Web Graphics with PhotoShop

Saving Images for the Web:

The best way to optimize images for the web is through the **Save for Web** command available from the **File** menu. This command changes your color modes, if needed, as well as converting the file format of your image.

Tools

In the upper left-hand corner, you will see a column of tools.

- **Hand tool**
- **Slice Select tool**
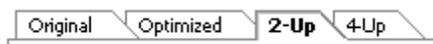- **Zoom tool**
- **Eyedropper**
- **Eyedropper color display**
- **Toggles Slices Visibility tool.**

Tabs

Next, you may notice four tabs across the top of the window: **Original, Optimized, 2-Up**, and **4-Up**. The first tab displays the original image, the second a version of the image optimized for web display. The 2-Up and 4-Up let you compare the original with either one or three options for optimizing the image. With the ⊕ button to the right of the tabs, you can select more advanced options for viewing your optimized image. You can see what it would look like on another platform (such as a Macintosh, if you were working in Windows).
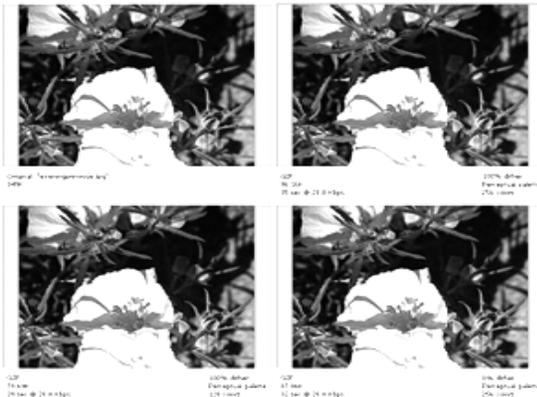
No matter which tab you've selected for viewing your image, you will see information about that image at the bottom of each window. You will see the file size, the required download time, as well as the optimization levels you've chosen for that image.

Zoom Level Display

After you click on **File** > **Save for Web**, you will see more information across the bottom of the **Save for Web** window. From the left, you'll see a Zoom level display that can be altered by using the drop down menu or by typing a number over the current percentage. The row of letters that follow display color information from a single pixel that you select from your image with the Eyedropper.
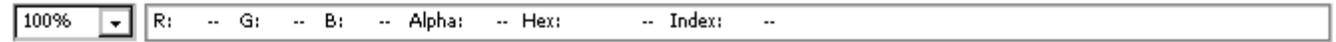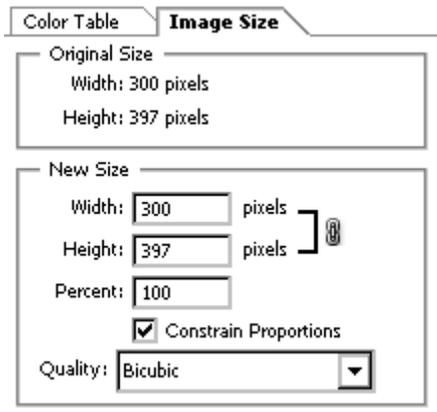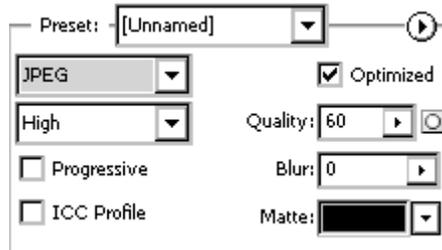
Image Size tab

Toward the bottom right of the window, you'll see an Image Size tab with which you can resample your optimized image (change the number of pixels in the image). Note that you cannot change the resolution here; you have to use the Image Size command from the Image menu instead.

JPEG images

By selecting the JPEG settings from the drop-down menu, you can set the compression quality level below the file format list: you can choose a level anywhere between low and maximum. Low will be a smaller file size and Maximum will be a larger file size. Maximum is usually overkill — your users won't even notice this setting.

You can use the Quality Slider (click the down arrow) to make small changes to the image quality and then preview the difference. Again *low* will generate a smaller file size and *maximum* will generate a larger file size.

If you check the Optimized feature, your file size will be smaller but may not be compatible with older browsers. If this feature is on, you can also choose the Progressive option, which displays your image to users in a series of overlays, displaying a low image until the complete image finishes downloading.

GIF images
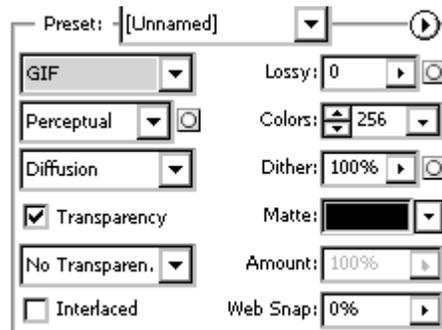
GIFs are usually the primary format for the web. Colors are limited to 256 or less through a color mode called Indexed Color. GIFs use a *lossless* compression method, which means that they don't discard pixel information like JPEGs do. GIFs support transparent areas in your image.

