


Chapter | 1

Welcome to Photoshop CS



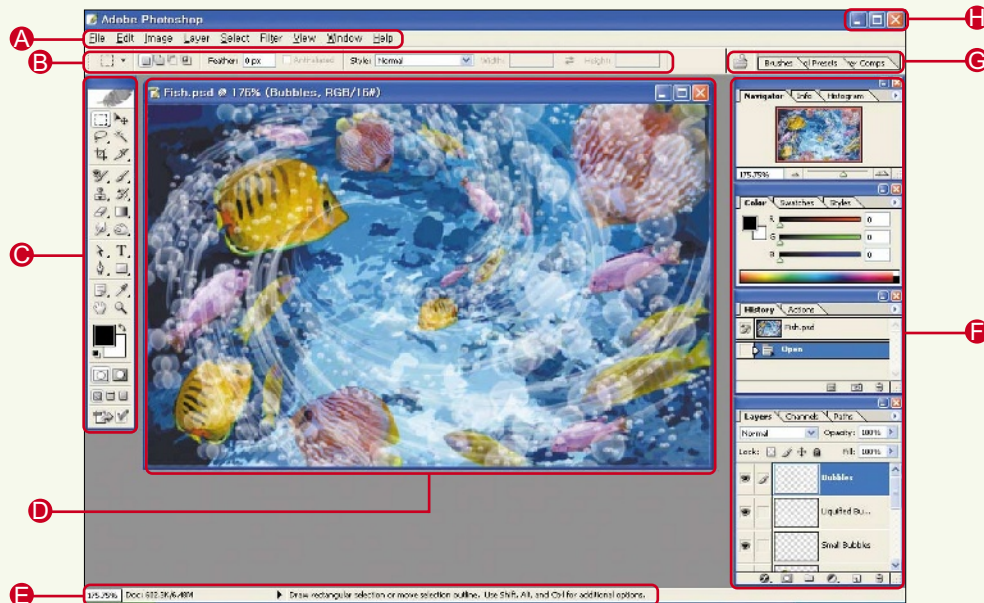
Photoshop CS is the latest version of Photoshop, Adobe's powerful image-editing program. It's part of Adobe's Creative Suite, a package of design programs for people working with both print and Web graphics. Among the new features in Photoshop CS are a range of productivity enhancements and exciting options for photographers. Photoshop CS also includes the ImageReady CS program, which integrates closely with Photoshop CS to facilitate the creation of Web graphics.

The Basics of Photoshop

Before you start working with Photoshop, it is important to cover some of the basic skills and become familiar with the Photoshop interface. In this chapter, you will learn to use some of the basic functions in Photoshop, including Photoshop tools and palettes, by creating and saving an image.

The Photoshop Work Area

The Photoshop work area contains pull-down menus, a toolbox, and palettes.



- A Menu Bar:** Photoshop provides nine pull-down menus across the top of the screen named File, Edit, Image, Layer, Select, Filter, View, Window, and Help.
- B Tool Options Bar:** When a tool is selected in the toolbox, the tool options bar provides the options for working with that tool.
- C Toolbox:** The toolbox is a collection of the tools used most frequently in Photoshop.
- D Image Window:** The image window contains the current images. Each image has a title bar that displays the file name, magnification, and color mode.
- E Status Bar:** The status bar shows information about the current file, including the magnification and file size and how to use the selected tool.
- F Palettes:** The palettes are used for a variety of functions. Each group contains palettes that perform similar functions.

- G Palette Well:** The well contains frequently-used palettes. You can drag any of the palettes into the well to make them easy to access. In most cases, the well displays the File Browser and Brushes palette.
- H Minimize, Maximize, and Close Buttons:** These buttons are used to minimize, maximize, and close the Photoshop window.

