academyX

Photoshop® CS6
Introduction

Helpful Links

AdobeTV
http://tv.adobe.com
Thousands of free videos covering new features, introductory topics & workflow in the Creative Cloud

Creative Cloud Lovers
http://creativecloudlovers.com
Kelly's Adobe® User Group

Kelly McCathran
San Francisco, CA
(415) 312-2459
kelly@onlineinstruct.com

Photoshop Tools

Marquee (**m**)

Lasso (**l**)

Crop (**c**)

Spot Healing Brush (**j**)

Clone Stamp (**s**)

Eraser (**e**)

Blur

Pen (**p**)

Path Selection (**a**)

Hand (**h**)

Default Colors (**d**)

Move (**v**)

Quick Selection (**w**)

Eyedropper (**i**)

Paintbrush (**b**)

History Brush (**y**)

Gradient (**g**)

Dodge (**o**)

Type (**t**)

Rectangle (**u**)

Zoom (**z**)

Swap Foreground & Background Color (**x**)

Edit in Quick Mask Mode (**q**)
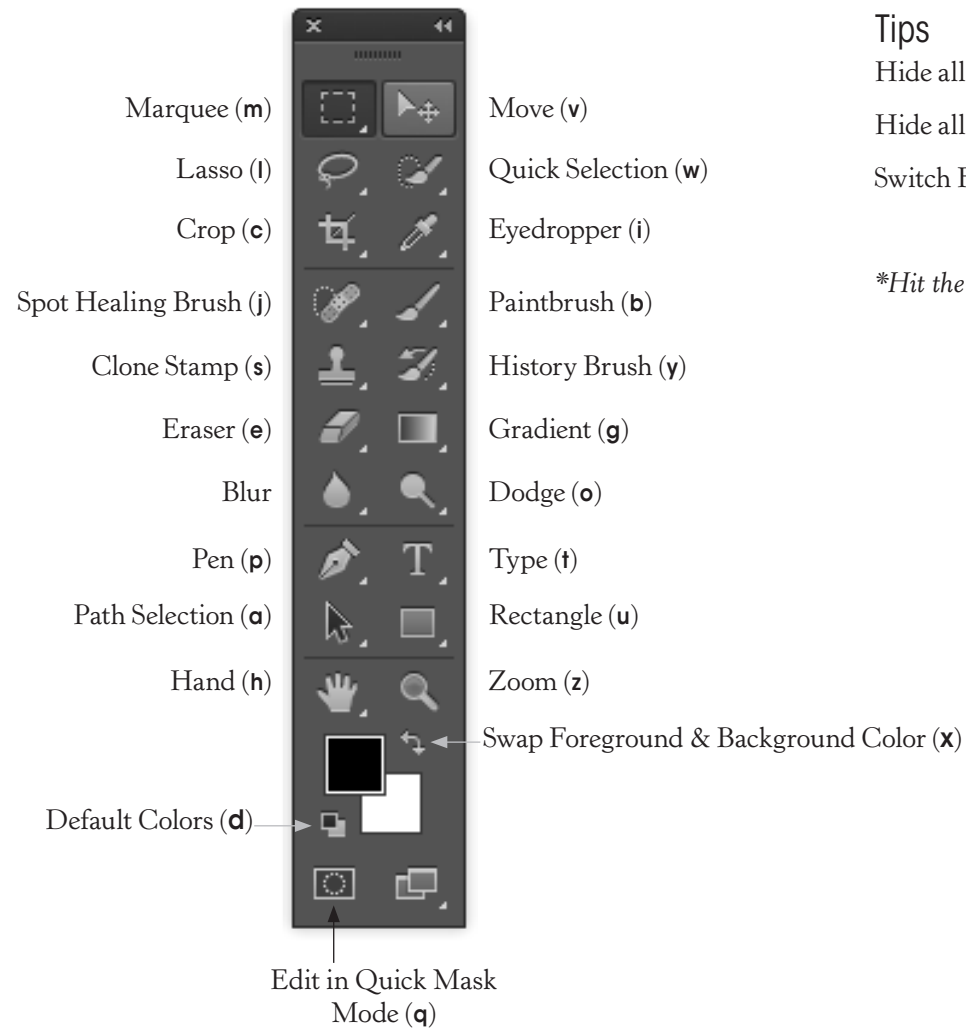
Tips

Hide all Panels (**tab**)

Hide all Panels except toolbar (**shift tab**)

Switch Full Screen Mode (**f**)*

Hit the letter "f" 3 times as a toggle between each mode

Navigation & Zoom Shortcuts

Zoom In.. Command + | **Ctrl +**
Zoom Out..Command - | **Ctrl -**
Fit in Window ....Command 0 | **Ctrl O**
Zoom tool *(while on any tool, except, type)* ....Command Spacebar | **Ctrl Spacebar**
Hand tool *(while on any tool, except, type)*... **Spacebar**
Zoom with mouse ....Hold down **alt** or **option** while moving your mouse **wheel**

Preferences Undo

Photoshop has up to **1,000 undos,** the default setting is 20. To increase the number of Undos go to
Photoshop > Preferences > Performance *(Mac)* **Edit > Preferences > Performance** *(Windows).* History States is where you set your multiple undos. The recommendation is 40 - 50, the more RAM you have the higher you can go *(unless you have over 6 GigaBytes of RAM, don't go above 100.)*

