, and adjust the total number of pixels in the image proportionately, you must resample the image.

- 1 Choose Image > Resize > Image Size.

- 2 Make sure that Resample Image is deselected. If deselected, you can change the print dimensions and resolution without changing the total number of pixels in the image, but the image may not keep its current proportions.

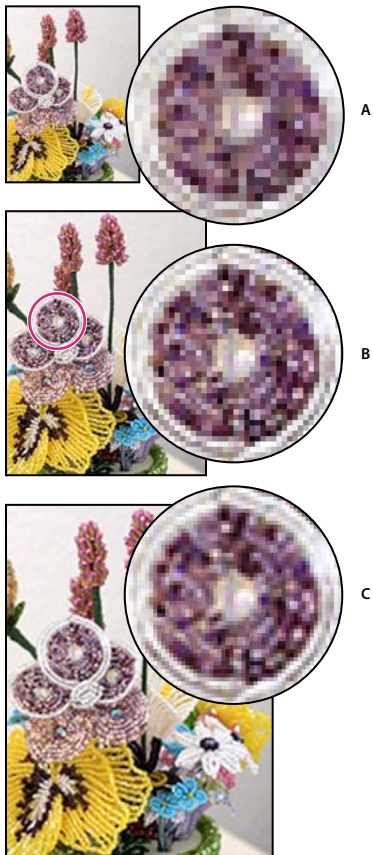
Note: *Resample Image must be selected in order to use the Constrain Proportions. Resample Image and Constrain Proportions must be selected to use Scale Style functions.*

- 3 To maintain the current aspect ratio, select Constrain Proportions. This option automatically updates the width as you change the height, and vice versa.
- 4 Under Document Size, enter new values for the height and width. If desired, choose a new unit of measurement. For Width, the Columns option uses the width and gutter sizes specified in the Units & Rulers preferences.
- 5 For Resolution, enter a new value. If desired, choose a new unit of measurement, and then click OK.

💡 To return to the original values displayed in the Image Size dialog box, use Option and click Reset.


Resample an image

Changing the pixel dimensions of an image is called *resampling*. Resampling affects not only the size of an image on-screen, but also its image quality and its printed output—either its printed dimensions or its image resolution. Resampling can degrade image quality. When you *downsample*, meaning that you decrease the number of pixels in your image, information is removed from the image. When you *upsample*, or increase the number of pixels in your image, new pixels are added based on the color values of existing pixels, and the image loses some detail and sharpness.



Resampling an image
A. Image downsampled B. Original image C. Image upsampled

To avoid the need for upsampling, scan or create the image at the resolution required for your printer or output device. If you want to preview the effects of changing pixel dimensions on-screen or print proofs at different resolutions, resample a duplicate of your file.

 *If you're preparing images for the web, it's useful to specify image size in terms of the pixel dimensions.*

1 Choose Image > Resize > Image Size.

2 Select Resample Image, and choose an interpolation method:

Nearest Neighbor Fast, but less precise. This method is recommended for use with illustrations containing edges that are not anti-aliased, to preserve hard edges and produce a smaller file. However, this method can create jagged edges, which become apparent when distorting or scaling an image or performing multiple manipulations on a selection.

Bilinear Medium-quality.

Bicubic Slow, but more precise, resulting in the smoothest tonal gradations.

Bicubic Smoother Use when you're enlarging images.


Bicubic Sharper Use when you're reducing the size of an image. This method maintains the detail in a resampled image. It may, however, oversharpen some areas of an image. In this case, try using Bicubic.

3 To maintain the current aspect ratio, select Constrain Proportions. This option automatically updates the width as you change the height, and vice versa.

4 In Pixel Dimensions, enter values for Width and Height. To enter values as percentages of the current dimensions, choose Percent as the unit of measurement.

The new file size of the image appears next to Pixel Dimensions, with the old file size in parentheses.

5 Click OK to change the pixel dimensions and resample the image.

 *For best results in producing a smaller image, downsample and apply the Unsharp Mask filter. To produce a larger image, rescan the image at a higher resolution.*

Retouching

Precisely remove red eye

The Red Eye Removal tool removes red eye in flash photos of people. Red eye is caused by the illumination of the subject's retina by the camera's flash. You'll see it more often when taking pictures in a darkened room because the subject's iris is wide open. To avoid red eye, use the camera's red-eye reduction feature, if available.



Correct red eye by selecting an eye (top) or clicking an eye (center).

1 To manually fix red eyes, select the Red Eye Removal tool .

2 In the Options bar, set the Pupil Size and Darken Amount.

3 In the image, do one of the following:

- Click a red area of an eye.
- Draw a selection over the eye area.

When you release the mouse button, the red is removed from the eyes.

Note: You can also automatically fix red eyes by clicking *Auto* in the Red Eye Removal tool option bar.

More Help topics

[“Automatically correct lighting and color”](#) on page 105


[“Adjust the color of skin tone”](#) on page 121

Remove spots and small imperfections

The Spot Healing Brush quickly removes blemishes and other imperfections from your photos. You can either click once on a blemish, or click and drag to smooth away imperfections in an area.



Easily remove spots or imperfections using the Spot Healing Brush tool.

- 1 Select the Spot Healing Brush tool .
- 2 Choose a brush size. A brush that is slightly larger than the area you want to fix works best so that you can cover the entire area with one click.
- 3 Choose a Type option in the options bar.

Proximity Match Uses the pixels around the edge of the selection to find an image area to use as a patch for the selected area. If this option doesn't provide a satisfactory fix, choose *Edit > Undo*, and try the *Create Texture* option.

Create Texture Uses all the pixels in the selection to create a texture in which to fix the area. If the texture doesn't work, try dragging through the area a second time.

Note: Click *All Layers* to apply your change to all layers of the image.

- 4 Click the area you want to fix in the image, or click and drag over a larger area.

More Help topics


[“Adjust the color of skin tone”](#) on page 121

Fix large imperfections

The Healing Brush fixes large areas of imperfections when you drag over them. You can remove objects from a uniform background, such as an object in a field of grass.



Before and after using Healing Brush

1 Select the Healing Brush tool .

2 Choose a brush size from the options bar and set healing brush options:

Mode Determines how the source or pattern blends with existing pixels. Normal mode lays new pixels over the original pixels. Replace mode preserves film grain and texture at the edges of the brush stroke.

Source Sets the source to use for repairing pixels. Sampled uses pixels from the current image. Pattern uses pixels from the pattern you specify in the Pattern panel.


Aligned Samples pixels continuously without losing the current sampling point, even if you release the mouse button. Deselect Aligned to continue using the sampled pixels from the initial sampling point each time you stop and resume painting.

Sample All Layers Choose Sample All Layers to sample data from the current layer, the current layer and below, or all visible layers.

3 Position the pointer in any open image and Option-click to sample data.

***Note:** If you are sampling from one image and applying to another, both images must be in the same color mode unless one of the images is in Grayscale mode.*

4 Drag the image over the flaw to meld existing data with sampled data. The sampled pixels meld with the existing pixels each time you release the mouse button.

 *If there is a strong contrast at the edges of the area you want to heal, make a selection before you use the Healing Brush tool. The selection should be bigger than the area you want to heal but should precisely follow the boundary of contrasting pixels. When you paint with the Healing Brush tool, the selection prevents colors from bleeding in from the outside.*

More Help topics

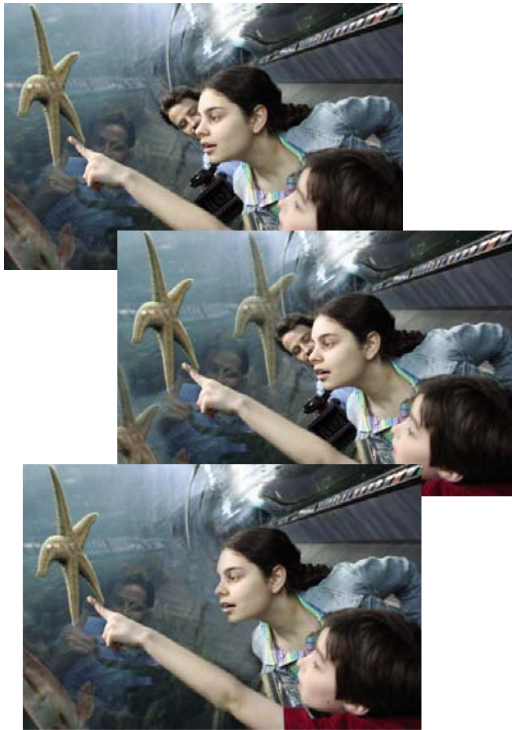
[“Adjust the color of skin tone”](#) on page 121

[“About blending modes”](#) on page 205


[“About patterns”](#) on page 224

Clone images or areas in an image

The Clone Stamp tool paints with an image sample, which you can use to duplicate objects, remove image imperfections, or paint over objects in your photo.



Original photo (top), after adding two starfish with the Clone Stamp tool (center), and after removing a person with the Clone Stamp tool (bottom)

1 Select the Clone Stamp tool .

2 (Optional) Set options in the options bar:

Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Determines how the source or pattern blends with existing pixels. Normal mode lays new pixels over the original pixels.

Opacity Sets the opacity of the paint you apply. A low opacity setting allows pixels under a paint stroke to show through. Drag the pop-up slider or enter an opacity value.

Aligned Moves the sampled area with the cursor as you begin to paint, regardless of how many times you stop and resume painting. Selecting this option is useful when you want to eliminate unwanted areas, such as a telephone line across the skyline or a rip in a scanned photo. If Aligned is deselected, the Clone Stamp tool applies the sampled area from the initial sampling point each time you stop and resume painting. Deselecting this option is useful for applying multiple copies of the same part of an image to different areas within the same image or to another image.

Sample All Layers To sample (copy) data from all visible layers, select Sample All Layers. To sample data from only the active layer, deselect this option.

3 Position the pointer on the part of any open image you want to sample, and Option-click. The tool duplicates the pixels at this sample point in your image as you paint.

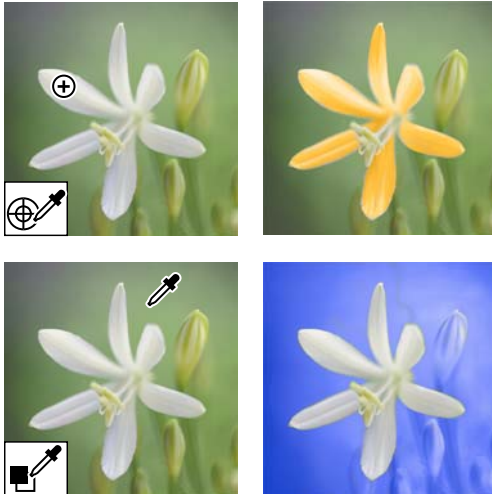
4 Drag or click to paint with the tool.

More Help topics



[“About blending modes”](#) on page 205

Replace colors in an image

The Color Replacement tool simplifies replacing specific colors in your image. You can paint over a targeted color—for example, a yellow flower in an image—with a different color, like red. You can also use the Color Replacement tool to correct colors.



Replacing colors

- 1 Select the Color Replacement tool . (The Color Replacement tool is nested under the Brush tool .)
- 2 Choose a brush tip from the Brush menu in the options bar. For Mode, generally, you'll want to keep the blending mode set to Color.
- 3 For Limits, choose one of the following:
Discontiguous Replaces the sampled color wherever it occurs under the pointer.
Contiguous Replaces colors that are contiguous with the color immediately under the pointer.
- 4 For Tolerance, specify a low percentage to replace colors very similar to the pixel you click, or raise the percentage to replace a broader range of colors.
- 5 To give a smooth edge to the areas you correct, select Anti-alias.
- 6 Choose a foreground color to use to replace the unwanted color.
- 7 Click the color you want to replace in the image.
- 8 Drag within the image to replace the targeted color.

More Help topics

[“Adjust the color of skin tone”](#) on page 121

Blur or soften edges

The Blur tool softens hard edges or areas in an image by reducing detail. Blurring a busy background can bring your target images more into focus. You can also use Blur filters for this purpose.



Original photo (left), and photo after blurring the background (right)

1 Select the Blur tool .

2 Set options in the options bar:

Brushes pop-up menu Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush, in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Specifies how the pixels you blur blend into other pixels in the image.

Strength Specifies the amount of blur that occurs with each stroke

Sample All Layers Blurs all visible layers. If this is deselected, the tool blurs only the active layer.

3 Drag over the part of the image you want to blur.

More Help topics

[“Blur and Blur More”](#) on page 185

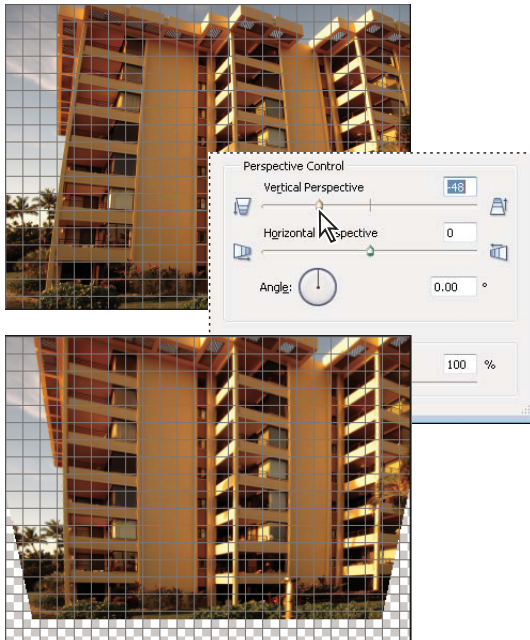
[“Gaussian Blur”](#) on page 185

[“About blending modes”](#) on page 205

Correct camera distortion

The Correct Camera Distortion dialog box enables you to fix common lens distortion problems, like darkened edges caused by lens faults or improper lens shading. For example, in a picture of the sky taken in low light, the corners of the image may be darker than the center. Changing the vignette amount and midtone settings fixes the distortion.

You can also use the perspective controls to rotate an image or fix image perspective caused by vertical or horizontal camera tilt. The Correct Camera Distortion filter’s image grid allows you to make these adjustments easily and accurately.



Correct camera distortion

- 1 Select Filter > Correct Camera Distortion.
- 2 Click Preview.
- 3 Set any of the following options to correct your image, and then click OK:

Remove Distortion Corrects lens barrel or pincushion distortion. Type a number in the box, or move the slider to straighten horizontal and vertical lines that bend either away from or toward the center of the image.

Vignette Amount Sets the amount of lightening or darkening along the edges of an image. Type a number in the box, or move the slider to gradually shade the image.

Vignette Midpoint Specifies the width of area affected by the Amount slider. Move the slider, or type a lower number to affect more of the image. Type a higher number to restrict the effect to the edges of the image.

Vertical Perspective Corrects image perspective caused by tilting the camera up or down. Type a number in the box or use the slider to make vertical lines in an image parallel.

Horizontal Perspective Detects the edges and detail in an image, provides finer detail, and reduces halos. Type a number or use the slider to reduce the blur caused by camera or subject movement. Set the Angle control if you choose Motion Blur.

Angle Rotates the image to correct for camera tilt or to make adjustments after correcting perspective. Type a number in the box or drag the angle dial to rotate the image to the left (counterclockwise) or right (clockwise).

Scale Adjusts the image scale up or down. The image pixel dimensions aren't changed. Type a number in the box or use the slider to remove blank areas of the image caused by pincushion, rotation, or perspective corrections. Scaling up effectively results in cropping the image and interpolating up to the original pixel dimensions.

Show Grid Shows the grid when selected. Hides the grid when deselected.

Zoom Shows a closer view when you zoom in, and shows a more distant view when you zoom out.

Color Specifies the grid color.

More Help topics

[“Adjust color curves”](#) on page 118

[“Improve shadow and highlight detail”](#) on page 111

Use Photomerge Group Shot

Use Photomerge Group Shot to create the perfect group photo from multiple photos.

***Note:** For best results, the multiple images used to create Photomerge Group Shot should be from the same photo session.*

- 1 Open two to 10 group shots you want to use as source images for the Photomerge Group Shot.
- 2 Choose File > New > Photomerge Group Shot.
- 3 Choose the best group shot of the multiple source files and drag it from the Project Bin to the Final window.
- 4 Click other photos in the Project Bin (color-coded to help you keep track) and use the Pencil tool to draw a line over the areas that you would like to merge into the final photo. To fine-tune the final image, use the Pencil tool to add additional content or the Eraser tool to remove content.

- 5 Set any of the following:

Show Strokes Click this to show your Pencil strokes in the source image.

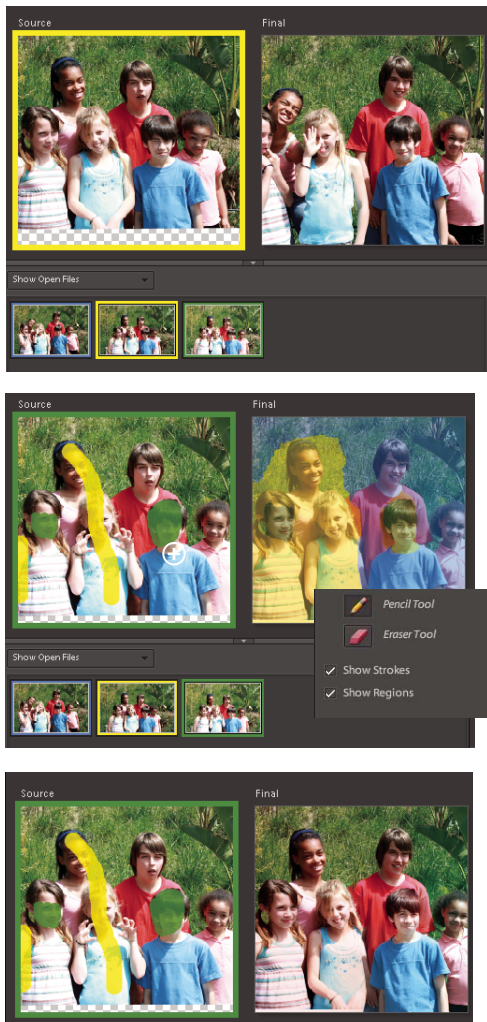
Show Regions Click this to reveal the selected regions in the final image.

Advanced Options Expand or collapse this arrow for Advanced Options.

Alignment Tool To correct the alignment of the multiple photos, click the Alignment Tool, place three markers in the source image and three markers in the final image, then click Align Photos.

Pixel Blending Click option to blend pixels.

- 6 Click Reset to start the process over, Done to complete the Photomerge Group Shot, or Cancel to close Photomerge Group Shot.



Photomerge Group Shot window

Note: Photomerge Group Shot does not support the PSE file format. If you try to create a photomerge group shot with a PSE file, you will get an error message. This is a known issue.

Use Photomerge Faces

Use Photomerge Faces to combine multiple facial features to create one composite face.

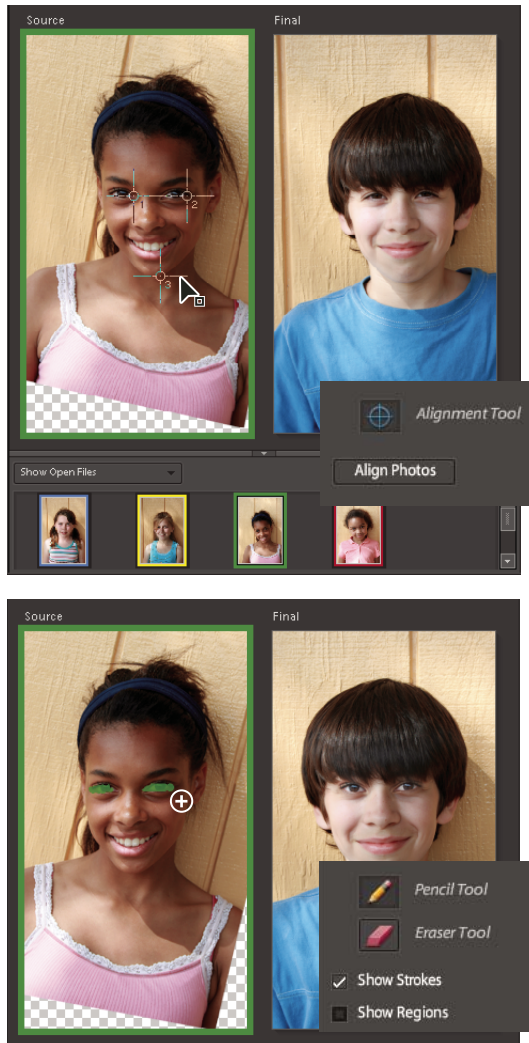
- 1 Open all the face images you want to use as source images for the Photomerge Faces.
- 2 Choose File > New > Photomerge Faces.
- 3 Pick a face photo as your base image and drag it from the Project Bin to the Final window.
- 4 Click another image in the Project Bin and click the Alignment tool. Place the three alignment markers on the eyes and mouth on the source image and the final image and click Align Photos.
- 5 Click other photos in the Project Bin (color-coded to help you keep track) and use the Pencil tool to draw a line over the areas that you would like to merge into the final photo. To fine-tune the final image, use the Pencil tool to add additional content or the Eraser tool to remove content.

6 Set the following:

Show Strokes Click this to show your Pencil strokes in the source image.

Show Regions Click this to reveal the selected regions in the final image.

7 Click Reset to start the process over, Done to complete the Photomerge Faces, or Cancel to close Photomerge Faces.



Photomerge Faces window

Use Photomerge Scene Cleaner

Use Photomerge Scene Cleaner to create the perfect scenic photo from multiple photos. You can eliminate unwanted elements like tourists that inadvertently wandered into the scenery.

Note: For best results, the multiple images used with Photomerge Scene Cleaner is of the same scene taken from the same angle.

- 1 Open 2 - 10 photos you want to use for the Photomerge Scene Cleaner.
- 2 Choose File > New > Photomerge Scene Cleaner.

The Editor is now in Guided Edit mode with the Photomerge Scene Cleaner Guided Edit panel containing tools and directions.

3 Select the best photo and then drag it from the Project Bin to the Final window.

This photo becomes the base image for the final photo.

4 Click a photo in the Project Bin (color-coded to help you keep track).

It appears in the Source window.

5 Do any of the following to add or remove areas from the Final window:

- To remove an area, use the Pencil tool to mark the area in the Final window.
- To add an area to the Final window, use the Pencil tool to mark the area in the Source window.
- To fine-tune the final image, use the Pencil tool to add additional content or the Eraser tool to remove content.

6 (Optional) Select one of the following:

Show Strokes Shows your Pencil strokes in the source image.

Show Regions Reveals the selected regions in the final image.

7 (Optional) If there's a problem with the photos aligning properly, click the Advanced Options arrow to access the following:

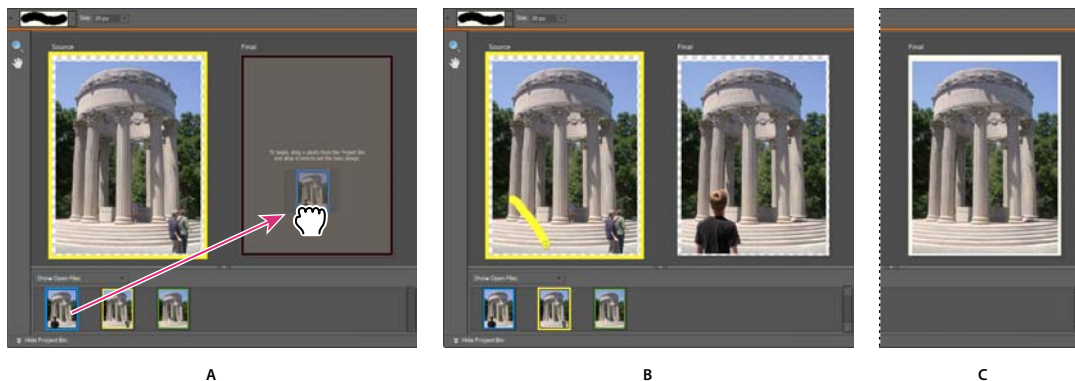
Alignment Tool  Corrects the alignment of the multiple photos. Click the Alignment Tool to place three markers in the source image and three markers in the final image. Drag markers to similar areas in each photo, and then click Align Photos.

Note: Photomerge Scene Cleaner uses auto alignment. Use the Alignment Tool only be if the automatic alignment doesn't produce the result you want.

Pixel Blending Blends pixels using different options. Experiment to see whether this option improves the photo or not.

8 (Optional) Select other photos in the Project Bin for use in the Source window and repeat step 5.

9 Click Reset to start the process over, Done to complete the Photomerge Scene Cleaner, or Cancel to close the Photomerge Scene Cleaner.



Photomerge Scene Cleaner

A. Dragging a photo to the Final window B. Using the Pencil tool to mark the area to be replaced in the Final window C. Result in the Final window

Photomerge Exposure

Use Photomerge Exposure to efficiently handle scenes in photos with exposure challenges. You can blend two photos together to get a perfectly exposed photo. For example, if you have a photo with a window in the background and you want a perfect photo with the following properties:

- A good exposure of the scenery outside the window.
- A good exposure of the darker objects inside the room.

In such a scenario, you often end up with either overexposed scenery outside the window or underexposed objects inside the room.

To ensure that you get a perfect photo, do the following:

- Take two or more photos of the same scene with different exposures. For best results, take the photos at different exposure values with minimum shakes. For example:
 - You can take two or more photos with the flash turned on to properly expose the subject (the objects inside the room).
 - You can then take one photo with the flash turned off to properly expose the background (the scenery outside the window).



You can use Exposure Bracketing in your camera to capture the same subject with a number of shots with different exposure settings.

- Blend the photos to create a perfectly exposed photo.

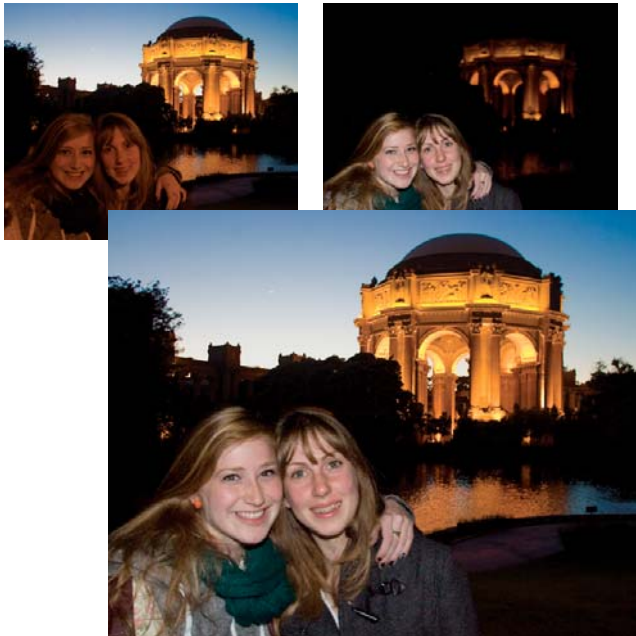
Photomerge Exposure enables blending the two photos together to get a perfectly exposed photo.

Photomerge Exposure can be done in the following modes:

- Automatic mode
- Manual mode



To obtain best results while using the Automatic mode, use photos that are shot at different exposure values, using Exposure Bracketing. To obtain best results while using the Manual mode, use photos shot with flash turned on and flash turned off.



Photomerge Exposure

Automatic Photomerge Exposure

You can select and deselect the photos through the Project Bin.

- 1 In the Photoshop Elements Editor, open the required files using File > Open.
 - a Select a minimum of two and a maximum of ten photos from the Project Bin.
 - b Select File > New > Photomerge Exposure.

Photoshop Elements Editor displays the selected photos.

- 2 In the Photomerge panel, select Automatic.

You can view the selected photos in the Editor.

- 3 Select one of the following options:

Simple Blending This option does not enable you to change the Photomerge Exposure settings. Selecting this option displays the merged photo in the Editor.

Smart Blending Selecting this option enables you to adjust the settings using the sliders. You can view the final photo based on the settings you provide. You can adjust the following settings:

- **Highlight Details** Enables you to increase or decrease the details that are in the highlight.
- **Shadows** Enables you to lighten or darken the shadows.
- **Saturation** Enables you to change the intensity of the color.

- 4 After you get the desired result, click Done to complete Photomerge Exposure.

Manual Photomerge Exposure

- 1 In the Photoshop Elements Editor, open the required files using File > Open.
 - a Select Show Open Files in the Project Bin to view all the opened files.
 - b Select a minimum of two and a maximum of ten photos from the Project Bin.

- c Select File > New > Photomerge Exposure.

The Photoshop Elements Editor displays the selected photos.

- 2 In the Photomerge panel, select Manual.

The first image in the Project Bin is displayed as the source photo. You can select an image from the Project Bin as the background photo.

- 3 Set the following:

Show Strokes Click this option to show your Pencil strokes in the source image.

Show Regions Click this option to reveal the selected regions in the final image.

- 4 Select exposed regions from the current source image by using the Pencil tool. Change the source photo, and select regions from this photo if necessary.

You can now view the final image with different regions copied from different source photos above the initially selected final photo.

- 5 Change the transparency of these selected regions to blend them properly with the background by using the Transparency Slider. Select Edge Blending to smoothen the blended edges.

***Note:** Transparency Slider affects only those regions that are selected from the currently displayed source image. Change to a different source image if you want to change the transparency of the regions selected from the other images. It remembers the value used for a particular image. If the slider is not changed, the default is set to 0.*

- 6 To correct the alignment of multiple photos, select Advanced Option, and click the Alignment Tool. Place three markers in the source image and three markers in the final image, then click Align Photos.

Sharpening

Sharpening overview

Sharpening enhances the definition of edges in an image. Whether your images come from a digital camera or a scanner, most images can benefit from sharpening. When sharpening images, keep the following in mind:

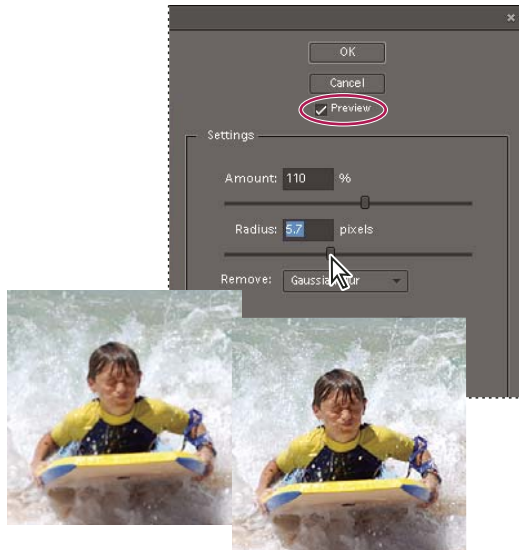
- Sharpening cannot correct a severely blurred image.
- Sharpen your image on a separate layer so that you can resharpen it later if you need to change the adjustment. Set the layer's blending mode to Luminosity to avoid color shifts along edges. If you find that highlights or shadows are lessened after you sharpen, use the layer blending controls to prevent sharpening in highlights and shadows.
- If you need to reduce image noise, do so before sharpening so that you don't intensify the noise.
- Sharpen your image multiple times in small amounts. Sharpen the first time to correct blur captured by a scanner or digital camera. After you've color corrected and resized your image, sharpen it again.
- If possible, judge your sharpening by outputting your image. The amount of sharpening needed varies depending on whether the image is printed or displayed on a web page.

Sharpen an image

The Auto Sharpen command increases clarity or focus without the risk of over sharpening an image.

The Sharpen tool focuses soft edges in a photo to increase clarity or focus. Oversharpening a photo gives it a grainy look. You can avoid oversharpening by setting a lower Strength value in the options bar. It's best to make the sharpening subtle and increase it as necessary by dragging over the area several times, building up the sharpness each time.

The Adjust Sharpness dialog box has sharpening controls not available with the Sharpen tool or with Auto Sharpen. You can set the sharpening algorithm or control the amount of sharpening that occurs in shadow and highlight areas.



Adjust sharpening


Automatically sharpen an image

- ❖ Select Enhance > Auto Sharpen.

Sharpen areas of an image



Original image (top), two faces sharpened correctly (bottom left), and two faces over sharpened (bottom right)

- 1 From the Blur tool menu, select the Sharpen tool .

2 Set options in the options bar:

Brushes menu Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes menu, and then select a brush thumbnail.

Size Sets the size of the brush, in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Determines how the paint that you apply blends with the existing pixels in the image.

Strength Specifies the amount of sharpening that occurs with each stroke.

Sample All Layers Sharpens all visible layers. If this is deselected, the tool sharpens only the active layer.

3 Drag over the part of the image you want to sharpen.

Precisely sharpen an image

1 Select Enhance > Adjust Sharpness.

2 Click Preview.

3 Set any of the following options to sharpen your image, and then click OK.

Amount Sets the amount of sharpening. Type a number in the box or drag the slider to increase or decrease the contrast between edge pixels, giving the appearance of greater sharpness.

Radius Determines the number of pixels surrounding the edge pixels affected by the sharpening. Type a number in the box or drag the slider to change the radius value. As you increase the radius, sharpening becomes more obvious.

Remove Sets the sharpening algorithm used to sharpen the image. Gaussian Blur is the method used by the Unsharp Mask filter. Lens Blur detects the edges and detail in an image, and provides finer sharpening of detail and reduced sharpening halos. Motion Blur attempts to reduce the effects of blur due to camera or subject movement. Select a blur option from the pop-up menu.

Angle Sets the direction of motion for the Motion Blur option of the Remove control. Type a number in the box or drag the angle dial to change the angle percentage to the left (counterclockwise) or right (clockwise).

More Refined Processes the file more slowly for more accurate blur removal.

Use the Unsharp Mask filter

The Unsharp Mask filter reproduces a traditional film technique used to sharpen edges in an image. The Unsharp Mask filter corrects blur introduced during photographing, scanning, resampling, or printing. It is useful for images intended for both print and online viewing.

Unsharp Mask locates pixels that differ from surrounding pixels by the threshold you specify and increases the pixels' contrast by the amount you specify. For neighboring pixels within the specified radius, the lighter pixels get lighter, and the darker pixels get darker.

The effects of the Unsharp Mask filter are far more pronounced on-screen than in high-resolution printed output. If your final destination is printed output, experiment to determine what settings work best for your image.



The Unsharp Mask filter adds contrast to reduce fuzziness.

- 1 Select an image, layer, or area.
- 2 Choose Enhance > Unsharp Mask.
- 3 Select the Preview option.
- 4 Set any of these options and click OK:

Amount Determines how much to increase the contrast of pixels. For high-resolution printed images, an amount between 150% and 200% is usually best.

Radius Specifies the number of pixels to sharpen around edges. For high-resolution images, a radius between 1 and 2 is usually recommended. A lower value sharpens only the edge pixels, whereas a higher value sharpens a wider band of pixels. This effect is much less noticeable in print than on-screen, because a 2-pixel radius represents a smaller area in a high-resolution printed image.

Threshold Determines how far different pixels must be from the surrounding area before they are considered edge pixels and sharpened. To avoid introducing noise (in images with flesh tones, for example), experiment with Threshold values between 2 and 20. The default Threshold value (0) sharpens all pixels in the image.

Transforming

Rotate or flip an item

You can rotate or flip a selection, a layer, or an entire image. Make sure to choose the correction command depending on the item you want to rotate or flip.

- 1 Select the photo, layer, selection, or shape you want to rotate or flip.
- 2 Choose Image > Rotate, and choose one of the following commands from the submenu:

90° Left, Layer 90° Left, and Selection 90° Left Rotates the photo, layer, or selection a quarter-turn counterclockwise. (Rotate Selection is only available when you have an active selection in an image.)

90° Right, Layer 90° Right, and Selection 90° Right Rotates the photo, layer, or selection a quarter-turn clockwise.

180°, Layer 180°, and Selection 180° Rotates the photo, layer, or selection a half-turn.

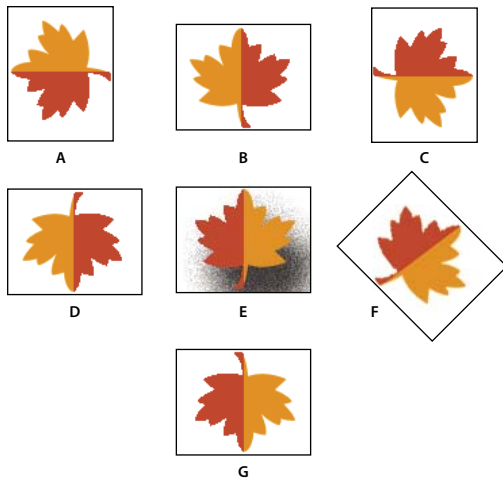
Custom Rotates the item by the amount you specify. If you select this option, enter the number of degrees you want to rotate the item by, and the direction in which you want to rotate the item.

Note: A positive number rotates the object clockwise, and a negative number rotates the object counterclockwise.

When you are finished, click OK.

Flip Horizontal, Flip Layer Horizontal, and Flip Selection Horizontal Flips the photo, layer, or selection horizontally.

Flip Vertical, Flip Layer Vertical, and Flip Selection Vertical Flips the photo, layer, or selection vertically.



Rotating an image

A. Rotate 90° left B. Flip Horizontal C. Rotate 90° right D. Rotate 180° E. Original image F. Free rotate G. Flip Vertical

Freely rotate an item


With the Free Rotate Layer and Free Rotate Selection commands, you can rotate an item by any amount.





Use the Free Rotate Layer command to straighten image, and click the Commit button to apply the rotation.

- 1 Select the layer or selection you want to rotate.
- 2 Choose Image > Rotate > Free Rotate Layer or Selection. A bounding box appears in the image.



Note: If you select an image that is a Background layer (such as a photo imported from a camera or scanner), you are given the option of turning it into a regular layer so that you can transform it.

- 3 (Optional) To change the point around which the item rotates, click a square on the reference point locator  in the options bar.

4 Do one of the following to specify the rotation amount:

- Click and drag the rotate handle at the bottom of the bounding box. The cursor will change to concentric arrows  when it's hovering over the handle. To constrain the rotation to 15° increments, hold down Shift as you drag.
- Type an angle of rotation between -180 (maximum counterclockwise rotation) and 180 (maximum clockwise rotation) in the Rotate  text box of the options bar.

5 Do one of the following:

- To apply the transformation, double-click inside the bounding box, click the Commit button , or press Enter.
- To cancel the transformation, click the Cancel button , or press Esc.

Scale an item

1 Select the photo, layer, selection, or shape you want to scale.



2 Choose Image > Resize > Scale.

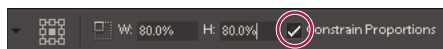
Note: If you select a photo that is a Background layer (such as a photo imported from a camera or scanner), you are given the option of turning it into a regular layer so that you can transform it.

3 Do any of the following to specify the scale amount:

- To maintain the relative proportions (avoiding image distortion) as you scale, select Constrain Proportions, and then drag a corner handle. Alternatively, press Shift as you drag a corner handle.
- To scale only the height or the width, drag a side handle.
- Enter a percentage for the Width, Height, or both in the options bar.