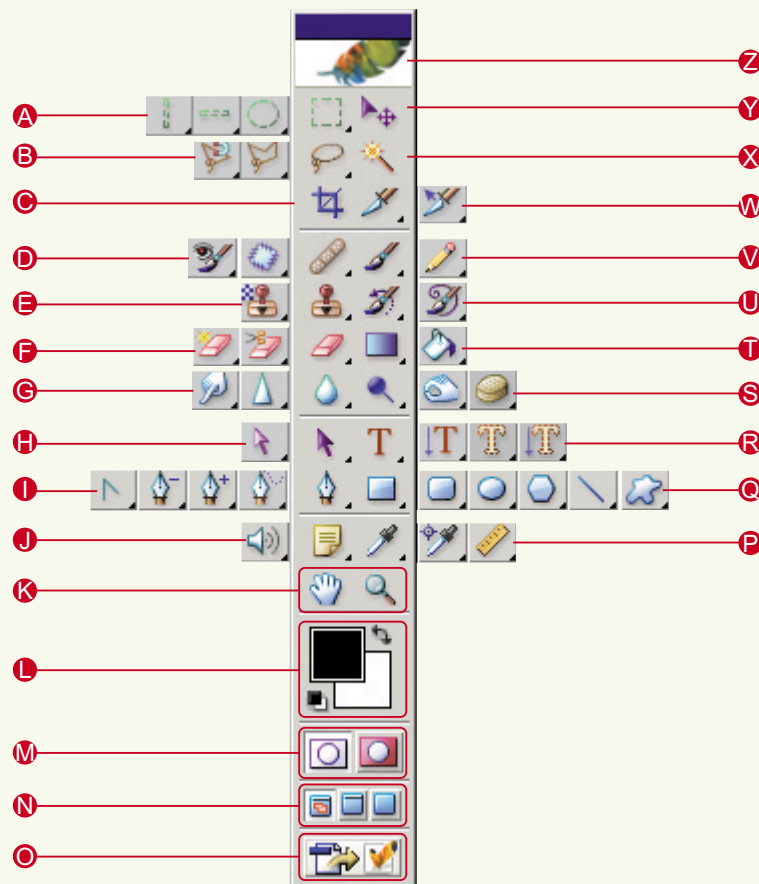
Working with Tools

The toolbox contains the Photoshop tools that you will use when working with an image. There is an icon for each tool. If you place your pointer over an icon, you will see a tool tip containing the tool name and shortcut key. To use a tool, click on the icon. You can set the options for the selected tool in the tool options bar.

There are also some hidden tools in the toolbox. If you see a small triangle in the lower-right corner of a tool icon, this means that there are similar tools hidden behind this icon. To see the hidden tools, click and hold down the mouse button on the tool icon.

The Toolbox

Let's look at the functions of all the tools in the toolbox. The shortcut key for each of these tools is indicated in the brackets beside the tool name.



A Selection Tools

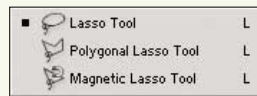
- Rectangular Marquee Tool [M] : Makes a rectangular or square selection.
- Elliptical Marquee Tool [M] : Makes an elliptical or circular selection.
- Single Row Marquee Tool : Makes a horizontal 1-pixel selection.
- Single Column Marquee Tool : Makes a vertical 1-pixel selection.



◀ Making a Selection with the Rectangular Marquee Tool

B Lasso Selection Tools

- Lasso Tool [L] : Makes a selection by drawing freehand lines.
- Polygonal Lasso Tool [L] : Makes a selection in the shape of a polygon by drawing connected straight lines.
- Magnetic Lasso Tool [L] : Makes a selection by snapping to an object's border like a magnet.



◀ The Lasso tool is great for selecting irregular shapes.

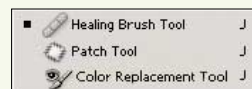
C Crop Tool [C] : Cuts out a portion of the image.



◀ Using the Crop Tool to Cut Out a Rectangular Section

D Correction Tools

- Healing Brush Tool [J] : Removes flaws by copying and blending another area into the selected area.
- Patch Tool [J] : Removes flaws like the Healing Brush tool, but lets you choose a healing patch with more flexibility.
- Color Replacement Tool [J] : Replaces image colors.

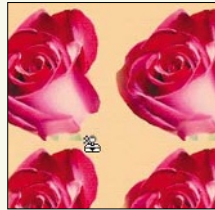


▲ Removing Flaws with the Healing Brush Tool (Left) and the Patch Tool (Right)

▲ Changing a Color with the Color Replacement Tool

E Clone Tools

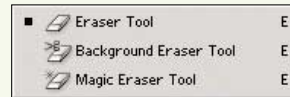
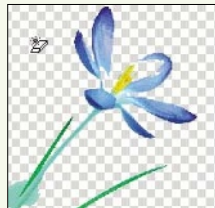
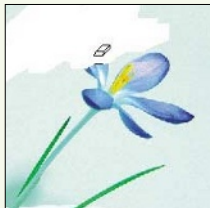
- Rubber Stamp Tool [S] <[img alt="Rubber Stamp Tool icon"]>: Clones another area and stamps it on a selection.
- Pattern Stamp Tool [S] <[img alt="Pattern Stamp Tool icon"]>: Stamps a pattern on an image.



◀Using the Rubber Stamp Tool and the Pattern Stamp Tool

F Eraser Tools

- Eraser Tool [E] <[img alt="Eraser Tool icon"]>: Erases an image.
- Background Eraser Tool [E] <[img alt="Background Eraser Tool icon"]>: Erases a background to make it transparent.
- Magic Eraser Tool [E] <[img alt="Magic Eraser Tool icon"]>: Erases areas similar to the area that was clicked with the tool.



▲From Left: Using the Eraser Tool, Background Eraser Tool, and Magic Eraser Tool

G Sharpness Tools

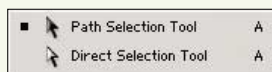
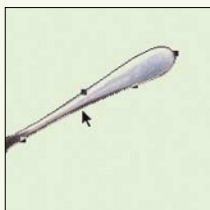
- Blur Tool [R] <[img alt="Blur Tool icon"]>: Blurs an image.
- Sharpen Tool [R] <[img alt="Sharpen Tool icon"]>: Sharpens the edges of an image.
- Smudge Tool [R] <[img alt="Smudge Tool icon"]>: Smudges an image.