- **Perceptual** preserves the colors that appear most often in the image and are more easily seen by the eye; this setting usually provides the greatest color integrity.
- **Selective** uses the preservation of broad areas of color and web-safe colors.
- **Adaptive** preserves the colors that appear most often in the image.
- **Web** consists of only 216 web-safe colors.

- **Custom** preserves the current perceptual, selective, or adaptive color table and it does not update with changes to the image.

Now that you have chosen your settings, it's time to see whether you can further reduce the colors in your image for an even smaller file size. Try setting the **Colors** to 128; look at your file size. You can also try **Diffusion, Pattern,** or **Noise** from the dither drop down menu.

Each of these methods attempts to substitute colors that exist in the color table for colors outside that complete subset of colors in the image. The pattern method replaces pixels in a square pattern, while the diffusion method uses a randomized technique that may leave some "seams"; the noise method uses random replacement that does not cause seams. To control the amount of dithering in your image, use the slider bar next to Dither.

Note: Increasing dithering levels will slightly increase your file size. But it may not increase your file size as much as adding more colors to your image would.

The Color Table
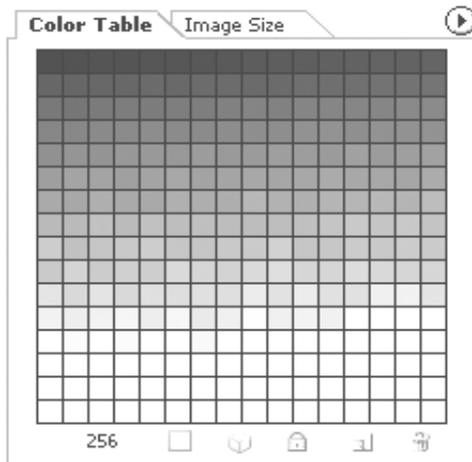
You can get additional information about the colors in your image from the Color Table, which displays all the colors currently indexed in the image. Photoshop will mark web-safe colors in the table with a diamond in the center. You can select a color from the image, either from the table or by picking it with the Eyedropper tool directly from the image, and "snap" it to the nearest web-safe color by clicking on the cube icon at the bottom of the Color Table palette. You can also set the Web Snap slider to increase the percentage of web-safe colors in your image. You may want to use the palette drop-down menu ⊙ to select certain colors in the table or to organize them.

Another option for reducing the overall number of colors while protecting certain colors is the lock a color(s) in the color table. Select the color you would like to lock with the Eyedropper, then click on the lock icon at the bottom of the palette. When you reduce colors next time, the colors you locked will be protected.

Finally, you may want to investigate interlacing and lossy options. With the **Lossy** slider you can apply a lossy compression method, much like the one used to compress a JPEG, to further reduce your file size. You may be able to set this slider to between 5 to 10 without losing significant image quality.

The **Interlace** feature is much like the **Progressive** option for JPEGs: a low-resolution version of your image displays to the user while the full image completes the loading process. Note that interlacing an image usually increases the file size.

Images in HTML

Once you've optimized your image, you need to know a little bit about adjusting its appearance on your web page. The tag that you will be using to work with any image element in HTML is **<IMG>**. This tag allows you to place and have some formatting control over in-line images in your HTML document. It cannot be used for embedding other HTML text. The image element is empty, which means that it does not have a closing tag.

Attribute	Options	Descriptions
src=""	URL	The URL of the image to be embedded. SRC is mandatory
lowsrc=""	URL	Load two images in the same space (usually one of a smaller file size that will appear while the larger image loads).
border="value"	numeric values	Lets you control the thickness of the image border (in pixels).
width="value"	numeric values	Manually sets the image width
height="value"	numeric values	Manually sets the image height
vspace="value"	numeric values	Controls the vertical space above and below the image.
hspace="value"	numeric values	Control the horizontal space around an image.
alt=""	text string	Optional text used as an alternative to the image in text-only browsers.
align="value"		Alignment of the image relative to other parts of your document.
	left	Image will align to the left margin, text will wrap around it
	right	Image will align to the right margin, text will wrap around it
	top	Aligns itself with the top of the tallest item in the line.
	texttop	Aligns itself with the top of the tallest text in the line (usually no different then top)
	middle	Aligns the baseline of the current line with the middle of the image.
	absmiddle	Aligns the middle of the current line with the middle of the image.
	baseline	Aligns the bottom of the image with the baseline of the current line.
	bottom	Same as baseline above.
	absbottom	Aligns the bottom of the image with the bottom of the current line.

Background Images

You may want to use an image as the background for your web page. While an image can create a depth and texture impossible to achieve with a flat background color, it may also pose problems for your viewers. If the image is too busy, it may prevent viewers from reading the text on your page. A background image could be more distracting than enhancing unless you plan ahead.

It's usually best to save your background images as GIFs for two reasons: first, a GIF image is smaller than a JPEG and will load more quickly, and second, JPEGs may look blotchy in areas of continuous-tone shading once dithering has occurred. But since you'll often need to make adjustments to the image in Photoshop before adding it to your web page, you should work in RBG Color mode until your editing is completed.