4 Do one of the following:

- To apply the transformation, double-click inside the bounding box, click the Commit button , or press Enter.
- To cancel the transformation, and click the Cancel button , or press Esc.



Scaling proportionally by dragging the corner with the scaling icon



Skew or distort an item

Skewing applies a vertical or horizontal slant to an item. Distorting stretches or squishes an item.

1 Select the photo, layer, selection, or shape you want to transform.

2 Choose Image > Transform > Skew or Image > Transform > Distort. If you are transforming a shape with the Shape tool selected, choose Image > Transform Shape > Skew or Image > Transform Shape > Distort.

Note: If you select a photo that is a Background layer (such as a photo imported from a camera or scanner), you are given the option of turning it into a regular layer so that you can transform it.

- 3 Drag a handle to skew or distort the bounding box.
- 4 Do one of the following:
 - To apply the transformation, double-click inside the bounding box, click the Commit button , or press Enter.
 - To cancel the transformation, click the Cancel button , or press Esc.

Apply perspective to an item



Applying perspective creates the appearance of objects existing in three dimensions.



Original image (left), and image after perspective applied (right)

- 1 Select the item you want to transform.
- 2 Choose Image > Transform > Perspective. If you are transforming a shape with the Shape tool selected, choose Image > Transform Shape > Perspective.

Note: If you select a photo that is a background layer (such as a photo imported from a camera or scanner), you are given the option of turning it into a regular layer so that you can transform it.


- 3 Drag a corner handle on the bounding box to apply perspective.
- 4 Do one of the following:
 - To commit the transformation, double-click inside the bounding box, click the Commit button , or press Enter.
 - To cancel the transformation, click the Cancel button , or press Esc.

Freely transform an item





The Free Transform command lets you apply transformations (rotating, scaling, skewing, distorting, and perspective) in one step. Instead of choosing different commands, you simply hold down a key on your keyboard to switch between transformation types.

- 1 Select the item you want to transform.
- 2 Choose Image > Transform > Free Transform. If you are transforming a shape, choose Image > Transform Shape > Free Transform Shape.



Note: If you select a photo that is a Background layer (such as a photo imported from a camera or scanner), you are given the option of turning it into a regular layer so that you can transform it.

- 3 (Optional) To change the point around which the item rotates, click a square on the reference point locator  in the options bar.

4 Do one or more of the following to transform the object:

- To scale, drag any handle of the bounding box. To scale the width and height proportionally, either press Shift as you drag a corner handle, or select Constrain Proportions in the options bar, and then drag a corner handle.
- To rotate, move the pointer outside of the bounding box and drag. When positioned outside the bounding box, the pointer becomes a curved, two-sided arrow . Press Shift and drag to constrain the rotation to 15° increments.
- To distort, press Command, and drag any handle. When positioned over a handle, the pointer becomes a gray arrowhead .
- To skew, press Command+Shift and drag a handle in the middle of any side of the bounding box. When positioned over a side handle, the pointer becomes a gray arrowhead with a small double arrow .
- To apply perspective, press Command+Option+Shift, and drag a corner handle. When positioned over a corner handle, the pointer becomes a gray arrowhead .

5 Do one of the following:

- To commit the transformation, double-click inside the bounding box, and then click the Commit button , or press Enter.
- To cancel the transformation, click the Cancel button , or press Esc.

Apply a transformation to a Background layer

Before you can apply transformations to the Background layer, you need to convert it into a regular layer.


- 1 Select the Background layer in the Layers panel.
- 2 Convert the background.
- 3 Apply the transformation.

More Help topics

[“Convert the Background layer into a regular layer”](#) on page 52

Recomposing

The Recompose tool facilitates intelligent resizing of photos without changing important visual content such as people, building, and animals. Normal scaling affects all pixels uniformly when resizing an image. Recompose affects pixels in areas that don't have important visual content. Recompose enables you to upscale or downscale images to improve a composition, fit a layout, or change the orientation. For a demo on the Recompose tool, see www.adobe.com/go/learn_pse_recompose_en.

Note: *Recompose can also be performed without using the Protect Areas option. For example, to Recompose a photo without marking any areas for protection or removal, drag the image handles .*




Before Recompose (left) and after Recompose

If you want to preserve or remove specific areas when scaling an image, Recompose enables you to intelligently protect content during resizing.




A. Photo selected for Recompose B. Areas marked for protection (green) and for removal (red) C. Photo after Recompose

Recompose a photo in Guided Edit


- 1 Open a photo in the project bin that you want to resize, and select Edit Guided.
- 2 In the Guided Edit panel, Expand Basic Photo Edits, and select Recompose Photo.
- 3 Click Recompose tool.
- 4 Mark the areas you want to protect using the Protect brush . Right-click the photo, and select one of the following modes:


Use Normal Highlight This mode is similar to painting. Mark all the regions that require protection. For example, protecting a circle using Normal Highlight requires marking or painting the entire circle.


Use Quick Highlight You can quickly highlight the required regions for protection. Encircle the subject to highlight the required regions. For example, to highlight the area within a circle, trace the boundary of the circle. Quick Highlight ensures that the area within the circle is marked for protection.



 *You can specify the size of the brush and the photo.*

Green indicates the areas marked for protection.


- 5 Do one of the following to erase portions of unwanted marked areas (green):
 - Erase using the green Eraser tool .

- Right-click the photo, and select Clear Protect Highlights.
- 6 Mark the areas you want to remove (areas that are unimportant) using the Remove brush tool .
- Red indicates the areas marked for removal.

 Right-click the photo, and select Clear All Highlights to erase protected and unprotected marked areas.


- 7 Do one of the following to erase portions of unwanted marked areas (red):
- Erase using the red Eraser tool .
 - Right-click the photo, and select Clear Remove Highlights.
- 8 Drag the image handles  to Recompose your photo.


Recompose a photo in Full Edit

- 1 Open a photo in the project bin that you want to resize, and select Image > Recompose, or click the Recompose tool .

Note: To view the Recompose tool, press C or right-click the Crop tool in the toolbar, and select the Recompose tool.



A dialog box with a brief overview of the Recompose tool opens. If you do not want to view this dialog again, select Don't Show Again. If you want to view this Help dialog again while working with the Recompose tool, right-click the photo and select Show Recompose Help. Click View An Online Video Tutorial to view a demo on Recompose.

- 2 Mark the areas you want to protect using the Protect brush . Right-click the photo, and select one of the following modes:
- Use Normal Highlight
 - Use Quick Highlight


 You can specify the size of the brush and the photo.


Green indicates the areas marked for protection.



Note: Recompose can also be performed without using the Protect Areas option. For example, to Recompose a photo without marking any areas for protection or removal, drag the image handles.

- 3 Do one of the following to erase portions of unwanted marked areas (green):
- Erase using the green Eraser tool .
 - Right-click the photo, and select Clear Protect Highlights.
- 4 Mark the areas you want to remove (areas that are unimportant) using the Remove brush tool .
- Red indicates the areas marked for removal.

 Right-click the photo, and select Clear All Highlights to erase protected and unprotected marked areas.

- 5 Do one of the following to erase portions of unwanted marked areas (red):
- Erase using the red Eraser tool .
 - Right-click the photo, and select Clear Remove Highlights.


 You can specify the size of the brush and the photo.


- 6 Drag the image handles  to Recompose your photo. On completion, click the Commit Current Operation icon .


Recompose a photo in a photo project


You can also use the Recompose tool to Recompose photos in the following photo projects:


- Photo Book
- Greeting Card
- Photo Collage

- 1 Create a photo book, greeting card, or a photo collage.
- 2 Right-click the photo in the photo project, and select Recompose Photo.
- 3 (Optional) Mark the areas you want to protect using the Protect brush .

Green indicates the protected areas. You can use the green Eraser tool  to erase portions of unwanted marked regions.

- 4 (Optional) Mark the areas you want to remove using the Remove brush tool .

Red indicates the areas marked for removal. You can use the red Eraser tool  to erase portions of unwanted areas marked for removal.

 You can specify the size of the brush and also specify the size of the photo.

- 5 Drag the image handles to Recompose your photo.

Note: *Recompose can also be performed without using the protect areas option. For example, to Recompose a photo without marking any areas for protection or removal, drag the image handles.*

More Help topics

[“Making projects”](#) on page 247

Recompose options


You can use the following options while using the Recompose tool.


Size Enables you to define the brush size.

Preset Used to specify the ratio that you want to use for resizing. Preset works on the photo ratio and not on the dimensions of the photo. For example, if you use a preset ratio 3x5, the image is resized using this ratio. If you want to scale the photo using the same ratio, hold the Shift key and drag the corner handles.

Note: *If you don't hold down the Shift key, the image is resized in any ratio.*

Amount Used to set the Recompose threshold. Setting the threshold to 100% indicates a 100% Recompose. If it is set to 0%, then the behavior of Recompose tool is similar to the Transform tool.

Highlight Skin Tones Identifies and highlights skin tones for protection. You can preserve regions that contain skin-tones. Click the Highlight Skin Tones icon  to view the suggested skin tones region. To erase the identified regions that contain skin tones, use the Protect Eraser tool, or right-click the image and select Clear Protect Highlights.

Swap Width And Height Used to swap the values specified for height and width. For example, you have specified the following values: H: 10 and W: 15. Click the Swap Height and Width icon  to interchange these values. The new values are: H: 15 and W: 10.

Chapter 10: Understanding color

In Adobe® Photoshop® Elements, you use two color models to manipulate color. One model is based on the way the human eye sees color—hue, saturation, and brightness (HSB), while the other model is based on the way computer monitors display color (in amounts of red, green, and blue or RGB). The color wheel is another tool that helps you understand the relationships between colors. Photoshop Elements provides four image modes that determine the number of colors displayed in an image: RGB, bitmap, grayscale, and indexed color.

Understanding color

About color

The human eye perceives color in terms of three characteristics—hue, saturation, and brightness (HSB)—whereas computer monitors display colors by generating varying amounts of red, green, and blue (RGB) light. In Photoshop Elements, you use the HSB and RGB color models to select and manipulate color. The color wheel can help you understand the relationships between colors.

HSB model

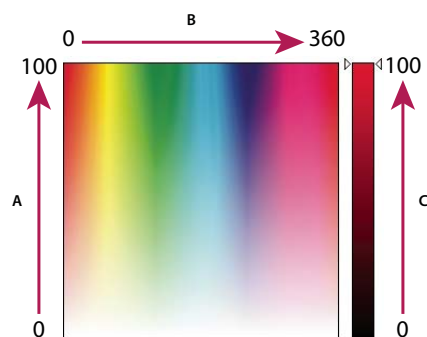
Based on the human perception of color, the HSB model describes three fundamental characteristics of color:

Hue The color reflected from or transmitted through an object. It is measured as a location on the standard color wheel, expressed as a degree between 0 and 360. In common use, hue is identified by the name of the color, such as red, orange, or green.

Saturation The strength or purity of the color. Saturation, which is sometimes called *chroma*, represents the amount of gray in proportion to the hue, measured as a percentage from 0 (gray) to 100 (fully saturated). On the standard color wheel, saturation increases from the center to the edge.

Brightness The relative lightness or darkness of the color, usually measured as a percentage from 0 (black) to 100 (white).

Although you can use the HSB model in Photoshop Elements to define a color in the Color Picker dialog box, you cannot use the HSB mode to create and edit images.

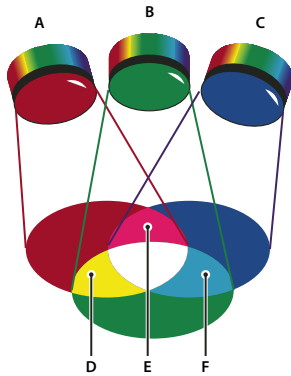


HSB view in the Adobe Color Picker
A. Saturation B. Hue C. Brightness

RGB model

A large percentage of the visible spectrum can be represented by mixing red, green, and blue (RGB) light in various proportions and intensities. These three colors are called the *additive primaries*. Added together, red, green, and blue light make white light. Where two colors overlap, they create cyan, magenta, or yellow.

The additive primary colors are used for lighting, video, and monitors. Your monitor, for example, creates color by emitting light through red, green, and blue phosphors.

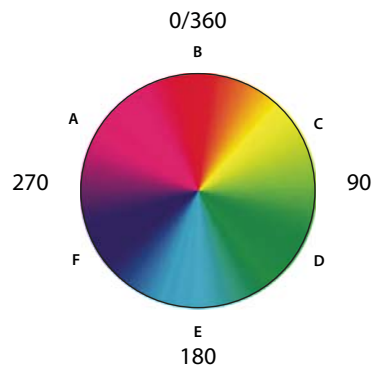


Additive colors (RGB).
A. Red B. Green C. Blue D. Yellow E. Magenta F. Cyan

Color wheel

The color wheel is a convenient way to understand and remember the relationship between colors. Red, green, and blue are the additive primaries. Cyan, magenta, and yellow are the subtractive primaries. Directly across from each additive primary is its complement: red-cyan, green-magenta, and blue-yellow.

Each subtractive primary is made up of two additive primaries, but not its complement. So, if you increase the amount of a primary color in your image, you reduce the amount of its complement. For example, yellow is composed of green and red light, but there is no blue light in yellow. When adjusting yellow in Photoshop Elements, you change the color values in the blue color channel. By adding blue to your image, you subtract yellow from it.



Color wheel.
A. Magenta B. Red C. Yellow D. Green E. Cyan F. Blue

Using image modes and color tables

About image modes

An image mode determines the number of colors that can be displayed in an image and can also affect the file size of the image. Photoshop Elements provides four image modes: RGB, bitmap, grayscale, and indexed color.

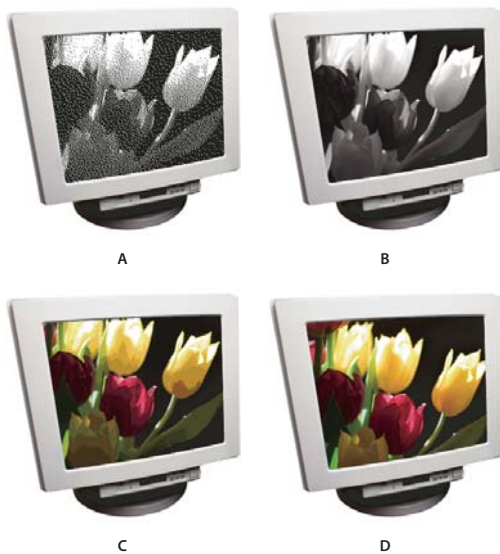


Image modes
A. Bitmap mode B. Grayscale mode C. Indexed-color mode D. RGB mode

Bitmap mode Uses one of two color values (black or white) to represent the pixels in an image. Images in bitmap mode are called 1-bit images because they have a bit depth of 1.

Grayscale mode Uses up to 256 shades of gray. Grayscale images are 8-bit images. Every pixel in a grayscale image has a brightness value ranging from 0 (black) to 255 (white). Grayscale values can also be measured as percentages of black ink coverage (0% is equal to white, 100% to black).

Indexed Color mode Uses up to 256 colors. Indexed-color images are 8-bit images. When converting into indexed color, Photoshop Elements builds a color lookup table (CLUT), which stores and indexes the colors in the image. If a color in the original image does not appear in the table, the program chooses the closest one or simulates the color using available colors. By limiting the panel of colors, indexed color can reduce file size while maintaining visual quality—for example, for a web page. Limited editing is available in this mode. For extensive editing, you should convert temporarily into RGB mode.

When you choose a different color mode for an image (Image > Mode > *[image mode]*), you permanently change the color values in the image. You might want to convert into a different mode for several reasons. For example, you may have an old scanned photo in grayscale mode in which you want to add color, so you would need to convert it into RGB mode. Before converting images, it's best to do the following:

- Edit as much as possible in RGB mode.
- Save a backup copy before converting. Be sure to save a copy of your image that includes all layers in order to edit the original version of the image after the conversion.
- Flatten the file before converting it. The interaction of colors between layer blending modes will change when the mode changes.

***Note:** Hidden layers are discarded and images are flattened automatically when you convert them into bitmap or indexed-color mode, because these modes do not support layers.*

RGB Color mode The default mode of new Photoshop Elements images and images from your digital camera. In RGB mode, the red, green, and blue components are each assigned an intensity value for every pixel—ranging from 0 (black) to 255 (white). For example, a bright red color might have an R value of 246, a G value of 20, and a B value of 50. When the values of all three components are equal, the result is a shade of neutral gray. When the value of all components is 255, the result is pure white; when the value is 0, the result is pure black.

Convert an image to bitmap mode

To convert an image to bitmap mode, you must first convert it to grayscale mode, simplifying the color information in the image and reducing its file size. Converting to grayscale removes the hue and saturation information from the pixels and leaves just the brightness values. However, because few editing options are available for bitmap-mode images, it's usually best to edit the image in grayscale mode and then convert it.

- 1 Choose Image > Mode > Bitmap.
- 2 If the image is RGB, click OK to convert it to grayscale.
- 3 For Output, enter a value for the output resolution of the bitmap-mode image, and choose a unit of measurement. By default, the current image resolution appears as both the input and the output resolutions.
- 4 Select one of the following bitmap conversion methods, and click OK:

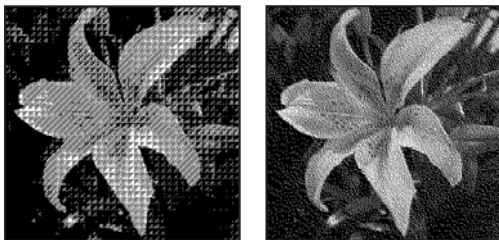
50% Threshold Converts pixels with gray values above the middle gray level (128) to white, and those below to black. The result is a very high-contrast, black-and-white representation of the image.



Original grayscale image (left), and 50% Threshold conversion method applied (right).

Pattern Dither Converts an image by organizing the gray levels into geometric configurations of black and white dots.

Diffusion Dither Converts an image by using an error-diffusion process, starting at the pixel in the upper-left corner of the image. If the pixel's value is above middle gray (128), the pixel is changed to white—if it's below middle gray, it's changed to black. Because the original pixel is rarely pure white or pure black, error is inevitably introduced. This error is transferred to surrounding pixels and diffused throughout the image, resulting in a grainy, film-like texture. This option is useful for viewing images on a black-and-white screen.



Pattern Dither and Diffusion Dither conversion methods

Convert a bitmap-mode image to grayscale

Before converting, keep in mind that a bitmap-mode image edited in grayscale mode may not look the same when converted back to bitmap mode. For example, consider a pixel that is black in bitmap mode and then edited to a shade of gray in grayscale mode. If the gray value of the pixel is light enough, it will become white when converted back to bitmap mode.

- 1 Choose Image > Mode > Grayscale.
- 2 Enter a value from 1 to 16 for the size ratio.

The size ratio is the factor for scaling down the image. For example, to reduce a grayscale image by 50%, enter 2 for the size ratio. If you enter a number greater than 1, the program averages multiple pixels in the bitmap-mode image to produce a single pixel in the grayscale image. This process lets you generate multiple shades of gray from an image scanned on a 1-bit scanner.

Convert an image to indexed color

Converting to indexed color reduces the number of colors in the image to a maximum of 256—the standard number of colors supported by the GIF and PNG-8 formats and many web browsers. This conversion reduces file size by deleting color information from the image.

***Note:** To convert to indexed color, you must start with either a grayscale or an RGB image.*

- 1 Choose Image > Mode > Indexed Color.
- 2 Click OK to flatten layers.

***Note:** This will flatten all visible layers and discard hidden layers.*

For grayscale images, the conversion happens automatically. For RGB images, the Indexed Color dialog box appears.

- 3 Select Preview in the Indexed Color dialog box to display a preview of the changes.
- 4 Specify any of the following conversion options and click OK.

Palette Specifies the color palette to apply to the indexed-color image. There are ten color palettes available:

- **Exact** Creates a panel using the exact colors that appear in the RGB image—an option available only if the image uses 256 or fewer colors. Because the image's panel contains all of the colors in the image, there is no dithering.
- **System (Mac OS)** Uses the Mac OS default 8-bit panel, which is based on a uniform sampling of RGB colors.
- **System (Windows)** Uses the Windows system's default 8-bit panel, which is based on a uniform sampling of RGB colors.
- **Web** Uses the 216 colors that web browsers, regardless of platform, use to display images on a monitor limited to 256 colors. Use this option to avoid browser dither when images are viewed on a monitor display limited to 256 colors.
- **Uniform** Creates a panel by uniformly sampling colors from the RGB color cube. For example, if Photoshop Elements takes 6 evenly spaced color levels, each of red, green, and blue, the combination produces a uniform panel of 216 colors ($6 \text{ cubed} = 6 \times 6 \times 6 = 216$). The total number of colors displayed in an image corresponds to the nearest perfect cube (8, 27, 64, 125, or 216) that is less than the value in the Colors text box.
- **Local or Master Perceptual** Creates a custom panel by giving priority to colors to which the human eye has greater sensitivity. Local Perceptual applies the panel to individual images; Master Perceptual applies the selected panel to multiple images (for example, for multimedia production).
- **Local or Master Selective** Creates a color table similar to the Perceptual color table, but favoring broad areas of color and the preservation of web colors. This option usually produces images with the greatest color integrity. Local

Selective applies the panel to individual images; Master Selective applies the selected panel to multiple images (for example, for multimedia production).

- **Local or Master Adaptive** Creates a panel by sampling the colors from the spectrum appearing most often in the image. For example, an RGB image with only the colors green and blue produces a panel made primarily of greens and blues. Most images concentrate colors in particular areas of the spectrum. To control a panel more precisely, first select a part of the image that contains the colors you want to emphasize. Photoshop Elements weights the conversion toward these colors. Local Adaptive applies the panel to individual images; Master Adaptive applies the selected panel to multiple images (for example, for multimedia production).
- **Custom** Creates a custom panel by using the Color Table dialog box. Either edit the color table and save it for later use, or click Load to load a previously created color table. This option also displays the current Adaptive panel, which is useful for previewing the colors most often used in the image.
- **Previous** Uses the custom panel from the previous conversion, making it easy to convert several images with the same custom panel.

Colors Specifies the number of colors to include in the color table (up to 256) for Uniform, Perceptual, Selective, or Adaptive panels.

Forced Provides options to force the inclusion of certain colors in the color table. Black And White adds a pure black and a pure white to the color table; Primaries adds red, green, blue, cyan, magenta, yellow, black, and white; Web adds the 216 web-safe colors; and Custom lets you define custom colors to add.

Transparency Specifies whether to preserve transparent areas of the image during conversion. Selecting this option adds a special index entry in the color table for a transparent color. Deselecting this option fills transparent areas with the matte color, or with white if no matte color is chosen.

Matte Specifies the background color used to fill anti-aliased edges that lie adjacent to transparent areas of the image. With Transparency selected, the matte is applied to edge areas to help blend the edges into a web background of the same color. With Transparency deselected, the matte is applied to transparent areas. Choosing None for the matte creates hard-edged transparency, if Transparency is selected; otherwise, all transparent areas are filled with 100% white.

Dither Specifies whether to use a dither pattern or not. Unless you're using the Exact color table option, the color table may not contain all the colors used in the image. To simulate colors not in the color table, you can dither the colors. Dithering mixes the pixels of the available colors to simulate the missing colors.

- **None** Does not dither colors but, instead, uses the color closest to the missing color. This tends to result in sharp transitions between shades of color in the image, creating a posterized effect.
- **Diffusion** Uses an error-diffusion method that produces a less structured dither than the Pattern option. To protect colors in the image that contain entries in the color table from being dithered, select Preserve Exact Colors. This is useful for preserving fine lines and text for web images.
- **Pattern** Uses a halftone-like square pattern to simulate any colors not in the color table.
- **Noise** Helps to reduce seam patterns along the edges.

Amount Specifies the percentage of image colors to dither. A higher amount dithers more colors, but may increase file size.

Preserve Exact Colors Prevents colors in the image that are in the color table from being dithered.

Edit colors in an indexed-color table

You can edit colors in the color table to produce special effects, or assign transparency in the image to a single color in the table.

- 1 Open the indexed-color image.
- 2 Choose Image > Mode > Color Table.
- 3 Click or drag within the table to choose the color or range of colors you want to change.
- 4 Choose a color from the Color Picker or sample a color from the image.

If you are changing a range of colors, Photoshop Elements creates a gradient in the color table between the starting and ending colors. The first color you choose in the Color Picker is the beginning color in the range. When you click OK, the Color Picker reappears, so that you can choose the last color in the range.

The colors you selected in the Color Picker are placed in the range you selected in the Color Table dialog box.

- 5 Click Preview to view the results of the changes you have made to the image.
- 6 Click OK in the Color Table dialog box to apply the new colors to the indexed-color image.

Assign transparency to a single color in an indexed-color table

- 1 Choose Image > Mode > Color Table.
- 2 Select the eyedropper, and click the desired color in the table or in the image. The sampled color is replaced with transparency in the image. Click OK.

Use a predefined indexed-color table

- 1 Choose Image > Mode > Color Table.
- 2 Select an option from the Table menu:

Black Body Displays a panel based on the different colors a black body radiator emits as it is heated—from black to red, orange, yellow, and white.

Grayscale Displays a panel based on 256 levels of gray—from black to white.

Spectrum Displays a panel based on the colors produced as white light passes through a prism—from violet, blue, and green to yellow, orange, and red.

System Displays the standard 256-color system panel for Mac OS or Windows.

Save or load an indexed-color table

- To save a table, click the Save button in the Color Table dialog box.
- To load a table, click the Load button in the Color Table dialog box. After you load a color table into an image, the colors in the image change to reflect the color positions they reference in the new color table.

Note: You can also load saved color tables into the Color Swatches panel.

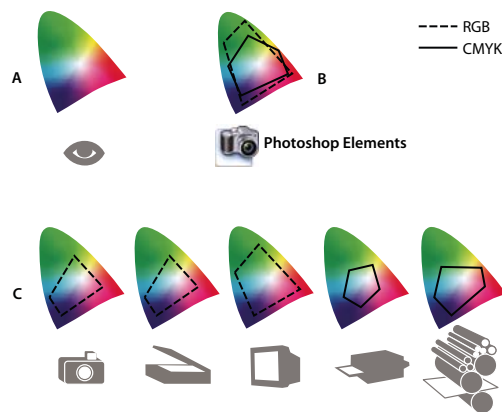
More Help topics

“[Use the Color Swatches panel](#)” on page 210

Setting up color management

About color management

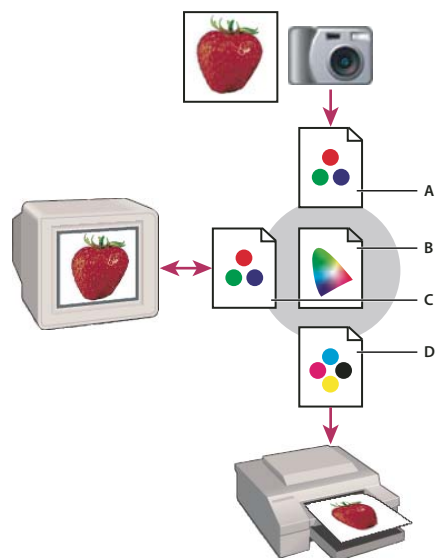
Color management helps you to achieve consistent color among digital cameras, scanners, computer monitors, and printers. Each of these devices reproduces a different range of colors, called a *color gamut*. As you move an image from your digital camera to your monitor, and finally to a printer, the image colors shift. This shift occurs because every device has a different color gamut and thus reproduces the colors differently.



The color gamuts of different devices and documents

A. Lab color space (entire visible spectrum) B. Documents (working space) C. Devices

Color management translates the image colors so that each device can reproduce them in the same way and the colors you see on your monitor will be close to the colors in your printed image. All colors may not match exactly because the printer may not reproduce the same range of colors as the monitor.



Managing color with profiles

A. Profiles describe the color spaces of the input device and the document. B. Using the profiles' descriptions, the color management system identifies the document's actual colors. C. The monitor's profile tells the color management system how to translate the numeric values into the monitor's color space. D. Using the output device's profile, the color management system translates the document's numeric values into the color values of the output device, so the actual colors are printed.

Profiling devices

For color management to work, you must profile your devices or use an ICC profile created by the device's manufacturer.

Capture devices Profiling is not critical for capture devices such as digital cameras or scanners. You may want to profile a scanner, however, if you want to accurately reproduce the colors in scanned transparencies, and reduce your color correction workload in Photoshop Elements.

Monitors Calibrating and profiling your monitor is important. If you are using a laptop or other LCD monitor, you can use the profile provided by the manufacturer. If you own a colorimeter and corresponding software to create profiles, you can use those profiles in Photoshop Elements.

Printers Profiling your inkjet printer will generally give you better results, though you can make excellent prints without a printer profile by using the controls in your printer driver. Many printer manufacturers provide ICC printer profiles on their websites. You need a separate profile for each printer, ink, and type of paper. You can also have profiles made for your favorite combination of ink and paper.

When you work on a photo and save it, Photoshop Elements can embed (tag) an ICC profile that reflects the colors on your computer monitor or the device that produced it. Embedding profiles with an image makes its color portable, so that different devices can translate its color values. For example, if you send the photo to your inkjet printer, the color management system reads the embedded profile and translates the color data using the printer's profile. Your printer can then use the translated color data to accurately translate its color into the selected media.

Color management tasks

If you want to use color management, you need to perform the following tasks:

- Set up color management by embedding a color profile and using device profiles when scanning or printing. (See [“Set up color management”](#) on page 172)
- Calibrate and profile your computer monitor. If you use an LCD monitor, use the profile that came with your monitor. See your LCD monitor documentation for instructions.
- When you print an image from Photoshop Elements, make sure that the correct color profile is specified in the Color Management area of the Print dialog box. Or, if you don't have a printer profile, specify colors using the color controls in the printer driver. In addition, choose a color setting that's appropriate for your workflow, such as Optimize For Printing.

Set up color management

- 1 Choose Edit > Color Settings.
- 2 Select one of the following color management options, then click OK.

No Color Management Leaves your image untagged. This option uses your monitor profile as the working space. It removes any embedded profiles when opening images, and does not tag when saving.

Always Optimize Colors For Computer Screens Uses sRGB as the RGB working space; the Grayscale working space is Gray Gamma 2.2. This option preserves embedded profiles, and assigns sRGB when opening untagged files.

Always Optimize For Printing Uses Adobe RGB as the RGB working space; the Grayscale working space is Dot Gain 20%. This option preserves embedded profiles and assigns Adobe RGB when opening untagged files.

Allow Me To Choose Lets you choose sRGB (the default) or Adobe RGB when opening untagged files.

- 3 When you save a file, select Embed Color Profile in the Save As dialog box.

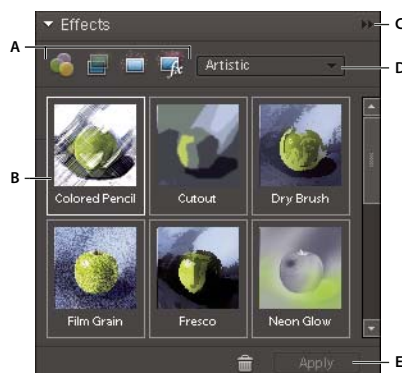
Chapter 11: Filters, effects, styles, and artwork

You can enhance images by using a variety of filters, effects, styles, and artwork. Using the deinterlace and NTSC color filters, you can smooth lines in a video or prepare it for television reproduction. You can also install and use third-party plug-in filters or create custom filters.

Effects


Using the Effects panel

The Effects panel provides a single location from which you can apply effects. By default, the Effects panel is located on the top of the Panel Bin.



Effects panel

A. Category B. Sample thumbnails C. More menu D. Subcategory E. Apply (save)

Filters  Apply filters to your image.



Layer Styles  Apply layer styles to your image.

Photo Effects  Apply photo effects to your image.

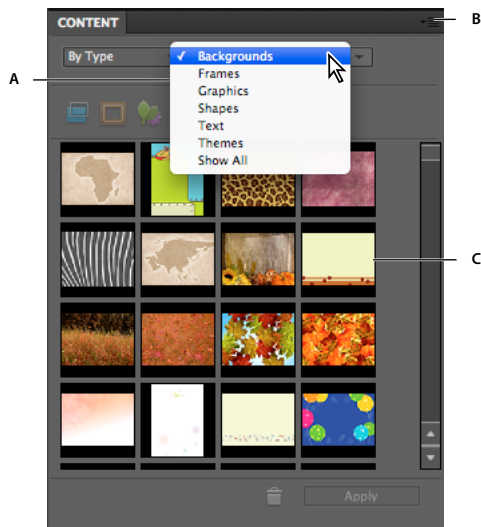
Each section displays thumbnail examples of the artwork or effects that you can add or apply to an image. Most sections offer a menu of category options and corresponding subcategories.

More Help topics

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Using the Content panel


The Content panel provides a single location from which you can apply artwork, theme decorations, and text styles to your images.





Content panel
A. Category B. More menu C. Sample thumbnails


In the Content panel, the following sections provide a variety of items that can enhance your images:


Filter For Backgrounds  Choose from a selection of decorative backgrounds.

Filter For Frames  Choose from preset frames to enhance your image or project.

Filter For Graphics  Apply graphics to your image or project.

Filter For Shapes  Apply shapes to your image or project.

Filter For Text Effects  Apply text to your image or project.

Filter For Themes  Choose from a selection of themes to apply to your project.

Each section displays thumbnail examples of the artwork or effects that you can add or apply to an image. Most sections offer a menu of category options and corresponding subcategories.

Note: Clicking these buttons will activate or deactivate the display of the thumbnails related to these buttons.

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Add stylized shapes or graphics to an image

When you add a shape or graphic to an image, the shape or graphic is a new layer and does not affect the original image.

- 1 In the Content panel, do one of the following:
 - Click the Filter For Graphics or Filter For Shapes icon.
 - Choose from the category menu (for example, By Event or By Activity), and choose a subcategory (for example, Baby or Cooking).
- 2 Then, in the toolbox, choose a color for the shape.
- 3 Do one of the following:
 - Select a thumbnail and click Apply.

- Double-click a thumbnail.
 - Drag the thumbnail to the image.
- 4 Use the Move tool to relocate or resize the shape or graphic.

More Help topics


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[“About shapes”](#) on page 241

[“Select or move a shape”](#) on page 245

Add an artistic background to an image

When you add an artistic background to an image, you replace the existing background layer. For example, you could use the selection tools to create a layer separating your family members from a kitchen background, and then replace the kitchen with a nature background.



- 1 If your image has only a background layer, select it, and choose Layer > Duplicate Layer. Name the layer and click OK.
- 2 Select the Background layer in the Layers panel.
- 3 In the Content panel, click the Background icon .
- 4 Do one of the following:
 - Select a thumbnail, and click Apply.
 - Double-click a thumbnail.
 - Drag the thumbnail to the image.

More Help topics

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Add a frame or theme to an image

When you add a frame or theme to a photo project, frames appear with a blank (gray) area for the image. Click and drag an image from the Project Bin to the blank area.


- 1 In the Content panel, do one of the following:
 - Click the Filter For Themes or Filter For Frames icon.
 - Choose from the category menu (for example, Event or Activity, and choose a subcategory (for example, Baby or Cooking).
- 2 Do one of the following:
 - Select a thumbnail and click Apply.
 - Double-click a thumbnail.
 - Drag the thumbnail to the blank background.
- 3 Drag the desired image from the Project Bin to the frame.
- 4 Use the slider to resize the image in the frame or theme border, then click the Commit icon  to apply the change, or click the Cancel icon .

- 5 Use the Move tool to center the image, then click the Commit icon  to apply the change, or click the Cancel icon .

More Help topics

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About photo effects

Photo effects lets you quickly create different looks for your images. In the Effects panel, click Photo Effects  and choose one of the subcategories, such as Faded Photo, Misc. Effects, Monotone Color, or Vintage Photo.

Frame Apply a variety of effects to the edges of a selected layer, or to a portion of a layer. A frame also creates a drop zone where you can add or change the contents easily.

Image Effects Apply effects to a copy of a selected layer. Adding the Blizzard effect to an image makes it look like it’s snowing. The Neon Glow effect turns the image into a dramatic neon picture. You can use Image effects, such as Oil Pastel or Soft Focus, to soften colors or blur an image. You can also combine Image effects, but you may be prompted to flatten layers first.

Textures Apply texture layers to an image. You can add texture to a new, blank image as a background, or add a texture to an existing image. By arranging layers, and working with opacity and other layer tools, you can create interesting and attractive images.



Many photo effects apply filters with modified values.

More Help topics

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[“About projects”](#) on page 247

[“Improve performance with filters and effects”](#) on page 182

[“Flatten an image”](#) on page 60

Apply an effect



If you want to experiment with an effect, modify a duplicate layer and preserve the original image.

- 1 Do one of the following:

- To apply an effect to an entire layer, deselect any selected areas in the image, and then select the layer in the Layers panel.
- To apply an effect to a portion of a layer, use any selection tool to select the area.
- To apply an effect to text, select or create text, and use any text effect from the Content panel.

- 2 In the Effects panel, choose Photo Effects and do one of the following:

- Double-click an effect.
- Drag an effect to the image.
- Select an effect, and click Apply.

Note: In some cases, when applying an effect to an image with multiple layers, you are prompted to flatten the image first.



Dragging an image effect to a photo

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[“Improve performance with filters and effects”](#) on page 182

[“Understanding layers”](#) on page 49

Add stylized text to an image

When you add text to an image, a text layer is added, so you can modify the text without affecting the original image.

- 1 In the Content panel, click the Text icon , and then do one of the following:
 - Select a thumbnail, and click Apply.
 - Double-click a thumbnail.
 - Drag a thumbnail to the image.
- 2 A text frame appears over the image and the Text tool becomes active. Type in the new text.
- 3 When you are finished changing the text, either click the Commit icon  to apply the change, or click the Cancel icon .
- 4 Use the Move tool to relocate or resize the text frame.
- 5 (Optional) Add color to the text using the pop-up Color panel in the options bar.
- 6 When you finish adjusting the text, either click the Commit icon  to apply the change, or click the Cancel icon .
- 7 (Optional) To experiment with different text effects, drag a different thumbnail over the text frame.

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[“About text”](#) on page 234

[“Edit type in a type layer”](#) on page 236

[“Change the orientation of a type layer”](#) on page 239

Add artwork or effects to Favorites

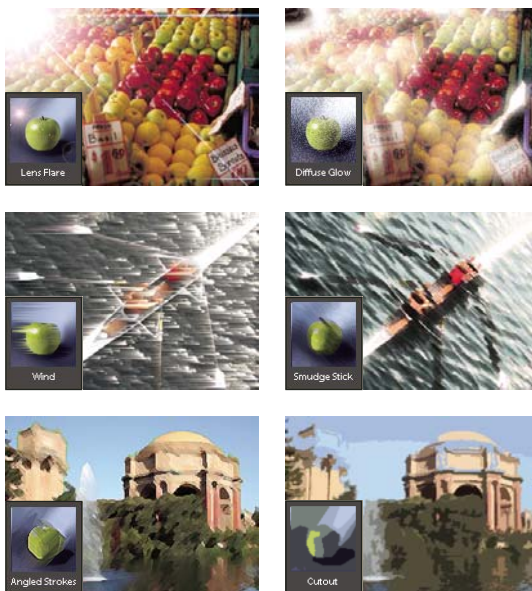
When you see artwork or effects that you would like to quickly access in the future, add it to the Favorites section of the Effects panel.