▲From Left: Applying the Blur Tool, the Sharpen Tool, and the Smudge Tool

H Path Selection Tools

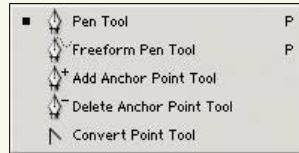
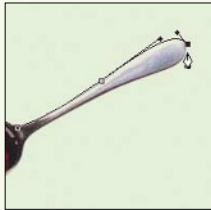
- Path Selection Tool [A] <[img alt="Path Selection Tool icon"]>: Selects paths.
- Direct Selection Tool [A] <[img alt="Direct Selection Tool icon"]>: Selects part of a path for editing.



◀Using the Path Selection Tool

I Path Tools

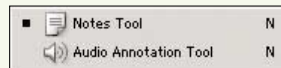
- Pen Tool [P] <[P]>: Creates lines and curves in a path.
- Freeform Pen Tool [P] <[P]>: Draws freeform paths.
- Add Anchor Point Tool <[P]>: Adds anchor points to a path.
- Delete Anchor Point Tool <[P]>: Removes anchor points from a path.
- Convert Point Tool <[P]>: Edits points on a path.



◀Drawing a Path with the Pen Tool

J Notes Tools

- Notes Tool [N] <[N]>: Adds text notes to images.
- Audio Annotation Tool [N] <[N]>: Adds audio notes to images.



◀Adding a Text Note to an Image

K Viewing Tools

- Hand Tool [H] <[H]>: Moves the image around so that you can see the parts that are outside the screen.
- Zoom Tool [Z] <[Z]>: Zooms in on an image. Using the tool with the [Alt] key zooms out from an image.



◀Using the Hand Tool (Left) and the Zoom Tool (Right)

L Color Swatches

- Foreground Color Swatch <[F]>: Shows the current foreground color. Click on the swatch to open the Color Picker dialog box and select a new foreground color. The [Alt]-[Delete] shortcut fills the image with the foreground color.
- Background Color Swatch <[B]>: Shows the current background color. Click the tool to open the Color Picker dialog box and select a new background color. The [Ctrl]-[Delete] shortcut fills the image with the background color.
- Switch Foreground and Background Colors [X] <[X]>: Switches the foreground and background colors.
- Default Foreground and Background Colors [D] <[D]>: Sets the foreground color to black and the background color to white.

M Editing Modes

- Standard Mode [Q] <[Q]>: The standard Photoshop editing mode.
- Quick Mask Mode [Q] <[Q]>: Used to create and edit selections by adding a temporary mask to the image. Areas that are not masked appear red.

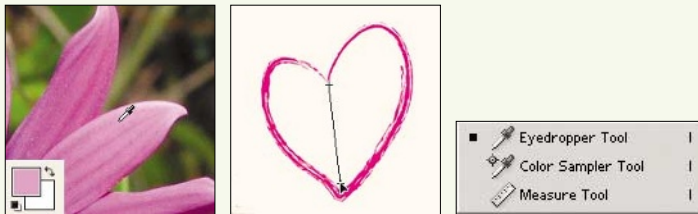
N Screen Modes

- Standard Screen Mode [F] <[F]>: The standard Photoshop window that shows the toolbox, palettes, and menus.
- Full Screen Mode with Menu Bar [F] <[F]>: The image is centered in the window without the menu bar or title bar.
- Full Screen Mode [F] <[F]>: Shows the image in full screen mode.

- **Edit in ImageReady** ([Shift]-[Ctrl]-[M]) <[ImageReady icon]>: Opens file in ImageReady.

P Sampling and Measuring Tools

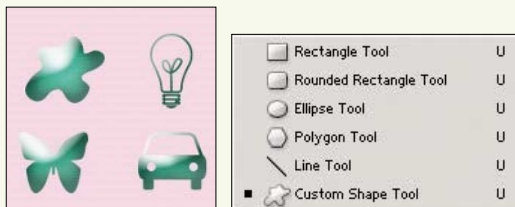
- Eyedropper Tool [I] <[I]>: Samples color to use for the foreground color.
- Color Sampler Tool [I] <[I]>: Defines a color sample in the RGB (Red, Green, and Blue) color mode.
- Measure Tool [I] <[I]>: Measures distance, position, and angles.



▲ Using the Eyedropper Tool (Left) and the Measure Tool (Right)

Q Shape Tools

- Rectangle Tool [U] <[U]>: Draws rectangular and square shapes.
- Rounded Rectangle Tool [U] <[U]>: Draws rectangular and square shapes with rounded corners.
- Ellipse Tool [U] <[U]>: Draws circles or ellipses.
- Polygon Tool [U] <[U]>: Draws polygons or stars.
- Line Tool [U] <[U]>: Draws lines or arrows.
- Custom Shape Tool [U] <[U]>: Draws a variety of custom shapes.