Here are a few tips for editing images to be used as backgrounds:

- Make your background more subtle so that it doesn't interrupt your text.
- Consider using the Edit, Fill command with a fill color of White or 50% gray and a low Opacity setting.
- You may also want to experiment with the Blending Modes (Lighten might be particularly useful).

Filters provide other means of reducing the prominence of your background. Gaussian Blur or one of the Artistic filters might be helpful.

Remember that all images set as the background for a web page will automatically be tiled. When you want to preview the way your background might look on a web page, select it using the rectangular marquee tool. Remember that just as on a web page, your background must be in a rectangular shape. Set that selection as a pattern using Edit, Define Pattern. Then create a new document with a size of 640 X 480 pixels (approximately the size of a v viewer's monitor) and fill it using Edit > Fill with the Contents set to Pattern. You can now see how your tiled background will look.

Transparency in Images

To make your pages look truly professional, you may want to create some images that blend into the background that you just created without a distinct background color of their own. To do so, you can create a transparent GIF or PNG. Photoshop offers several ways to add transparency to your image: the **Transparent Image Wizard,** the **Background Eraser**, the **Magic Eraser**, and the **Extract** command. The method you choose to add transparency to your image will depend on how difficult it is to select or isolate the area that is to be transparent.

Transparent Image Wizard

If the area to be made transparent is easily selected, you will want to use a simple option, such as the Transparent Image Wizard; the wizard will walk you through the process, step-by-step. The downside to using this feature is that it doesn't give you as much control over optimization settings as the Save for Web command. From the **Help** menu, select **Export Transparent Image**. Select the second radio button, indicating that you have already made your selection, and click next. The remaining windows will ask you to select the end-use for your image (print

or online), the file format (GIF or PNG) as well as final conversion information, depending on your format choice. If you select the GIF format, you will be asked to select the color reduction algorithm as you would in the Save for Web window. Be sure to check the box for Transparency so that Photoshop will preserve the transparency of the selected pixels. After you have saved the file, you may see a gray and white checkerboard pattern in the areas that were made transparent; this is Photoshop's way of displaying transparency. To change this setting, use the **Preferences** command from the **Edit** menu and choose the **Transparency and Gamut** option.

The Background Eraser and Magic Eraser

Found under the Eraser tool, they offer two options for converting color pixels to transparency.

The Background Eraser converts pixels to transparency as you click and drag, allowing you to "erase" areas to transparency. The Magic Eraser works like the Magic Wand tool, converting all the pixels of a particular color in the image (or selection) to transparency.

You may want to use the first option when the area you wish to erase contains colors that are also in the foreground of the image; the second option is more useful if the area to be made transparent doesn't share colors in common with the foreground.

The Background Eraser

To use the Background Eraser, select it from the toolbox and select a brush size; as with the painting tools, you have the option of fading your brush stokes using the Brush Dynamics settings. Set the limits according to the kind of control you want Photoshop to exercise over your erasing to transparency:
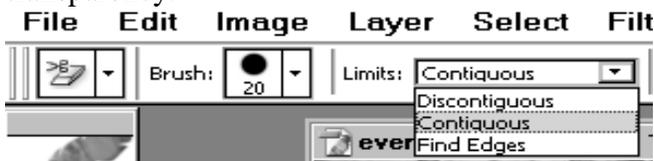
- **Discontiguous** erases the sample color wherever it exists under the tool. (The plus sign in the center of the cursor indicates the tool's "hotspot".)
- **Contiguous** erases colors that are under the brush and touching each other.
- **Find Edges** erases the color under the brush while doing a better job of preserving shape edges.

The Magic Eraser

If the area you want to make transparent is the same color throughout your image, or if you wan t to make a particular color or colors transparent, you should use the Magic Eraser. It works very much like the Magic Wand tool, except instead of selecting the area you click on, you'll erase it to transparency.

The Extract Command

For selections with intricate edges, you may need a more sophisticated tool to help you do the work of selecting. Choose the Extract command from the Filter menu to help you select an area that you plan to move into another image, or to create a transparent image for a web graphic. In the window that appears, you can use the **Edge Highlighter tool** to mark the edges of a selection.

If you need to select an area with intricate or wispy edges, set the Brush Size fairly large, or, for areas with well-defined edges, check the **Smart Highlighting** feature. You can also set the **Highlight color** with the drop-down menu. Click and drag the Highlighter along the edges of the image, being sure to cover any wispy areas with a broad brush stroke.

You can clean up any mistakes with the **Eraser tool**. Once you have the edges of your selection highlighted, you'll need to fill the area using the **Fill Tool**. Just as you can change the color of the highlighter, you can change the Fill color using the drop-down menu. To see what the extracted area might look like, press the Preview button.

Once you've previewed the image, you may discover that you need to make some adjustments. Use the **cleanup tool** to make areas that shouldn't have been included in your selection transparent. The Edge Touchup tool will help you sharpen the edges of your selection. Conversely, if you need to tone down overly sharp edges, set the Smooth slider above 0. If after these adjustments, you find that you need to start over altogether, select Original from the preview drop-down menu and check on the boxes to Show Highlight and Show Fill. If you're happy with the extraction, click OK to perform it. You will now see your selection against a transparent background.