- ❖ In the Effects or Content panel, hold Control and click the thumbnail and choose Add To Favorites.

Filters

About filters

Filters let you change the look of your images—for example, by applying mosaic tile, lighting, and three-dimensional effects. You can also use some filters to clean up or retouch your photos. In addition to the filters provided by Adobe, some third-party filters are available as well. Once installed, these filters appear at the bottom of the Filter lists.



Filters can radically change the mood of a photo or image.

You can apply filters in any of three ways:

Filter menu Contains all of the available filters and lets you apply filters individually.

Filter Gallery Displays thumbnail examples of what each filter does, like the panel. The Filter Gallery lets you apply filters cumulatively and apply individual filters more than once. You can also rearrange filters and change the settings of each filter you’ve applied to achieve the effect you want. Because it is so flexible, the Filter Gallery is often the best choice for applying filters. However, not all filters listed in the Filter menu are available in the Filter Gallery.

Effects panel Displays thumbnail examples of what each filter listed in the Filter menu does. However, you can also use it to apply effects and layer styles.

Tips for applying filters

The following information can help you understand the process of applying filters to your images.

- Preview the filter's result. Applying filters to a large image can be time-consuming. It's quicker to preview what the filter does in the Filter Gallery. Most filters also let you preview their result in the Filter Options dialog box and the document window. You can then choose to apply the filter or cancel the operation without losing time.
- Filters apply only to the active part of an image. Filters affect only the active, visible layer or a selected area of the layer.
- Filters don't work on all images. You can't use some filters on images in grayscale mode, or any filters on images in bitmap or Indexed-color mode. Many filters don't work on 16-bit images.
- You can reapply the previous filter. The last filter you applied appears at the top of the Filter menu. You can reapply it with the same settings you last used to further enhance the image.

Tips for creating visual effects with filters

Use the following techniques to create special visual results with filters:

- Feature the filter edges. If you're applying a filter to a selected area, you can soften the edges of the filter effect by feathering the selection before you apply the filter.
- Apply filters in succession to build up effects. You can apply filters to individual layers or to several layers in succession to build up an effect. Choosing different blending modes in the Layers panel blends the effect. For a filter to affect a layer, the layer must be visible and must contain pixels.
- Create textures and backgrounds. By applying filters to solid-color or grayscale images, you can generate a variety of backgrounds and textures. You can then blur these textures. Although some filters (for example, the Glass filter) have little or no visible effect when applied to solid colors, others produce interesting effects. For such colors, you can use Add Noise, Chalk & Charcoal, Clouds, Conté Crayon, Difference Clouds, Glass, Graphic Pen, Halftone Pattern, Mezzotint, Note Paper, Pointillize, Reticulation, Rough Pastels, Sponge, or Underpainting. You can also use any of the filters in the Texture submenu.
- Improve image quality and consistency. You can disguise faults, alter or enhance images, or make a series of images look similar by applying the same filter to each.

More Help topics

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[“Improve performance with filters and effects”](#) on page 182

Apply a filter





1 Choose the area you want to apply the filter to:

- To apply a filter to an entire layer, deselect any selected areas, and then select the layer in the Layers panel.
- To apply a filter to a portion of a layer, use any selection tool to select an area.

2 Choose how to apply the filter:

- To use the Filter gallery, choose Filter > Filter Gallery, select a category, and click the filter you want to apply.
- To use the Effects panel, choose Window > Effects, select a category, and double-click the filter you want to apply.
- To use the Filter menu, choose Filter, then choose a submenu followed by the filter you want to apply. If a filter name is followed by ellipses (...), a Filter Options dialog box appears.

3 If a dialog box appears, enter values or select options.

- 4 If available, select the Preview option to preview the filter in the document window. Depending on the filter and how you are applying it, use one of the following methods to preview the filter:
 - Use the + button or - button under the preview window to zoom in or zoom out.
 - Click the zoom bar (where the zoom percentage appears) to choose a zoom percentage.
 - Click-drag within the preview window to center a specific area of the image in the window.
 - Click the Show/Hide button  at the top of the dialog box to hide the filter thumbnails. Hiding the thumbnails expands the preview area.
 - Click the eye icon  next to a filter to hide the effect in the preview image.
 - 5 If the dialog box contains sliders, hold down Option while dragging a slider to see a real-time preview (real-time rendering).
 - 6 Click in the image window to center a specific area of the image in the preview window. (This may not work with all preview windows.)
- Note: A blinking line beneath the preview size indicates that the preview is being rendered.*
- 7 If you are using the Filter Gallery, or the filter opens in the Filter Gallery, do any of the following and click OK:
 - Click the New Effect Layer button  at the bottom of the dialog box and choose an additional filter to apply. You can add multiple effect layers to apply multiple filters.
 - Rearrange applied filters by dragging a filter name to another position in the list of applied filters at the bottom of the dialog box. Rearranging the order of filters can dramatically change the way your image looks.
 - Remove applied filters by selecting the filter and clicking the Delete Effect Layer button .
 - 8 If you are using a Filter command or the Effects panel, do one of the following and click OK:
 - Double-click the filter.
 - Drag the filter onto the image.

More Help topics

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Filter categories

You can apply the following categories of filters:

Adjustment filters Change the brightness values, color, grayscale range, and tonal levels of pixels in an image. Convert color pixels into black and white.

Artistic filters Simulate a painterly appearance on traditional media, and create a unique look.

Blur filters Soften a selection or an image. Useful for retouching.

Brush Stroke filters Give a painterly or fine-arts look using different brush and ink stroke effects.

Distort filters Geometrically distort an image, creating three-dimensional and other reshaping effects.

Noise filters Blend a selection into the surrounding pixels and remove problem areas, such as dust and scratches.

Pixelate filters Sharply define an image or selection by clumping pixels of similar color values.

Render filters Create cloud patterns, refraction patterns, and simulated light reflections.

Sketch filters Add texture for depth or to give a hand-drawn look.

Stylize filters Produce a painted or impressionistic effect by displacing pixels and heightening contrast.

Texture filters Give the appearance of depth or substance, or add an organic look.

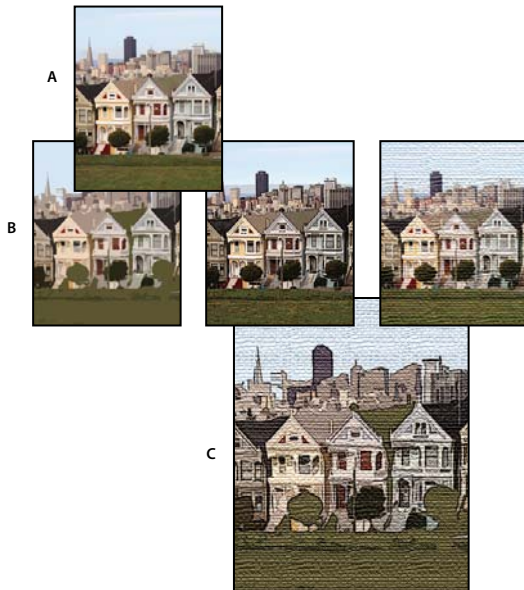
Video filters Restrict the gamut of colors to those acceptable for television reproduction, and smooth moving images captured from video.

Other filters Let you create your own filter effects, modify masks, offset a selection within an image, and make quick color adjustments.

Digimarc filter Lets you read a Digimarc watermark.

Filter Gallery

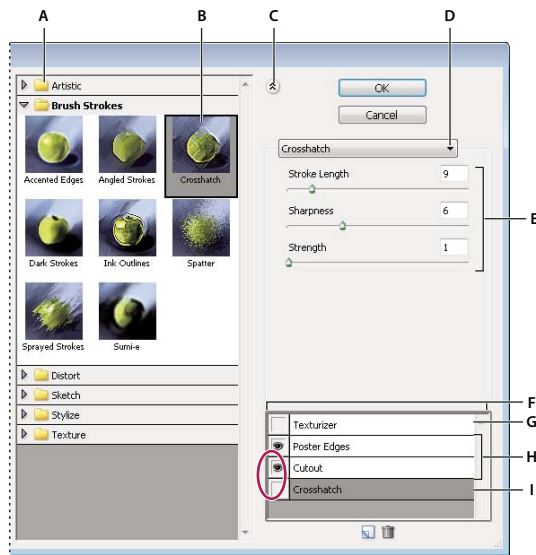
The Filter Gallery (Filter > Filter Gallery) lets you apply filters cumulatively, and apply individual filters more than once. You can also rearrange filters and change the settings of each filter you've applied to achieve the effect you want. Because you can apply more than one filter to an image when you use the Filter Gallery dialog box, you have a lot of control over the way your image is affected by each filter. The Filter Gallery is often the best choice for applying filters because it's flexible and easy to use.



Applying filters through the Filters Gallery

A. Original photo B. Photos each with a single filter applied C. Three filters applied cumulatively

However, not all filters are available from the Filter Gallery. Some are available only as individual commands from the Filter menu. Also, you cannot apply effects and layer styles from the Filter Gallery, as you can from the Effects panel.



Filter Gallery dialog box


A. Filter category B. Thumbnail of selected filter C. Show/Hide filter thumbnails D. Filters menu E. Options for selected filter F. List of filter effects to apply or arrange G. Hidden filter H. Filters applied cumulatively but not selected I. Filter selected but not applied

More Help topics

[“Using the Effects panel”](#) on page 173

Texture and glass surface options

The Conté Crayon, Glass, Rough Pastels, Texturizer, and Underpainting filters have texturizing options. These options make images appear as if they were painted onto textures, such as canvas and brick, or viewed through glass blocks.

Texture Specifies the type of texture to apply. You can also click Load Texture  to specify a Photoshop file.

Scaling Increases and decreases the effect on the image surface.

Relief (if available) Adjusts the depth of the texture’s surface.

Light Angle (if available) Sets the direction of the light source on the image.

Invert Reverses the surface’s light and dark colors.

Improve performance with filters and effects

Some filters and effects are memory intensive, especially when applied to high-resolution images. You can use these techniques to improve performance:

- Try filters and settings on a small selected area of the image.
- Try filters and settings on a smaller, resized copy of your image. When you’re satisfied with the results, apply the filter with the same settings to your original image.
- Free up memory before running the filter or effect by clearing the clipboard, the undo history, or both. Choose Edit > Clear > *[command]*.
- Exit from other applications to make more memory available.

- Adjust filter settings to make memory-intensive filters less complex. Memory-intensive filters include Lighting Effects, Cutout, Stained Glass, Chrome, Ripple, Spatter, Sprayed Strokes, and Glass. (For example, to reduce the complexity of the Stained Glass filter, increase cell size. To reduce the complexity of the Cutout filter, increase Edge Simplicity, decrease Edge Fidelity, or both.)

More Help topics

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Artistic filters

Colored Pencil

The Colored Pencil filter redraws an image using colored pencils on a solid background. This filter retains important edges and gives them a rough crosshatch appearance; the solid background color shows through the smoother areas. You can set the pencil width, stroke pressure, and paper brightness.

***Note:** For a parchment effect, change the background color before applying the Colored Pencil filter to a selected area.*

Cutout

The Cutout filter portrays an image as though it were made from roughly cut-out pieces of colored paper. High-contrast images appear as if in silhouette, while colored images are built up from several layers of colored paper. You can set the tonal levels, edge simplicity, and edge fidelity.

Dry Brush

The Dry Brush filter paints an image using a dry brush technique (between oil and watercolor). The filter simplifies an image by reducing its range of colors to areas of common color. You can set the brush size, brush detail, and texture amount.

Film Grain

The Film Grain filter applies an even, grainy pattern to an image. It adds a smoother, more saturated pattern to the image's lighter areas. This filter is useful for eliminating banding in blends and visually unifying elements from various sources. You can set the grain amount, highlight area range, and intensity level.

Fresco

The Fresco filter paints a layer in a coarse style using short, rounded, and hastily applied dabs. You can set the brush size, brush detail, and texture.

Neon Glow

The Neon Glow filter uses the foreground color, background color, and glow color to colorize an image while softening its look. You can set the glow size, glow brightness, and glow color. Lower glow size values restrict the glow color to the shadow areas, and higher values move the glow color to the midtones and highlight areas of a layer. To select a glow color, click the Glow Color box, and select a color in the Color Picker.

Paint Daubs

The Paint Daubs filter makes an image appear painted. You can set the brush size, image sharpness, and brush types.

Panel Knife

The Panel Knife filter reduces detail in an image to give the effect of a thinly painted canvas that reveals the texture underneath. You can set the stroke size, stroke detail, and edge softness.

Plastic Wrap

The Plastic Wrap filter renders a layer as if it were coated in shiny plastic, accentuating the surface detail. You can set the highlight strength, plastic wrap detail, and plastic smoothness.

Poster Edges

The Poster Edges filter reduces the number of colors in an image according to the posterization option you set, finds the edges of the image, and draws black lines on them. Large broad areas of the image receive simple shading, while fine dark details are distributed throughout the image. You can set the edge thickness, edge intensity, and posterization.

Rough Pastels

The Rough Pastels makes an image appear as if it were made with rough strokes of pastel chalk on a textured background. In areas of bright color, the chalk appears thick with little texture; in darker areas, the chalk appears scraped off to reveal the texture. You can set the stroke length, stroke detail, and texture. Texture options make images appear as if they were painted onto textures, such as canvas and brick, or viewed through glass blocks.

Smudge Stick

The Smudge Stick filter softens an image using short diagonal strokes to smudge or smear the darker areas of the images. Lighter areas become brighter and lose detail. You can set the stroke length, highlight area, and intensity.

Sponge

The Sponge filter paints a layer with highly textured areas of contrasting color. You can set the brush size, image definition, and edge smoothness.

Underpainting

The Underpainting filter paints a layer as if it were on a textured background. You can set the brush size, texture coverage area, and texture options. Texture options make images appear as if they were painted onto textures, such as canvas and brick, or viewed through glass blocks.

Watercolor

The Watercolor filter paints an image in a watercolor style, simplifying details in an image by using a medium brush loaded with water and color. Where significant tonal changes occur at edges, the filter saturates colors. You can set the brush detail, shadow intensity, and texture.

Blur filters

Average

The Average filter finds the average color of an image or selection, and then fills the image or selection with the color to create a smooth look. For example, if you select an area of grass, the filter changes the area into a homogeneous patch of green.

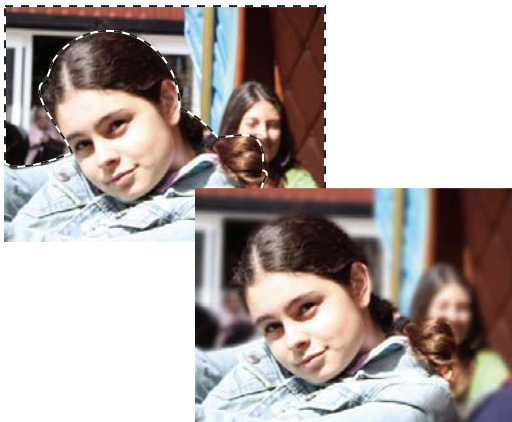
Blur and Blur More

The Blur filters soften a selection or an image, and are useful for retouching. They smooth transitions by averaging the color values of pixels next to the hard edges of defined lines and shaded areas.

Blur Eliminates noise where significant color transitions occur in an image. Blur filters smooth transitions by averaging the color values of pixels next to the hard edges of defined lines and shaded areas.

Blur More Produces an effect several times stronger than that of the Blur filter.

***Note:** Before applying a Blur filter, deselect the Lock transparent pixels option in the Layers panel.*



Blurring the background of a photo

Gaussian Blur

The Gaussian Blur filter quickly blurs a selection by an adjustable amount. Gaussian refers to the bell-shaped curve that Photoshop Elements generates when it applies a weighted average to the pixels. The Gaussian Blur filter adds low-frequency detail and can produce a hazy effect. You can set the blur radius in the filter options to determine how far the filter searches for dissimilar pixels to blur.

Motion Blur

The Motion Blur filter blurs in a particular direction (from -360° to +360°) and at a specific distance (from 1 to 999). The filter's effect is analogous to taking a picture of a moving object with a fixed exposure time. You can set the blur angle, and distance.

Radial Blur

The Radial Blur filter simulates the blur of a zooming or rotating camera to produce a soft blur. The Amount option controls the blur amount. Spin blurs along concentric circular lines, and lets you specify a degree of rotation. Zoom blurs along radial lines, as if zooming in on or out of the image, and lets you specify an amount from 1 to 100. Blur quality ranges from Draft for fast, but grainy, results to Good and Best for smoother results, which are indistinguishable except on a large selection. You can specify the origin of the blur by dragging the pattern in the Blur Center box.

Smart Blur

The Smart Blur filter precisely blurs an image. You can specify a radius to determine how far the filter searches for dissimilar pixels to blur, a threshold to determine how different the pixels' values must be before they are eliminated, and a blur quality. You can also set a mode for the entire selection (Normal) or for the edges of color transitions (Edge Only and Overlay Edge). Where significant contrast occurs, Edge Only applies black-and-white edges, and Overlay Edge applies white.

Surface Blur

The Surface Blur filter blurs an image while preserving edges. This filter is useful for creating special effects and for removing noise and graininess. The Radius option specifies the size of the area sampled for the blur. The Threshold option controls how much the tonal values of neighboring pixels must diverge from the center pixel value before becoming a part of the blur. Pixels with tonal value differences less than the threshold value are excluded from the blur.

Brush Stroke filters

Accented Edges

The Accented Edges filter accentuates the edges of an image. When the edge brightness control is set to a high value, the accents resemble white chalk; when set to a low value, the accents resemble black ink. You can set the edge width, edge brightness, and smoothness.

Angled Strokes

The Angled Strokes filter repaints an image using diagonal strokes. The strokes in the lighter areas of the image go in the opposite direction of the strokes in the darker areas. You can set the stroke direction balance, stroke length, and sharpness.

Crosshatch

The Crosshatch filter preserves the details and features of the original image while adding texture and roughening the edges of the colored areas in the image with simulated pencil hatching. You can set the stroke length, sharpness, and strength (the number of hatching passes).

Dark Strokes

The Dark Strokes filter paints dark areas of an image closer to black with short, tight strokes, and paints lighter areas of the layer with long, white strokes. You can set the stroke balance, and black and white intensity levels.

Ink Outlines

The Ink Outlines filter redraws an image with fine narrow lines over the original details, in pen-and-ink style. You can set the stroke length, and dark and light intensity levels.

Spatter

The Spatter filter replicates the effect of a spatter airbrush. You can set the spray radius and smoothness.

Sprayed Strokes

The Sprayed Strokes filter repaints a layer using its dominant colors with angled, sprayed strokes of color. You can set the stroke length, spray radius, and stroke direction.

Sumi-e

The Sumi-e filter redraws a layer in a Japanese style, as if with a wet brush full of black ink on rice paper. The effect is soft blurry edges with rich blacks. You can set stroke width, stroke pressure, and contrast.

Distort filters

Diffuse Glow

The Diffuse Glow filter renders an image as though it were viewed through a soft diffusion filter. This filter adds see-through white noise to an image, with the glow fading from the center of a selection.

Displace

The Displace filter uses an image, called a *displacement map*, to determine how to distort a selection. For example, using a parabola-shaped displacement map, you can create an image that appears to be printed on a cloth held at its corners.

More Help topics

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[“Flatten an image”](#) on page 60

Apply the Displace filter

- 1 Select an image, layer, or area.
- 2 Choose Distort > Displace from the Filter menu.
- 3 To define the magnitude of the displacement, enter a value between -999 and 999 in the Horizontal and Vertical Scale text boxes.

When the horizontal and vertical scales are 100%, the greatest displacement is 128 pixels (because middle gray produces no displacement).

- 4 If the displacement map is not the same size as the selection, select how you want the map to fit the image:

Stretch To Fit Resizes the map.

Tile Fills the selection by repeating the map in a pattern.

5 Select how to fill voids that are created by the filter in the image, and click OK.

Wrap Around Fills voids with content from the opposite edge of the image.

Repeat Edge Pixels Extends the colors of pixels along the image's edge in the direction you specify.

6 Select and open the displacement map. Photoshop Elements applies the map to the image.

Glass

The Glass filter makes an image appear as if it were being viewed through different types of glass. You can choose a glass effect or create your own glass surface as a Photoshop file and apply it. You can adjust scaling, distortion, and smoothness settings. When using surface controls with a file, follow the instructions for the Displace filter.

Liquify


The Liquify filter makes it easy to manipulate areas of an image as if those areas had been melted. You work with a preview image of the current layer, using special tools to warp, twirl, expand, contract, shift, and reflect areas of the image. You can make subtle changes to retouch an image or drastic distortions to create an artistic effect.


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Apply the Liquify filter


- 1 Select an image, layer, or area.
- 2 Choose Filter > Distort > Liquify.
- 3 To zoom in on or out of the image preview, do one of the following:
 - Choose a zoom level from the pop-up menu in the lower-left area of the dialog box.
 - Select the zoom tool from the toolbox in the dialog box, and click in the image to zoom in, or Option-click to zoom out. You can also use the zoom tool to drag over an area of the preview you want to magnify.
 - Select a tool from the toolbox.
- 4 Select one of the following tools from the toolbox:


Warp  Pushes pixels forward as you drag.


Turbulence  Smoothly scrambles pixels and creates fire, clouds, waves, and similar effects. To adjust the smoothness, drag the Turbulent Jitter pop-up slider in the Tool Options section, or enter a value between 1 and 100 in the text box. Higher values increase smoothness.


Twirl Clockwise  Rotates pixels clockwise as you hold down the mouse button or drag.


Twirl Counterclockwise  Rotates pixels counterclockwise as you hold down the mouse button or drag.

Pucker  Moves pixels toward the center of the brush area as you hold down the mouse button or drag.

Bloat  Moves pixels away from the center of the brush area as you hold down the mouse button or drag.


Shift Pixels  Moves pixels perpendicularly to the stroke direction. Drag to move pixels to the left, and Option-drag to move pixels to the right.

Reflection  Copies pixels to the brush area. Drag to reflect the area perpendicular to the direction of the stroke (to the left of or below the stroke). Option-drag to reflect the area in the direction opposite the stroke (for example, the area above a downward stroke). Use overlapping strokes to create an effect similar to a reflection in water.


Reconstruct  Fully or partially reverses the changes you've made.

5 In the Tool Options section, adjust the brush size and pressure of the tool, as needed:

- To change the brush size, drag the pop-up slider, or enter a brush size value from 1 to 600 pixels.
- To change the brush pressure, drag the pop-up slider, or enter a brush pressure value from 1 to 100.


 A low brush pressure makes more gradual changes.

- If you're using a stylus tablet, select Stylus Pressure.

 To create the effect of dragging in a straight line between the current point and the previous point that you clicked, Shift-click with the Warp, Shift Pixels, and Reflection tools.

6 To apply the changes in the preview image to the actual image, click OK.

7 (Optional) To revert to a previous state, do one of the following:

- Select the Reconstruct tool , and hold down the mouse button or drag over the distorted areas. The restoration occurs more quickly at the brush center. Shift-click to reconstruct in a straight line between the current point and the previous point that you clicked.
- To restore the entire preview image to its state when you opened the dialog box, press Option and click Reset. Alternatively, click Revert to restore the original image and reset the tools to their previous settings.

Ocean Ripple

The Ocean Ripple filter adds randomly spaced ripples to the image's surface, making the image look as if it were under water.

Pinch

The Pinch filter squeezes a selection or layer inward or outward.

Apply the Pinch filter

- 1 Select an image, layer, or area.
- 2 Choose Distort > Pinch from the Filter menu.
- 3 Drag the slider to the right, into positive values, to pinch a selection inward toward its center; or to the left, into negative values, to shift a selection outward. Then click OK.

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Polar Coordinates

The Polar Coordinates filter converts a selection from its rectangular to polar coordinates, and vice versa, according to a selected option. You can use this filter to create a cylinder anamorphosis—art popular in the 18th century—in which the distorted image appears normal when viewed in a mirrored cylinder.

Ripple

The Ripple filter creates an undulating pattern on a selection, like ripples on the surface of a pond. For greater control, use the Wave filter. Options include the amount and size of ripples.

Shear

The Shear filter distorts an image along a curve.

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Apply the Shear filter

- 1 Select an image, layer, or area.
- 2 Choose Distort > Shear from the Filter menu.
- 3 To define a distortion curve, do one of the following in the Shear dialog box:
 - Click anywhere on either side of the vertical line.
 - Click on the vertical line, and then drag the new curve point.

You can drag any point along the curve to adjust the distortion, and you can add additional curve points.

- 4 Select one of the following in the Undefined Areas options and click OK:

Wrap Around Fills new voids in the image with content from the opposite side of the image.

Repeat Edge Pixels Extends the colors of pixels. Banding may result if the edge pixels are different colors.

You can click Defaults to start over and return the curve to a straight line.

Spherize

The Spherize filter gives objects a 3D effect by wrapping a selection around or inside a spherical shape, distorting and stretching the image.

Apply the Spherize filter

- 1 Select an image, layer, or area.
- 2 Choose Distort > Spherize from the Filter menu.
- 3 For Amount, enter a positive value to stretch the image outward as though it were wrapped around a sphere. Enter a negative amount to compress the image inward as though it were wrapped inside a sphere.
- 4 For Mode, choose whether to apply the filter horizontally, vertically, or in both directions, and then click OK.

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Twirl

The Twirl filter rotates an image or selection more sharply in the center than at the edges. Specifying an angle produces a twirl pattern. You can drag the slider to the right into positive values to twirl the image clockwise, drag to the left into negative values to twirl counterclockwise, or enter a value between -999 and 999.

Wave

The Wave filter creates an undulating pattern on a layer or selection.

Apply the Wave filter

- 1 Select an image, layer, or area.
- 2 Choose Distort > Wave from the Filter menu.
- 3 Select a wave type in the Type section: Sine (creates a rolling wave pattern), Triangle, or Square.
- 4 To set the number of wave generators, drag the slider or enter a number between 1 and 999.
- 5 Drag the minimum and maximum Wavelength sliders to set the distance from one wave crest to the next. Set both sliders to the same value to create a consistent pattern of wave crests.
- 6 Drag the minimum and maximum Amplitude sliders to set the wave strength.
- 7 Drag the horizontal and vertical Scale sliders to set the height and width of the wave effect.
- 8 To apply random results based on the set of values in the dialog box, click Randomize. You can click Randomize multiple times to get more results.
- 9 Select one of the following and click OK:

Wrap Around Fills the voids in the image with content from the opposite edge of the image.

Repeat Edge Pixels Extends the colors of pixels along the image's edge in the direction specified.

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ZigZag

The ZigZag filter distorts a selection radially, depending on the radius of the pixels in your selection.

Apply the ZigZag filter

- 1 Select an image, layer, or area.
- 2 Choose Distort > ZigZag from the Filter menu.
- 3 Drag the Amount slider to set the level and direction of distortion.
- 4 Drag the Ridges slider to set the number of direction reversals for the zigzag from the center to the edge of the selection.
- 5 Choose a displacement option from the Style menu and click OK:

Around Center Rotates the pixels around the center of the selection.

Out From Center Produces a rippling effect toward or away from the center of the selection.

Pond Ripples Produces a rippling effect that distorts the selection to the upper left or lower right.

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Noise filters

Add Noise

The Add Noise filter applies random pixels to an image, simulating the result of shooting pictures on high-speed film. This filter can also be used to reduce banding in feathered selections or graduated fills, to give a more realistic look to heavily retouched areas, or to create a textured layer. You can set the amount of noise, the type of noise distribution, and color mode. The Uniform option creates a subtle distribution appearance, and Gaussian creates a speckled distribution look. Monochromatic applies the filter using the existing tones of the image without changing the colors.

Despeckle

The Despeckle filter detects the edges in a layer (areas where significant color changes occur) and blurs all of the selection except those edges. This blurring removes noise while preserving detail. You can use this filter to remove banding or visual noise that often appears in scans of magazines or other printed materials.

Dust & Scratches

The Dust & Scratches filter reduces visual noise by changing dissimilar pixels.

Median

The Median filter reduces noise in a layer by blending the brightness of pixels within a selection. The filter searches for pixels of similar brightness, discarding pixels that differ too much from adjacent pixels, and replaces the center pixel with the median brightness value of the searched pixels. This filter is useful for eliminating or reducing the appearance of motion in an image, or undesirable patterns that may appear in a scanned image.

Reduce Noise

The Reduce Noise filter reduces luminous noise and color noise, such as the noise introduced by photographing with insufficient light. Select the Remove JPEG Artifacts option to remove the blocky artifacts and halos that are caused by saving an image at a low JPEG quality setting.



In this photo, taken with a mobile phone, there's noise in the boy's face (left). The Reduce Noise filter smooths away the stray pixels (right).

Pixelate filters

Color Halftone

The Color Halftone filter simulates the result of using an enlarged halftone screen on the layer. The filter divides the image into rectangles and replaces each rectangle with a circle. The circle size is proportional to the brightness of the rectangle.

Apply the Color Halftone filter

- 1 Select an image, layer, or area.
- 2 Choose Pixelate > Color Halftone from the Filter menu.
- 3 Enter a value for the maximum radius of a halftone dot, from 4 to 127 pixels.
- 4 Enter a screen-angle value between -360 and 360 (the angle of the dot from the true horizontal) for one or more channels:
 - For grayscale images, enter a value in channel 1. Values in the other channel text boxes do not affect the filter.
 - For color images, use channels 1, 2, 3, and 4, which correspond to CMYK channels (cyan, magenta, yellow, and black).
- 5 Click Defaults to return all the screen angles to their default values, and then click OK.

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Crystalize

The Crystalize filter redraws a layer as polygon-shaped clumps of color. You can set the cell size of the crystals.

Facet

The Facet filter redraws a layer as blocks of solid color. You can use this filter to make a scanned image look hand painted or to make a realistic image resemble an abstract painting.

Fragment

The Fragment filter redraws a layer so that it appears offset and blurred.

Mezzotint

The Mezzotint filter redraws a layer as a random pattern of black-and-white areas in a grayscale image, or fully saturated colors in a color image. You can choose a dot, line, or stroke pattern.

Mosaic

The Mosaic filter redraws a layer as square blocks of color. You can set the mosaic cell size.

Pointillize

The Pointillize filter redraws a layer as randomly placed dots, as in a pointillist painting, and uses the background color in the toolbox as a canvas area between the dots. You can set the cell size.

Render filters

Clouds

The Clouds filter generates a soft cloud pattern using random values that vary between the foreground and the background color in the toolbox.



To generate a starker cloud pattern, hold down Option as you choose Filter > Render > Clouds.

Difference Clouds

The Difference Clouds filter uses randomly generated values that vary between the foreground and background color in the toolbox to produce a cloud pattern. The first time you choose this filter, portions of the image are inverted in a cloud pattern. Applying the filter several times creates rib and vein patterns that resemble a marble texture.

Fibers

The Fibers filter creates the look of woven fibers using the foreground and background colors. You can control how the colors vary with the Variance option (a low value creates longer streaks of color, while a high value makes very short fibers with more varied distribution of color). The Strength option controls how each fiber looks. A low setting creates spread out fibers, while a high setting produces short, stringy fibers. Randomize changes how the pattern looks; you can select this option until you find a pattern you like. When you apply the Fibers filter, the image data on the active layer is replaced with fibers.



Add a gradient map adjustment layer to colorize the fibers. (See “[About adjustment and fill layers](#)” on page 62.)

Lens Flare

The Lens Flare filter simulates the light refraction caused by shining a bright light into a camera lens. You can set the flare brightness, flare location, and flare shape (the lens type). Click in the preview window in the dialog box to set the flare location.


Lighting Effects

The Lighting Effects filter lets you produce sophisticated lighting effects in RGB images. You can create multiple lights, set individual light properties, and easily drag lights around in the preview window to test different lighting setups. You can also use textures from grayscale files called texture maps to produce 3D-like effects, and save your own styles for use in other images.

Apply the Lighting Effects filter

- 1 Select an image, layer, or area.
- 2 Choose Render > Lighting Effects from the Filter menu.

3 Specify options, as desired, and click OK.

Preview area Displays a preview of the lighting effect so you can adjust each light (see “[Adjust a light](#)” on page 196). You can also create a new light by dragging the light icon  into the preview area (you can create up to 16 lights). To delete a light, select the light in the preview window and drag the light (by its center circle) to the Trash.



To copy an existing light, select a light in the preview window, press Option, and drag to a new location in the window.

Save Lets you name and save the style. Saved styles include all of the settings for each light and appear in the Style menu whenever you open an image in Photoshop Elements.

Delete Removes the selected style. You can’t delete default styles.

Style menu Lets you choose from the following default light styles, plus any custom styles you have saved:

Note: If you choose a style that has multiple lights, you must set options for each light individually.

- **2 O’ Clock Spotlight** Adds one yellow spotlight with medium intensity and wide focus.
- **Blue Omni** Adds a blue overhead omni light with full intensity and no focus.
- **Circle Of Light** Adds four spotlights. White has full intensity and a concentrated focus. Yellow has strong intensity and a concentrated focus. Red has medium intensity and a concentrated focus. Blue has full intensity and medium focus.
- **Crossing** Adds one white spotlight with medium intensity and a wide focus.
- **Crossing Down** Adds two white spotlights with medium intensity and a wide focus.
- **Default** Adds a white spotlight with a medium intensity and a wide focus.
- **Five Lights Down/Five Lights Up** Add five white spotlights down or up with full intensity and wide focus.
- **Flashlight** Adds an omni yellow light with medium intensity.
- **Flood Light** Produces a medium intensity and wide focus white spotlight.
- **Parallel Directional** Is a blue light with full intensity and no focus, or a white directional light with medium intensity and no focus.
- **RGB Lights** Are red, green, and blue lights producing a light of medium intensity and wide focus.
- **Soft Direct Lights** Adds two unfocused white (soft intensity) and blue (medium intensity) directional lights.
- **Soft Omni** Is a soft omni light of medium intensity.
- **Soft Spotlight** Is a white spotlight with full intensity and wide (100) focus.
- **Three Down** Adds three white spotlights with medium intensity and wide focus.
- **Triple Spotlight** Adds three spotlights with medium intensity and wide focus.

Light Type Contains these options for each light in the selected style:

- **On** Turns the selected light on or off in the preview window. This is useful if your lighting effects style uses multiple lights and you want to look at a particular light.
- **Intensity** Specifies the light’s brightness.
- **Focus** Specifies the width of the beam of light.
- **Color box** Displays the Color Picker so you can change the color of the light. Click this white box to use it.

Properties Contains these options for the image you're shining the light on:

- **Gloss** Determines how much the surface reflects light, from Matte (low reflectance) to Shiny (high reflectance).
- **Material** Determines whether the light or the object on which the light is cast reflects more light. Plastic reflects the light's color; Metallic reflects the object's color.
- **Exposure** Increases the light (positive values) or decreases the light (negative values). A value of 0 has no effect.
- **Ambience** Diffuses the light as if it were combined with other light in a room, such as sunlight or fluorescent light. Choose a value of 100 to use only the light source, or a value of -100 to completely diffuse the light source.
- **Color box** Displays the Color Picker so you can change the color of the ambient light. Click this white box to use it.

Texture Channel Contains these options for creating a texture for the image you're shining the light on:

- **Texture Channel menu** Lets you select the red, green, and blue color channels in your image so you can manipulate how light reflects off of each channel, creating a texture effect. You can also choose to use the layer transparency of the active layer to create a texture effect.
- **White Is High** Raises the light parts of the channel from the surface. Deselect this option to raise the dark parts.
- **Height** Varies the depth of the texture from Flat (0) to Mountainous (100).

Adjust a light

Do any of the following in the Lighting Effects preview, depending on the type of light:

- (Directional, Omni, and Spotlights) To move the light, drag the center circle.
- (Directional lights) To change the direction of the light, drag the handle at the end of the line at an angle from the line. Command-drag to keep the light's height constant.
- (Directional lights) To change the height of the light, drag the handle at the end of the line in the direction of the line. Shift-drag to keep the angle constant and change the light's height (line length).
- (Omni lights) To increase or decrease the size of the light, drag one of the handles defining the edges of the light.
- (Spotlights) To change the light angle, drag the handle at the end of the line.
- (Spotlights) To stretch the ellipse or rotate the light, drag one of the handles. Shift-drag to keep the angle constant and change only the size of the ellipse. Command-drag to keep the size constant and change the angle or direction of the spotlight.

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Texture Fill

The Texture Fill filter uses a grayscale Photoshop image as a texture for an image.

Sketch filters

Bas Relief

The Bas Relief filter transforms an image to appear carved in low relief and lit to accent the surface variations. Dark areas of the image take on the foreground color, light areas use the background color. You can set relief detail and smoothness.

Chalk & Charcoal


The Chalk & Charcoal filter redraws an image's highlights and midtones with a solid midtone gray background drawn in coarse chalk. Shadow areas are replaced with black diagonal charcoal lines. The charcoal is drawn in the foreground color, the chalk in the background color. You can set stroke pressure, and the charcoal and chalk areas.

Charcoal

The Charcoal filter redraws an image to create a smudged effect. Major edges are boldly drawn, and midtones are sketched using a diagonal stroke. Charcoal is the foreground color, and the paper is the background color. You can set the charcoal thickness, level of image detail, and light/dark balance.


Chrome

The Chrome filter gives the image a polished chrome surface using highlights as high points and shadows as low points in the reflecting surface. You can set the level of chrome surface detail and smoothness.

 *After applying the Chrome filter, use the Levels dialog box to add more contrast to the image.*

Conté Crayon

The Conté Crayon filter replicates the texture of dense dark and pure white Conté crayons on an image. The Conté Crayon filter uses the foreground color for dark areas and the background color for light areas. You can set the level of foreground and background emphasis, and texture options. Texture options make images appear as if they were painted onto textures, such as canvas and brick, or viewed through glass blocks, for example.

 *For a more realistic effect, change the foreground color to one of the common Conté Crayon colors (black, sepia, or sanguine) before applying this filter. For a muted effect, change the background color to white with some foreground color added to it.*

Graphic Pen

The Graphic Pen filter uses fine, linear ink strokes to capture the details in the original image and is especially striking with scanned images. The filter replaces color in the original image, using the foreground color for ink and background color for paper. You can set the stroke length and direction, and the light/dark balance.

Halftone Pattern

The Halftone Pattern filter simulates the effect of a halftone screen while maintaining the continuous range of tones. You can set the halftone size, contrast, and pattern type.

Note Paper

The Note Paper filter simulates the texture of handmade paper by combining the effects of the Emboss and Grain filters. Dark areas in the image appear as holes in the top layer of paper, revealing the background color. You can set the image balance, graininess, and relief.