▲ One of the Predefined Shapes You Can Draw with the Custom Shape Tool

R Type Tools

- Type Tool [T] <[T]>: Adds horizontal text.
- Vertical Type Tool [T] <[T]>: Adds vertical text.
- Horizontal Type Mask Tool [T] <[T]>: Adds a horizontal selection in the shape of text.
- Vertical Type Mask Tool [T] <[T]>: Adds a vertical selection in the shape of text.



▲Using the Horizontal Type Tool (Left) and the Horizontal Type Mask Tool (Right)

S Brightness and Saturation Tools

- Dodge Tool [O] <[O]>: Lightens an area.
- Burn Tool [O] <[O]>: Darkens an area.
- Sponge Tool [O] <[O]>: Increases or decreases the color saturation of an area.



▲From Left: Applying the Dodge Tool, the Burn Tool, and the Sponge Tool

T Fill Tools

- Gradient Tool [G] <[G]>: Creates a color gradient.
- Paint Bucket Tool [G] <[G]>: Fills an image using the foreground color or pattern.



▲Using the Gradient Tool (Left) and the Paint Bucket Tool (Right)

U History Brushes

- History Brush Tool [Y] <[Y]>: Restores an image to a previous state picked from the History palette.
- Art History Brush Tool [Y] <[Y]>: Similar to the History Brush tool, but includes artistic effects.



◀Using the Art History Brush Tool for an Artistic Effect (Right)

■	History Brush Tool	Y
■	Art History Brush	Y

▲Restoring a Selected Color to the Previous State with the History Brush Tool (Left)

✓ Painting Tools

- Brush Tool [B] < >: Creates brush stroke drawings.
- Pencil Tool [B] < >: Draws pencil lines.

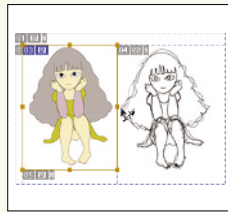
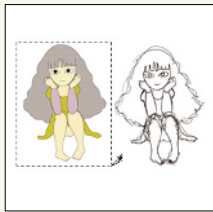


■	Brush Tool	B
■	Pencil Tool	B

▲Using the Brush Tool (Left) and the Pencil Tool (Right)

W Slice Tools

- Slice Tool [K] < >: Slices an image into smaller pieces.
- Slice Select Tool [K] < >: Selects or moves a slice.



■	Slice Tool	K
■	Slice Select Tool	K

▲Slicing an Image (Left) and Moving a Slice (Right)

✗ Magic Wand Tool [W] < >



Selects adjacent colors similar to the color that was clicked with the tool.

◀Using the Magic Wand Tool to Select Areas with Similar Colors

Y Move Tool [V] < >



Moves a selection, layer, or guide.

◀Moving a Selection with the Move Tool

Connects to the Adobe Web site for file updates and new product information.

<< **note**

Using Shortcut Keys to Select Tools

A tool can be activated by pressing its shortcut key(s). If you hold down the [Shift] key while pressing a shortcut key, you will toggle among the hidden tools of the selected tool group.

Working with Palettes

Palettes contain options for working with images. Palettes with similar functions are grouped together for convenience.

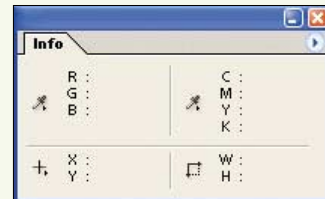
The Navigator Palette

This palette is used to zoom in and out of an image and to move to another position within the image.



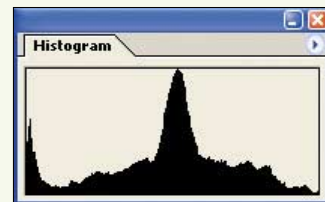
The Info Palette

The Info palette displays color values, angles, and coordinates of a point or selection.



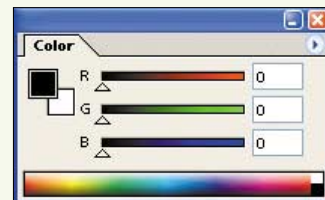
The Histogram Palette

The Histogram palette displays a bar graph of image color information.



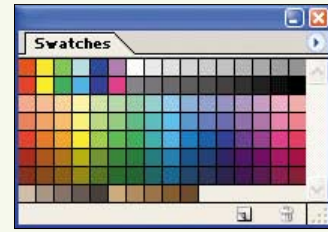
The Color Palette

This palette is used to mix and select colors.



The Swatches Palette

The Swatches palette contains commonly used colors. Colors can be added and removed from this palette and new swatches can be loaded.



The Styles Palette

The Style palette contains pre-made layer styles.