Photocopy

The Photocopy filter simulates the effect of photocopying an image. Large areas of darkness tend to copy only around their edges, and midtones fall away to either solid black or white. You can set the level of detail and darkness.

Plaster

The Plaster filter molds the layer into a 3D plaster effect, and then colorizes the result using the foreground and background color. Dark areas are raised, light areas are sunken. You can set the image balance, smoothness, and light direction.

Reticulation

The Reticulation filter simulates the controlled shrinking and distorting of film emulsion to create an image that appears clumped in the shadow areas and lightly grained in the highlights. You can set the density, foreground, and background levels.

Stamp

The Stamp filter simplifies the image so that it seems made with a rubber or wood stamp. You can set the smoothness, and the balance between light and dark. This filter works best with black-and-white images.

Torn Edges

The Torn Edges filter reconstructs the image as ragged, torn pieces of paper, and then colorizes the image using the foreground and background color. You can set the image balance, smoothness, and contrast. This filter is particularly useful for images consisting of text or high-contrast objects.

Water Paper

The Water Paper filter uses blotchy daubs that appear to be painted onto fibrous, damp paper, causing the colors to flow and blend. You can set the paper's fiber length, brightness, and contrast.

Stylize filters

Diffuse

The Diffuse filter shuffles pixels in a selection to make the selection look less focused according to the option you select: Normal moves pixels randomly, ignoring color values; Darken Only replaces light pixels with darker pixels; Lighten Only replaces dark pixels with lighter pixels; and Anisotropic softens all pixels.

Emboss

The Emboss filter makes a selection appear raised or stamped by converting its fill color to gray and tracing the edges with the original fill color. You can set the embossing angle, height, and a percentage for the amount of color within the selection.

Extrude

The Extrude filter gives a three-dimensional texture to a selection or layer.

Apply the Extrude filter

- 1 Select an image, layer, or area.
- 2 Choose Stylize > Extrude from the Filter menu.
- 3 Set the following options and click OK:

Blocks Creates objects with a square front face and four side faces.

Pyramids Creates objects with four triangular sides that meet at a point.

Size Determines the length of the object's base, from 2 to 255 pixels.

Depth Indicates how far the tallest object appears to protrude from the screen, from 1 to 255.

Random Gives each block or pyramid an arbitrary depth.

Level-based Makes each object's depth correspond to its brightness—bright objects protrude more than dark.

Solid Front Faces Fills the front face of each block with an averaged color of the block. Deselect Solid Front Faces to fill the front face of each block with the image. This option is not available for Pyramids.

Mask Incomplete Blocks Hides any object extending beyond the selection.

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Find Edges

The Find Edges filter identifies areas of the image with significant transitions and emphasizes edges. Like the Trace Contour filter, Find Edges outlines the edges of an image with dark lines against a white background and is useful for creating a border around an image.

***Note:** After using filters like Find Edges and Trace Contour that highlight edges, you can apply the Invert filter to outline the edges of a color image with colored lines or a grayscale image with white lines.*

Glowing Edges

The Glowing Edges filter identifies the edges of color and adds a neon-like glow to them. You can set the edge width, brightness, and smoothness.

Solarize

The Solarize filter blends a negative and a positive image, for a result similar to exposing a photographic print briefly to light during development.

Tiles

The Tiles filter breaks up an image into a series of tiles, offsetting the selection from its original position. You can set the number of tiles and the offset percentage. You can also choose one of the following to fill the empty area between the tiles: Background Color, Foreground Color, Inverse Image, or Unaltered Image, which puts the tiled version on top of the original and reveals part of the original image underneath the tiled edges.

Trace Contour

The Trace Contour filter finds the transitions between major areas of brightness and thinly outlines them for an effect similar to the lines in a contour map. You can set the level for evaluating color values, and specify whether to outline pixels that are below (Lower) or above (Upper) that level.



Use the Info panel in grayscale mode to identify a color value that you want traced. Then enter the value in the Level text box.

Wind

The Wind filter creates tiny horizontal lines in the image to simulate a wind effect. You can set the wind strength and direction.

Texture filters

Craquelure

The Craquelure filter paints an image onto a high-relief plaster surface, producing a fine network of cracks that follow the contours of the image. Use this filter to create an embossing effect with images that contain a broad range of color or grayscale values. You can set the crack spacing, depth, and brightness.

Grain

The Grain filter adds texture to an image by simulating different kinds of grain. The sprinkles and stippled grain types use the background color. You can set the grain intensity, contrast, and type.

Mosaic Tiles

The Mosaic Tiles filter draws the image as if it were made up of small chips or tiles and adds grout between the tiles. (In contrast, the Pixelate > Mosaic filter breaks up an image into blocks of different-colored pixels.) You can set the tile size, grout width, and grout highlights.

Patchwork

The Patchwork filter breaks up an image into squares filled with the predominant color in different areas of the image. The filter randomly reduces or increases the tile depth to replicate the highlights and shadows. You can set the square size and relief.

Stained Glass

The Stained Glass filter repaints an image as single-colored adjacent cells outlined in the foreground color. You can set the cell size, border thickness, and light intensity.

Texturizer

The Texturizer filter allows you to simulate different texture types or select a file to use as a texture. Texture options make images appear as if they were painted onto textures, such as canvas and brick, or viewed through glass blocks.

Video filters

De-Interlace

The De-Interlace filter smooths moving images captured on video by removing either the odd or even interlaced lines in a video image. You can choose to replace the discarded lines by duplication or interpolation.

NTSC Colors

The NTSC Colors filter restricts the gamut of colors to those acceptable for television reproduction to prevent oversaturated colors from bleeding across television scan lines.

Other filters

High Pass

The High Pass filter retains edge details in the specified radius where sharp color transitions occur and suppresses the rest of the image. (A radius of 0.1 pixel keeps only edge pixels.) The filter removes low-frequency detail in an image and has an effect opposite to that of the Gaussian Blur filter.



You can use the High Pass filter to extract line art and large black-and-white areas from scanned images. To do so, apply the filter before using the Filter > Adjustments > Threshold command or converting the image to bitmap mode.

Maximum and Minimum

The Maximum and Minimum filters look at individual pixels in a selection, like the Median filter. Within a specified radius, the Maximum and Minimum filters replace the current pixel's brightness value with the highest or lowest brightness value of the surrounding pixels. The Maximum filter has the effect of applying a choke—spreading out white areas and choking in black areas. The Minimum filter has the effect of applying a spread—spreading out black areas and shrinking white areas.

Offset

The Offset filter moves a selection a specified amount to the right horizontally or down vertically, leaving an empty space at the selection's original location. Depending on the size of the selection, you can fill the empty area with a transparent background, with the edge pixels, or with pixels from the right or bottom edges of an image.

Custom filters

Custom filters let you design your own filter effect. With the Custom filter, you can change the brightness values of each pixel in the image according to a predefined mathematical operation known as convolution. Each pixel is reassigned a value based on the values of surrounding pixels. You can save the custom filters you create and use them with other Photoshop images.

Use the Save and Load buttons to save and reuse custom filters.

Apply a Custom filter

- 1 Select an image, layer, or area.
- 2 Choose Other > Custom from the Filter menu.
- 3 Select the center text box, which represents the pixel being evaluated. Enter the value by which you want to multiply that pixel's brightness value, from -999 to +999.
- 4 Select a text box representing an adjacent pixel. Enter the value by which you want the pixel in this position multiplied.

For example, to multiply the brightness value of the pixel to the immediate right of the current pixel by 2, enter 2 in the text box to the immediate right of the center text box.

Note: To avoid turning the image completely white or black, the sum of the values in the matrix should equal 1.

- 5 Repeat steps 3 and 4 for all pixels you want to include in the operation. You don't have to enter values in all the text boxes.
- 6 For Scale, enter the value by which to divide the sum of the brightness values of the pixels included in the calculation.
- 7 For Offset, enter the value to be added to the result of the scale calculation.
- 8 Click OK. The custom filter is applied to each pixel in the image, one at a time.

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Plug-in filters

You can install plug-in filters developed by non-Adobe software developers. Once installed, the plug-in filters appear at the bottom of the Filter menu unless the developer has specified another location.

If you are interested in creating plug-in modules, contact Adobe Systems Developer Support.

Important: If you have problems or questions about a third-party plug-in, contact the plug-in's manufacturer for support.

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Digimarc filter

Photoshop Elements automatically scans opened images for Digimarc® watermarks. If a watermark is detected, the application displays a copyright symbol in the image window's title bar and includes the information in the Copyright Status, Copyright Notice, and Owner URL sections of the File Info dialog box.

More Help topics

[“About filters”](#) on page 178

[“Filter categories”](#) on page 180

[“Apply a filter”](#) on page 179

Detect the Digimarc filter

- 1 Choose Filter > Digimarc > Read Watermark. If the filter finds a watermark, a dialog box displays the Digimarc ID, copyright year (if present), and image attributes.
- 2 Click OK. If you have a web browser installed, click Web Lookup to get more information about the owner of the image. This option opens the browser and displays the Digimarc website, where contact details appear for the given Digimarc ID.

Chapter 12: Painting

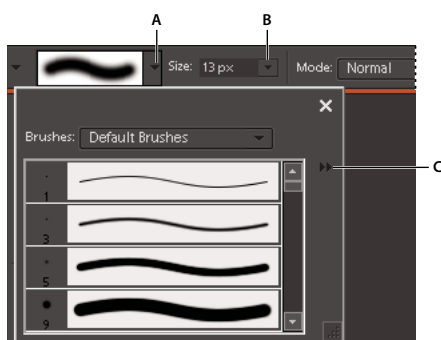
The painting tools change the color of pixels in an image. The Brush tool and the Pencil tool work like traditional drawing tools by applying color with brush strokes. The Gradient tool, Fill command, and Paint Bucket tool apply color to large areas. Tools like the Eraser tool, Blur tool, and Smudge tool modify the existing colors in an image.

The power of painting in Adobe® Photoshop® Elements is in the options that you can set to specify how a tool applies or modifies color. You can apply color gradually, with soft edges, with large brush strokes, with various brush dynamics, with different blending properties, and with brushes of different shapes. You can simulate spraying paint with an airbrush.

Painting overview

About painting tools

The workspace in Photoshop Elements provides a variety of tools for applying and editing color. When you select a painting tool, the option bar displays a variety of preset brush tips and settings for brush size, paint blending, opacity, and airbrush effects. You can create new brush presets and save them in brush libraries. You can customize the brush and settings for any of the painting and editing tools and manage them using the Preset Manager.



Brush options in the options bar

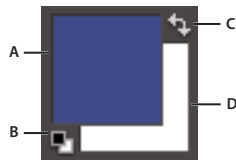
A. Brush pop-up panel and brush thumbnail B. Brush size pop-up slider and text box C. More menu

The Brush tool paints smooth, anti-aliased lines. Other painting tools include the Pencil tool for making hard-edged lines and the Eraser tool for erasing color pixels from layers. The Paint Bucket tool and Fill command fill areas of your image with color or patterns. The pattern Stamp tool paints with one of the predefined patterns or a pattern that you design.

The Impressionist Brush tool affects existing color by applying stylized brush strokes. The Smudge tool also affects existing image colors by simulating the action of dragging a finger through wet paint.

About foreground and background colors

You apply the foreground color when you paint with the Brush or Pencil tools, and when you fill selections with the Paint Bucket tool. The color you apply to the Background layer with the Eraser tool is called the *background color*. You can see and change the foreground and background colors in the two overlapping boxes at the bottom of the toolbox. The top box is the foreground color, and the bottom box is the background color. The foreground and background colors are also used together by the Gradient tool and some special effects filters.



Foreground and background color boxes in toolbox

A. Foreground color box B. Click to use default colors (black and white) C. Click to switch the foreground and background colors D. Background color box

You can change the foreground or background color in the toolbox by using the Eyedropper tool, the Color Swatches panel, or the Color Picker.

More Help topics

[“Choosing colors”](#) on page 208

About blending modes

Blending modes control how pixels in an image are affected by a painting or editing tool. It’s helpful to think in terms of the following colors when visualizing a blending mode’s effect:

- The base color is the original color in the image.
- The blend color is the color applied by the painting or editing tool.
- The result color is the color resulting from the blend.



The Multiply blending mode (top), Screen blending mode (center), and Luminosity blending mode (bottom) applied to the starfish layer.

You can choose any of the following blending modes from the Mode menu in the options bar:

Normal Edits or paints each pixel to make it the result color. This is the default mode. (Normal mode is called *Threshold* when you're working with an image in bitmap or indexed-color mode.)

Dissolve Edits or paints each pixel to make it the result color. However, the result color is a random replacement of the pixels with the base color or the blend color, depending on the opacity at any pixel location. This mode works best with the brush tool and a large brush.

Behind Edits or paints only on the transparent part of a layer. This mode works only on layers with Lock Transparency deselected, and is analogous to painting on the back of transparent areas on a sheet of glass.

Clear Edits or paints each pixel and makes it transparent. You must be on a layer with Lock Transparency deselected in the Layers panel to use this mode.

Darken Looks at the color information in each channel and selects the base or blend color—whichever is darker—as the result color. Pixels lighter than the blend color are replaced, and pixels darker than the blend color do not change.

Multiply Looks at the color information in each channel and multiplies the base color by the blend color. The result color is always a darker color. Multiplying any color by black produces black. Multiplying any color by white leaves the color unchanged. When you're painting with a color other than black or white, successive strokes with a painting tool produce progressively darker colors. The effect is similar to drawing on the image with multiple felt-tipped pens.

Color Burn Looks at the color information in each channel and darkens the base color to reflect the blend color. Blending with white produces no change.

Linear Burn Looks at the color information in each channel and darkens the base color to reflect the blend color by decreasing the brightness. Blending with white produces no change.

Darker Color Compares the total of all channel values for the blend and base color and displays the lower value color. Darker Color does not produce a third color, which can result from the Darken blend, because it chooses the lowest channel values from both the base and the blend color to create the result color.

Lighten Looks at the color information in each channel and selects the base or blend color—whichever is lighter—as the result color. Pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change.

Screen Looks at each channel's color information and multiplies the inverse of the blend and base colors. The result color is always a lighter color. Screening with black leaves the color unchanged. Screening with white produces white. The effect is similar to projecting multiple photographic slides on top of each other.

Color Dodge Looks at the color information in each channel and brightens the base color to reflect the blend color. Blending with black produces no change.

Linear Dodge (Add) Looks at the color information in each channel and brightens the base color to reflect the blend color by increasing the brightness. Blending with black produces no change.

Lighter Color Compares the total of all channel values for the blend and base color and displays the higher value color. Does not produce a third color, which can result from the Lighten blend, because it chooses the highest channel values from both the base and blend color to create the result color.

Overlay Multiplies or screens the colors, depending on the base color. Patterns or colors overlay the existing pixels while preserving the highlights and shadows of the base color. The base color is mixed with the blend color to reflect the lightness or darkness of the original color.

Soft Light Darkens or lightens the colors, depending on the blend color. The effect is similar to shining a diffused spotlight on the image. If the blend color is lighter than 50% gray, the image is lightened. If the blend color is darker than 50% gray, the image is darkened. Painting with pure black or white produces a distinctly darker or lighter area but does not result in pure black or white.

Hard Light Multiplies or screens the colors, depending on the blend color. The effect is similar to shining a harsh spotlight on the image. If the blend color is lighter than 50% gray, the image is lightened. This is useful for adding highlights to an image. If the blend color is darker than 50% gray, the image is darkened. This is useful for adding shadows to an image. Painting with pure black or white results in pure black or white.

Vivid Light Burns or dodges the colors by increasing or decreasing the contrast, depending on the blend color. If the blend color (light source) is lighter than 50% gray, the image is lightened by decreasing the contrast. If the blend color is darker than 50% gray, the image is darkened by increasing the contrast.

Linear Light Burns or dodges the colors by decreasing or increasing the brightness, depending on the blend color. If the blend color (light source) is lighter than 50% gray, the image is lightened by increasing the brightness. If the blend color is darker than 50% gray, the image is darkened by decreasing the brightness.

Pin Light Replaces the colors, depending on the underblend color. If the blend color (light source) is lighter than 50% gray, pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change. If the blend color is darker than 50% gray, pixels lighter than the blend color are replaced, and pixels darker than the blend color do not change. This mode is useful for adding special effects to an image.

Hard Mix Reduces colors to white, black, red, green, blue, yellow, cyan, and magenta—depending on the base color and the blend color.

Difference Looks at the color information in each channel and subtracts either the blend color from the base color or the base color from the blend color, depending on which has the greater brightness value. Blending with white inverts the base color values; blending with black produces no change.

Exclusion Creates an effect similar to, but lower in contrast, than the Difference mode. Blending with white inverts the base color values. Blending with black produces no change.

Hue Creates a result color with the luminance and saturation of the base color and the hue of the blend color.

Saturation Creates a result color with the luminance and hue of the base color and the saturation of the blend color. Painting with this mode in an area with zero saturation (a neutral gray area) causes no change.

Color Creates a result color with the luminance of the base color and the hue and saturation of the blend color. This preserves the gray levels in the image and is useful for coloring monochrome images and for tinting color images.




Using the Color blending mode to change the color of a shirt

Luminosity Creates a result color with the hue and saturation of the base color and the luminance of the blend color. This mode creates an inverse effect from that of the Color mode.

Web-safe colors

Web-safe colors are the 216 colors used by browsers on both the Windows and Mac OS platforms. By working only with these colors, you ensure that colors in art you prepare for the web display accurately in a web browser.

You can identify web-safe colors in the Adobe Color Picker by using either of the following methods:

- Select Only Web Colors in the lower-left corner of the Color Picker, and then choose any color in the Color Picker. When this option is selected, any color you pick is web-safe.
- Choose a color in the Color Picker. If you choose a color that isn't web-safe, an alert cube  appears next to the color rectangle in the upper-right area of the Color Picker. Click the alert cube to select the closest web-safe color. (If no alert cube appears, the color you chose is web-safe.)

More Help topics

[“Use the Color Swatches panel”](#) on page 210

[“Use the Adobe Color Picker”](#) on page 211

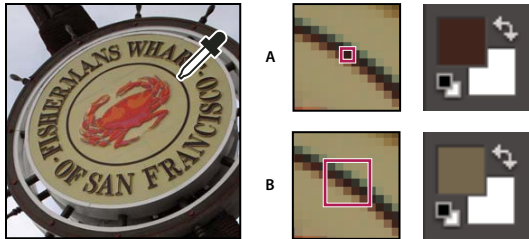
[“About dithering”](#) on page 271

Choosing colors


Choose a color with the Eyedropper tool

The Eyedropper tool makes it easy to copy a color without having to select a swatch. It copies, or samples, the color of an area in your photo to set a new foreground or background color. You can sample from the active image, from another open image, or from your computer's desktop.

If you want the color always to be available, you can add the sampled color to the Color Swatches panel. You can also specify the size of the area that the Eyedropper tool samples. For example, you can set the eyedropper to sample the average color values of a 5-by-5- or 3-by-3-pixel area under the pointer.



Selecting a foreground color with the eyedropper.
A. Point sample B. 5 by 5 Average sample

- 1 Select the Eyedropper tool  in the toolbox.
- 2 (Optional) To change the sample size of the eyedropper, choose an option from the Sample Size menu in the options bar:
 - Point Sample to get the precise value of the pixel you click.
 - 3 By 3 Average or 5 By 5 Average to get the average value of the specified number of pixels within the area you click.
- 3 Do one of the following to choose a color:
 - To select a new foreground color from an image, click the desired color in your image. To select a color that appears elsewhere on your computer screen, click inside your image and drag away from it.
 - To select a new background color from an image, Option-click the color you want.

As you click and drag the Eyedropper tool, the foreground color box changes.



- 4 Release the mouse button to pick the new color.

Note: You can temporarily switch to the Eyedropper tool while using most painting tools, which allows you to change colors quickly without selecting another tool. Simply hold down the Option key. Once you've chosen your color, release the Option key.

More Help topics

[“About foreground and background colors”](#) on page 205

Choose a color from the toolbox

- ❖ Do one of the following:
 - To set the foreground and background boxes to black and white, click the Default Colors icon .
 - To switch the colors in the two boxes, click the Switch Colors icon .
 - To change the foreground color, click the topmost color box in the toolbox, and then choose a color from the Color Picker.
 - To change the background color, click the bottom color box in the toolbox, and then choose a color from the Color Picker.

More Help topics

[“About foreground and background colors”](#) on page 205

Use the Color Swatches panel

The Color Swatches panel (Window > Color Swatches) is a good place to store the colors that you use often in your images. You can select a foreground or background color by clicking a color swatch in the Color Swatches panel. You can add or delete colors to create a custom swatch library, save a library of swatches, and reload them for use in another image. You can change the way thumbnails are displayed in the Color Swatches panel by choosing an option from the More menu.

Although you can add many colors to the Color Swatches panel, you should manage its size and organization to improve performance. Creating libraries can help you group related or special swatches and manage panel size.

The Photoshop Elements/Presets/Color Swatches folder contains the various swatch libraries. When you create custom libraries, saving them to the Color Swatches folder makes them automatically appear in the panel libraries pop-up menu.

More Help topics


[“Use the Preset Manager”](#) on page 232

Choose a color using the Color Swatches panel

- 1 If the Color Swatches panel is not already open, choose Window > Color Swatches.
- 2 (Optional) Choose a swatch library name from the Swatches menu in the upper-left corner of the panel.
- 3 Do one of the following:
 - To choose a foreground color, click a color in the panel.
 - To choose a background color, Command-click a color in the panel.

Add a color to the Color Swatches panel

If there is a color you'd like to use often, you can save the color as a swatch in the Color Swatches panel. Saved swatches are added to the library of colors in the panel. To permanently save your custom swatches, you must save the entire library.

- 1 Set the foreground color in the toolbox to the color you want to add.
- 2 Do one of the following in the Color Swatches panel:
 - Click the New Swatch button  at the bottom of the panel. The color swatch is added and automatically named Color Swatch 1.
 - Choose New Swatch from the More menu.
 - Position the pointer over an empty space in the bottom row of the Color Swatches panel (the pointer turns into the Paint Bucket tool), and click to add the color.



Selecting a color with the eyedropper and adding it as a new swatch

- 3 Enter a name for the new color and click OK.

- 4 If prompted to save the swatch library, enter a new name in the Save dialog box and click Save.

Save and use custom swatch libraries

- ❖ Do any of the following in the Color Swatches panel:
 - To save a library of swatches, choose Save Swatches from the pop-up menu. To make the set appear in the panel's swatch libraries pop-up menu, save the file to the Photoshop Elements\Presets\Color Swatches folder.

Note: To see the new swatch set in the menu, restart Photoshop Elements.

- To select and load a swatch library, choose Load Swatches from the pop-up menu in the panel.
- To replace the current swatch library with a different library, choose Replace Swatches from the pop-up menu and select a library.

Reset a swatch library to its default color swatches

- 1 Choose a swatch library from the pop-up menu in the Color Swatches panel.
- 2 From the More menu in the Color Swatches panel, choose Preset Manager.
- 3 In the Preset Manager dialog box, choose Swatches from the Preset Type menu.
- 4 Choose Reset Swatches from the More menu, and click Done.

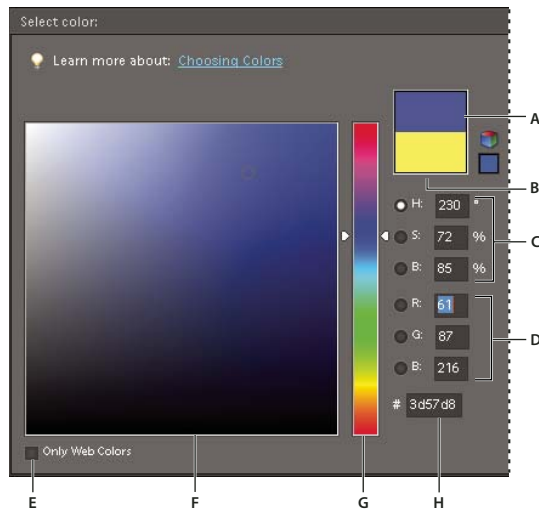
Delete a color from the Color Swatches panel

- 1 Do one of the following:
 - Drag the color swatch to the Trash button in the panel, and click OK to confirm the deletion.
 - Press Option to change the pointer to a scissors icon, and click a color in the Color Swatches panel.
- 2 If prompted to save the library, enter a name in the Save dialog box and click Save.

Note: To permanently remove swatches you delete, you must resave the library that contained them.

Use the Adobe Color Picker

You can use the Adobe Color Picker to select the foreground or background color by choosing from a color spectrum or by defining colors numerically. In addition, you can select colors based on HSB or RGB color models, or choose to select only web-safe colors.



Adobe Color Picker.




A. Adjusted color B. Original color C. HSB color values D. RGB color values E. Displays only web colors F. Color field G. Color slider
H. Hexadecimal color value

- 1 Click the foreground or background color boxes in the toolbox to display the Color Picker.
- 2 Click inside the color field. When you click in the color field, a circular marker indicates the color's position in the field, and the numerical values change to reflect the new color.
- 3 Drag the white triangles along the slider to move to another color.
- 4 Alternately, to specify a number visually, do any of the following:
 - Enter the hexadecimal value for your color in the text box under the RGB values. (Hexadecimal color values are often used by web designers.)
 - For RGB color, select a radio button and specify component values from 0 to 255 (0 is no light and 255 is the brightest light).
 - For HSB color, select a radio button and specify saturation and brightness as percentages; specify hue as an angle from 0° to 360° that corresponds to a location on the color wheel.
- 5 The color rectangle to the right of the color slider displays the new color in the top section of the rectangle. The original color appears at the bottom of the rectangle.
- 6 Click OK to begin painting with the new color.

Note: You can select colors using your system's built-in color picker or a plug-in color picker. Choose *Photoshop Elements > Preferences > General* and choose the color picker.


Painting tools

Use the Brush tool

The Brush tool  creates soft or hard strokes of color. You can use it to simulate airbrush techniques. (If you don't see it in the toolbox, select either the Impressionist Brush  or the Color Replacement tool , and then click the Brush tool icon in the options bar.)

- 1 Select a color to paint by setting the foreground color.

- 2 Select the Brush tool in the toolbox.
- 3 Specify Brush tool options in the options bar as desired, and then drag within the image to paint.

 *To draw a straight line, click a starting point in the image. Then hold down Shift and click an ending point.*


You can specify any of the following Brush tool options:


Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.


Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Specifies how the paint that you apply blends with the existing pixels in the image.

Opacity Sets the opacity of the paint you apply. A low opacity setting allows pixels under a paint stroke to show through. Drag the pop-up slider or enter an opacity value.

Airbrush  Enables airbrush capabilities. This option applies gradual tones to an image, simulating traditional airbrush techniques.

Brush Tablet Options  Sets the options to control with your stylus if you are using a pressure sensitive drawing tablet instead of a mouse.

More Options  Sets additional brush options.

More Help topics

[“About blending modes”](#) on page 205


[“About foreground and background colors”](#) on page 205


[“About brush options”](#) on page 219


[“Add a new brush to the brush library”](#) on page 221

[“Set up pressure-sensitive tablet support”](#) on page 222

Use the Pencil tool

The Pencil tool  creates hard-edged freehand lines.

- 1 Select a color to paint by setting the foreground color.
- 2 Select the Pencil tool in the toolbox. (The Pencil tool is nested with the Brush tool .)
- 3 Set Pencil tool options in the options bar, as desired, and then drag within the image to paint.

 *To draw a straight line, click a starting point in the image. Then hold down Shift and click an ending point.*

You can specify any of the following Pencil tool options:

Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Specifies how the paint that you apply blends with the existing pixels in the image.

Opacity Sets the opacity of the paint you apply. A low opacity setting allows pixels under a paint stroke to show through. Drag the pop-up slider or enter an opacity value.

Auto Erase Paints with the background color over areas containing the foreground color. If you begin dragging from an area that doesn't contain the foreground color, the tool paints with the foreground color.

More Help topics

[“About blending modes”](#) on page 205




[“About foreground and background colors”](#) on page 205

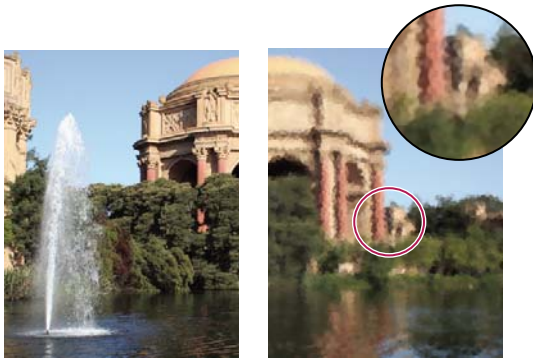
[“About painting tools”](#) on page 204

[“About brush options”](#) on page 219

Use the Impressionist Brush tool

The Impressionist Brush tool changes the existing colors and details in your image so your photo looks like it was painted using stylized brush strokes. By experimenting with different style, area size, and tolerance options, you can simulate the textures associated with painting in different artistic styles.

- 1 Select the Impressionist Brush tool  from the toolbox. (If you don't see it in the toolbox, right-click either the Brush tool  or the Color Replacement tool , and then click the Impressionist Brush tool icon from the context menu.)
- 2 Set options in the options bar as desired, and then drag within the image to paint.



Original photo (left), and after using the Impressionist Brush tool (right)

You can specify any of the following options:

Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Specifies how the paint that you apply blends with the existing pixels in the image. See [“About blending modes”](#) on page 205 for more information.

Opacity Sets the opacity of the paint you apply. A low opacity setting allows pixels under a paint stroke to show through. Drag the pop-up slider or enter an opacity value.

More Options Style affects the shape of the brush stroke. Area controls the size of the brush stroke. A larger area value also increases the number of strokes. Tolerance controls how similar in color value adjacent pixels must be before they are affected by the brush stroke.

More Help topics

[“About brush options”](#) on page 219

Smart Brush tools




The Detail Smart Brush tool automatically creates an adjustment layer as you paint. It doesn’t alter the original image layer. You can paint and change the adjustments as many times as you want without degrading your original photo. See [“Adjust color and tonality using the Smart Brush tools”](#) on page 108.


Use the Smudge tool

The Smudge tool simulates the actions of dragging a finger through wet paint. The tool picks up color where the stroke begins and pushes it in the direction you drag. You can smudge existing colors in your image, or smear foreground color on the image.



Original image (left), and after smudging parts of the photo (right)

- 1 Select the Smudge tool  in the toolbox. (If you don’t see it in the toolbox, select either the Blur tool  or the Sharpen tool , and then click the Smudge tool icon in the options bar.)
- 2 Set options in the options bar, and then drag within the image to smudge color.

 *To temporarily use the Finger Painting option as you drag with the smudge tool, press the Option key.*

You can specify any of the following Smudge tool options:

Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Specifies how the paint that you apply blends with the existing pixels in the image. See [“About blending modes”](#) on page 205 for more information.

Strength Sets the amount of the smudge effect.

Sample All Layers Smudges using color from all visible layers. If this option is deselected, the smudge tool uses colors from only the active layer.

Finger Painting Smears the foreground color at the beginning of each stroke. If this option is deselected, the smudge tool uses the color under the pointer at the beginning of each stroke.


More Help topics

[“Understanding layers”](#) on page 49

[“About brush options”](#) on page 219

Use the Eraser tool

The Eraser tool changes pixels in the image as you drag through them. If you’re working in the Background layer or in a layer with locked transparency, erased pixels change to the background color; otherwise, erased pixels become transparent. Transparent pixels are indicated by the transparency grid.

- 1 Select the Eraser tool  from the toolbox.
- 2 Set options in the options bar as desired, and then drag through the area you want to erase.

You can specify any of the following Eraser tool options:

Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Brush mode erases by using characteristics of the brush tool, so you can make soft-edged erasures. Pencil mode makes hard-edge erasures like a pencil. Block mode uses a hard-edged 16-pixel square as an eraser.

Opacity Defines the strength of the erasure. An opacity of 100% erases pixels to complete transparency on a layer and to the background color on the Background layer. A lower opacity erases pixels to partial transparency on a layer and paints partially with the background color on the Background layer. (If Block mode is selected in the options bar, the Opacity option isn’t available.)

More Help topics

[“About blending modes”](#) on page 205

[“About brush options”](#) on page 219

Use the Magic Eraser tool




The Magic Eraser tool changes all similar pixels when you drag within a photo. If you’re working in a layer with locked transparency, the pixels change to the background color; otherwise, the pixels are erased to transparency. You can choose to erase contiguous pixels only, or all similar pixels on the current layer.



Original image (left), and after erasing the clouds (right)

1 In the Layers panel, select the layer containing the areas you want to erase.

Note: If you select the Background, it automatically becomes a layer when you use the Magic Eraser.

2 Select the Magic Eraser tool  in the toolbox. (If you don't see it in the toolbox, select either the Eraser tool  or the Background Eraser tool , and then click the Magic Eraser tool icon in the options bar.)

3 Set options in the options bar, as desired, and then click the area of the layer you want to erase.

You can set any of the following Magic Eraser tool options:

Tolerance Defines the range of colors that will be erased. A low tolerance erases pixels within a range of color values very similar to the pixel you click. A high tolerance erases pixels within a broader range.

Anti-alias Smooths the edges of the area you erase, making the edge look more natural.

Contiguous Erases only pixels that are adjacent to the one you click. Deselect this option to erase all similar pixels in the image.

Sample All Layers Samples the erased color using combined data from all visible layers. Deselect the option if you want to erase only the pixels on the active layer.

Opacity Defines the strength of the erasure. An opacity of 100% erases pixels to complete transparency on a layer and to the background color on a locked layer. A lower opacity erases pixels to partial transparency on a layer and paints partially with the background color on a locked layer.

More Help topics

[“About blending modes”](#) on page 205


[“About brush options”](#) on page 219

[“About the Layers panel”](#) on page 50

[“Smooth the edges of a selection by anti-aliasing”](#) on page 93

Use the Background Eraser tool

The Background Eraser tool turns color pixels to transparent pixels so that you can easily remove an object from its background. With careful use, you can maintain the edges of the foreground object while eliminating background fringe pixels.




The tool pointer is a circle with a cross hair indicating the tool's hotspot . As you drag the pointer, pixels within the circle and of a similar color value as the pixel under the hotspot are erased. If the circle overlaps your foreground object, and it doesn't contain pixels similar to the hotspot pixel, the foreground object won't be erased.



Erasing the distracting background. You can replace the background with another background by using the Clone Stamp tool or by adding another layer.

- 1 In the Layers panel, select the layer containing the areas you want to erase.

Note: If you select *Background*, it automatically becomes a layer when you use the *Background Eraser*.

- 2 Select the Background Eraser tool . (If you don't see it in the toolbox, select either the Eraser tool  or the Magic Eraser tool , and then click the Background Eraser tool icon in the options bar.)
- 3 Set options in the options bar as desired, and then drag through the area you want to erase. Keep the tool's hotspot off of areas that you don't want to erase

You can specify any of the following Background Eraser tool options:

Brush Preset Picker Sets the presets of the brush, such as size, diameter, hardness, and spacing. Drag the Size pop-up sliders or enter numbers in text boxes.

Limits Choose *Contiguous* to erase areas that contain the hotspot color and are connected to one another. *Discontiguous* erases any pixels within the circle that are similar to the hotspot color.

Tolerance Defines how similar in color to the hotspot a pixel must be to be affected by the tool. A low tolerance limits erasure to areas that are very similar to the hotspot color. A high tolerance erases a broader range of colors.

More Help topics

[“About brush options”](#) on page 219

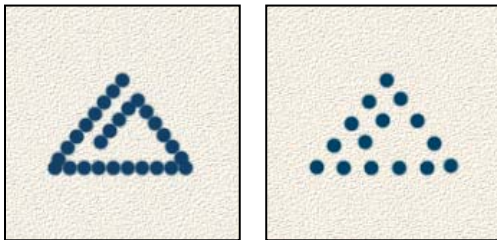
Setting up brushes

About brush options

You can simulate actual brush strokes by setting the rates at which the brush tool strokes fade out. You can specify which options dynamically change over the course of a brush stroke, including scattering, size, and color. The brush thumbnail in the options bar reflects the brush changes as you adjust the brush dynamics options.

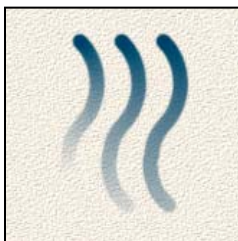
You set brush dynamics options by selecting the brush tool and then selecting from the following controls from the More Options menu in the options bar.

Spacing Controls the distance between the brush marks in a stroke. To change the spacing, type a number, or use the slider to enter a value that is a percentage of the brush diameter. (The brush thumbnail in the options bar dynamically changes to reflect your spacing adjustments.)



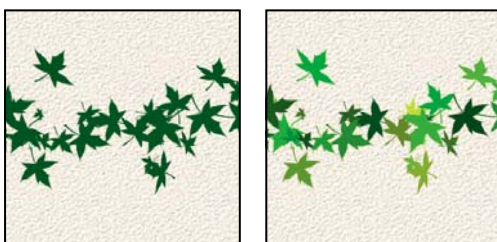
Increasing the spacing makes the brush skip.

Fade Sets the number of steps until the paint flow fades to nothing. A low value makes the paint stroke fade away very quickly, while a value of zero has no fading effect. Each step is equal to one mark of the brush tip. Possible values range from 0 to 9999. For example, entering 10 for Fade produces a fade in 10 increments. For smaller brushes, you may want to set a value of 25 or larger. If strokes fade too quickly, increase the values.



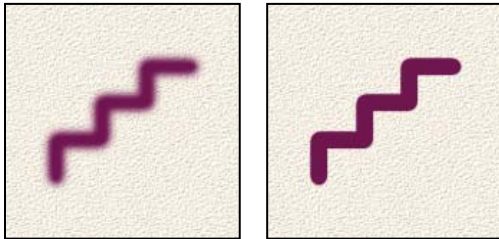
Fade showing setting of 40, 60, and 80 steps

Hue Jitter Sets the rate at which the stroke color switches between the foreground and background colors. Higher values cause more frequent switches between the two colors than lower values. (To set the colors used by the color jitter option, see [“About foreground and background colors”](#) on page 205.)



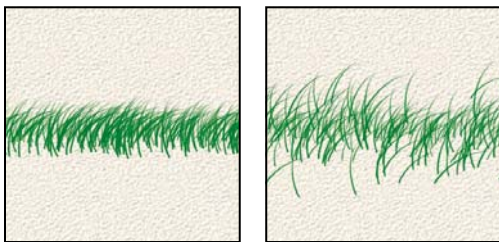
Paint stroke without and with color jitter

Hardness Controls the size of the brush's hard center. Type a number, or use the slider to enter a value that's a percentage of the brush diameter.



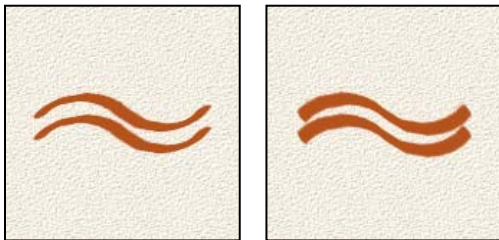
Brush strokes with different hardness values

Scatter Brush scattering determines how brush marks are distributed in a stroke. A low value produces a denser stroke with less paint scattering, and higher values increase the scattering area.



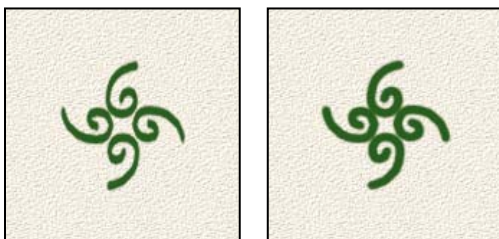
Brush stroke with low and high scatter values

Angle Specifies the angle by which an elliptical brush's long axis is offset from horizontal. Type a value in degrees, or drag the arrowhead of the angle icon to mark the desired angle.



Angled brushes create a chiseled stroke

Roundness Specifies the ratio between the brush's short and long axes. Enter a percentage value, or drag a dot in the angle icon away from or toward the arrow. A value of 100% indicates a circular brush, a value of 0% indicates a linear brush, and intermediate values indicate elliptical brushes.




Adjusting roundness affects the shape of a brush tip.

More Help topics


[“About blending modes”](#) on page 205

Add a new brush to the brush library

- 1 Select the Brush tool .
- 2 Click the arrow next to the brush sample to display the pop-up panel in the options bar; choose a category from the Brushes pop-up menu, and then select a brush to modify in the brush list.
- 3 Use the options bar to modify the original brush.
- 4 Click the arrow next to the brush sample to display the panel menu, and then choose Save Brush.
- 5 Enter a name in the Brush Name dialog box and click OK.

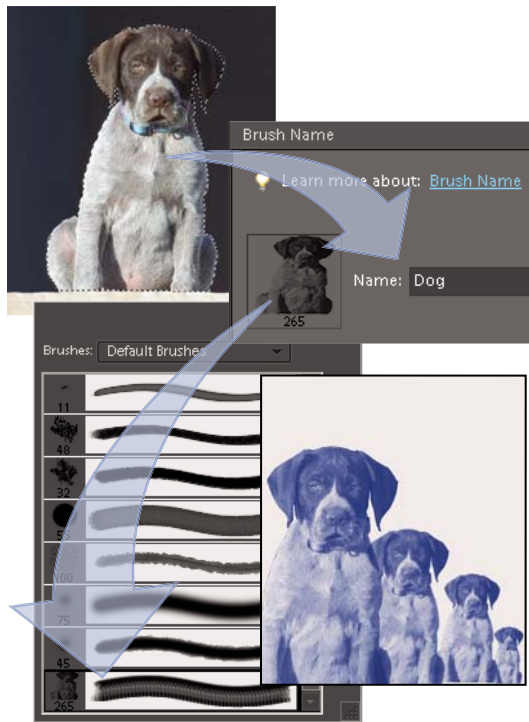
The new brush is selected in the options bar, and is added to the bottom of the brushes pop-up panel.

Delete a brush

- 1 Select the Brush tool .
- 2 Click the arrow next to the brush sample to display the brushes pop-up panel in the options bar.
- 3 Do one of the following:
 - Press the Option key to change the pointer to scissors, and then click the brush you want to delete.
 - Select the brush in the pop-up panel, and choose Delete Brush from the panel menu.
 - Choose Preset Manager from the panel menu, select Brushes from the Preset Type list, select the brush from the list in the dialog box, and click Delete.

Create a custom brush shape from an image

You can create a custom brush by selecting an area in a photo. The brush uses a grayscale version of that selection to apply the foreground color to your image. For example, you could select a leaf and then paint using a fall color. You can also draw a new brush shape using the Brush tool. You can create a custom brush shape either from an entire layer or from a selection. A custom brush shape can be up to 2500 pixels by 2500 pixels in size.



Creating a custom brush of a dog. When you paint with this brush, you paint on dogs.

1 Do one of the following:

- To use part of the image as a custom brush, select part of an image.
- To use the entire layer as a custom brush, deselect everything.

Use the painting tools to draw the brush shape and select it. You can use hard-edged or soft-edged strokes, or vary the opacity of strokes to achieve soft-edge effects.

2 Choose Edit > Define Brush or Edit > Define Brush From Selection.

3 Name the brush and click OK.

More Help topics

[“Use the Preset Manager”](#) on page 232


Set up pressure-sensitive tablet support

Photoshop Elements is compatible with most pressure-sensitive digitizing tablets, such as Wacom® tablets. With the software control panel for your tablet installed, you can vary brush tool properties based on the chosen tablet options and the amount of pressure you apply with your stylus.

- ❖ Select the Brush tool in the toolbox and then set the tablet options in the options bar that you want to control with pen pressure.

Fills and strokes

Use the Paint Bucket tool

The Paint Bucket tool  fills an area that is similar in color value to the pixels you click. You can fill an area with the foreground color or a pattern.

- 1 Choose a foreground color.
- 2 Select the Paint Bucket tool in the toolbox.
- 3 Set options in the options bar, as desired, and then click the part of the image you want to fill.



If you don't want to fill transparent areas in a layer, you can lock the layer's transparency in the Layers panel.

You can specify any of the following Paint Bucket tool options:

Pattern Sets a pattern to use as the fill.

Mode Specifies how the paint that you apply blends with the existing pixels in the image.

Opacity Sets the opacity of the paint you apply. A low opacity setting allows pixels under a paint stroke to show through. Drag the pop-up slider or enter an opacity value.

Tolerance Defines how similar in color filled pixels must be. A low tolerance fills pixels with color values very similar to the pixel you click. A high tolerance fills pixels that have a broader range of colors.

Anti-alias Smooths the edges of the filled selection.

Contiguous Fills similarly colored pixels that are next to each other. Deselect this option to fill all similar pixels in the image, including those that aren't touching. The Tolerance option defines how similar the colors must be.

All Layers Fills similar pixels on any visible layer that are within the levels set by the Tolerance and Contiguous options.

More Help topics

[“About foreground and background colors”](#) on page 205

[“About blending modes”](#) on page 205

[“Smooth the edges of a selection by anti-aliasing”](#) on page 93

[“Create fill layers”](#) on page 64

Fill a layer with a color or pattern

You can use a Fill Layer to apply a fill or a pattern to your image, instead of using one of the brush tools. The fill layer gives you the added flexibility of changing the fill and pattern properties and editing the fill layer's mask to limit the gradient to a portion of your image.

- 1 Specify a foreground or background color.
- 2 Select the area you want to fill. To fill an entire layer, select the layer in the Layers panel.
- 3 Choose Edit > Fill Selection.
- 4 Set options in the Fill dialog box, and then click OK.

Contents Choose a color from the Use menu. To select a different color, choose Color, and then select a color from the Color Picker. Choose Pattern to fill with a pattern.

Custom Pattern Specifies the pattern to use if you choose Pattern from the Use menu. You can use patterns from the pattern libraries or create your own patterns.

Mode Specifies how the color pattern that you apply blends with the existing pixels in the image.

Opacity Sets the opacity of the color pattern to apply.

Preserve Transparency Fills only opaque pixels.

More Help topics

[“About patterns”](#) on page 224

[“About blending modes”](#) on page 205

[“About foreground and background colors”](#) on page 205

[“Create fill layers”](#) on page 64

Stroke (outline) objects on a layer

You can use the Stroke command to automatically trace a colored outline around a selection or the content of a layer.

Note: *To add an outline to the background, you must first convert it to a regular layer. The background contains no transparent pixels, so the entire layer is outlined.*

- 1 Select the area in the image or a layer in the Layers panel.
- 2 Choose Edit > Stroke (Outline) Selection.
- 3 In the Stroke dialog box, set any of the following options, and then click OK to add the outline:

Width Specifies the width of the hard-edged outline. Values can range from 1 to 250 pixels.

Color Sets the color of the outline. Click the color swatch to select a color in the Color Picker.

Location Specifies whether to place the outline inside, outside, or centered over the selection or layer boundaries.

Mode Specifies how the paint that you apply blends with the existing pixels in the image.

Opacity Sets the opacity of the paint you apply. Enter an opacity value or click on the arrow and drag the pop-up slider.

Preserve Transparency Strokes only areas containing opaque pixels on a layer. If your image has no transparency, this option isn't available.

More Help topics

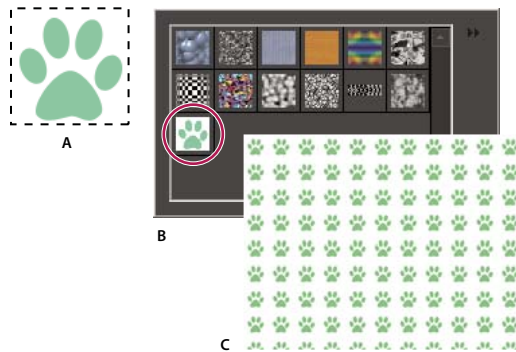
[“About blending modes”](#) on page 205

Patterns

About patterns

You can paint a pattern with the Pattern stamp tool or fill a selection or layer with a pattern that you choose from the pattern libraries. Photoshop Elements has several patterns you can choose from.

To customize your images, or to make one-of-a-kind scrapbook pages, you can create your own patterns. You can save patterns that you create in a library, and then load libraries of patterns using the Preset Manager or the Pattern pop-up panel, which appears in the options bar of the Pattern Stamp tool and the Paint Bucket tool. Saving patterns allows you to easily use a pattern in multiple images.



Creating a custom pattern


A. Rectangular selection used to define a pattern B. Custom pattern in pattern picker C. New image filled with custom pattern

More Help topics

[“Fill a layer with a color or pattern”](#) on page 223

[“Use the Preset Manager”](#) on page 232

Use the Pattern Stamp tool

The Pattern Stamp tool  paints with a pattern defined from your image, another image, or a preset pattern.

- 1 Select the Pattern Stamp tool from the toolbox.
- 2 Choose a pattern from the Pattern pop-up panel in the options bar. To load additional pattern libraries, select a library name from the panel menu, or choose Load Patterns and navigate to the folder where the library is stored. You can also define your own pattern.
- 3 Set Pattern Stamp tool options in the options bar, as desired, and then drag within the image to paint.

You can specify any of the following Pattern Stamp tool options:

Brushes Sets the brush tip. Click the arrow next to the brush sample, choose a brush category from the Brushes pop-up menu, and then select a brush thumbnail.

Size Sets the size of the brush in pixels. Drag the Size pop-up slider or enter a size in the text box.

Mode Specifies how the paint that you apply blends with the existing pixels in the image. (See [“About blending modes”](#) on page 205.)

Opacity Sets the opacity of the pattern you apply. A low opacity setting allows pixels under a pattern stroke to show through. Drag the pop-up slider or enter an opacity value.

Aligned Repeats the pattern as a contiguous, uniform design. The pattern is aligned from one paint stroke to the next. If Aligned is deselected, the pattern is centered on the pointer each time you stop and resume painting.

Impressionist Paints the pattern using paint daubs to create an impressionist effect.

More Help topics

[“Fill a layer with a color or pattern”](#) on page 223

Add a custom pattern to the pattern picker

- 1 Do one of the following:
 - To create a pattern from part of the image, make a rectangular selection with Feather set to 0 pixels.
 - To create a pattern from the entire image, deselect everything.
- 2 Choose Edit > Define Pattern.
- 3 Enter a name for the pattern in the Pattern Name dialog box.
- 4 To deselect the original selection, choose Select > Deselect.

More Help topics

[“About selections”](#) on page 80

Use a preset pattern from the PostScript Patterns folder

Each preset file in the PostScript Patterns folder contains a single pattern in the Adobe Illustrator format. You can scale these patterns at any resolution.

- 1 Choose File > Open.
- 2 Navigate to Adobe Photoshop Elements 8.0/Presets/Patterns/PostScript Patterns.
- 3 Select the pattern file you want to use, and click Open.
- 4 When the Rasterize Generic EPS Format dialog opens, click OK to proceed.
- 5 Choose Select > All, or make a rectangular selection around the pattern with Feather set to 0 pixels in the options bar.
- 6 Choose Edit > Define Pattern From Selection. The pattern is defined as an Adobe Photoshop Elements pattern.
- 7 Enter a name for the pattern in the Pattern Name dialog box, and click OK.

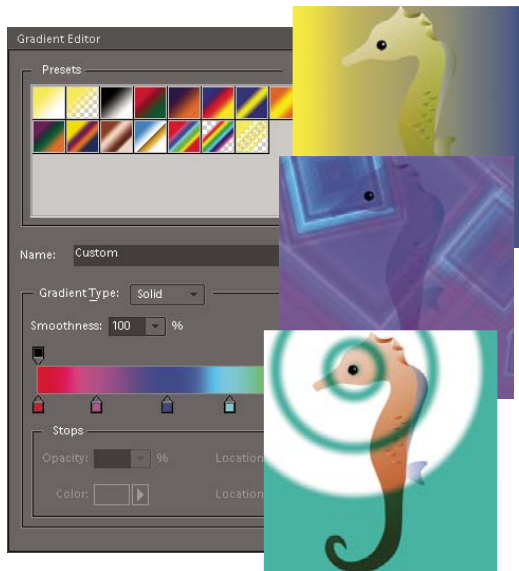
More Help topics

[“Use the Preset Manager”](#) on page 232

Gradients


About gradients


You fill an area with a gradient by dragging within the image or by selecting with the Gradient tool. The distance between the starting point (where you first press and the mouse button) and ending point (where you release the mouse button) affects the gradient appearance, as does the gradient type.





Using the Gradient tool and Gradient Editor, you can create a custom mix of colors in your photos.


You can choose any of the following gradient types in the options bar.

Linear gradient  Shades from the starting point to the ending point in a straight line.

Radial gradient  Shades from the starting point to the ending point in a circular pattern.

Angle gradient  Shades in a counterclockwise sweep around the starting point.

Reflected gradient  Shades using symmetric linear gradients on either side of the starting point.

Diamond gradient  Shades from the starting point outward in a diamond pattern. The ending point defines one corner of the diamond.




You can also use a Fill Layer to apply a gradient to your image. The fill layer gives you the added flexibility of changing the gradient properties and editing the fill layer's mask to limit the gradient to a portion of your image.

Gradients are stored in libraries. You can choose a different library of gradients to display in the Gradient Picker menu by clicking the small triangle in the menu and selecting a library at the bottom of the list. You can also save and load your own libraries of gradients in this menu. You can also manage gradients by using the Preset Manager.

More Help topics

[“Create fill layers”](#) on page 64

Apply a gradient

- 1 To fill part of the image, select the area with one of the selection tools. Otherwise, the gradient fill is applied to the entire active layer.
- 2 Select the Gradient tool .
- 3 In the options bar, click the desired gradient type.
- 4 Choose a gradient fill from the Gradient Picker panel in the options bar.
- 5 (Optional) Set gradient options in the options bar.

Mode Specifies how the gradient blends with the existing pixels in the image.

Opacity Sets the opacity of the gradient. A low opacity setting allows pixels under the gradient to show through. Drag the pop-up slider or enter an opacity value.

Reverse Switches the order of the colors in the gradient fill.

Dither Creates a smoother blend with less obvious bands of color.

Transparency Uses the gradient's transparency (instead of any transparent areas in the image) if the gradient has transparent areas.

- 6 In the image, position the pointer where you want to set the starting point of the gradient, and drag to define the ending point. To constrain the gradient angle to a multiple of 45°, hold down Shift as you drag.

Apply gradient fill to text

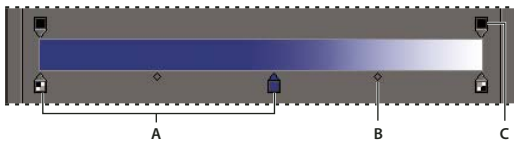
- 1 Select the text layer you want to fill.
- 2 Choose Layer > Simplify Layer to convert the vector text to a bitmap image. You won't be able to edit the text after you simplify the layer.
- 3 Command-click the thumbnail for the text layer in the Layers panel to select the text.
- 4 Select the Gradient tool.
- 5 In the options bar, click the desired gradient type.
- 6 Choose a gradient fill from the Gradient Picker panel.
- 7 Position the pointer on the text where you want to set the starting point of the gradient, and drag to define the ending point.

More Help topics

[“Simplify a layer”](#) on page 55

Define a gradient



You can define your own gradients in the Gradient Editor dialog box. A gradient can include two or more colors, or one or more colors that fade to transparency.



Gradient Editor dialog box.

A. Color stop B. Midpoint C. Opacity stop

To define a gradient, you add a color stop to add a color to the gradient, drag the color stop and the midpoint icon to define the range between two colors, and adjust the Opacity stops to specify the transparency that you want in the gradient.

- 1 Select the Gradient tool .
- 2 To display the Gradient Editor dialog box, click the Edit button next to the gradient sample.
- 3 In the Presets section of the Gradient Editor dialog box, select a gradient on which to base your new gradient.
- 4 To choose colors for your gradient, do one of the following:
 - Double-click the color stop , or click the Color swatch to display the Color Picker. Choose a color, and click OK.

- Choose Foreground from the Color pop-up menu to use the current foreground color.
 - Choose Background from the Color pop-up menu to use the current background color.
 - Choose User Color from the Color pop-up menu to always use the color you chose for the gradient, other than the current foreground or background.
- 5 To adjust the color stop location of a color, drag the stop left or right.
 - 6 To add a color to the gradient, click below the gradient bar to define another color stop.
 - 7 To adjust the location of the transition midpoint between colors, drag the diamond below the gradient bar to the left or right.
 - 8 To delete the color stop you are editing, click Delete.
 - 9 To set the color transition's smoothness, enter a percentage in the Smoothness text box, or drag the pop-up slider.
 - 10 If desired, set transparency values for the gradient by dragging the Opacity stops.
 - 11 To save the gradient in the gradient presets, enter a name for the new gradient, and then click New.
 - 12 Click OK. The newly created gradient is selected and ready to use.

More Help topics

[“Use the Adobe Color Picker”](#) on page 211

Specify gradient transparency

Each gradient fill contains settings (opacity stops) that control the opacity of the fill at different locations in the gradient. The checkerboard pattern indicates the amount of transparency in the gradient preview. Gradients need at least two opacity stops.

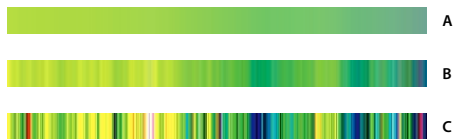
- 1 Create a gradient.
- 2 To adjust the starting opacity in the Gradient Editor, click the left opacity stop above the gradient bar. The triangle below the stop turns black, indicating that you're editing the starting transparency.
- 3 Set the Opacity by doing one of the following:
 - Enter a value between 0 (fully transparent) and 100% (fully opaque).
 - Drag the arrow on the Opacity pop-up slider.
- 4 To adjust the opacity of the endpoint, click the right transparency stop above the gradient bar. Then set the opacity as described in step 3.
- 5 To adjust the location of the starting or ending opacity, do one of the following:
 - Drag the corresponding opacity stop to the left or right.
 - Select the corresponding opacity stop, and enter a value for Location.
- 6 To adjust the location of the midpoint opacity (the point midway between the starting and ending opacities), do one of the following:
 - Drag the diamond above the gradient bar to the left or right.
 - Select the diamond, and enter a value for Location.
- 7 To delete the opacity stop you are editing, click Delete, or drag the stop away from the gradient bar.
- 8 To add an intermediate opacity, click above the gradient bar to define a new opacity stop. You can then adjust and move this opacity as you would a starting or ending opacity.

To remove an intermediate opacity, drag its transparency stop up and off the gradient bar, or select the stop and click the Delete button.


- 9 To save the gradient to the gradient presets, enter a new name in the Name text box, and then click New. This creates a new gradient preset with the transparency setting you specified.
- 10 Click OK to exit the dialog box and select the newly created gradient. Make sure that Transparency is selected in the options bar.

Create a noise gradient

A noise gradient is a gradient that contains randomly distributed colors within a range of colors that you specify.



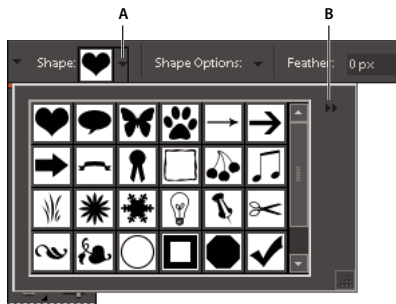
Noise gradients with different noise values.
A. 10% noise B. 50% noise C. 90% noise

- 1 Select the Gradient tool .
- 2 To display the Gradient Editor dialog box, click the Edit button in the options bar.
- 3 Choose Noise from the Gradient Type menu.
- 4 Set options for the gradient.
Roughness Sets the amount of softness in the transition between colors in the pattern.
Color Model Specifies the color model to use to set the color range to include in the gradient. To define the range of colors, drag the sliders for each color component.
Restrict Colors Prevents oversaturated colors.
Add Transparency Adds transparency to random colors.
- 5 To randomly mix the colors, click the Randomize button until you find a gradient you like.
- 6 Enter a name for the new gradient.
- 7 To add your gradient preset, click New.
- 8 Click OK to exit the dialog box, and then select the newly created gradient.

Presets and libraries

About presets

In the Full Edit workspace, pop-up panels appear in the options bar and provide access to predefined libraries of brushes, color swatches, gradients, patterns, layer styles, and custom shapes. The items in each library are called *presets*. When closed, pop-up panels display a thumbnail image of the currently selected preset.



Viewing the Cookie Cutter pop-up panel in the options bar

A. Click to show the pop-up panel. B. Click to view the pop-up panel menu, which contains preset libraries.

You can change the display of a pop-up panel to view presets by their names, as thumbnail icons, or with both names and icons.

You can use the Presets Manager to load different preset libraries. Presets are stored in separate library files that can be found in the Presets folder in the Photoshop Elements application folder.

Use preset tool options

- 1 Select the tool you want to use.
- 2 In the options bar, open the pop-up panel. (Only certain tools have pop-up panels.)
- 3 Do any of the following:
 - To view and select currently loaded preset libraries, click the triangle in the upper-right corner of the pop-up panel.
 - To select a preset, click an item in the library.
 - To save a brush, open the pop-up panel menu, choose the Save Brush command, then enter a name in the dialog box provided and click OK.
 - To save a gradient or pattern, open the panel menu, choose the New Gradient or New Pattern command, then enter a name in the dialog box provided and click OK.
 - To rename a brush, gradient, or pattern in a panel, open the pop-up panel menu, choose the Rename command, then enter a new name and click OK.
 - To delete a brush, gradient, or pattern from a panel, select an item, open the pop-up panel menu and choose the Delete command. You can also hold down Option and click a brush or gradient.
 - To save a library of brushes, gradients, or patterns, open the pop-up panel menu. From the menu, choose the Save Brushes, Save Gradients, or Save Patterns command, then enter a name for the library file, and click Save.
 - To load a library of brushes, gradients, or patterns, open the pop-up panel menu, choose the Load command, then select the library file you want to add and click Load.

Note: Using the Load command adds the brush library to the brushes you have available. If you choose a preset library of brushes, the preset library replaces your current set of brushes.


- To replace the current set of gradients in a panel, open the pop-up panel menu, choose a library file from the bottom section of the menu, and click OK. You can also choose the Replace command, browse to select a library file, and click Load.
- To replace the current set of brushes or patterns in a panel, choose a library from the Brushes menu.

Note: To replace the current set of brushes, gradients, or patterns, you can also choose Preset Manager from the pop-up panel menu and use the Preset Manager to load a different library of brushes, gradients, or patterns.

- To load the default set of brushes, gradients, or patterns, open the pop-up panel menu and choose the Reset command.

Change the display of items in a pop-up panel menu

1 Do one of the following:

- To change the display of one panel, open the pop-up panel menu by clicking the triangle  in the upper-right corner of the pop-up panel.
- To change the display for all panels, choose Edit > Preset Manager to open the Preset Manager, and then click the More button.

2 Select a view option:

Text Only Displays the name of each item.

Small Thumbnail or Large Thumbnail Displays a thumbnail of each item.

Small List or Large List Displays the name and thumbnail of each item.

Stroke Thumbnail Displays a sample brush stroke and brush thumbnail. (This option is available for brushes only.)

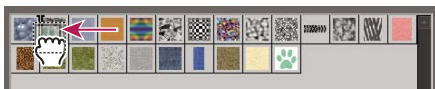
Note: Not all of the above options are available for all pop-up panels.

Use the Preset Manager

In the Full Edit workspace, the Preset Manager (Edit > Preset Manager) lets you manage the libraries of preset brushes, color swatches, gradients, and patterns included in Photoshop Elements. For example, you can create a set of favorite brushes, or you can restore the default presets.

Each type of library is a file with its own file extension and default folder. Preset files are installed on your computer inside the Presets folder in the Photoshop Elements program folder.

Note: You can delete a preset in the Preset Manager by selecting the preset and clicking Delete. You can always use the Reset command to restore the default items to a library.



Dragging a preset to a new position in the Preset Manager

Load a library

- 1 In the Preset Manager, choose Brushes, Swatches, Gradients, or Patterns from the Preset Type menu.
- 2 Do one of the following:
 - Click Load, select a library from the list, and then click Load. If you want to load a library located in another folder, navigate to that folder, then select the library. By default, preset files are installed on your computer inside the Presets folder in the Photoshop Elements program folder.
 - Click the More button and choose a library from the bottom section of the menu.
- 3 Click the Done button when you're finished.

Restore the default library or replace the currently displayed library

❖ In the Preset Manager, click the More button and choose a command from the menu:

Reset Restores the default library for that type.

Replace Replaces the current library with the contents of another library.

Save a subset of a library

- 1 In the Preset Manager, Shift-click to select multiple contiguous presets or Command-click to select multiple noncontiguous presets. Only the selected presets are saved in the new library.
- 2 Click Save Set, then enter a name for the library. If you want to save the library in a folder other than the default, navigate to the new folder before saving.

Rename a preset

- 1 In the Preset Manager, do one of the following:
 - Select a preset in the list, and click Rename.
 - Double-click a preset in the list.
- 2 Enter a new name for the preset. If you selected multiple presets, you are prompted to enter multiple names.

Chapter 13: Adding text and shapes

You can add text and shapes of different color, styles, and effects to an image. Use the Horizontal Type and Vertical Type tools to create and edit text. You can create single-line text or paragraph text.

In Photoshop Elements, shapes are resolution-independent vector graphics (lines and curves defined by their geometric characteristics instead of pixels) that can be moved, resized, or changed without losing detail, clarity, or quality. Both text and shapes are created in separate layers.

Add and edit text

About text



Use the Horizontal Type and Vertical Type tools to create and edit text. The new text you type is entered in a new text layer. You can create single-line text or paragraph text. Each line of single line text you enter is independent—the length of a line grows or shrinks as you edit it, but it doesn't wrap to the next line. To create a new line of text, press Enter. Paragraph text wraps within the paragraph boundaries you specify.



Single-line text (top of image) and paragraph text (bottom of image).





You can use the type mask tools (Right-click the Type tool) to create a selection in the shape of text. You can then create different effects and cutouts with the text.

Clicking in an image with a type tool puts the tool in edit mode so you can enter and edit text. You must commit changes to the type before you can perform other operations, like selecting menu commands. The Type tool is in edit mode when you see the Commit button  and Cancel button  in the options bar.

Note: When you add text to an image that's in indexed color mode, Photoshop Elements does not create a new text layer. The text you type appears as masked text.

Add text

- 1 Select the Horizontal Type tool  or the Vertical Type tool .
- 2 Do one of the following:
 - To create a single line of text, click in the image to set an insertion point for the type.
 - To create paragraph text, drag a rectangle to create a text box for the type.

The small line through the I-beam marks the position of the type baseline. For horizontal type, the baseline marks the line on which the type rests; for vertical type, the baseline marks the center axis of the type characters.

3 (Optional) Select type options, such as font, style, size, and color, in the options bar.

4 Type the characters you want. If you did not create a text box, you can press Return to create a new line.

The text appears in its own layer, which is called a *text layer*.

5 Commit the text layer by doing one of the following:

- Click the Commit button ✓ in the options bar.
- Press the Enter key on the numeric keypad.
- Click in the image, outside of the text box.
- Select a different tool in the toolbox.

Note: To discard the text layer before you commit it, click the Cancel button ✖.

More Help topics

“[Add stylized text to an image](#)” on page 177

Type tool options

In the options bar, set the following Type tool options:

Font Family Applies a font family to new or existing text.

Font Style Applies font styles, such as bold, to new or existing text.

Font Size Applies a font size to new or existing text.

Anti-aliased Applies anti-aliasing to make text appear smoother.



Applying anti-aliasing
A. Anti-aliasing off B. Anti-aliasing on

Faux Bold Applies a bold style to new or existing text. Use this option if your font doesn't have a true bold style that you can select from the Font Style menu.

Faux Italic Applies an italic style to new or existing text. Use this option if your font doesn't have a true italic or oblique style that you can select from the Font Style menu.

Underline Applies an underline to new text or selected existing text.

Strikethrough Applies a line through new text or selected existing text.

Leading menu Sets the space between lines of new or selected text.

Color menu Applies a color to new text or selected text.




Warp text Warps text on the selected layer.

Text Orientation Changes vertical text to horizontal and horizontal text to vertical.


Edit type in a type layer

After you create a text layer, you can edit the text and apply layer commands to it. You can insert new text, change existing text, and delete text in text layers. If any styles are applied to a text layer, all text inherits the attributes of those styles.


You can also change the orientation (either horizontal or vertical) of a text layer. When a text layer is vertical, the type lines flow from top to bottom; when a text layer is horizontal, the type lines flow from left to right.

- 1 Select the Horizontal Type tool  or the Vertical Type tool  (or select the Move tool  and double-click on the text).


When you click in an existing text layer, the Type tool changes at the insertion point to match the orientation of the layer.


- 2 Select the text layer in the Layers panel, or click the text flow to automatically select a text layer.
- 3 Position the insertion point in the text, and do one of the following:
 - Click to set the insertion point.
 - Select one or more characters you want to edit.
 - Enter text as desired.
- 4 Commit the text layer by doing one of the following:
 - Click the Commit button  in the options bar.
 - Click in the image.
 - Select a different tool in the toolbox.

Align text

❖ Using a type tool, click the Align pop-up menu  and select any of the following:

Left Align  Aligns the left edge of each text line in the layer to the initial cursor position.

Center  Aligns the center of each text line in the layer to the initial cursor position.

Right Align  Aligns the right edge of each text line in the layer to the initial cursor position.

Select characters


- 1 Select a type tool.
- 2 Select the text layer in the Layers panel, or click in the text flow to automatically select a text layer.
- 3 Position the insertion point in the text, and do one of the following:
 - Drag to select one or more characters.

- Double-click to select a single word.
- Triple-click to select an entire line of text.
- Click a point in the text and then Shift-click to select a range of characters.
- Choose Select > All to select all the characters in the layer.
- To use the arrow keys to select characters, hold down Shift and press the Right Arrow or Left Arrow key.

Choose a font family and style

A font is a set of characters—letters, numbers, or symbols—that share a common weight, width, and style. When you select a font, you can select the font family (for example, Arial) and its type style independently. A type style is a variant version of an individual font in the font family (for example, regular, bold, or italic). The range of available type styles varies with each font.

If a font doesn't include the style you want, you can apply faux (fake) versions of bold and italic. A faux font is a computer-generated version of a font that approximates an alternative typeface design, used only if there is no corresponding style for a given font.


- 1 If you're changing the existing text, select one or more characters whose font you want to change. To change the font of all characters in a layer, select the text layer in the Layers panel, and then use the buttons and menus in the options bar to change the font type, style, size, alignment, and color.
- 2 In the options bar, choose a font family from the Font Family pop-up menu.
- 3 Do one of the following:
 - Choose a font style from the Font Style pop-up menu in the options bar.
 - If the font family you chose does not include a bold or italic style, click the Faux Bold button **T**, Faux Italic button *T*, or both; then click the Commit button .

Note: The type you enter gets its color from the current foreground color; however, you can change the type color before or after you enter text. When editing existing text layers, you can change the color of individual characters or all type in a layer.

Choose a font size

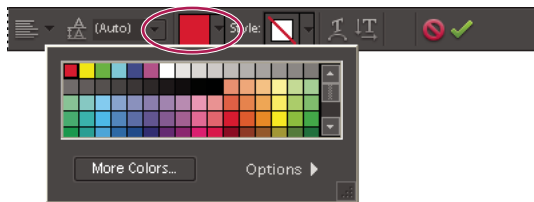
The type size determines how large the type appears in the image. The physical size of the font depends on the resolution of the image. A capital letter in 72-point text is approximately 1-inch high in an image that is 72 ppi. Higher resolutions reduce a given text point size because the pixels are packed more tightly in higher resolution images.

- 1 If you're changing existing text, select one or more characters whose size you want to change. To change the size of all the characters in a layer, select the text layer in the Layers panel.
- 2 Select the Horizontal Type tool **T** or the Vertical Type tool **⌈T**.
- 3 In the options bar, enter or select a new value for Size. You can enter a size larger than 72 points. The value you enter is converted into the default unit of measurement. To use an alternate unit of measurement, enter the unit (in, cm, pt, px, or pica) after the value in the Size text box.

 The default unit of measurement for type is points. However, you can change the unit of measurement in the Units & Rulers section of the Preferences dialog box. Choose Photoshop Elements > Preferences > Units & Rulers, and then select a unit of measurement for Type.

Change text color

You can change the type color before or after you enter text. When editing existing text layers, you can change the color of individual characters or all type in a layer. You can also apply a gradient to text in a text layer.



The Color menu in the options bar displays many preset color swatches from which you can choose.

- 1 Do one of the following:
 - To change the color of text before you type it, select a type tool.
 - To change the color of existing text, select a type tool and then drag to select the text.
- 2 Do one of the following:
 - To choose a color from the Color Picker, click the colored area of the Color menu in the options bar.
 - To choose a color from a list of color swatches, click the triangle on the Color menu in the options bar.

More Help topics

[“Use the Color Swatches panel”](#) on page 210

[“Use the Adobe Color Picker”](#) on page 211

Create and use masked type

The Horizontal Type Mask tool and Vertical Type Mask tool create a selection in the shape of text. You can have fun with text selection borders by cutting text out of an image to show the background, or pasting the selected text into a new image. Experiment with different options to personalize your images and compositions.



Horizontal type mask used to create a filled selection.

- 1 Select the layer on which you want the selection to appear. For best results, don't create the type selection border on a text layer.
- 2 Select the Horizontal Type Mask tool or the Vertical Type Mask tool .

- 3 Select additional type options (See “[Type tool options](#)” on page 235), and enter your text.


The type selection border appears in the image on the active layer.

Warp type


Warping allows you to distort type to conform to a variety of shapes; for example, you can warp type in the shape of an arc or a wave. Warping applies to all characters in a text layer—you cannot warp individual characters. Also, you can’t warp faux bold text.




Text layer with warp applied

- 1 Select a text layer.
- 2 Do one of the following:
 - Select a type tool, and click the Warp button  in the options bar.
 - Choose Layer > Type > Warp Text.
- 3 Choose a warp style from the Style pop-up menu. The style determines the basic shape of the warped text.
- 4 Select an orientation for the warp effect—Horizontal or Vertical.
- 5 (Optional) Specify values for additional warping options to control the orientation and perspective of the warp effect:
 - Bend to specify the amount of warp.
 - Horizontal Distortion and Vertical Distortion to apply perspective to the warp.
- 6 Click OK.

Unwarp type

- 1 Select a text layer that has warping applied to it.
- 2 Select a type tool, and click the Warp button  in the options bar; or choose Layer > Type > Warp Text.
- 3 Choose None from the Style pop-up menu, and click OK.


Change the orientation of a type layer

- 1 Select the text layer in the Layers panel.
- 2 Do one of the following:
 - Select a type tool, and click the Flip Orientation button  in the options bar.
 - Choose Layer > Type > Horizontal, or choose Layer > Type > Vertical.

Work with Asian type



Display Asian type options

Photoshop Elements provides several options for working with Asian type. Asian fonts are often referred to as double-byte fonts or CJK fonts, meaning Chinese, Japanese, and Korean fonts.

- 1 Choose Photoshop Elements > Preferences > Type.
- 2 Set text options:
 - Show Asian Text Options to display Asian type options.
 - Show Font Names in English to display Asian font names in English.
- 3 Click OK. The Asian type options button  is added to the type tool options bar.

Reduce spacing between Asian characters

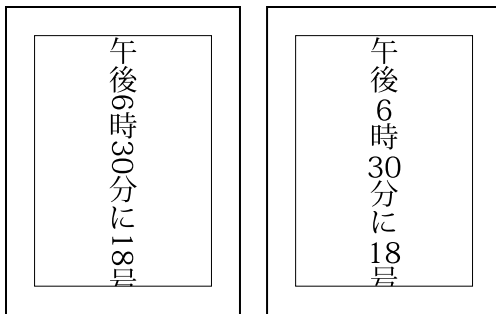
Tsume reduces the space around a character (but not the character itself) by a specified percentage value. When tsume is added to a character, spacing around both sides of the character is reduced by an equal percentage.

- 1 If you're working with an existing layer, select the text layer in the Layers panel and then select a type tool.
- 2 Select the characters you want to adjust.
- 3 Click the Show Asian Text Options button  in the options bar. If you don't see the button, make sure that preferences are set to show Asian type options.
- 4 Select a percentage for Tsume  from the pop-up menu, and press the Enter or Return key. The greater the percentage, the tighter the compression between characters. At 100% (the maximum value), there is no space between the character's bounding box and its em box.


Note: An em box is a space whose height and width roughly correspond to the width of the letter "M" (also called a mutton).

Turn on or turn off tate-chuu-yoko

Tate-chuu-yoko (also called kumimoji and renmoji) is a block of horizontal type laid out within a vertical type line.



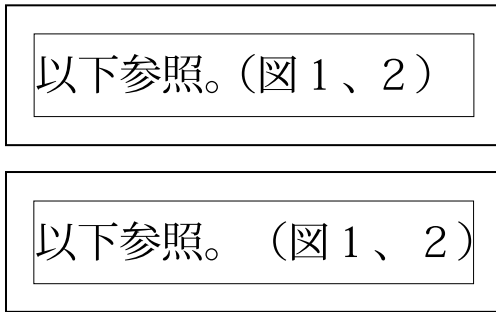
Before and after tate-chuu-yoko is applied

- 1 If you're working with an existing layer, select the text layer in the Layers panel and then select a type tool.
- 2 Select the characters that you want to rotate.
- 3 Click the Asian Text Options button  in the options bar.


- 4 Select Tate-Chuu-Yoko.

Turn on or turn off mojikumi

Mojikumi determines spacing between punctuation, symbols, numbers, and other character classes in Japanese type. When mojikumi is turned off, full-width spacing is applied to these characters. When mojikumi is on, half-width spacing is applied to these characters.