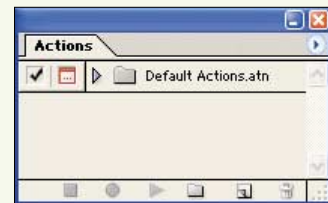
The History Palette

This palette shows a list of all the steps that you have carried out in your work. You can use this palette to undo many steps and go back to a previous state.



The Actions Palette

The Actions palette can be used to save and work with common actions.



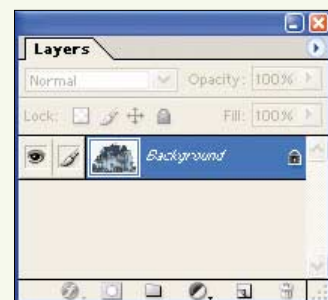
The Tool Presets Palette

The Tool Presets palette contains any tools that you have configured specifically for the current tool.



The Layers Palette

The Layers palette is used to manage and edit layers.



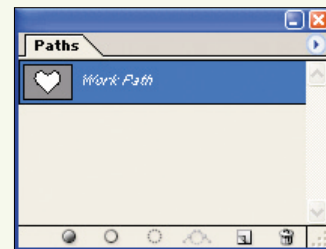
The Channels Palette

This palette is used to manage and edit color channels.



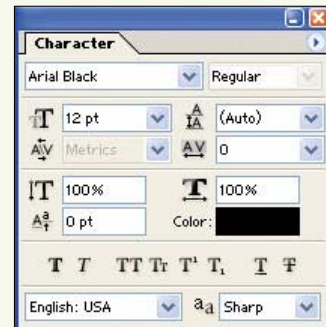
The Paths Palette

The Paths palette is used to manage and edit paths created with the Pen tool.



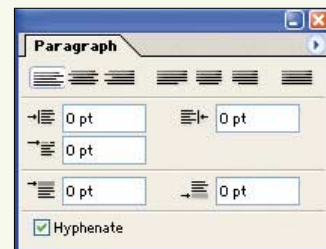
The Character Palette

The Character palette is used to set text options.



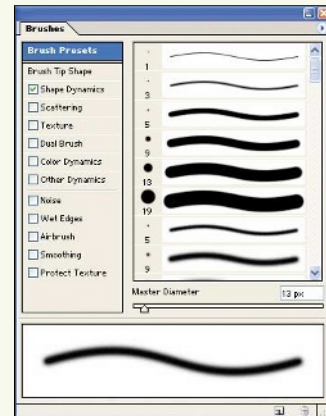
The Paragraph Palette

The Paragraph palette is used to change the paragraph options of text.

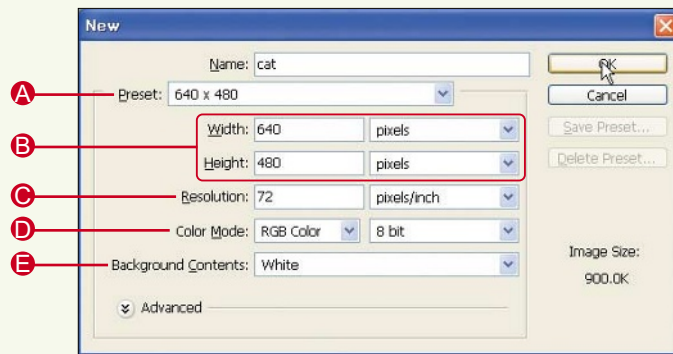


The Brushes Palette

The Brushes palette contains brush properties.



The New Dialog Box



A Preset: Select an image size from the preset sizes.

- Custom: The user determines the image size.
- Clipboard: Uses the size of the last object that you copied.
- Default Photoshop Size: The default image size of a Photoshop image is 7 inches by 5 inches at 72 pixels/inch.
- Image Formats: Includes Letter (8.5" × 11"), Legal (8.5" × 14"), and Tabloid (11" × 17").
- Photograph Size: Standard photograph sizes.
- TV Screen Resolutions: The most commonly used TV screen resolutions.
- Paper Size: Includes sizes A4, A3, B5, B4, and B3.

B Width and Height

You can specify width and height using these units of measurement: pixels, inches, centimeters, points (1 point = 1/72 inch), picas (1 pica = 12 points), and columns. You can set the size of 1 column by selecting [File] - [Preferences] - [Units & Rulers] - [Column Size] from the menu bar.

C Resolution

The higher the resolution of an image, the more details it includes. However, increasing the resolution will also increase the file size of the image. Web images normally use a resolution of 72 pixels/inch and printed images use 300 pixels/inch.

D Color Modes: Here is a brief explanation of color modes; you will learn more about color modes later in this chapter.

- **Bitmap:** Images that contain only black and white.
- **Grayscale:** Uses only shades of gray.
- **RGB Color:** In this mode, 16,700,000 colors are defined using combinations of the colors Red, Green, and Blue.
- **CMYK Color:** Specifies color for print using a combination of Cyan, Magenta, Yellow, and Black.
- **Lab Color:** A color made up of a luminance component and two color elements (a: Green to Red, b: Blue to Yellow).