Mojikumi on (top), and mojikumi off (bottom)

- 1 If you're working with an existing layer, select the text layer in the Layers panel and then select a type tool.
- 2 Click the Asian Text Options button  in the options bar.
- 3 Select Mojikumi.

Creating shapes

About shapes

In Photoshop Elements, shapes are vector graphics, which means they are made up of lines and curves defined by their geometric characteristics instead of pixels. Vector graphics are resolution-independent—that is, they can be scaled to any size and printed at any resolution without losing detail or clarity. You can move, resize, or change them without losing the quality of the graphic. Because computer monitors display images on a pixel grid, vector data is displayed on-screen as pixels.

Shapes are created in shape layers. A shape layer can contain a single shape or multiple shapes, depending on the shape area option you select. You can choose to have more than one shape in a layer.

You can change the color of a shape by editing its fill layer and applying layer styles to it. Shape tools provide an easy way to create buttons, navigation bars, and other items used on web pages.



Vector objects created with the shape tools in Photoshop Elements



More Help topics

[“Select or move a shape”](#) on page 245

[“Transform a shape”](#) on page 245

[“Apply a layer style to a shape”](#) on page 245

Draw a rectangle, square, or rounded rectangle

1 Select the Rectangle tool  or Rounded Rectangle tool . If necessary, press and hold another shape tool in the toolbox, and then choose a tool from the list that appears.

2 (Optional) In the options bar, click the Geometry options triangle to access the following options:

Unconstrained Lets you set the width and height of a rectangle by dragging.

Square Constrains a rectangle to a square.

Fixed Size Draws a rectangle at the exact size you specified in the Width and Height text boxes.


Proportional Draws a rectangle based on the numbers you type in the Width and Height text boxes.

From Center Draws a rectangle from the center of where you begin drawing (usually a rectangle is drawn from the upper-left corner).

Snap to Pixels Snaps edges of a rectangle to the pixel boundaries.

3 Drag within your image to draw the shape.

Draw a circle or ellipse

1 Select the Ellipse tool . If necessary, press and hold another shape tool in the toolbox, and then choose this tool from the list that appears.

2 (Optional) In the options bar, click the Geometry options triangle to use the following options:

Unconstrained Lets you set the width and height of an ellipse by dragging.

Circle Draws a perfect circle instead of an ellipse.


Fixed Size Draws an ellipse at the exact size you specified in the Width and Height text boxes.

Proportional Draws a proportional ellipse based on the numbers you type in the Width and Height text boxes.

From Center Draws an ellipse from the center of where you begin drawing (usually an ellipse is drawn from the upper-left corner).

- 3 Drag in your image to draw the ellipse.

Draw a multisided shape

- 1 Select the Polygon tool . If necessary, press and hold another shape tool in the toolbox, and then choose this tool from the list that appears.

- 2 (Optional) In the options bar, select the Geometry options triangle to use the following options:

Radius Specifies the distance from the center of a polygon to the outer points.

Smooth Corners Renders a polygon with smooth corners.


Star Turns a polygon into a star.

Indent Sides By Specifies the depth of the star's indentations.

Smooth Indents Renders a star-shaped polygon with smooth indents.

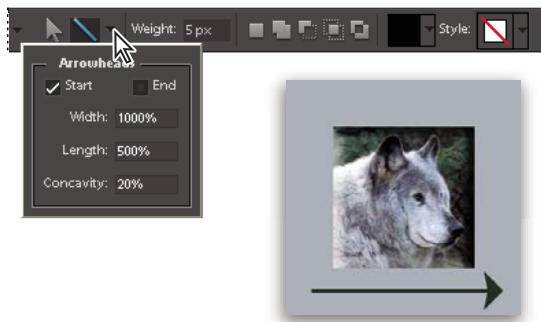
- 3 In the Sides box, specify the number of sides for the polygon.
- 4 Drag within your image to draw the polygon.

Draw a line or arrow

- 1 Select the Line tool . If necessary, press and hold another shape tool in the toolbox, and then choose this tool from the list that appears.

- 2 (Optional) In the options bar, select the Geometry options triangle to use the following options:

Arrowheads Start and End Renders a line with arrowheads. Select Start, End, or both to specify on which end of the line arrows are rendered. The shape options appear in the pop-up dialog box.



Choosing options for an arrowhead


Arrowheads Width and Length Specify the proportions of the arrowhead as a percentage of the line width (10% to 1000% for Width, and 10% to 5000% for Length). Enter a value for the concavity of the arrowhead (from -50% to +50%).

Concavity Defines the amount of curvature on the widest part of the arrowhead, where the arrowhead meets the line.

- 3 In the Weight box, specify the width of the line in pixels.
- 4 Drag within your image to draw the line.

Draw a custom shape

The Custom Shape tool provides many different shape options for you to draw. When you select the custom shape tool, you can access these shapes in the options bar.

- 1 Select the Custom Shape tool . If necessary, press and hold another shape tool in the toolbox, and then choose this tool from the list that appears.
- 2 In the options bar, select a shape from the Shape pop-up panel. Click the arrow at the top right of the panel to list the shapes you can choose from and how to display them.
- 3 (Optional) In the options bar, select the Geometry options triangle to use the following options:

Unconstrained Lets you set the width and height of a rectangle, rounded rectangle, ellipse, or custom shape by dragging.

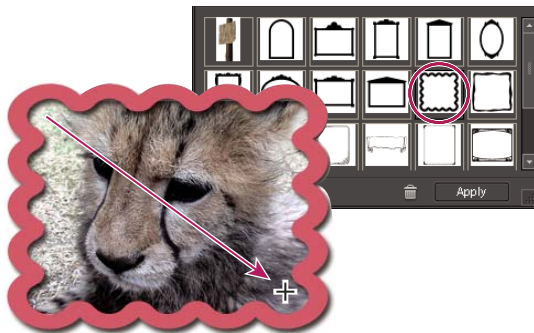
Defined Proportions Draws a custom shape based on the proportions with which it was created.

Defined Size Draws a custom shape based on the size at which it was created.

Fixed Size Draws a custom shape as a fixed shape based on the values you enter in the Width and Height text boxes.

From Center Draws a custom shape from the center.


- 4 Drag within your image to draw the shape.




The Custom Shape tool has ready-made frames that you can drag around a photo.


Create multiple shapes in the same layer

- 1 Select a shape layer in the Layers panel or create a new shape layer.
- 2 If you want to create a different type of shape, select a different shape tool.
- 3 Select a shape area option to determine how shapes should overlap, and then drag within the image to draw new shapes:

Add  Adds an additional shape to the existing shape. The combined shape will cover the entire area of the shapes you drew using the Add option.

Subtract  Removes the area where shapes overlap. The rest of the shapes' areas are preserved.

Intersect  Shows only the area where shapes intersect. The other areas will be removed.


Exclude  Removes the overlapping areas in the new and existing shapes.

Editing shapes


Select or move a shape

Use the Shape Selection tool to select shapes with one click. If you convert a shape into a bitmap element by simplifying the shape layer, the Shape Selection tool will no longer select the shape (use the Move tool instead).


If a layer contains multiple shapes, you can reposition all the shapes together using the Move tool. However, if you want to reposition a specific shape in a layer, you must use the Shape Selection tool.

- 1 Do one of the following:
 - Select the Shape Selection tool  in the toolbox.
 - If another shape tool is active, click the Shape Selection tool in the options bar.
- 2 To select the shape, click it.
- 3 To move the shape, drag it to a new location.

Transform a shape

- 1 Select the Shape Selection tool .
- 2 Do one of the following:
 - Select the shape you want to transform, choose Image > Transform Shape, and then choose a transformation command.
 - Double-click the shape you want to transform, and then drag an anchor to transform the shape.

Change the color of all shapes in a layer

- 1 Double-click the thumbnail of the shape layer in the Layers panel.
- 2 Use the Color Picker tool  to select a new color.

Note: If the color of a shape doesn't change when you pick a new color, check to see if the layer has a layer style (represented by a style icon in the Layers panel). Some layer styles override the base color of a shape.

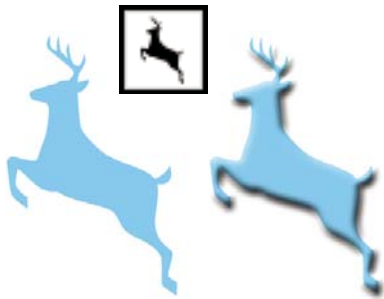
More Help topics

[“Use the Adobe Color Picker”](#) on page 211

[“Use the Paint Bucket tool”](#) on page 223

Apply a layer style to a shape

You can apply effects—such as drop shadows and bevels—to shapes quickly and easily using layer styles. Keep in mind that a layer style is applied to all shapes in a layer. For example, if you apply a drop shadow style to a layer that contains multiple shapes, all of the shapes will display a drop shadow.



Before (left) and after (right) applying a layer style to a custom shape.

- 1 In the Layers panel, click the New Layer button.
- 2 In the Content panel, select a shape and insert it into the new layer.
- 3 In the Effects panel, click the Layer Styles button and double-click the thumbnail you want to apply to the shape.

Chapter 14: Making projects

Projects are albums of images that you create with Photoshop Elements. You can use and share projects in traditional print formats, in digital format online, and with electronic media.

Projects overview

About projects

You can use your images in photo albums, scrapbooks, greeting cards, CD/DVD labels and jackets, and photo collages. These print-oriented items are called *photo projects* and can be printed with your home printer, or professionally printed using online services. You can also use your images in *digital projects* as well, such as slide shows and Web Photo galleries. (Services vary by geographic region.)

To make a photo project, click the Create tab and then click the type of project you want to start. First you specify the size, layout, and theme of the photo project, which then opens so you can make subsequent modifications. You can print these photo projects with your home printer, or order them from an online service.

To make a Web Photo Gallery, click that option on the Create tab. Choose customizing options, such as layout, and click Upload to generate HTML pages for uploading to the web.

Photo and digital projects are stored as projects and stored on your local hard drive. Projects include the project file and related subfolders that contain the document for each project. To maintain the link between these project files, subfolders, and page files, use the Place command in Photoshop Elements.

The .pse format is composed of a small text document and embedded PSD files (one per page). To identify the embedded PSD files, go to Finder, Control-click the PSE document, and select Show Package Contents. Open the folder to display the individual pages. (Removing a page damages the document. Use this method if you want to edit PSD files, preferably with Photoshop Elements.)

There are various ways of sharing projects. For example, you can print or e-mail a scrapbook to a friend, or burn a slide show onto a CD or DVD.

Find saved projects

❖ Choose File > Open Recently Edited File. Or, in Adobe Bridge, choose Edit > Find.

Open saved projects

You can open saved projects at any time to make changes or republish them. Projects appear in the Project Bin.

Making photo projects

About photo projects

Photo projects include Photo Books, photo collages, greeting cards, and jackets and labels for CDs and DVDs.

Note: Photo Books are photo projects. However, they have their own workspace mode, with a limited toolbox and limited access to the Content panel. Photo Books are designed specifically for online printing. You can print them locally, but each side of a spread is treated as a separate page.

If a project has a single page, it's saved in Photoshop format (PSD) by default. If a project has multiple pages, however, it's saved in the more versatile Photo Projects Format (PSE). Unlike conventional image formats, which require you to open and edit each image separately, PSE lets you create Photobooks of up to 80 pages and Photo Collages of up to 30 pages.

Note: Because multipage files can be quite large, a computer with least 1 GB of RAM is required; 2 GB is recommended for optimum performance.

When you start a photo project, a panel in the Panel Bin opens for that project type.

When you click the Create button to start a project, you can specify a size, layout, and theme that's unique or common to each project type. For example, the CD Jacket template has different size options than the Photo Collage template, but both offer layout and theme options that are common to most projects. At this time, you also specify whether to use the Auto-Fill With Project Bin Photos, Include Captions, and Number Of Pages options (when applicable).

After you specify these primary options, the photo project opens, and you can apply designs and styles to images using the Effects panel. You also can add or modify frames, backgrounds, and layer styles. For example, you can apply a unique background to every page of a photo album using the Content panel instead of having all pages with the same background, which occurs by default.

After you finish a project, you can share it in a variety of ways. For example, you can print or e-mail greeting cards or photo collages, or burn photo albums onto a CD or DVD. You can also have your projects professionally printed using Adobe Photoshop Services.

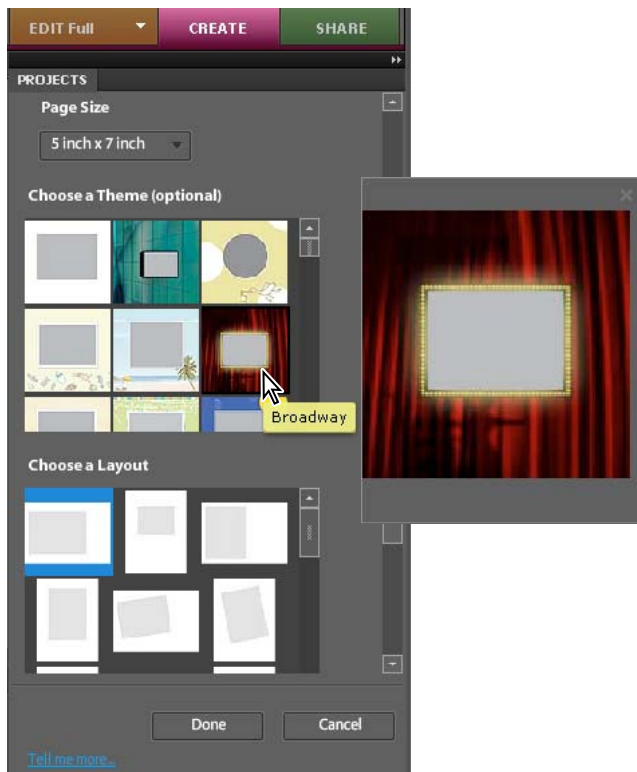
Note: Multi-page files cannot be attached to e-mail messages.

More Help topics

[“Using the Effects panel”](#) on page 173

Using the photo projects dialog box

The Projects panel in the Panel Bin is the starting point for making new photo projects. To add images to a photo project, select Auto-Fill With Project Bin Photos, or manually add them later.



Setting photo project options

For example, if you click Photo Collage in Create tab, the photo projects dialog box provides the following options:

Page Size Provides preset page sizes for each project. The size chosen becomes the default for all pages in the project, but it can be later modified. Each project type offers different size options. For example, the greeting card template sizes are smaller than the photo album template sizes.

Choose A Layout Provides preset single and multiple photo collages on a page. The layout chosen becomes the default for all pages in the project, but it can be later modified. For example, if the original layout is structured for landscape-oriented photos, you can rotate the image frame for portrait-oriented photos, or choose Fit Frame To Photo from the context menu.

Choose A Theme Provides a variety of preset designs to complement your images with preset frames and backgrounds. The theme and frame chosen becomes the default for all pages in the project, but they can be modified later. For example, you may want to apply a different background to each page of a scrapbook.

Auto-Fill With Project Bin Photos Places selected images in the project automatically in the same order they are arranged in the Project Bin. You can select open files, albums, or files selected in the Project Bin to auto-fill the project. To arrange images in a particular order, rearrange them in the Project Bin before starting a project. You can also rearrange the images later in the photo project.

Note: GIF files must be converted manually to RGB before they can be inserted.

Include Captions Adds a caption on or below the image (depending on layout) in a separate layer. If an image already has a caption, it will be placed in the project with the image. Caption text can be modified in a variety of ways, depending on how the text is selected. For example, highlighting the text with the Text tool lets you apply font types, styles, and color to the text. Selecting the text frame with the Move tool pointer lets you rotate, resize, and move the text. Double-clicking the text allows you to edit it as well.

Number Of Pages Specifies the number of pages for the project. If you selected Auto-Fill With Project Bin Photos in the Projects panel, the required number of pages are identified for a chosen layout. You can change this setting. For example, if you know that a project will continue to grow, and the selected photos require only four pages, you can specify 10 pages to accommodate images added later.

Note: *Photoshop Elements supports Photo book projects of up to 80 pages and Photo collages of up to 30 pages. If your project exceeds the maximum number, create a second file that can be appended to the original when you send them to Adobe Photoshop Services.*

About photo collages

Photo collages let you create large picture projects, such as scrapbooks, photo collages, or unique photo prints. Photo collages can be printed with your home printer, ordered online, saved to your hard drive, and sent by e-mail.



Sample photo collages

More Help topics

[“Make a photo collage, greeting card, or other projects”](#) on page 252

[“Create a photo book”](#) on page 256

About Photo Books

Photo Books let you add a variety of layouts and designs to your images. Photo Books can be printed on your home printer, ordered online from Adobe® Photoshop® Services, saved to your hard drive, and sent by e-mail. Photo Books are designed to be ordered online using Adobe Photoshop Services. (Services are not available in all areas outside the United States.)



Sample Photo Book

About greeting cards

Greeting cards let you add a variety of layouts and designs to your images, and allow adding up to 22 photos on a page. Greeting cards can be printed with your home printer, saved to your hard drive, and sent by e-mail. Greetings cards can be ordered online from Adobe Photoshop Services from some locales.



Sample photo greeting cards

More Help topics

[“Make a photo collage, greeting card, or other projects”](#) on page 252

About CD and DVD jackets

Photoshop Elements lets you create disc jackets (covers) for a CD and DVD case. They can be printed with your home printer, saved to your hard drive, and sent by e-mail in .jpg format.



Sample CD and DVD jackets

More Help topics

[“Make a photo collage, greeting card, or other projects”](#) on page 252

About CD and DVD labels

Photoshop Elements lets you create adhesive disc labels for CDs and DVDs, or labels for printable CDs and DVDs, using an inkjet printer. Labels can be printed with your home printer, or saved to your hard drive and sent by e-mail in PDF format.





Sample CD and DVD labels

More Help topics

[“Make a photo collage, greeting card, or other projects”](#) on page 252

Make a photo collage, greeting card, or other projects

- 1 Select the Create tab **CREATE**, and then the Projects button. Choose one of the project types:
 - Photo Collage
 - Greeting Cards
 - Click More Options, and select CD Or DVD Jackets, CD, or DVD Labels
- 2 Select a size, theme, and layout, or, in the case of CD and DVD disc jackets and labels, a theme, and a layout. If you plan to print your project, choose a standard size that your printer supports. If you plan to order prints from Adobe Photoshop Services, you can choose a standard size or a nonstandard size. (Services are not available in all areas outside the United States.)
- 3 Select any additional options, such as Auto-Fill With Project Bin Photos, Include Captions, and Number Of Pages.
- 4 Click Done. When the project opens, you can modify the design using the Content, Effects, or Favorites panels.
- 5 Add photos (if you have not added) or new pages to the photo collage.
- 6 View and customize your photos by doing any of the following:
 - To see each page, click the forward arrow  or backward arrow  in the lower-left corner of the image window. Or select a page in the Project Bin.
 - Reposition or resize a photo.
 - Rotate a photo.
 - Add or edit text.
 - Replace or remove a photo.
- 7 Choose File > Save. By default, projects are saved in your Pictures folder, although you can save projects to another location.
- 8 Type a filename, and click Save.

More Help topics

[“Using the photo projects dialog box”](#) on page 248

[“Using the Effects panel”](#) on page 173

[“Editing photo projects”](#) on page 253

Editing photo projects

About photo projects edits

You can modify photo collages, greeting cards, and CD/DVD disc jackets and labels. The Content panel lets you add a variety of frames, textures, backgrounds, and graphics to your projects, as well as apply text effects. You can also resize, rotate, and move images and captions.

More Help topics

[“Using the Effects panel”](#) on page 173

Add images to a photo project

You can add images to a photo project, and then can rearrange, modify, or replace them.

- 1 Open the photo project and do one of the following:
 - Click a thumbnail in the Project Bin to activate the photo project.
- 2 Select a photo from the Project Bin, and drag it into a frame, which is the gray area inside a layout. To replace an existing photo in a photo project, select another photo from the Project Bin, and drag it into a frame.

More Help topics

[“Using the Effects panel”](#) on page 173

Add new pages to a photo project

- 1 In the Project Bin, select the page that will precede the new page.



Moving pages in a photo project

- 2 Do any of the following:
 - To add a blank page, choose Edit > Add Blank Page, or right-click a page in the Project Bin, and then select this option from the context menu. You can also drag a blank page to a different location in the photo project. For example, you might drag it to the beginning of your photo project if you want to use it as your title page.

Note: Depending on the design of your mouse, either right-click or Control-click it.

- To add a new page that uses the current layout, click Edit > Add Page Using Current Layout, or right-click a page in the Project Bin, and then select this option from the context menu. You can also drag a new page to a different location in the project. For example, you might want to move the new page somewhere else in the project.
- To remove a page, click Edit > Delete Current Page, or right-click the page, and then select this option from the context menu.

More Help topics

[“Using the Effects panel”](#) on page 173



Reposition or resize photos in a photo project

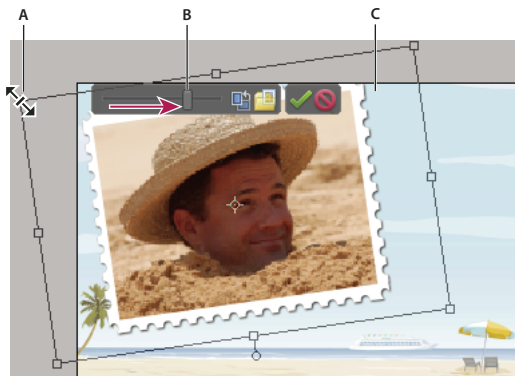
- 1 To adjust a photo and frame together, click the photo once. To adjust a photo within a frame, double-click the photo.

A bounding box appears showing the edges of the photo, even if the edges are masked by the frame.

- 2 Do any of the following:

- To reposition the photo, click anywhere within the bounding box and drag the photo.
- To resize the photo, drag the slider. Or, position the Move tool over a corner, top, bottom, or side; when the diagonal double-headed arrow appears, drag it.

- 3 After repositioning or resizing the photo within the frame, click the Commit button  or the Cancel button  when you're finished.




Resizing a photo


A. Drag a corner of the photo to resize it B. Move the resize slider C. Areas outside the photo frame are hidden

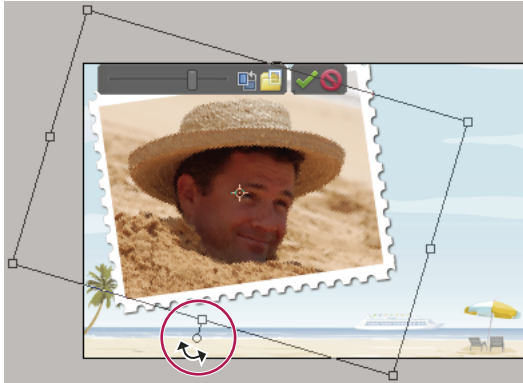
Replace or remove photos in a photo project

- ❖ Do any of the following:




- Double-click the photo, then click Get New Photo .
- Drag a new photo from the Project Bin onto a photo. If the photo doesn't appear in the Project Bin, open it in Adobe Bridge.
- To replace a photo on a page, right-click and select Replace Photo.
- To remove (clear) a photo from a page, right-click and select Clear Photo.

Rotate photos in a photo project

- 1 To rotate a photo and frame together, click the photo once. To rotate a photo within a frame, double-click the photo.
- 2 Do any of the following:
 - Click anywhere within the bounding box and a circle appears below the selection. Position the cursor over the circle. When the curved four-headed arrow  appears, drag the track ball handle to rotate the image.



Rotating an image in a photo project

- Position the Move tool over a corner. When the curved double-headed arrow  appears, drag it to rotate the photo. The further away the cursor is from the corner, the more control you have to make more accurate changes.
 - Double-click the photo, and then click the rotate button next to the slider (only rotates in 90° increments).
- 3 When you are finished, click the Commit button  or the Cancel button .

Edit photo project pages in Photoshop CS4

If you have Adobe® Photoshop® CS4 and Photoshop Elements installed on the same computer, you can send JPEG, GIF, and other single-page photo files to Photoshop. (Set file-opening preferences in Adobe Bridge.) Photoshop does not support the multipage PSE file format, so it cannot edit entire photo projects. However, Photoshop can edit individual pages of a photo project, which are in the single-page PSD format. Use Show Package Contents to identify individual PSE and PSD files.

Photoshop offers direct control over many aspects of photo project pages, including direct editing of photo layers (called *Smart Objects* in Photoshop) and frames. These features are limited in Photoshop Elements to preserve its easy, automatic image-editing workflow.

- 1 Select the Photo Projects document.
- 2 In the Finder, right-click on the file and select Show Package Contents.
- 3 Open the folder with the same name as the PSE document.
- 4 Right-click the PSD file for the page you want to edit, and choose Open With > Photoshop CS.
- 5 In Photoshop, make your changes, and then choose File > Save. When Photoshop asks if you want to replace the existing file, click Yes.

Important: Do not reorder or rename layers in the PSD file. Doing so could prevent the automatic editing features in Photoshop Elements from working as expected.

Making digital projects

About digital projects

You don't have to know anything about HTML programming to create a Web Photo Gallery; the Web Photo Gallery dialog box provides styles that you can easily select, customize, and save. It creates a folder containing all the necessary web page and linked image files. You send this folder by FTP to your web server (or online service).

Create a photo book

- 1 Click Create, and select Photo Book.
- 2 Select one of the following options:
 - Random Photo Layout.
 - Choose Photo layout.

If you select a Random Photo Layout, specify the following options:

- Page Size.
- Choose A Theme.

If you select Choose Photo layout, do the following:

- a Specify the page size, select the left and right page layouts, and click Next.
 - b Select a theme.
- 3 Set the additional options, and click Create:

Auto-Fill With Project Bin Photos Add all the photos already open in the Project Bin.

Include Captions Inserts a caption under the photo, if the photo has a caption.


Number Of Pages Sets the number of pages in the photo book.

Note: Sometimes, minimum and maximum number of pages allowed vary based on locale.

- 4 Use the Content panel to add creative designs to your photo book.
- 5 Use the Photo Book Editing Toolbar to fine-tune your photo book.

Create a Web Photo Gallery

Web Photo galleries come in a variety of traditional layouts and designs, and are optimized for viewing images on a web page. The Web Photo Gallery dialog box guides you through the process of adding and arranging photos, applying web page layouts and background styles, adding transitions, and sharing the files. The Web Photo Gallery dialog box only lets you arrange photos, not edit them.

- 1 Open the photos you want to use.
- 2 Select the Create tab,  and choose Web Photo Gallery. Adobe Bridge CS4 opens with the photos you want to use.
- 3 Choose a page layout template or thumbnail style.
- 4 A preview of the web page appears in the dialog box.
- 5 Specify the options for your web page, such as Gallery Title, Thumbnail Size, and Background Color.

- 6 Type a name for the gallery folder in the Gallery Name box. This folder contains the web page and image files you can share later. If you want to change the default storage location, select Save To Disk and click Browse. Select the location where you want to save the Web Photo Gallery files.

Creating slide shows

About slide shows

Slide shows are a fun way to share photos. And because Photoshop Elements saves your slides as PDFs, you can be sure that anyone with the free Adobe® Reader will be able to see and enjoy your photos.

Adjust the display time of a slide

- ❖ In the Presentation Options section of the PDF Slide Show box, click the Presentation button in the Output settings of the PDF Slide Show dialog box. Then, set the number of seconds in the Advance Every option. You can open the PDF Slide Show dialog box when you first create a slide show (using the Create tab), or when you share it (using the Share tab).

Stitching together panoramas

Creating Photomerge panoramas

The Photomerge Panorama command combines several photographs into one continuous image. For example, you can take five overlapping photographs of a city skyline, and assemble them into a panorama. The Photomerge Panorama command can tile photos horizontally as well as vertically.

When you set up a Photomerge panorama composition, you identify the files you want to merge (called your *source files*), and then Photoshop Elements automatically assembles them into a single panorama. After the panorama is complete, you can still make changes to the placement of the individual photos, if necessary.




Creating a Photomerge panorama

Your source photographs play a large role in panoramic compositions. To avoid problems, follow these guidelines when taking pictures for use with Photomerge Panorama:

Overlap images sufficiently Images should overlap approximately 15% to 40%. If the overlap is less, Photomerge Panorama may not be able to automatically assemble the panorama. If images overlap by 50% or more, it can be difficult to work with them, and blending may not be as effective.

Use a consistent focal length Avoid using the zoom feature of your camera while taking your pictures.

Keep the camera level Although Photomerge Panorama can process slight rotations between pictures, a tilt of more than a few degrees can result in errors when automatically assembling the panorama. Using a tripod with a rotating head helps maintain camera alignment and viewpoint.


 *When photographing a panoramic scene from a high place, the natural inclination is to keep the horizon level in the viewfinder. However, this actually produces a noticeable rotation between images. Try using a tripod to keep the camera level when taking photographs in this situation.*

Stay in the same position Try not to change your location as you take a series of photographs, so that the pictures are from the same viewpoint. Using the optical viewfinder with the camera held close to the eye helps keep the viewpoint consistent. Or try using a tripod to keep the camera in the same place.

Avoid using distortion lenses Lenses, such as fish-eye lenses, that noticeably distort the image can interfere with Photomerge Panorama.

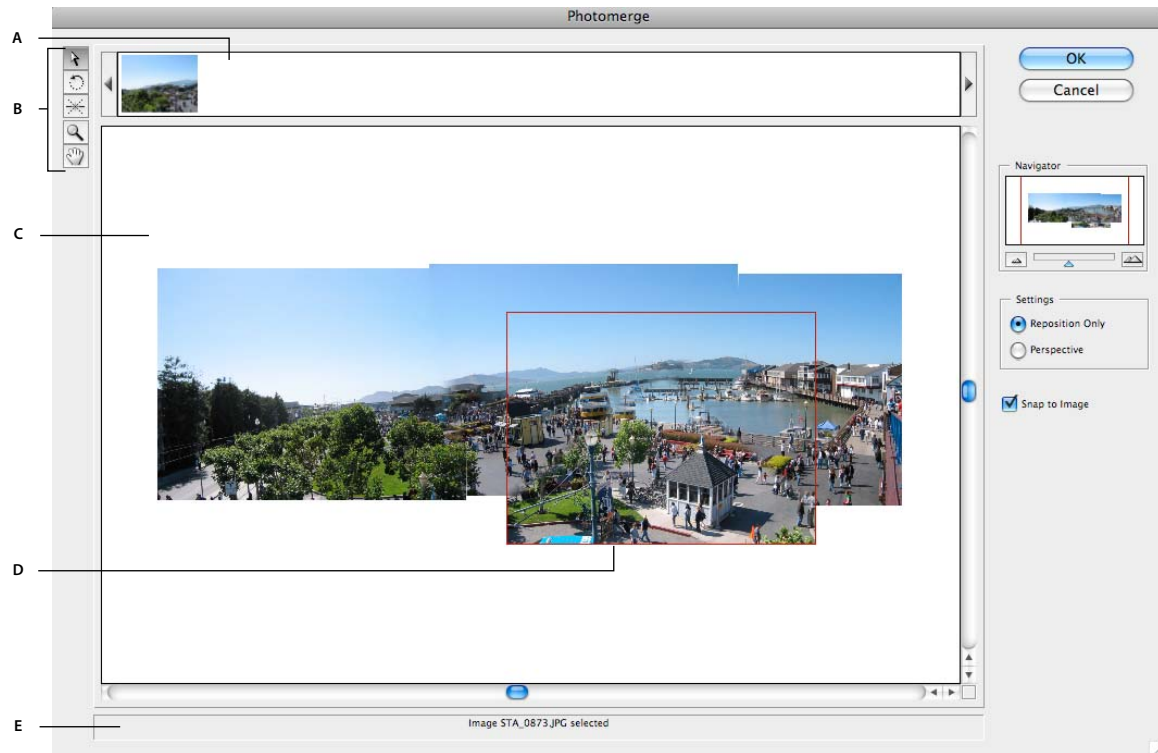
Maintain the same exposure Avoid using the flash in some pictures and not in others. The advanced blending feature in Photomerge Panorama helps smooth out different exposures, but extreme differences make alignment difficult. Some digital cameras change exposure settings automatically as you take pictures, so you may need to check your camera settings to be sure that all the images have the same exposure.

Create a Photomerge panorama composition

- 1 Choose File > New > Photomerge Panorama.
 - 2 Open the files you want to stitch together by doing one of the following:
 - Click Add Open Files to add files that are open in the Project bin.
 - Choose Files from the drop-down menu and browse to a file on your hard disk.
 - Choose Use > Folder to add an entire directory.
 - 3 Select a calculation method.
 - 4 Click OK to create the panorama composition. The source files open automatically and are processed
-  *If you chose Interactive Layout calculation method or if the composition can't be automatically assembled, you can assemble the composition manually.*
- 5 After the new panorama image appears in the Panorama dialog box, you can work with individual source files and change your view of the work area. If you need to rearrange the order of the images, drag an image in the work area to reposition it.
 - 6 If necessary, adjust the composition by changing the vanishing point, changing the calculation method, or using the Snap To Image option.
 - 7 Click OK to generate the panorama as a new file.







Use the Photomerge dialog box


The Photomerge dialog box contains tools for manipulating the composition, a lightbox for storing source images that are not in use, a work area for assembling the composition, and options for viewing and editing the composition. You can also zoom in and out to better see the alignment of each file.



Photomerge dialog box.

A. Lightbox B. Tools C. Work area D. Selected image E. Status bar


- To navigate, select the Move View Tool  and drag within the work area. Or, drag the view area (the red box) or the scroll bar of the navigator.
- To zoom, click the Zoom In icon  and Zoom Out icon  or use the Zoom tool . Hold down Option to zoom out with the Zoom tool.
- To rotate images, select the Select Image tool , click the image you want to rotate, select the Rotate tool  and then drag in a circular motion around the image.
- To reorder images in the lightbox, select the Select Image tool and drag an image in the lightbox.
- To add an image to the composition, select the Select Image tool, and then drag the image from the lightbox to the work area.
- To remove an image from the composition, select the Select Image tool, and then drag the image from the work area to the lightbox.

 Make sure *Snap To Image* is selected to automatically snap overlapping images into place when a commonality is detected.


Change the vanishing point

The Vanishing Point tool selects the vanishing point image, which changes the perspective of the Photomerge panorama composition.

- 1 Select Perspective in the Settings area of the Photomerge dialog box. The middle image is the default vanishing point image (it has a blue border around it when selected).

- 2 Select the Set Vanishing Point Tool , and click on an image in the work area to make it the vanishing point image. There can only be one vanishing point image in a composition.

Note: Hold down the Option key when you move the pointer over an image to show the selection border of the photo.

- 3 If necessary, use the Select Image tool  to adjust the position of the non-vanishing point images. A non-vanishing point image has a red border around it when selected.

When you apply perspective correction to a composition, the non-vanishing point images are linked to the vanishing point image. You can break this link by clicking the Reposition Only button, by separating the images in the work area, or by dragging the vanishing point image back to the lightbox. After the link is broken, images return to their original shapes.

The perspective correction only works up to an approximately 120° angle of view. If your composition has a wider angle of view, deselect the Perspective option.

Reduce distortion and inconsistent color

Use composition options to reduce distortion in a Photomerge panorama composition.

- 1 Select composition options:

Cylindrical Mapping Reduces the bow tie distortion that can occur when you apply perspective correction. You must select the Perspective option in order to apply cylindrical mapping.



Adding cylindrical mapping
A. Original B. Cylindrical mapping applied

- 2 Click Preview.

The results of applying these options are visible only in preview mode and in the final, generated image.

- 3 To return to edit mode, click Exit Preview.

Chapter 15: Optimizing for the web

Optimization for the web is the process of compressing images and setting display options for optimal use on the Internet. When you put images on the Internet, file size becomes important; you want to achieve a file size that is small enough to allow a reasonable download time, but large enough to preserve colors and details to your satisfaction. There are three major graphic file formats that are used on the web: GIF, JPEG, and PNG.

Optimizing images

About optimizing

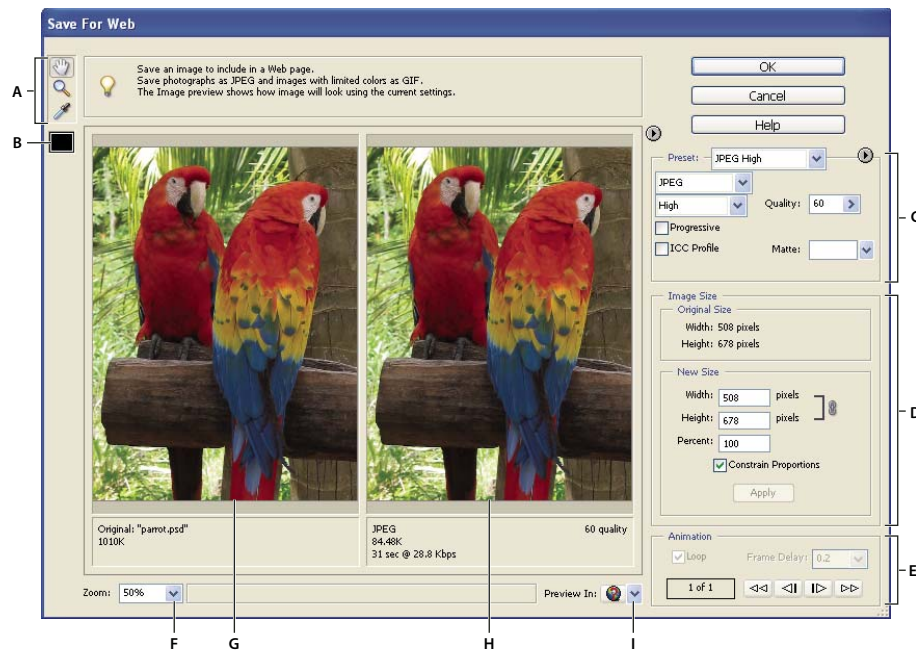
When you put images on the web, you need to think about file size. The goal is a file size that is small enough to allow reasonable download times but that preserves colors and details to your satisfaction.

Three major graphic file formats are used on the web: GIF, JPEG, and PNG. You can optimize images in these formats using one of the following methods:

- To precisely optimize an image for use in web authoring applications, such as Adobe® GoLive®, you can use the Save For Web command. The Save For Web dialog box lets you preview your image in different file formats and with different optimization settings. You can also set transparency and animation settings.
- For basic optimization, you can use the Save As command. Depending on the file format, you can specify image quality, background transparency or matting, color display, and downloading method.

Using the Save For Web dialog box

Use the Save For Web dialog box to preview the effects of different optimization options on a photo you want to share on the web. The process is simple. Open a photo and choose File > Save For Web. Then choose a format from the file format menu (GIF, JPEG, PNG-8, or PNG-24) and set options as desired. (The file format menu is directly beneath the Preset menu.) This saves a copy of your file, without overwriting the original image.





Save For Web dialog box

A. Toolbox B. Eyedropper color C. Optimization settings D. Image Size E. Animation options F. Zoom level menu G. Original image H. Optimized image I. Browser preview menu

Optimization options appear on the right side of the Save For Web dialog box. In addition to selecting a web file format, you can choose compression and color options, preserve background transparency or set background matting, and change the size of the image. You can use predefined settings (by choosing a format from the Preset menu), or select format-specific options to fine-tune the optimization.

The image windows show your original image (on the left) and a preview of the optimized image (on the right). Under each window is optimization information—the current settings, the size of the optimized file, and the estimated download time. As you make adjustments, the information under the optimized image changes to reflect your new settings.

A small toolbox is located in the upper-left corner of the dialog box. To view different areas of an image, select the Hand tool  and drag to bring those areas into view. To zoom in on an image, select the Zoom tool  and click in a view; then hold down Option, and click again to zoom out. (Alternatively, you can use the Zoom box at the bottom of the dialog box.) To create matte colors, use the Eyedropper Color tool.

More Help topics

[“Preview an optimized image in a web browser”](#) on page 273

[“Preview variations in color display”](#) on page 274

[“View estimated download time”](#) on page 273

Optimized file formats for the web

You can choose between four formats for the web. Use the following guidelines when choosing the format for your web image:

JPEG In most cases, this is the best format in which to save photographs.

PNG-24 Like JPEG, this is a good format for photographs. Choose PNG-24 rather than JPEG only when your image contains transparency. (JPEG does not support transparency; you must fill it with a matte color.) PNG-24 files are often much larger than JPEG files of the same image.

GIF GIF is the format to use for line art, illustrations with large areas of solid color and crisp detail, and text. Also, if you want to export an animated image, you must use GIF.

PNG-8 PNG-8 is a lesser-known alternative to GIF. Use it for the same purposes (except animation).

Images in GIF and PNG-8 formats, sometimes called *indexed-color images*, can display up to 256 colors. To convert an image to indexed-color format, Photoshop Elements builds a color lookup table. 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.

JPEG and PNG-24 files support 24-bit color, so they can display up to 16 million colors. Depending on the format, you can specify image quality, background transparency or matting, color display, and the method a browser should use to display the image while downloading.

The appearance of an image on the web also depends on the colors displayed by the computer platform, operating system, monitor, and browser. You may want to preview images in different browsers and on different platforms to see how they will appear on the web.

About the JPEG format

The JPEG format supports 24-bit color, so it preserves the subtle variations in brightness and hue found in photographs. A progressive JPEG file displays a low-resolution version of the image in the web browser while the full image is downloading.

JPEG image compression is called *lossy* because it selectively discards image data. A higher quality setting results in less data being discarded, but the JPEG compression method may still degrade sharp detail in an image, particularly in images containing type or vector art.

Note: Artifacts, such as wavelike patterns or blocky areas of banding, are created each time you save an image in JPEG format. Therefore, you should always save JPEG files from the original image, not from a previously saved JPEG.



Original image (left), and optimized JPEG with Low quality setting (right)

The JPEG format does not support transparency. When you save an image as a JPEG file, transparent pixels are filled with the matte color specified in the Save For Web dialog box. To simulate the effect of background transparency, you can match the matte color to the web page background color. If your image contains transparency and you do not know the web page background color, or if the background is a pattern, you should use a format that supports transparency (GIF, PNG-8, or PNG-24).

More Help topics

[“Create a matted GIF or PNG image”](#) on page 270

About the GIF format

The GIF format uses 8-bit color and efficiently compresses solid areas of color while preserving sharp details like those in line art, logos, or type. You also use the GIF format to create an animated image and preserve transparency in an image. GIF is supported by most browsers.

The GIF format uses LZW compression, which is a lossless compression method. However, because GIF files are limited to 256 colors, optimizing an original 24-bit image as an 8-bit GIF can subtract colors from an image.



GIF image with selective color (left), and GIF image with web color (right)

You can choose the number of colors in a GIF image and control how colors dither in a browser. GIF supports background transparency or background matting, by which you blend the edges of the image with a web page background color.

More Help topics

[“Preserve background transparency in a GIF or PNG image”](#) on page 270

About the PNG-8 format

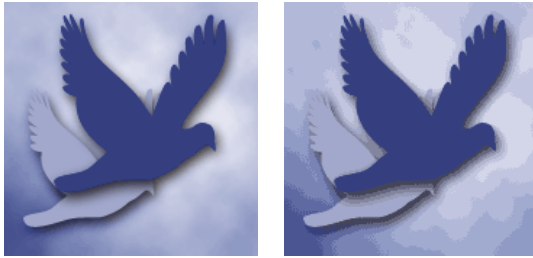
The PNG-8 format uses 8-bit color. Like the GIF format, PNG-8 efficiently compresses areas of solid color while preserving sharp detail like those in line art, logos, or type.

Because PNG-8 is not supported by all browsers, you may want to avoid this format when you are distributing the image to a wide audience.

The PNG-8 format uses more advanced compression schemes than GIF does, and a PNG-8 file can be 10% to 30% smaller than a GIF file of the same image, depending on the image’s color patterns. Although PNG-8 compression is lossless, optimizing an original 24-bit image as an 8-bit PNG file can subtract colors from the image.

Note: *With certain images, especially those with simple patterns and few colors, GIF compression can create a smaller file than PNG-8 compression. View optimized images in GIF and PNG-8 format to compare file size.*

As with the GIF format, you can choose the number of colors in an image and control how colors dither in a browser. The PNG-8 format supports background transparency and background matting, by which you blend the edges of the image with a web page background color.



PNG-8 with 256 colors and no dither (left), and PNG-8 with 16 colors and dithering (right)

More Help topics

[“Preserve background transparency in a GIF or PNG image”](#) on page 270

About the PNG-24 format

The PNG-24 format supports 24-bit color. Like the JPEG format, PNG-24 preserves the subtle variations in brightness and hue found in photographs. Like the GIF and PNG-8 formats, PNG-24 preserves sharp details like those in line art, logos, or type.

The PNG-24 format uses the same lossless compression method as the PNG-8 format. For that reason, PNG-24 files are usually larger than JPEG files of the same image. You may want to avoid PNG-24 format when you are distributing your image to a wide audience.

In addition to supporting background transparency and background matting, the PNG-24 format supports multilevel transparency. You can have up to 256 degrees of transparency from opaque to completely transparent, so you can blend the edges of an image smoothly with any background color. However, not all browsers support multilevel transparency.

More Help topics

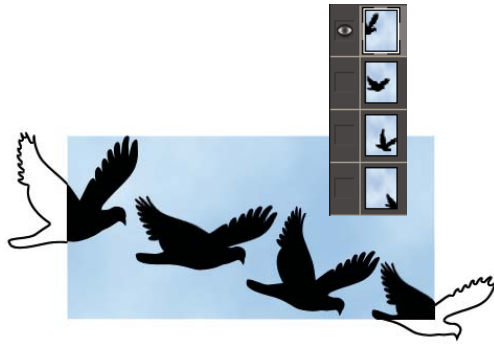
[“Preserve background transparency in a GIF or PNG image”](#) on page 270

About animated GIFs

Animated GIFs create the illusion of movement by displaying a sequence of images, or frames, over time. Photoshop Elements provides a powerful, easy way to create animated GIFs from a multiple-layer image.

To create an animated GIF file, you work with layers. Each layer becomes a frame when Photoshop Elements generates an optimized animation. The animated GIFs are compiled into an RGB color document.

You can open an existing animated GIF file using the Open command. For each frame in the file, Photoshop Elements creates a layer. To view a specific frame in the document window, make the layer for that frame visible in the Layers panel, and hide other layers.



Images in separate layers can be sequenced together to create an animation.

More Help topics

[“Understanding layers”](#) on page 49

[“Preview an animation”](#) on page 274

Apply a preset optimization setting

You can quickly and easily optimize an image for the web by choosing a predefined optimization setting, called a *preset*, from the Preset menu near the upper-right corner of the Save For Web dialog box. Presets are tailored to meet the optimization needs of different types of images.


The name of each preset reflects its file format and quality level. For example, choose JPEG High to optimize an image in JPEG format with high image quality and low compression. Choose GIF 32 Dithered to optimize an image in GIF format, reduce the number of colors to 32, and apply dithering.

- 1 In the Save For Web dialog box, choose a setting name from the Preset menu, and then click OK.
- 2 In the Save Optimized As dialog box, type a filename and click Save.

Note: *If you change the options in a preset, the Preset menu displays the word “Custom.” You cannot save a custom setting; however, the current settings appear in the Save For Web dialog box the next time you display it.*

Optimize as JPEG

JPEG is the standard format for compressing photographs.

- 1 Open an image and choose File > Save For Web.
- 2 Choose JPEG from the optimization format menu.
- 3 (Optional) To optimize to a specific file size, click the arrow  to the right of the Preset menu, and then click Optimize To File Size. Enter a number in the Desired File Size text box, and select either Current Settings, which optimizes for the current settings, or Auto Select GIF/JPEG, which automatically determines whether JPEG or GIF is the better format.
- 4 Do one of the following to specify the compression level:
 - Choose a quality option (Low, Medium, High, and so on) from the pop-up menu under the optimization format menu.
 - Click the arrow in the Quality menu and drag the Quality pop-up slider.
 - Enter a value between 0 and 100 in the Quality box.

The higher the Quality setting, the more detail is preserved in the optimized image, but the larger the file size. View the optimized image at several quality settings to determine the best balance between quality and file size.

- 5 Select Progressive to display the image progressively in a web browser; that is, to display it first at a low resolution, and then at progressively higher resolutions as downloading proceeds.

Note: Some browsers do not support progressive JPEGs.

- 6 To preserve the ICC profile of the original image in the optimized file, select ICC Profile.

Some browsers use ICC profiles for color correction. The ICC profile of the image depends on your current color setting.

- 7 If the original image contains transparency, select a Matte color that matches the background of your web page. Transparent areas in your original image are filled with the Matte color.
- 8 To save your optimized image, click OK. In the Save Optimized As dialog box, type a filename, and click Save.

More Help topics

[“About the JPEG format”](#) on page 263

[“About color management”](#) on page 171

Optimize as GIF or PNG-8 format

GIF is the standard format for compressing images with large areas of solid colors and crisp details like those in line art, logos, or type. Like the GIF format, PNG-8 supports transparency and efficiently compresses areas of solid color while preserving sharp detail; however, not all web browsers can display PNG-8 files.

- 1 Open an image and choose File > Save For Web.
- 2 Choose GIF or PNG-8 from the optimization format menu.
- 3 To display an image at low resolution while the full-resolution image is downloading, select Interlaced. Interlacing can make downloading time seem shorter and gives viewers feedback that downloading is in progress.
- 4 Under the optimization format menu, choose a color-reduction algorithm for generating the color lookup table:

Perceptual Creates a custom color table by giving priority to colors for which the human eye has greater sensitivity.

Selective Creates a color table similar to the Perceptual color table, but favoring broad areas of color and the preservation of web colors. This color table usually produces images with the greatest color integrity.

Adaptive Creates a custom color table by sampling colors from the spectrum appearing most commonly in the image. For example, an image with only shades of green and blue produces a color table made primarily of greens and blues. Most images concentrate colors in particular areas of the spectrum.

Restrictive (Web) Uses the standard, 216-color, web-safe color table common to the 8-bit (256-color) panels of Windows and Mac OS. This option ensures that no browser dither is applied to colors when the image is displayed using 8-bit color. If your image has fewer than 216 colors, unused colors are removed from the table.

- 5 To specify the maximum number of colors in the color panel, select a number from the Colors menu, enter a value in the text box, or click the arrows to change the number of colors. If the image contains fewer colors than the panel, the color table reflects the smaller number of colors in the image.
- 6 If you chose Restrictive (Web) for the color-reduction algorithm, you can choose Auto from the Colors menu. Choose Auto if you want Photoshop Elements to determine the optimal number of colors in the color table based on the frequency of colors in the image.
- 7 Choose a dithering percentage, either by entering a percentage in the Dither text box or by clicking the Dither menu arrow and dragging the slider that appears.

- 8 If the image contains transparency, select Transparency to preserve transparent pixels; deselect Transparency to fill fully and partially transparent pixels with the matte color.
- 9 To create an animated GIF, select Animation.
- 10 To save your optimized image, click OK. In the Save Optimized As dialog box, type a filename, and click Save.

More Help topics

[“About dithering”](#) on page 271

[“About transparent and matted web images”](#) on page 269

Optimize as PNG-24

PNG-24 format is suitable for compressing photographs. However, PNG-24 files are often much larger than JPEG files of the same image. PNG-24 format is recommended only when you work with an image that includes multiple levels of partial transparency.

- 1 Open an image and choose File > Save For Web.
- 2 Choose PNG-24 for the optimization format.
- 3 Select Interlaced to create an image that is displayed at low-resolution in a browser while the full-resolution image is downloading. Interlacing can make downloading time seem shorter and gives viewers feedback that downloading is in progress.
- 4 If the image contains transparency, select Transparency to preserve transparent pixels; deselect Transparency to fill fully and partially transparent pixels with the Matte color.
- 5 To save your optimized image, click OK. In the Save Optimized As dialog box, type a filename, and click Save.

More Help topics

[“Preserve background transparency in a GIF or PNG image”](#) on page 270

Create an animated GIF

- 1 Place the images you want to appear in each frame of the animation on separate layers of the Layers panel. For example, to create an animation of an eye blinking, you would place an image of the open eye on one layer, and an image of the closed eye on another layer.

- 2 Choose File > Save for Web.

Note: If your image has multiple layers, you can also open the Save For Web dialog box from the Save As dialog box by choosing CompuServe GIF Format and selecting Layers As Frames.

- 3 Optimize the image in GIF format.
- 4 Select Animation.
- 5 Set additional options in the Animation section of the dialog box:

Loop Continuously repeats the animation in a web browser.

Frame Delay Specifies the number of seconds that each frame is displayed in a web browser. Use a decimal value to specify fractions of a second. For example, use .5 to specify half a second.

More Help topics

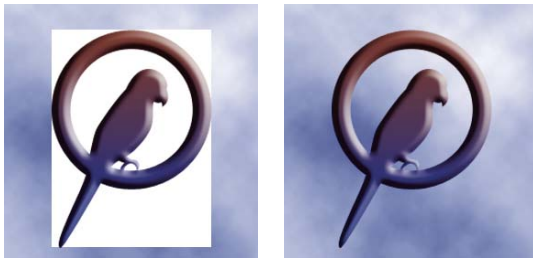
[“Preview an animation”](#) on page 274

[“Understanding layers”](#) on page 49

Using transparency and mattes

About transparent and matted web images

Transparency makes it possible to create nonrectangular images for the web. Background transparency, supported by the GIF and PNG formats, preserves transparent pixels in the image and allows the background of the web page to show through the transparent areas of your image. (Although the JPEG format does not support transparency, you can specify a matte color to simulate the appearance of transparency in the original image.)

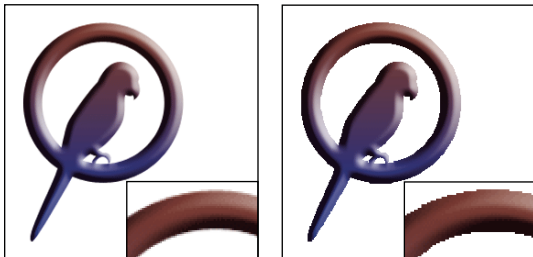


Web button without transparency (left), and with transparency (right)

Background matting, supported by the GIF, PNG, and JPEG formats, simulates transparency by filling or blending transparent pixels with a matte color that matches the web page background. Background matting works best if the web page background is a solid color and if you know what that color is.

To create background transparency or background matting in the optimized image, you must start with an image that contains transparency. You can create transparency when you create a new layer or use the Background Eraser, Magic Eraser, or Magic Extractor tools.

When working with GIF or PNG-8 files, you can use a matte setting of None to create hard-edged transparency: all pixels that are more than 50% transparent in the original image are fully transparent in the optimized image, and all pixels that are more than 50% opaque in the original image are fully opaque in the optimized image. Use hard-edged transparency when you don't know the background color of a web page, or when the web page background contains a texture or pattern. However, keep in mind that hard-edged transparency can cause jagged edges in the image.



GIF without hard-edged transparency (left), and with hard-edged transparency (right)

More Help topics

[“Adding layers”](#) on page 51

[“Optimized file formats for the web”](#) on page 262

Preserve background transparency in a GIF or PNG image

GIF and PNG-8 formats support one level of transparency—pixels can be fully transparent or fully opaque, but not partially transparent. (By contrast, PNG-24 format supports multilevel transparency; that is, you can have up to 256 degrees of transparency in an image, ranging from opaque to completely transparent.)

- 1 Open or create an image that contains transparency, and choose File > Save For Web.
- 2 In the Save For Web dialog box, select GIF, PNG-8, or PNG-24 as the optimization format.
- 3 Select Transparency.
- 4 For the GIF and PNG-8 formats, specify how to treat partially transparent pixels in the original image. You can blend these pixels with a matte color, or you can create hard-edged transparency by applying a matte setting of None.

More Help topics

[“About the GIF format”](#) on page 264

[“About the PNG-8 format”](#) on page 264

[“About the PNG-24 format”](#) on page 265

Create a matted GIF or PNG image

When you know the background color of the web page on which an image will be displayed, you can use the matting feature to fill or blend transparent pixels with a matte color that matches the web page background.

- 1 Open or create an image that contains transparency, and choose File > Save For Web.
- 2 In the Save For Web dialog box, select GIF, PNG-8, or PNG-24 as the optimization format.
- 3 For GIF and PNG-8 format, do one of the following:
 - To keep fully transparent pixels transparent, and blend partially transparent pixels with the matte color, select Transparency. This option prevents the halo effect you see when you place an anti-aliased image on a web page background that differs from the image background. This option also prevents the jagged edges of hard-edged transparency.
 - To fill transparent pixels with the matte color and blend partially transparent pixels with the matte color, deselect Transparency.
- 4 For GIF and PNG-8 format, select a color from the Matte menu:
 - Eyedropper Color (to use the color in the eyedropper sample box)
 - White, Black, or Other (to select a color using the Color Picker)

More Help topics

[“About the GIF format”](#) on page 264

[“About the PNG-8 format”](#) on page 264

[“About the PNG-24 format”](#) on page 265

Create hard-edged transparency in a GIF or PNG-8 file

Use hard-edged transparency when you don't know the background color of a web page, or when the web page background contains a texture or pattern. However, keep in mind that hard-edged transparency can cause jagged edges in the image.

- 1 Open or create an image that contains transparency, and choose File > Save For Web.
- 2 In the Save For Web dialog box, select GIF or PNG-8 as the optimization format.
- 3 Select Transparency.
- 4 Select None from the Matte menu.

More Help topics

[“About the GIF format”](#) on page 264

[“About the PNG-8 format”](#) on page 264

Create a matted JPEG image

Although the JPEG format does not support transparency, you can specify a matte color to simulate the appearance of transparency in the original image. The matte color fills fully transparent pixels and blends with partially transparent pixels. When you place the JPEG on a web page with a background that matches the matte color, the image appears to blend with the background.

- 1 Open or create an image that contains transparency, and choose File > Save For Web.
- 2 In the Save For Web dialog box, select JPEG as the optimization format.
- 3 Select a color from the Matte menu: None, Eyedropper Color (to use the color in the eyedropper sample box), White, Black, or Other (to select a color using the Color Picker).

When you select None, white is used as the matte color.

More Help topics

[“About the JPEG format”](#) on page 263


Dithering in web images

About dithering

Most web images are created by designers using 24-bit color displays (which display over 16 million colors), although some users view web pages on computers with 8-bit color displays (which display only 256 colors). As a result, web images often contain colors not available on some computers. Computers use a technique called dithering to simulate colors they can't display. Dithering uses adjacent pixels of different colors to give the appearance of a third color. For example, a red color and a yellow color may dither in a mosaic pattern to produce the illusion of an orange color that the 8-bit color panel doesn't contain.



Dithering simulates continuous tones

 Use colors in the Web panel to ensure that colors won't dither when displayed in Windows or Mac OS systems capable of displaying 256 colors. When creating an original image, you can use the Color Picker to choose web-safe colors.

When optimizing images, keep in mind that two kinds of dithering can occur:

Application dither Occurs in GIF and PNG-8 images when Photoshop Elements attempts to simulate colors that aren't in the current color table. You can control application dither by choosing a dithering pattern, or you can try to avoid application dither by adding more colors to the table.

Browser dither Occurs when a web browser using an 8-bit color display (256-color mode) attempts to simulate colors that aren't in the 8-bit color panel. Browser dither can occur with GIF, PNG, or JPEG images. In Photoshop Elements, you can control the amount of browser dither by shifting selected colors in the image to web-safe colors. You can also specify web-safe colors when choosing a color in the Color Picker.

You can preview application dither in GIF and PNG-8 images. Images with primarily solid colors may work well without dithering. Conversely, images with continuous-tone color (especially color gradients) may require dithering to prevent color banding.

More Help topics

[“Optimized file formats for the web”](#) on page 262

[“Use the Adobe Color Picker”](#) on page 211

[“Optimize as GIF or PNG-8 format”](#) on page 267


Control dither in web images

- 1 Open an image and choose File > Save For Web.
- 2 Choose your optimization settings.
- 3 Enter a value in the Dither text box, or click the Dither menu arrow and drag the slider that appears.
- 4 The Dither percentage controls the amount of dithering that is applied to the image. A higher dithering percentage creates the appearance of more colors and more detail in an image but can also increase the file size. For optimal compression and display quality, use the lowest percentage of application dither that provides the color detail you require.

Preview dither

You can preview browser dither directly in Photoshop Elements or in a browser that uses an 8-bit color display (256-color mode).

- 1 Open an image and choose File > Save For Web.
- 2 Choose your optimization settings.

- 3 To preview dither in Photoshop Elements, choose Browser Dither from the document panel menu in the Save For Web dialog box. (To view the menu, click the triangle  in the upper-right corner of the optimized image.)
- 4 To preview dither in a browser, follow these steps:
 - Set your computer's color display to 8-bit color (256 colors). See your operating system's documentation for information on changing the color display.
 - Select a browser from the Preview In menu in the Save For Web dialog box.


More Help topics

[“Add a browser to the Preview In menu”](#) on page 273

Previewing web images

Preview an optimized image in a web browser

You can preview an optimized image in any web browser installed on your system. The browser preview displays the image with a caption listing the image's file type, pixel dimensions, file size, compression specifications, and other HTML information.

- 1 Open the image you want to preview.
- 2 Select File > Save For Web, and apply your optimization settings.
- 3 Choose a browser from the Preview In menu in the lower-right corner of the optimized image, or click the browser icon  to launch your default web browser.


More Help topics

[“Using the Save For Web dialog box”](#) on page 261

Add a browser to the Preview In menu

- 1 Choose File > Save For Web.
- 2 Click the down arrow in the Preview In menu, and choose Edit List.
- 3 In the Browsers dialog box, click Find All. The dialog box displays all installed browsers.
- 4 Select a browser, click Add, and then click OK.

View estimated download time


- 1 Open an image and choose File > Save For Web.
- 2 Choose your optimization settings.
- 3 Click the triangle  to the upper right of the optimized image to view the document panel menu.
- 4 Choose an Internet access speed, including modem, ISDN, cable, or DSL Internet access.
- 5 When you change the Internet access speed, the estimated download time displayed under the optimized image is updated. If the download time seems too long, try different optimization settings, or change the image size in the Save For Web dialog box.

More Help topics

[“About optimizing”](#) on page 261

Preview variations in color display

When optimizing an image for the web, consider how the image will appear on different monitors. In general, an image appears darker in Windows systems than on Mac OS systems. You can simulate cross-platform display differences in the Save For Web dialog box.

- 1 Open an image and choose File > Save For Web.
- 2 Choose your optimization settings.
- 3 Click the triangle  to the right of the optimized image to view the document panel menu.
- 4 Choose a display option:

Uncompensated Color Shows the image with no color adjustment (the default option).

Standard Windows Color Adjusts the color to simulate a standard Windows monitor.

Standard Macintosh Color Adjusts the color to simulate a standard Macintosh® monitor.

Use Document Color Profile Shows image with its color profile, if one exists.






***Note:** These preview options adjust color only in the Save For Web dialog box; they don't change colors in the original or optimized image.*

More Help topics

[“About optimizing”](#) on page 261

Preview an animation

You can preview an animation in the Save For Web dialog box or in a web browser. The Save For Web dialog box shows the animation as still frames. You must preview the animation in a browser to view the frames in timed sequence.

- 1 Set up an animated image and choose File > Save For Web.
- 2 To preview an animation from the Save For Web dialog box, do one of the following:
 - To view the next frame in the animation, click the Next Frame button .
 - To view the previous frame in the animation, click the Previous Frame button .
 - To view the last frame in the animation, click the Last Frame button .
 - To view the first frame in the animation, click the First Frame button .
- 3 To preview an animation in a web browser, do the following:
 - Choose a browser from the Preview In menu below the lower-right corner of the optimized image, or click the browser icon  to launch your default web browser.
 - Use your browser's Stop, Refresh, or Reload commands to stop or replay the animation.

Chapter 16: Printing and sharing photos

Printing photos

Printing overview

Photoshop Elements provides several options for printing your photos. You can have photos professionally printed by online providers through Adobe Photoshop Services (which you can register for through the Adobe website), or you can print your photos with your home printer. You can print individual photos, sheets (thumbnails of each selected photo), and picture packages (a page of one or more photos printed at various sizes). And you can print projects you've made in Photoshop Elements, such as photo books, cards, and photo collages.

Before you print your photos, you need to let Photoshop Elements know some basic information about your print job, such as the paper size you are using and the page orientation.

For information on other ways to share photos, see [“Making photo projects”](#) on page 247.

Print photos

- 1 Open the photos you want to print.
- 2 Select File > Print.
- 3 Select a printer from the Select Printer menu. You can also click the Page Setup button to specify page printing options.
- 4 Select the size of the paper from the Paper Size menu.
- 5 Select a print size from the Select Print Size menu.
- 6 Select or enter a number in the Print Copies Of Each Page textbox.
- 7 To fit the individual image to the specified print layout, select Crop To Fit. The image is scaled and, if necessary, cropped to match the aspect ratio of the print layout. Deselect this option if you don't want your photos cropped.
- 8 (Optional) Click More Options to change additional settings.
- 9 Click Print.



If your photos are not printing at a particular size, try resizing the photo to the specific dimensions you want before you print.

More Help topics

[“Set page and printer options”](#) on page 279

More options for printing

When you click More Options in the Print dialog box, the following options are displayed:

- Printing Choices
- Custom Print Size

- Color Management

Printing Choices Enables you to specify the following settings:

- **Photo Details** You can print the date, caption, and filename by selecting the following options:
 - Show Date
 - Show Caption
 - Show File Name
- **Border** You can specify the following details for the border:
 - Thickness in inches, mm, or points.
 - Color of the border
 - Background color
- **Iron-on Transfer** Select Flip Image to use image for T-shirt transfers.

Note: Some printers have the inverting images option. If so, ensure that you use either your printer driver settings or the Invert image option to invert images. Selecting both the options horizontally flips the image twice.

- **Trim Guidelines** Select Print Crop Marks (guide lines on all four edges of the photo) to make it easier to trim a photo.

Custom Print Size Enables you to specify the following settings:

- **Print Size** You can specify the width and height in inches, centimeters, millimeters, points, and picas. Select Scale To Fit Media to scale the image to fit on the page.

Color Management Displays the color profile of the photo. Image Space shows the color space embedded in your photo file. (The print preview in the Print dialog box is not color managed and doesn't update as you choose a profile.) You can change the profile for printing from the following options:

- **Color Handling** You can choose to have either your printer or Photoshop Elements manage colors, or you can choose no color management.
- **Printer Profile** Enables a custom printer profile to convert image colors to the printer's color space, or turns off color conversion. If you have an ICC profile for your printer and paper combination, choose it from the menu. Make sure that you turn off the printer driver's color management.
- **Rendering Intent** Specifies how colors are translated from the image's source color space when certain colors are not available in the print space.

Scale an image in the Print dialog box

Scaling an image in the Print dialog box changes the size and resolution of the printed image (the file size of the image doesn't change).

- ❖ Select File > Print. Click More Options in the Print dialog box. Select Custom Print Size option and do one of the following:
 - Select Scale To Fit Media to scale the image to fit on the page.
 - Specify the units of measurement from the Units menu and enter values for Height and Width to rescale the image numerically. The dimensions are constrained, meaning that changing one dimension proportionately changes the other dimension.

Reposition an image

You can change the placement of a photo before printing.

- ❖ Choose File > Print, and using the panning operation, reposition the image.

Use Photo Prints

You can print photos using the Photo Prints option.


- 1 Open the photos you want to print.
- 2 Select Create > Photo Prints.
- 3 Follow the onscreen instructions to print your photos.

More Help topics

[“Print photos”](#) on page 275

Print multilayer images

If your image (PSD or TIFF) has more than one layer, you can use the Layers panel to temporarily hide the layers from view and prevent them from printing.

- 1 In Full Edit, open a multilayer image.
- 2 In the Layers panel, click the eye icon  to make a layer invisible.
- 3 When only the layers you want to print are visible, choose File > Print. The Print dialog box opens with only the visible layers showing in the thumbnail preview.
- 4 Set your printing options and click Print.

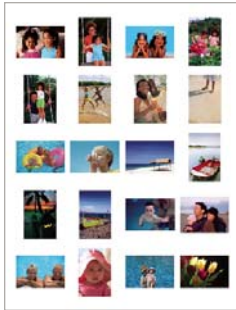
More Help topics

[“Understanding layers”](#) on page 49

Print a contact sheet

Contact sheets let you easily preview groups of images by displaying a series of thumbnail images on a single page.

Note: You must open and select files in Bridge before using the Selected Images From Bridge option.



Sample contact sheet

- 1 In Adobe Bridge, select a folder of images or specific image files. From the Bridge Tools menu, choose Photoshop Elements > Contact Sheet II. Unless you select specific images, the contact sheet will include all images currently displayed in Adobe Bridge. You can select a different image folder or select other currently open images after the Contact Sheet II dialog box opens.
- 2 In Photoshop Elements choose File > Contact Sheet II.
- 3 Click to select an image in Bridge. Shift-click to select a series of images. Ctrl-click (Windows) or Command-click (Mac OS) to select noncontiguous images
- 4 In the Contact Sheet II dialog box, specify the images to use from the Use menu in the Sources images area.
- 5 In the Document area, specify the dimensions, resolution, and color mode for the contact sheet. Select Flatten All Layers to create a contact sheet with all images and text on a single layer. Deselect Flatten All Layers to create a contact sheet in which each image is on a separate layer and each caption is on a separate text layer.
- 6 In the Thumbnails area, specify layout options for the thumbnail previews.
 - For Place, choose whether to arrange thumbnails across first (from left to right, then top to bottom) or down first (from top to bottom, then left to right).
 - Enter the number of columns (between 1 and 9) and rows that you want per contact sheet. The thumbnail size and number of rows adjust according to your choice. If the number of photos exceeds the capacity of a single page, more pages are added to accommodate them.
 - Use Auto-Spacing to let Photoshop Elements automatically space the thumbnails in the contact sheet. If you deselect Use Auto-Spacing, you can specify the vertical and horizontal space around the thumbnails.
- 7 Select Use Filename As Caption to label the thumbnails using their source image filenames. Use the menu to specify a caption font and font size.
- 8 In Photoshop Elements, choose File > Print.

Print a picture package

Picture Package lets you place multiple copies of a photos on a single page, much as traditional portrait studios do. You can choose from a variety of size and placement options to customize your package layout.



Picture packages come in a variety of sizes

- 1 If you are using pictures from Adobe Bridge, open Adobe Bridge and select the images.
- 2 In Photoshop Elements, choose File > Picture Package.
- 3 Select the location of the source images.
- 4 Set Document and Label options. An example of the layout option you select appears in the Layout box.
- 5 To modify the selected layout, click Edit Layout and make selections in the Picture Package Edit Layout dialog box.

Note: Depending on the layout you choose, the images are oriented to produce the optimum coverage of the printable area. This feature is automatic and cannot be overridden. You cannot rotate the images placed in the layout.

- 6 Select the picture package and click Print.

Options for printing and sharing

Print options

Set page and printer options

- 1 Choose File > Print > Page Setup.
- 2 In the Page Setup dialog box, set options such as paper size and orientation.

Specify measurement units for printing

- 1 Choose Photoshop Elements > Preferences > Units & Rulers.
- 2 Choose either Inches or Centimeters/Millimeters from the Print Sizes box. This setting determines the sizes you can choose from when you print or crop a photo.

Sharing photos

Sending photos by e-mail

Photoshop Elements streamlines sharing photos by e-mail.

You can share files by e-mail in the following ways (regardless of the format, all tags, and metadata are preserved in your e-mailed file):

PDF Slide Show Combines image and media files into a single PDF file. Your recipients can view the PDF file as a slide show by using the free *Adobe Reader* software.

E-mail Attachments Lets you send image as individual e-mail attachments. You can specify the size of the photo. You can also convert images to JPEG format if they are in a different format.

Before sending your files, it's best to set your e-mail preferences. You can adjust the image size and compression setting so that photos download quickly yet retain sufficient detail for online viewing.

After setting up your e-mail account, you can share your photos and videos with friends and family.

Send photos by e-mail

- 1 Select a photo in the Project Bin, click the Share  tab, and then click the E-mail Attachments button.

The New Message window is displayed with the attached photo.

Note: If you are e-mailing a photo for the first time, you are asked to confirm the e-mail service you want to use. Confirm your choice and click OK.

- 2 Compose your message.
- 3 Select recipients of the e-mail, and click Send.

Set e-mail preferences

- 1 Launch Apple Mail.
- 2 Select Mail > Preferences, and set the e-mail preferences.

Burn media files to CD/DVD

- 1 Select the media files you want to copy in the Project Bin, and click Share.
- 2 Click CD/DVD.

The BurnDisc dialog box is displayed.

- 3 Specify the burn options such as the writing speed, and click Burn.

The files are written to the CD or DVD.

Chapter 17: Keyboard shortcuts

Shortcuts help you view, select, edit, and use many of the other tools that are available in Full Edit mode.