E Background Contents

- **White:** White background
- **Background Color:** Uses the current background color from the color picker.
- **Transparent:** The background layer is transparent

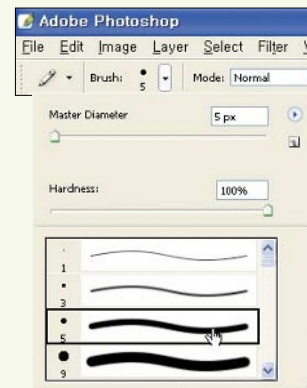
Creating a New Image

In this section, you will learn how to create new image files. When you create a new file, you can choose the size of the image, the background color, and the image resolution.

1. Select [File] - [New] to create a new document or image file. In the New dialog box, enter **cat** for the Name, set the width to 640 pixels, and the height to 480 pixels.



2. Click OK to create the image. Click and hold on the Brush tool icon in the toolbox and select the Pencil tool .
3. In the Tool Options bar, click on the Brush Preset picker and select Hard Round 5 pixels.

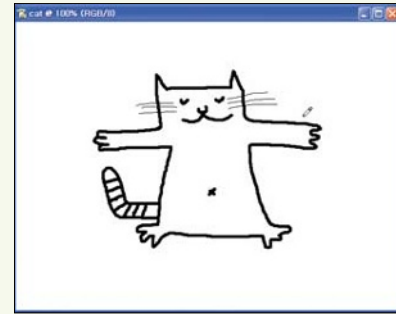


4. Use the Pencil tool to make a simple drawing. Make sure there are no spaces in the image outline, as it will be filled with color. The title bar displays the image name as cat, the magnification as 100%, and shows that it is an 8-bit RGB image.

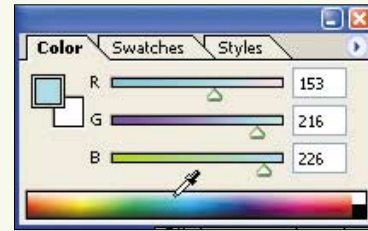
<< tip

Undoing Mistakes

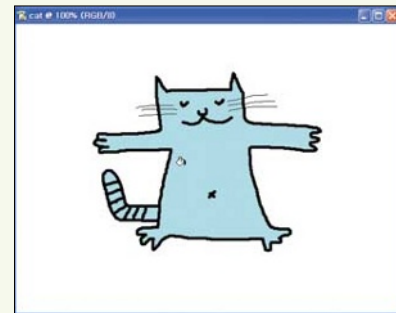
If you make a mistake in your drawing, select [Edit] - [Step Backward] to undo the previous step. You can use this command to undo several steps.



5. Click and hold on the Gradient tool and select the Paint Bucket tool from the toolbox. Drag the R, G, and B slider bars in the Color palette to select a fill color for the drawing, or select a color from the color bar below.

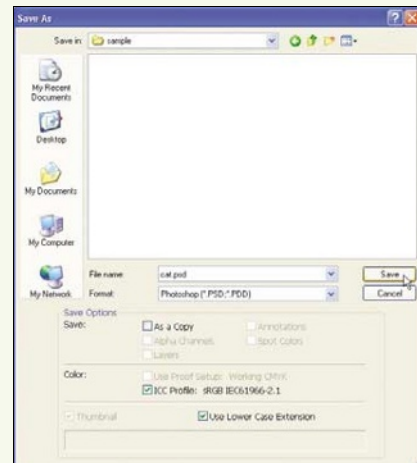


6. Click inside your drawing to fill the image with the selected color.



Saving an Image File

1. Select [File] - [Save]. In the Save As dialog box, choose the image location and click [Save]. The image will be named cat. Select JPEG (*.JPG, *.JPEG, *.JPE) from the drop-down Format menu.



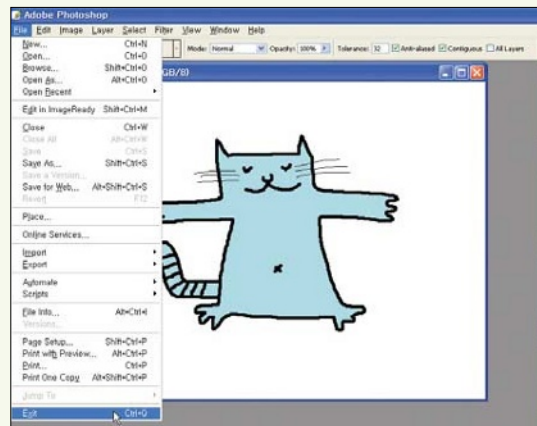
[File] - [Save] Options

- **Save:** This command saves the current file using the current filename, format, and location. If the file has not been saved before, the Save As dialog box will be shown.
- **Save As:** The Save As command allows the file name, location, and file format to be selected. You can use it to save a different version of an existing file.
- **As a Copy:** Creates a backup of the image file. This saves a copy of the image without affecting the file that is currently open.