Shortcuts

Keys for viewing images (Full Edit)

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Fit image in window	Command + 0
Magnify 100%	Command + Option + 0
Switch to Hand tool (when not in text-edit mode)	Spacebar
Switch to Zoom In tool	Spacebar + Command
Switch to Zoom Out tool	Spacebar + Option
Zoom in	Command +
Zoom out	Command -
Reposition zoom marquee while dragging	Spacebar-drag
Zoom in on specified area of an image	Command-drag over preview in Navigator panel
Scroll image with Hand tool	Drag, or drag view area box in Navigator panel
Scroll up or down 1 screen	Page Up or Page Down
Scroll up or down 10 units	Shift + Page Up or Page Down
Scroll left or right 1 screen	Command + Page Up or Page Down
Scroll left or right 10 units	Command + Shift + Page Up or Page Down
Move view to upper-left corner or lower-right corner	Home or End

Keys for selecting tools

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Cycle through tools that have the same keyboard shortcut	Shift-press keyboard shortcut (preference setting, Use Shift Key for Tool Switch, must be enabled)
Cycle through nested tools	Option-click tool
Move tool	V
Zoom tool	Z
Hand tool	H

Result	Shortcut
Eyedropper tool	I
Rectangular Marquee tool	M
Elliptical Marquee tool	
Lasso tool	L
Magnetic Lasso tool	
Polygonal Lasso tool	
Magic Wand tool	W
Selection Brush tool (or Quick Selection tool)	A
Horizontal Type tool	T
Vertical Type tool	
Horizontal Type Mask tool	
Vertical Type Mask tool	
Crop tool	C
Recompose tool	C
Cookie Cutter tool	Q
Straighten tool	P
Red Eye Removal tool	Y
Spot Healing Brush tool	J
Healing Brush tool	
Clone Stamp tool	S
Pattern Stamp tool	
Pencil tool	N
Eraser tool	E
Background Eraser tool	
Magic Eraser tool	
Brush tool	B
Impressionist Brush	
Color Replacement tool	
Smart Brush tool	F
Detail Smart Brush tool	F
Paint Bucket tool	K
Gradient tool	G

Result	Shortcut
Rectangle tool Rounded Rectangle tool Ellipse tool Polygon tool Line tool Custom Shape tool Shape Selection tool	U
Blur tool Sharpen tool Smudge tool	R
Sponge tool Dodge tool Burn tool	O
Show/Hide all panels (not including Content and Layers panel)	Tab
Default foreground and background colors	D
Switch foreground and background colors	X

Keys for selecting and moving objects

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Deselect a selection	Command + D
Reposition marquee while selecting	Spacebar-drag
Add to or subtract from a selection	Any selection tool + Shift or Option-drag
Intersect a selection	Any selection tool + Shift + Option-drag
Constrain marquee to square or circle (if no other selections are active)	Shift-drag
Draw marquee from center (if no other selections are active)	Option-drag
Constrain shape and draw marquee from center	Shift + Option-drag
Switch to Move tool	Command (except when Hand or any shape tool is selected)
Switch from Magnetic Lasso tool to Lasso tool	Option-click and drag
Delete last anchor point for Magnetic or Polygonal Lasso tool	Delete
Apply/cancel an operation of the Magnetic Lasso tool	Enter/Esc
Move copy of selection	Move tool + Option-drag selection
Move selection area 1 pixel	Any selection + Right Arrow, Left Arrow, Up Arrow, or Down Arrow
Move selection 1 pixel	Move tool + Right Arrow, Left Arrow, Up Arrow, or Down Arrow
Move layer 1 pixel when nothing selected on layer	Command + Right Arrow, Left Arrow, Up Arrow, or Down Arrow

Result	Shortcut
Increase/decrease detection width	Magnetic Lasso tool + [or]
Accept cropping or exit cropping	Crop tool + Enter or Esc
Toggle crop shield off and on	/ (forward slash)

Keys for the Magic Extractor dialog box

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Foreground brush	B
Background brush	P
Point Eraser	E
Add To Selection tool	A
Remove From Selection tool	D
Smoothing Brush tool	J
Zoom tool	Z
Hand tool	H

Keys for transforming selections

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Transform from center or reflect	Option
Constrain	Shift
Distort	Command
Skew	Command + Shift
Change perspective	Command + Shift + Option
Apply	Enter
Cancel	Esc or Command + . (period)

Keys for painting and brushes

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Switch to Eyedropper tool	Any painting tool or shape tool + Option (except Impressionist Brush)
Select background color	Eyedropper tool + Option-click
Set opacity, tolerance, or exposure for painting	Any painting or editing tool + number keys (for example, 0 = 100%, 1 = 10%, 4 and 5 in quick succession = 45%).
Cycle through blending modes	Shift + + (plus) or - (minus)
Fill selection/layer with foreground or background color	Option + Delete (Backspace), or Command + Delete (Backspace)
Display Fill dialog box	Shift + Delete (Backspace)
Lock transparent pixels on/off	/ (forward slash)
Connect points with a straight line (draw a straight line)	Any painting tool + Shift-click
Delete brush	Option-click brush
Decrease/increase brush size	[or]
Decrease/increase brush softness/hardness in 25% increments	Shift + [or]
Select previous/next brush size	, (comma) or . (period)
Select first/last brush	Shift + , (comma) or . (period)
Display precise cross hair for brushes	Caps Lock

Keys for using text

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Move type in image	Command-drag type when Type layer is selected
Select 1 character left/right or 1 line down/up, or 1 word left/right	Shift + Left Arrow/Right Arrow or Down Arrow/Up Arrow, or Command + Shift + Left Arrow/Right Arrow
Select characters from insertion point to mouse click point	Shift-click
Move 1 character left/right, 1 line down/up, or 1 word left/right	Left Arrow/Right Arrow, Down Arrow/Up Arrow, or Command + Left Arrow/Right Arrow
Select word, line, or paragraph	Double-click, triple-click, or quadruple-click
Scale and skew text within a bounding box when resizing the bounding box	Command-drag a bounding box handle
Align left, center, or right	Horizontal Type tool or Horizontal Type Mask tool + Command + Shift + L, C, or R
Align top, center, or bottom	Vertical Type tool or Vertical Type Mask tool + Command + Shift + L, C, or R
Return to default font style	Command + Shift + Y
Turn Underlining on/off	Command + Shift + U
Turn Strikethrough on/off	Command + Shift + / (forward slash)
Decrease or increase type size of selected text 2 pts/px	Command + Shift + < or >

Keys for the Layers panel

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Set layer options	Option-click New button
Delete without confirmation	Option-click Trash button
Apply value and keep text box active	Shift + Enter
Load layer transparency as a selection	Command-click layer thumbnail
Add to current selection	Command + Shift-click layer thumbnail
Subtract from current selection	Command + Option-click layer thumbnail
Intersect with current selection	Command + Shift + Option-click layer thumbnail
Merge visible layers	Command + Shift + E
Create new empty layer with dialog	Option-click New Layer button
Create new layer below target layer	Command-click New Layer button
Activate bottom/top layer	Shift + Option + [or]
Select next layer down/up	Option + [or]
Move target layer down/up	Command + [or]
Merge a copy of all visible layers into target layer	Command + Shift + Option + E
Merge down	Command + E
Copy current layer to layer below	Option + Merge Down command from the panel pop-up menu
Copy all visible layers to active layer	Option + Merge Visible command from the panel pop-up menu
Show/hide all other currently visible layers	Option-click the eye icon
Toggle lock transparency for target layer, or last applied lock	/ (forward slash)
Edit layer properties	Double-click layer thumbnail
Select all text; temporarily select Type tool	Double-click text layer thumbnail
Create a clipping mask	Option-click the line dividing two layers
Rename layer	Double-click the layer name

Keys for using blending modes

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Cycle through blending modes	Shift + + (plus) or - (minus)
Normal	Shift + Option + N
Dissolve	Shift + Option + I
Behind	Shift + Option + Q
Clear	Shift + Option + R

Result	Shortcut
Darken	Shift + Option + K
Multiply	Shift + Option + M
Color Burn	Shift + Option + B
Linear Burn	Shift + Option + A
Lighten	Shift + Option + G
Screen	Shift + Option + S
Color Dodge	Shift + Option + D
Linear Dodge	Shift + Option + W
Overlay	Shift + Option + O
Soft Light	Shift + Option + F
Hard Light	Shift + Option + H
Vivid Light	Shift + Option + V
Linear Light	Shift + Option + J
Pin Light	Shift + Option + Z
Hard Mix	Shift + Option + L
Difference	Shift + Option + E
Exclusion	Shift + Option + X
Hue	Shift + Option + U
Saturation	Shift + Option + T
Color	Shift + Option + C
Luminosity	Shift + Option + Y

Keys for the Info panel

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Change color readout modes	Click eyedropper icon
Change measurement units	Click cross-hair icon

Keys for the Color Swatches panel

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Create new swatch from foreground color	Click in empty area of panel
Select background color	Command-click swatch
Delete color	Option-click swatch

Keys for the Filter Gallery

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Apply a new filter on top of selected	Option-click on a filter
Open/close all disclosure triangles	Option-click on a disclosure triangle
Change Cancel button to Default	Command
Change Cancel button to Reset	Option
Undo/redo	Command + Z
Step forward	Command + Shift + Z
Step backward	Command + Option + Z

Keys for the Liquify filter

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Warp tool	W
Turbulence tool	T
Twirl Clockwise tool	C
Twirl Counter Clockwise tool	L
Pucker tool	P
Bloat tool	B
Shift Pixels tool	S
Reflection tool	M
Reconstruct tool	E
Zoom tool	Z
Hand tool	H

Keys for using Photomerge Panorama

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Select Image tool	A
Rotate Image tool	R
Set Vanishing Point tool (Perspective option selected)	V
Zoom tool	Z
Move View tool	H
Switch to Hand tool	Spacebar

Result	Shortcut
Step backward	Command + Z
Step forward	Command + Shift + Z
Move selected image 1 pixel	Right Arrow, Left Arrow, Up Arrow, or Down Arrow
Change Cancel button to Reset	Option
Show individual image border	Option-move pointer over image

Keys for the Camera Raw dialog box

This partial list includes the most helpful shortcuts. You'll find additional shortcuts in menu commands and tool tips.

Result	Shortcut
Display highlights that will be clipped in Preview	Option-drag Exposure or Blacks sliders
Enable Open Copy button in the Camera Raw dialog box	Option

Chapter 18: Glossary

The glossary is your guide to unfamiliar terms in Photoshop Elements and digital imaging terms. If you don't find a term here, search for it in Help to find a feature-specific definition.

Find definitions for terms

- ❖ In the Contents tab of Help, expand the letters below “Digital imaging terms.” If you don't find a term there, enter it in the Search box to find it elsewhere in Help.

Digital imaging terms

A

acquisition module interface A plug-in that allows you to import photos from a digital camera or scanner.

active layer The layer currently selected in the Layers panel.

additive primaries Red, green, and blue. The human eye perceives all other colors as combinations of these three. To create colors besides the additive primaries, computer monitors combine these three colors of light. For instance, to create yellow, a monitor emits a combination of red and green light. When combined with each other at maximum intensity, the additive primaries create white. (See also “[subtractive primaries](#)” on page 302.)

adjustment layer A layer that lets you apply color and tonal adjustments to your image without permanently changing pixel values. Use adjustment layers to experiment with color and color tones. You can think of an adjustment layer as a veil through which the underlying layers are seen. (See also “[layer](#)” on page 297.)

ADM Adobe Dialog Manager. A file required for many plug-ins in Photoshop Elements.

Adobe Bridge Companion product for managing photos.

Adobe Color Engine Manages colors you view on-screen and in print. It is used to map the gamut of one color space to the gamut of another.

Adobe Color Picker A built-in utility for specifying a foreground or background color in an Adobe application.

Adobe Photo Downloader A feature of Photoshop Elements that automatically searches for and downloads photos from attached card readers, cameras, or mobile phones. You can disable the automatic detection through General Preferences in Adobe Bridge.

Adobe RGB The RGB color space profile created by Adobe Systems, Incorporated. It provides a large gamut of colors. (See also “[RGB](#)” on page 300.)

AGMLib An Adobe Graphics Manager library file, which Photoshop Elements installs with and requires.

airbrush An brush option that lets you apply gradual tones to an image, simulating traditional airbrush techniques. Paint builds up as you apply more pressure. Using this option simulates the effect of spray-painting an image.

aliasing The jagged edges seen at the edges of diagonal lines, arcs, and so on, caused by pixels lining up in a saw-tooth pattern.

alpha channels Masks, which let you manipulate, isolate, and protect specific parts of an image. In Photoshop Elements, alpha channels are called saved selections. To save an alpha channel, choose Select > Save Selection. To load an alpha channel, choose Select > Load Selection.

ambient light The existing lighting conditions under which a photo is taken, without enhancement from a camera flash.

animated GIF A series of images in GIF format that create the illusion of movement when they are displayed in sequence over time.

anti-aliasing The smoothing of jagged edges in digital images by averaging the colors of the pixels at a boundary.

arithmetic coded JPEG A type of file compression used to compress JPEG files.

artifact Any unexpected and undesired change to a digital image caused by incorrect settings or faulty processing. Examples include blooming, moire, sharpening, and noise.

aspect ratio The ratio of an image's width to its height. It is used to determine how an image fits on a page or monitor.

associated Related to an application (also, file association). Each file type has an associated application. For example, PSD files are associated with Photoshop and Photoshop Elements. You receive an alert if you try to open a file that lacks an associated application.

Auto Levels An automatic color-correction command.

B

Background layer The bottom-most layer in an image, usually containing the image data. The Background layer is always locked. If you want to change its stacking order, blending mode, or opacity, you must first convert it to a regular layer.

backlight Light coming from a source behind the photographed subject.

bas relief In digital photography, the illusion that an image is slightly raised from its background surface.

baseline JPEG The standard compression scheme for JPEG files. Baseline JPEG files display in line-by-line passes when viewed on the web.

batch processing Performing one or more tasks to a group of files at the same time.

bevel A raised or depressed effect around all or part of an image or text. Bevels are created by applying highlight and shadow to the inside and outside edges of its border to simulate three-dimensional depth.

bit depth The number of colors used to represent a pixel in an image. A 1-bit image is black and white; an 8-bit image can have 256 colors or shades of gray; a 16-bit image can have 65,536 colors.

bitmap image An image consisting of rows and columns of pixels in computer memory. Also called a raster image. Bitmap file formats include BMP, GIF, JPEG, PSD, PICT, and TIFF. (See also "[vector graphics](#)" on page 303.)

bits/channel Bits per channel. This measurement determines how many tones each color channel can contain.

black body A theoretical material that is black when completely cold and that begins to glow in various colors as it is heated. As its temperature (measured in degrees Kelvin) rises, it begins glowing in colors ranging from red (coolest) to white (hottest). (See also "[color temperature](#)" on page 293.)

blending mode A feature that controls how pixels in an image are affected by a painting or editing tool. The blend color is applied to the base (original) color to produce a new color, the result color. When applied to layers, a blending mode determines how the pixels in a layer blend with pixels in layers beneath it.

blooming An artifact caused by overflow of color information from one sensor in a camera (corresponding to a pixel) to adjacent ones. Blooming can cause streaks, halos, and loss of detail. (See also "[artifact](#)" on page 291.)

blur The softening of the detail in an image or parts of a image.

BMP A standard file format for saving bitmap files in Windows. Windows can display BMP files on any type of display device.

bounding box A rectangular border around an image, shape, or text that you can drag to rotate or resize.

brightness The relative lightness or darkness of an image, which determines the intensity of colors. Also, the relative lightness or darkness of any color. (See also “[luminance](#)” on page 297.)

brightness value The brightness of an image or selection, usually measured as a percentage from 0% (black) to 100% (white).

brush preset A brush with preset settings for size, thickness and so on. Photoshop Elements includes several brush presets for you to choose from, and you can create your own as well. The maximum number of brush presets that you can create in Photoshop Elements: 8000.

brush type One of the following brush tool styles: brush, impressionist brush, or airbrush.

burning The selective darkening of a part of an image.

C

cache file A file used for virtual memory. The cache file speeds the performance of Photoshop Elements.

camera raw format A format describing data exactly as it is captured by a camera sensor, with no in-camera processing applied. Also called *raw format*. (This format differs from “[Photoshop raw format](#)” on page 299.)

canvas The workspace around an existing image, within the image window. Layer data may lie outside of the canvas, but it will be clipped to the canvas when the image is flattened. You can change the size and color of the canvas by choosing Image > Resize > Canvas Size.

card reader Portable hardware on which you can store, upload, or download photos, audio, video, and other data. You can download data from a card reader into Adobe Bridge.

CCITT Comité Consultatif International Téléphonique et Télégraphique. A group that defines communications standards. Now known as the ITU-T (International Telecommunications Union-Telecommunication Standardization sector). The CCITT has developed a family of lossless compression techniques for black-and-white images.

channel A construct for describing the color data in an image. A black-and-white grayscale image has one channel, an RGB image has three, and a CMYK image has four. Ordinarily, a channel describes either red, green, or blue, which are blended to create all colors.

chroma See “[saturation](#)” on page 300.

CIE Commission Internationale de l’Éclairage. A group that defined universal color standards in the early 1930s. The Lab color model was developed by CIE.

clipboard The temporary holding area for data stored with the Cut or Copy commands.

clipboard path data Data for vector paths stored on the clipboard. Vector paths are used with vector data such as text layers or shape layers.

clone To paint with the Clone Stamp tool. You must set a sampling point on the active layer (by holding the Alt key and clicking the mouse) before you paint with the Clone Stamp tool.

CMap files Files used to access character sets in double-byte fonts such as Japanese fonts.

CMYK Cyan, magenta, yellow, and black—the inks most printers use to produce color images. Though Photoshop Elements does not support CMYK color mode, most desktop printers automatically convert to it.

color cast An unwanted or unexpected color shift in a photo. For example, a photo taken indoors without a camera flash may have too much yellow.

color channels The component colors from which all colors in an image are created. Usually refers to red, green, and blue (RGB).

color depth Measures how much color information is available to display or print each pixel in an image. Greater color depth means more available colors and more accurate color representation in the digital image.

color gamut The range of colors that a device can reproduce in any given color space.

color lookup table (CLUT) A system used to index or reference colors when the bit depth is insufficient to represent all colors.

color management A system used to achieve consistent color as an image travels from one device to another (for example, from camera to computer, and computer to printer).

color mode Determines how the components of a color are combined, based on the number of color channels in the color model. Color modes include grayscale (1 channel), RGB (3 channels), and CMYK (4 channels), among others. Photoshop Elements supports bitmap, grayscale, indexed, and RGB color modes.

color model Any system for specifying the components of color. The main color models are RGB, CMYK, and HSB.

color separation The conversion of RGB color data into CMYK data for printing.

color space A color mode designed for a particular device or purpose. For instance, Adobe RGB is the color space used by Adobe applications, and sRGB is the color space used by most monitors. Color spaces are important in color management, where the color profile of an image is reconciled with the color space of the application or device on which it is viewed. The color space used by Adobe applications is sometimes called the *working space*.

color table See “[color lookup table \(CLUT\)](#)” on page 293.

color temperature (1) The position of a color along a continuum from warm (red) to cool (blue). (2) The degree of heat (in degrees Kelvin) that an object would have to absorb before it glowed in a certain color. Each color is associated with a color temperature, as are various kinds of light.

color value A mathematical description of the color of a pixel determined from its color components.

color wheel A representation of the colors in the visible spectrum arranged in a circle so that complementary colors are directly opposite each other.

ColorSync Color management software provided by Apple.

command Refers to any menu item you choose to perform a desired operation.

complementary colors Two colors of light that, when combined, create white light, or two colors of ink that, when combined, create black. Complementary colors are opposing colors on a color wheel.

composite Multiple photos combined into a single image.

compression A technique that reduces the file size of bitmap images.

content layers Any layer in Photoshop Elements that contains an image, text, or object.

contrast The difference in brightness between light and dark areas of an image. Contrast determines the number of shades in the image.

cool colors The colors at the blue end of the spectrum.

CoolType A font technology from Adobe that improves on-screen text resolution.

Cos object An internal part of an Adobe PDF file.

craquelure Hairline surface cracking seen in old paintings, and the effect used to simulate surface cracking in photographic images.

cropping Trimming a portion of an image to improve its composition or to create a frame around it.

custom shape A shape listed in the Custom Shape menu in the options bar. The Custom Shape menu is available when you select the Custom Shape tool.

D

definition Sharpness or clarity of detail in an image.

differential JPEG files A type of coding method used with certain JPEG files. Differential JPEG files are not supported in Photoshop Elements.

digital camera A camera that records image data in pixels, which consist of bits of information that a computer can process.

dithering The approximation of an unavailable color through the use of two or more available colors. The color of adjacent pixels is changed in an attempt to reproduce the unavailable color.

dodging The selective lightening of any part of an image.

dots per inch (dpi) A measure of printer resolution. High dpi settings produce prints with fine detail. (See also “[pixels per inch \(ppi\)](#)” on page 299.)

double-byte fonts A term used to describe Asian fonts, often called CJK (Chinese, Japanese, Korean) fonts. Two bytes, rather than one, are needed to represent each character.

droplet A small application that batch processes images that you drag onto the droplet icon. Photoshop Elements does not support droplets.

Duotone A two-color grayscale file that uses two custom inks. Photoshop Elements does not support duotone files.

E

embedded profile An ICC (color) profile resident in an image file. This profile ensures that image colors are correctly interpreted. (See also “[color management](#)” on page 293.)

end-of-file The last line of readable code in a file. The error “Unexpected end-of-file” indicates that the file you are trying to work with is damaged.

EPS Encapsulated PostScript. A file format used to save images that will be used in illustration and page-layout programs

EPS file An Encapsulated PostScript file. A graphic file format that can represent both vector and bitmap data and is supported by virtually all graphic, illustration, and page-layout programs.

EPS PICT preview A low-resolution screen preview saved with a Macintosh EPS file.

EPS TIFF preview A low-resolution screen preview saved with an EPS file.

error log A text file generated when an error occurs while running the Batch Processing command or the Process Multiple Files command.

errors A system or application message that alerts you to a failed command or operation.

EXIF Exchangeable Image File Format. A standard for simplifying the exchange of data between cameras and software. The data may include camera model, date and time the photo was taken, camera settings, shutter speed, and so on.

export module A plug-in that enables you to export images in different file formats from Photoshop Elements.

exposure A measure of the amount of light in which a photo was taken. Underexposed digital photos are too dark; overexposed ones, too light.

extension module A plug-in for Photoshop Elements that enhances performance or adds features.

F

fade When used with painting tools, fade controls the number of steps until the paint flow fades to nothing.

fall-off Decrease in light as it travels from its source. Also the length of the transition between related colors in the Hue/Saturation dialog box.

faux bold style A type style that allows you to apply a bold effect to a font family that does not include a bold style.

faux font A computer-generated version of a font that simulates the appearance of an unavailable font.

FDF File containing comments from an Adobe Acrobat PDF file. Photoshop Elements cannot open FDF files.

feathering The softening of an edge of a selection.

file-format module A plug-in that allows Photoshop Elements to open different file types.

fill layer A type of layer that contains a solid color, a pattern, or a gradient as an interchangeable attribute.

filter module A filter plug-in installed with Photoshop Elements and listed in the Filter menu.

filters Presupplied ways to alter the look of an image, for instance, to make it look like a mosaic, add unique lighting, apply distortions, and so on.

flattening Merging all visible layers into the Background layer to reduce file size.

font A set of letters, numbers, punctuation marks, and symbols that share a common weight, width, and style. An example is Times Italic.

font family A collection of fonts with the same name but different styles. For instance, Times Italic, Times Bold, and Times Bold Italic all belong to the same font family.

font server An internal engine in Photoshop Elements that allows the application to use and display fonts.

font style A variant version of an individual font in a family. Italic, regular, and bold are font styles.

48-bit RGB color A high-bit image mode that can contain thousands of colors per channel. Photoshop Elements supports 8-bit or 16-bits per color channel, so an RGB image can be a total of 24-bit or 48-bit, depending on the bit depth per channel.

frame layer A layer masking an image in a photo creation. A frame layer borders an image and can be resized, rotated, or repositioned using the same methods used for images.

fuzziness A tolerance setting for the Magic Wand tool and the Replace Color command. It controls the degree to which related colors are included in the selection. See Tolerance.

G

gamma adjustment The contrast resulting from darkening or lightening the midtones of an image. When you adjust the gamma, you change the brightness of the midtones without substantially affecting the highlights and shadows.

gamut The range of color that a device can reproduce. (See also “[color space](#)” on page 293.)

Gaussian blur A softening effect applied through a bell-shaped distribution of tones and colors.

GIF Graphic image file format. A file format suitable for images that contain line art, large areas of a single color, and text. Web animations are done with images in GIF format.

gradient Any of several methods for achieving a smooth transition between two adjacent colors, including black and white.

Gray working space profile A predefined profile that determines how best to display and print grayscale images for a given color setting.

grayscale A single-channel image that includes only black, white, and shades of gray. Depending on the bit depth, grayscale images can reproduce various shades of gray.

H

halftone A monochrome image made up of variably sized dots simulating the shades of gray in a photograph. It is used for reproducing photographs on PostScript printers and printing presses.

highlight and shadow The lightest and darkest colors in an image.

highlights The brightest elements in an image. (See also “[shadows](#)” on page 301.)

histogram A bar chart showing the distribution of the pixel values in a digital image. The horizontal axis represents levels from 0 (darkest) to lightest (255), and the vertical axis represents the numbers of pixels at each level.

history state An image state listed in the Undo History panel.

hotspot An area in which light is concentrated to such a degree that all detail is lost; that is, an area that is blown out to white.

HSB A color mode that is based on the human perception of color and describes it according to hue, saturation, and brightness.

hue The color reflected from or transmitted through an object. In common use, hue is the property that allows a color to be distinguished as red, blue, yellow, and so on; the “color of a color.”

hue jitter Sets the rate at which the stroke color switches between the foreground and background colors. Higher values cause more frequent switches between the two colors than lower values.

I

ICC International Color Consortium. ICC device profiles are the industry standard for reproducing colors accurately across devices such as scanners, monitors, and printers. (See also “[profile](#)” on page 299.)

ICM Image Color Management, is Windows’s built-in color management system that uses color profiles for images and devices such as scanners or printers. Similar to Apple’s ColorSync on Mac OS.

illuminance A measure of the light falling upon a subject in a photograph.

image cache A section of hard disk space used as virtual memory. The image cache speeds the on-screen redraw of high-resolution images.

image mode The color mode of an image, such as Grayscale or RGB.

indexed color A color that is rendered by using a pixel value as an index to a panel of 256 or fewer colors for interpretation.

interlaced video Video generated by a system developed for early television and still in use in standard television displays. Video is displayed on-screen at 30 frames per second (NTSC) or 25 frames per second (PAL). Each frame is divided into two interlaced *fields*, each displayed for 1/60 of a second. The odd field contains all the odd-numbered scan lines, and the even field contains all the even-numbered scan lines of a video frame. The human eye perceives the information in two sequential interlaced fields as one unified frame. (See also “[progressive scan](#)” on page 299.)

interlacing The display of a series of low-resolution versions of an image in a browser while the full image file is downloaded.

J

jitter Specifies the randomness of a brush stroke.

JPEG Joint Photographic Experts Group. A committee of experts that develops algorithms for compressing computer image files. Also, any graphic file to which a JPEG algorithm is applied. JPEG is the format generally used to share photographs over the web.

JPEG compression A lossy compression technique that reduces image data and file size. (See also “[lossy compression](#)” on page 297.)

K

keyword tag A label that you attach to photos to organize them. You create your own tags according to the people, places, and events that they represent. You can attach multiple tags to a photo. Once tagged, you can easily find photos by filtering on the keyword tag in Adobe Bridge.

kumimoji See “[tate-chuu-yoko](#)” on page 302.

L

layer A mechanism for overlaying and combining multiple images. Layers are like transparent sheets of acetate (clear plastic) that you can stack and rearrange. In addition to ordinary image layers, there are special kinds of layers. (See “[fill layer](#)” on page 295 and “[adjustment layer](#)” on page 290.)

layer group A collection of layers saved with a Photoshop image. When you open a file with a layer group in Photoshop Elements, individual layers in the set are hidden in a read-only folder. To edit a layer group in Photoshop Elements, you must first simplify the layer.

layer mask A protected area in an adjustment layer. Areas below the mask cannot be edited.

Levels Functionality for adjusting color and tone. With a Levels adjustment, you can set shadow and highlight values to use a full tonal range, adjust middle tones only, correct color casts, and so on.

locked A file that is set as Read Only.

locked layer A layer in the Layers panel that has the lock icon applied. No changes can be made to a locked layer. A Background layer is always locked.

lossless compression An image-compression technique that prevents image degradation caused by data loss. Lossless techniques usually use lower compression ratios than lossy techniques.

lossy compression An image-compression technique using compression ratios that result in the loss of some image data.

luminance Lightness. Technically, the highest plus lowest RGB values divided by two.

LZW (Lemple-Zif-Welch) A lossless technique especially suited for compressing images that contain large areas of a single color.

M

matting A method for simulating transparency in images displayed on web pages. When transparency is not supported, you can specify a matte color that matches the background to simulate transparency.

mezzotint An effect that simulates the pattern of light and shade seen in engravings made from a roughened plate.

Microsoft Panel file A color table attached to an image file.

midtone An area that falls between the brightest highlight and the darkest shadow.

moire A wavy striped pattern in an image, resembling the pattern of watered silk. Moire can be an artifact caused by a camera's inability to capture the detail in an image.

mojikumi A system for determining spacing between punctuation, symbols, and numbers in Japanese type.

monitor resolution The resolution of a monitor, described in pixel dimensions. The size of an image displayed on-screen depends on the pixel dimensions of the image, the size of the monitor, and the monitor resolution. (See also "[resolution](#)" on page 300 and "[printer resolution](#)" on page 299.)

N

noise An artifact caused by interference or camera error. Noise is often seen as stray pixels of unexpected color or a generally "grainy" appearance. Certain compression techniques can amplify noise.

noise gradient A gradient that contains randomly distributed colors within a range of specified colors.

non-fringe pixels Pixels that are more than 50 percent selected in an anti-aliased selection.

notes A note added to a Photoshop file. In Photoshop Elements you can view and delete notes, but you can't add them.

O

online service Any service to which you can connect to and order from over the Internet. You can access online services directly from Photoshop Elements to order prints, photo books, cards, and such. In addition, you can share your photos online through online sharing services. Services vary by geographic region.

opacity The extent to which something blocks light. You can change the opacity of layers, filters, and effects so that more (or less) of the underlying image shows through.

opaque The opposite of transparent. When text, shapes, or layers are opaque you cannot see through them.

Options bar The location of all tools in Full Edit mode.

P

Panel Bin The space located under the Edit, Create, and Share tabs in Full Edit mode. For easy access, drag and drop any of the nine panels from the Window menu into the Panel Bin.

panorama A broad view of a subject, usually a landscape, made by overlapping individual shots as they are taken and then merging them to form one image.

parser module A plug-in that converts vector data into bitmap data.

pattern A predefined pattern included with Photoshop Elements, or a pattern you create. You can use patterns with fill layers, the Fill command, the Pattern Stamp tool, or the Paint Bucket tool.

PDF (PDP) Portable Document Format. An Adobe file format that captures the elements of a printed document, including graphics and photos, as an electronic image. You can search, navigate through, print, and e-mail PDF documents. PDF and PDP files are identical, except that PDF files are opened in Adobe Acrobat and PDP files are opened in Adobe Photoshop Elements.

perspective The angle or level from which a photograph is taken; the camera-eye view.

phosphor The substance that coats the interior surface of a CRT monitor. It emits light in response to electrical stimulation and affects how colors appear on the screen. Over time, changes in the phosphor make it necessary to recalibrate or reprofile the monitor.

Photomerge A family of features for creating a single composite image from multiple source images.

Photoshop raw format A format designed to accommodate images saved in undocumented formats, such as those used in scientific applications. (This format differs from “[camera raw format](#)” on page 292.)

PICT A file format for storing digital images in Mac OS.

pixel The basic, rectangular unit of data that a digital image consists of. The edges of pixels can produce a saw-tooth pattern unless anti-aliasing is used. (See also “[bitmap image](#)” on page 291.)

pixel dimensions The number of pixels along the width and height of an image. This is a measure of the amount of image data in the photo, not its physical size when printed or displayed on a monitor.

pixels per inch (ppi) A measure of image resolution stored in a camera or computer file. High ppi settings produce photographs with fine detail and large file size. (See also “[dots per inch \(dpi\)](#)” on page 294.)

PixMap A bitmap image stored in your computer’s memory.

plug-in module A small software program developed by Adobe or third parties to add functionality to Adobe products.

PNG-24 Portable Network Graphics. An image format that supports 24-bit color. Like the JPEG format, PNG-24 preserves photographic detail. Unlike JPEG, it supports 256 levels of transparency.

PNG-8 Portable Network Graphics. A bitmap image format that uses 8-bit color. Like the GIF format, PNG-8 efficiently compresses areas of solid color while preserving sharp detail in line art, logos, or type.

point The default unit of measurement for type, for instance Times Roman Regular, 12 points.

pointillism A style of painting in which paint is applied in very small dots that cannot be discerned individually at a distance. The eye merges the dots into the perceived color.

posterize To reduce the number of continuous tones in an image. Posterization results in a flat, cartoon-like image. The effect can be deliberately applied but sometimes results from overcompression.

PostScript A programming language developed by Adobe that describes the appearance of text, graphic shapes, and sampled images on printed or displayed pages.

printable character A text object that can be printed.

printer profiles Profiles that describe how printers reproduce colors.

printer resolution The fineness of detail that a printer can render in an image. It is measured in ink dots per inch (dpi). Generally a resolution of 240 dpi provides good results when you print high-quality photos on an inkjet printer. (See also “[resolution](#)” on page 300 and “[monitor resolution](#)” on page 298.)

profile Information about the color space of a device, application, or photo file. An ICC device color profile allows an image’s color data to be converted so that color is reproduced faithfully on that specific device. (See also “[color management](#)” on page 293.)

progressive scan A process of displaying images on-screen that draws 60 complete frames of video from left to right every second. Progressive scan creates a cleaner, clearer picture than interlaced video.

project A product that you make using your photos in Photoshop Elements. You can create slide shows, greeting cards, calendars, and more.

Project Bin Location where thumbnails of all open images appear. Some workflows, such as a Faces session, require that you select images from the Project Bin. To change the active image, double-click on a thumbnail.

PSD The native file format of Adobe Photoshop and Adobe Photoshop Elements.

PSE The file format for saving and opening multiple pages as a single file in Adobe Photoshop Elements. Photoshop and other editors will open the individual PSDs that compose the PSE.

Q

QuickTime Software from Apple that allows you to view movies and other multi-media files on your computer.

R

RAID Redundant Array of Independent Disks, a category of disk drives that use two or more drives at the same time to improve performance and ensure a graceful response in the event of a hardware or software failure.

raster image See “[bitmap image](#)” on page 291.

rasterizer The engine in Photoshop Elements that converts vector data, such as text, to bitmap data.

red eye The reflection of the camera flash from the retina of a photographed subject, resulting in a red dot in the subject’s eye. You can eliminate it automatically when you import images or by using the Red Eye Removal tool.

Rename Multiple Files Allows you to automatically rename several files at once. Available with the Process Multiple Files command.

rendering Converting a vector layer such as a shape layer or a text layer into a normal layer. To convert a vector layer into a normal layer, choose Layer > Simplify Layer.

renmoji See “[tate-chuu-yoko](#)” on page 302.

resample To change the resolution of an image by changing its pixel dimensions. Downsampling is decreasing the number of pixels, and resampling up (or upsampling) is increasing the number.

resolution A measure of the clarity and sharpness of an image. In digital images, it is measured in pixels per inch. (See also “[monitor resolution](#)” on page 298 and “[printer resolution](#)” on page 299.)

resolution independence Lets an image be resized without changing its resolution. In a typical bitmap image, pixel resolution is fixed, so if you enlarge the image, quality is reduced. With resolution independence, however, an image isn’t rendered into pixels until it is simplified or printed.

reticulation A traditional photographic effect caused by the rapid changing of the film emulsion from hot to cold (hot developer to cold fixer). It produces a random pattern of lines in a photographic image, less fine than craquelure.

revert The command that reverts the image to the last saved version.

RGB A model for representing colors on a computer display. Red, green, and blue (RGB) are combined in different proportions to represent any color. The RGB model can represent 256 x 256 x 256 colors.

RGB working space profile A color profile that defines an RGB working space, such as that for a digital camera or scanner.

RLE (run length encoding) A lossless technique for compressing the transparent portions of each layer in images. (See also “[lossless compression](#)” on page 297.)

S

sample To select a color with the eyedropper in order to use it with a drawing or painting tool.

saturation The purity, or strength, of a color. A fully saturated color contains no gray. Saturation controls make colors more vivid (less black or white added) or more muted (more black or white added).

scanning The process of converting a tangible image, such as a slide or print, into a digital image by using light shining onto sensors such as Charged Couple Devices (CCDs).

scatter Determines how brush marks are distributed in a stroke.

scatter spacing Determines the spacing between elements in a brush stroke.

Scitex file A high-resolution file for use with proprietary Scitex systems. Photoshop Elements can open Scitex files that are in RGB color mode.

scratch disk Photoshop Elements' own virtual memory system, which uses any disk drive or drive partition with free space. You can designate scratch disks to be used whenever there is not enough RAM to perform an operation.

screen resolution The dimensions of the pixel grid used by a monitor.

selection A part of an image selected for manipulation of any kind—duplication in a layer, color correction, deletion, rotation, and so on. The selection consists of all the pixels—fully or partially selected—contained within the selection boundary.

selection module A plug-in that enables you to make a selection in Photoshop Elements, such as the TextureSelect plug-in that is used by the Magic Selection Brush tool and the Magic Extractor.

sepia print A photograph in tones of brown. Photo-editing programs simulate this antique look by applying special effects.

shadows The darkest elements in an image, and the degree of detail that is discernible in those the dark portions. (See also [“highlights”](#) on page 296.)

shape layer A layer that contains vector-based shapes. (See also [“layer”](#) on page 297.)

sharpening In photo-editing programs, any functionality that enhances the details at the edges of photographed objects and people. Sharpening is often applied as part of in-camera processing as well, although no sharpening is applied to camera raw file images. (See also [“Unsharp Mask”](#) on page 303.)

sharpening halo An artifact, seen as a bright ring or line around edges, caused by too much sharpening. (See also [“artifact”](#) on page 291.)

silhouette A dark mass outlined against a light background.

simplifying Converting a text layer, shape layer, solid color layer, gradient layer, or pattern fill layer to a regular image layer. You must simplify these layer types before applying filters or using the painting tools.

single channel images An image that contains one channel such as a bitmap-mode, grayscale, or indexed-color image.

16-bit grayscale A high-bit image mode that can contain thousands of shades of gray. Photoshop Elements supports flattened 16-bit images (it does not support layers in 16-bit images).

skewing Deviation of the content of an image from a vertical or horizontal axis. Skewing can be a camera artifact or an intentionally applied effect.

slices Portions of an image in Photoshop that divide the image into functional areas. Slices are not supported in Photoshop Elements.

smoothing A technique for averaging the values of neighboring pixels to reduce contrast and create a soft, blurry effect.

spot channels A Photoshop channel that contains a spot color such as a Pantone color. Photoshop Elements does not support spot channels.

sRGB An RGB color space that's now a standard on the web. Most computer monitors can display only the colors in the sRGB color space. (See also [“color space”](#) on page 293.)

stack Photos that you group together under one photo. You can create stacks when you have multiple photos of the same subject and you don't want them all to clutter up the Bridge Content panel.

stroke (1) An outline around an image or part of an image created with the Stroke command or with a drawing, painting, or selection tool. (2) The characteristics of the lines created with one of the painting or drawing tools, especially brushes.

subtractive primaries Cyan, magenta, and yellow. In theory, when pigments of these three colors are combined in equal quantities, the result is black. Printers combine these colors in various proportions to represent all printable colors. The additive primaries are used to combine colors of light, whereas the subtractive primaries are used to combine colors of ink. (See also "[additive primaries](#)" on page 290.)

swatches Preset colors that you can choose from in the Color Swatches panel. The maximum number of color swatches that you can load in Photoshop Elements: 8190.

T

Targa (TGA) format A file format that is compatible with systems using the Truevision video board.

target channels Selected channels in the Channels panel of Photoshop. Photoshop Elements doesn't have a Channels panel.

target colors Colors you specify for highlights, neutral grays, and shadows when you correct a photo.

target layer The selected layer in the Layers panel.

target path The selected path in the Paths panel of Photoshop. Photoshop Elements doesn't have a Paths panel.

tate-chuu-yoko A block of horizontal type that is laid out in a vertical line.

temperature In regard to color, the degree of heat (in degrees Kelvin) that an object would have to absorb before it glowed in a certain color. Each color is associated with a color temperature, as are various kinds of light. (See also "[black body](#)" on page 291.)

text layer A layer that contains vector-based text. (See also "[layer](#)" on page 297.)

thumbnail A small, low-resolution representation of an image. The program displays thumbnails of the photos you are working on to help you find them and edit them.

TIFF Tagged Image File Format. A digital image format widely used for images that are to be printed or published. TIFF images can be compressed losslessly.

tint A variation of a color produced by adding white, thus decreasing saturation and increasing lightness.

tolerance A measure of the precision with which certain tools work. The tolerance describes the difference in value between adjacent pixels affected by a tool. If the tolerance is high, many more pixels are affected or selected than if the tolerance is low.

tonal correction An adjustment made in the tones of an image: shadows, highlights, or midtones. You can adjust highlight and shadow values to increase the tonal range, adjust the brightness of the midtones without affecting shadow and highlight values, and so on.

transform To scale, shrink, enlarge, skew, distort, rotate, or change the perspective of a layer, selection, or shape.

transform bounding box The box that surrounds the portion of an image you are changing with a transform command.

transition An effect added between two photos, for instance in a slide show, that affects the visual presentation of how one photo changes to the other.

transparency In digital photography, the functionality that supports transparent areas in an image or image layer. Certain image formats do not support transparency.

trim To remove pixels from an image by using the Trim command in Photoshop. Photoshop Elements doesn't have a Trim command.

TWAIN A protocol by which applications and devices, such as scanners and cameras, exchange information.

type mask A selection outline in the shape of text.

type style See "[font style](#)" on page 295.

U

underexposed image An image that is overly dark because it was taken in low-light conditions or with incorrect camera settings.

Unicode character Part of the Worldwide Character coding system for text.

Unsharp Mask A technique that sharpens details in an image by increasing the contrast between light and dark areas. (The name originates from traditional photography, where contrast is increased by adding a slightly blurred negative over the original.)

V

vector graphics Lines, shapes, and other graphic image components stored in a format that incorporates geometric formulas for rendering the image elements. For this reason, the graphics scale without degradation of image quality, and there are no jagged lines in the output. Adobe Illustrator is a vector graphics program.

video monitor Video monitors use a progressive scanning method to display images (as compared to televisions, which use interlaced fields).

vignetting An effect in which the edges of an image gradually fade out.

W

warm colors Colors at the red end of the spectrum, including yellow and orange, associated with heat.

warping A distortion of an image, often text, to conform to a variety of shapes. For instance, a line of text can be warped in the shape of an arc or wave.

Web Photo Gallery A feature for generating a full site of your images, which you can upload to your own web site.

web-safe color Any of the 216 colors that are displayed consistently on the web, regardless of browser and computer platform.

white balance A function that compensates for the different rendering of identical colors under different sources of light: incandescent, fluorescent, sunlight, and so on.

white point A reference point used to represent white. This reference point is used to calculate all other colors in the image.

Z

zero length images Images without specified dimensions.

zero width images Images without specified dimensions.

ZIP encoding A lossless compression technique best used for images that contain large areas of a single color.