2. When an image is saved in JPEG format, the JPEG Options dialog box will appear. This dialog box is used to set the compression rate for the image. The lower the Quality setting, the smaller the file size. However, the image quality will decline as the Quality setting is lowered. Enter a Quality of 8 and click OK.



3. The image has been saved. Select [File] - [Exit] to close Photoshop.



Understanding Color and Image Modes

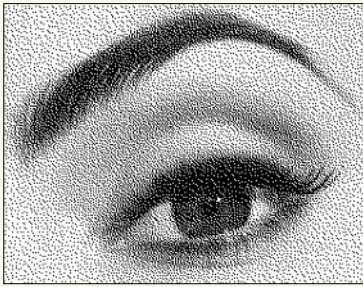
A color mode determines how colors make up an image. Let's have a look at each of the color modes available in Photoshop.

- **Bitmap:** Only the colors black and white can be used in bitmap images.

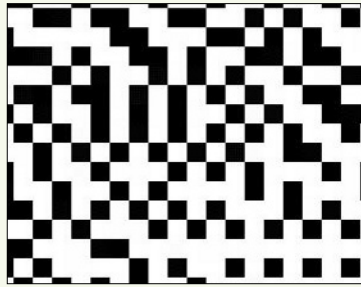
<< note

Color in Bitmap Images

Although bitmaps created in Photoshop can only display black and white, you can save color images in the bitmap file format while retaining their color.



▲ A Black and White Image

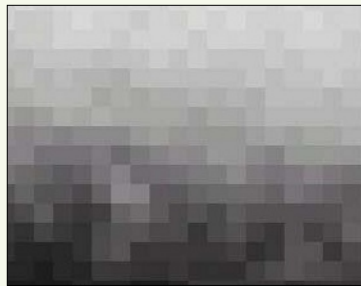


▲ Magnifying the image makes it possible to see the black and white pixels.

- **Grayscale:** Grayscale mode uses up to 256 shades of gray. The color black is given a value of 0 and all numbers between 1 and 254 are increasingly lighter shades of gray. White has a value of 255.

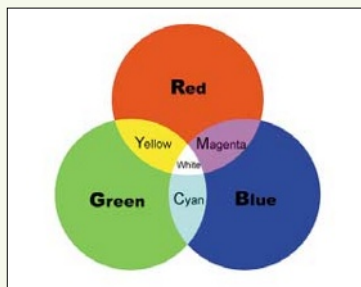


▲ Image Displayed in Grayscale Mode

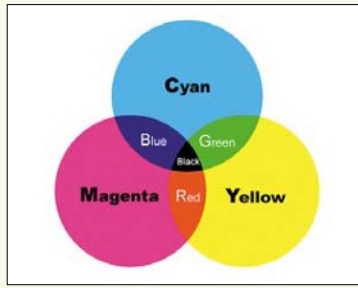


▲ Magnifying the image makes it possible to see the gray pixels.

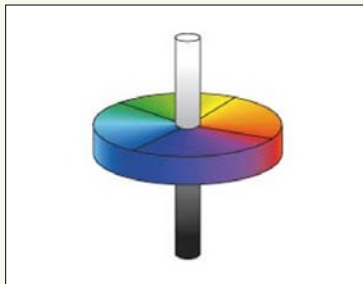
- **RGB Color:** The RGB color mode uses the three primary colors - red, green, and blue - and is the format that is used on computer monitors. Within this color mode, up to 16.7 million different colors can be displayed. RGB color is normally used for color images as all file formats and filters within Photoshop support this mode.



- **CMYK Color:** The CMYK color mode is used primarily for printing. Within this mode, colors are given a percentage value for each of the process inks - cyan, magenta, yellow, and black. When working with print images, the editing is often done within RGB mode and the mode is changed to CMYK as the final step.



- **Lab Color:** The Lab color mode uses lightness as well as two color axes - the A-axis (shades from green to magenta) and the B-axis (shades from blue to yellow). Photoshop uses lab color to convert an image from one color mode to another.



- **HSB Color:** The HSB color mode uses hue, brightness, and saturation to determine color.

- *Hue:* Hue is the color of the object and uses a measurement between 0 and 360.



- *Brightness:* Represents the lightness or darkness of a color and is measured in a percentage between 0% (black) to 100% (white).



- *Saturation:* Saturation is also called chroma and is the strength or purity of the color. It is measured in a percentage from 0% (gray) to 100%. Higher saturations create colors that are closest to the primary colors. A saturation of 100% red would be referred to as a pure red color.



Selecting the Color Mode

The color mode can be changed at any time using the [Image] - [Mode] menu. It is important to select the color mode according to the purpose of the image. The Bitmap color mode is used for line art images in black and white. Grayscale color mode is used for images that contain only black, gray, and white. The RGB color mode is used for images that will be displayed on a monitor, for example on a Web page or in a screen presentation. CMYK color is used for print images.

Photoshop File Formats

Photoshop supports a variety of file formats so that you can create images for different purposes and share them with other programs. You can specify the file format when you use the [File] - [Save] or [Save As] commands to save an image. Photoshop supports the following file formats.

- **PHOTOSHOP (*.PSD, *.PDD)**

This format is the Photoshop native file format. It cannot be used with other programs, but it allows the greatest flexibility when working with images. It supports all color modes and features such as alpha channels, paths, and layers.

Although this file format compresses the image file, the file is still larger than compressed files of other formats. Increasing the number of layers and channels within the image will increase the file size. This file format is usually used to create and edit the image, and a final copy is saved in another format for use in Web pages, print, or multi-media presentations.

- **BMP (*.BMP, *.RLE, *.DIB)**

The bitmap format is the most basic graphic file format. When you save a bitmap file, you will need to specify the operating system, either Windows or OS/2, and configure the depth of the image up to a value of 32 bits. Channels and layers cannot be saved in this format.

- **CompuServe GIF (*.GIF)**

The GIF (Graphic Interchange Format) format was developed as a way to compress image sizes. It is used for Internet images, animations, and images with transparent sections. The GIF format supports up to 256 colors (8 bit) and is not suitable for complex images such as photographs. RGB images, as well as those in Bitmap, Grayscale, and Indexed color modes, can be saved as GIF files.

- **Photoshop EPS (*.EPS)**

The EPS (Encapsulated PostScript) format, used for vector or bitmap images, is appropriate when importing images to an editing program, such as Illustrator, PageMaker, or QuarkXpress. The EPS format is normally used in the print process, so images will often need to be changed to CMYK mode. This format saves the paths within an image but does not save alpha channels.

- **Photoshop DCS1.0 (*.EPS), Photoshop DCS2.0 (*.EPS)**

When CMYK images are saved in EPS format, the DCS (Desktop Color Separations) format saves the file as 4 individual files and 1 master file. The DCS2.0 format includes spot channels and can be used for images with customized colors.

- **JPEG (*.JPG, *.JPEG *.JPE)**

The JPEG (Joint Photographic Experts Group) format is another compressed file format that is widely used on the Internet. JPEGs can display up to 24 bits of color and are used for saving images with continuous color, such as photographs. The compression rate can be changed as needed. Higher compression rates result in smaller files, but will also lower the quality of an image.

- **PCX (*.PCX)**

The PCX format was created for exchange of files with Zsoft's PC Paintbrush. This file format is rarely used.

- **Photoshop PDF (*.PDF, *.PDP)**

The Photoshop PDF (Portable Document Format) format was created for compatibility with Adobe Acrobat. This format allows Photoshop to read PDF documents.

- **PICT (*.PCT, *.PICT)**

This format is the standard graphics format for Macintosh computers. RGB images saved as PICT files can use either 16 or 32 bits. JPEG compression is possible at 32 bits.

- **Pixar (*.PXR)**

The Pixar format is a special format that was developed by Pixar, an animation company. This format supports RGB and grayscale images with a single alpha channel.

- **PNG (*.PNG)**

The PNG (Portable Network Graphic) format is a compressed file format that can be used to create transparent images. This format can be saved in 8-bit or 24-bit. PNG is a newer file format that provides compression without loss of image quality. However, PNG files are larger compared with JPEG-compressed files. Older web browsers may have difficulty displaying these images.

- **Raw (*.RAW)**

The Raw file format contains raw pixel information and is a flexible format for transferring images between programs and computer types.

- **Scitex CT (*.SCT)**

The Scitex CT (Scitex Continuous Tone) file format is for file transfer with Scitex computers.

- **TGA (*.TGA, *.VDA, *.ICB, *.VST)**

The TGA (Targa) format was developed by Truevision for their Targa and Vista video board. This format can be used on PCs and Macs and supports 24-bit color, as well as 32-bit Web color.

- **TIFF (*.TIF, *.TIFF)**

The TIFF (Tagged Image File Format) format was developed to allow for sharing of images between programs and between Macintosh computers and PCs. It includes LZW compression, which does not affect the quality of an image file. This format preserves channels and produces smaller file sizes compared with the EPS file format. TIFF also supports ZIP compression and preserves transparent frames.

Choosing the Right File Format

Photoshop supports many different file formats. Each format is used for a different purpose and should be selected depending on how your image will ultimately be used.

- **Incomplete Files or Files Requiring Modification**

If you need to continue to work on an image file, it is most useful to save it in Photoshop (PSD) format. This will preserve the layers, paths, and channels within the image.

- **DTP for Printing**

If you are going to use Photoshop images in a desktop publishing program, they should be saved in EPS format. This allows image properties such as paths to be made available.

- **Web Images**

GIF and JPEG formats are used on Web pages because they compress the image file size. The GIF format allows you to save images with transparent backgrounds without loss of quality. Within the JPEG format, you can specify your own compression rate to determine the final file size and image quality. The JPEG format is suitable for photographs.