Multiple Undo & Redo Shortcuts

Edit > Step Backward is your multiple undo menu command. **Edit > Step Forward** is your multiple redo command. These commands also this move up and down the History Panel.
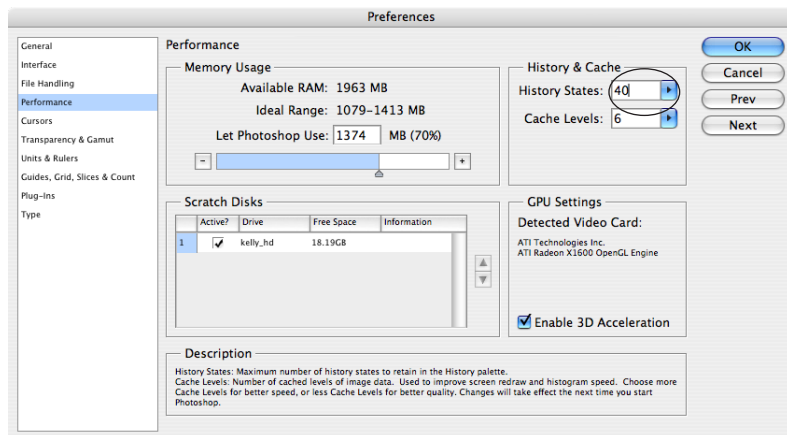
Step Backward (undo more than once).. Command Option Z *or* **Ctrl Alt Z**
Step Forward (redo more than once) ....Command Shift Z *or* **Ctrl Shift Z**

Grids

There are many circumstances when it is helpful to see the center of a photo, especially if you are Cropping, Adding Borders or Exporting for the Web. A preference can be changed to show the exact center of every image.

1. Turn on your grid through **View > Show > Grid**.
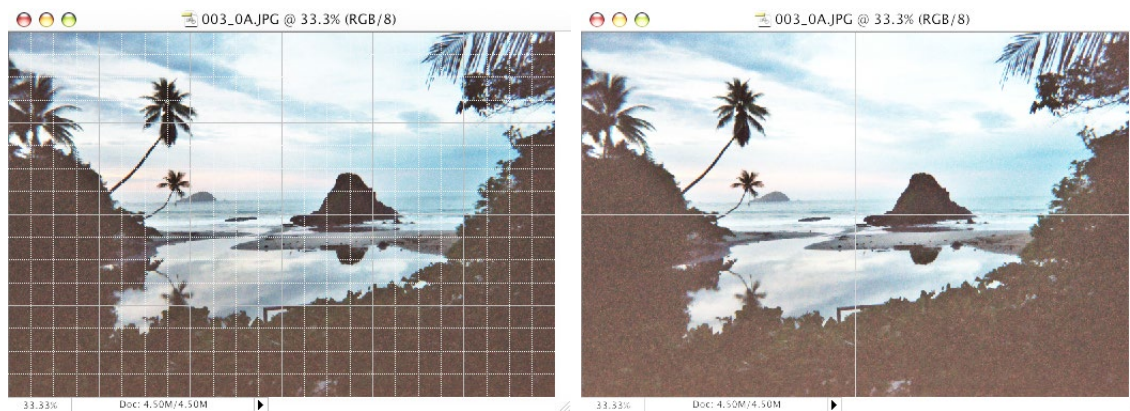
2. Set the scale under **Photoshop > Preferences > Guides, Grid & Slices** *(Mac)* or
Edit > Preferences > Guides, Grid & Slices *(Windows)*.

Image Size & Resolution

Finally, there is a keyboard shortcut for **Image Size**, **Command Option I** *or* **Ctrl Alt I**.

Another trick for seeing the Image Size information is to hold down **Option** or **Alt** and click on the file size dialog in the lower left corner of the window. If you click that area without the **Option** or **Alt** keys it shows you how the image can fit on an 8.5 x 11 inch sheet of paper.

Image Size

Pixel Dimensions: 14.4M

Width: 2592   pixels

Height: 1944   pixels

OK

Cancel

Auto...

Document Size:

Width: 14.4   inches

Height: 10.8   inches

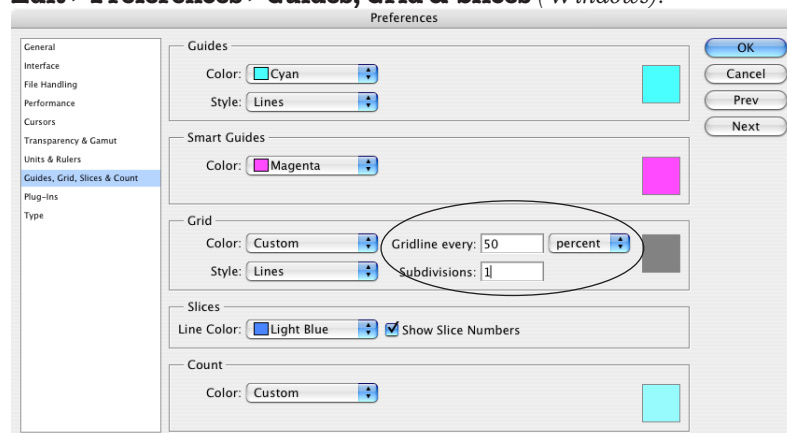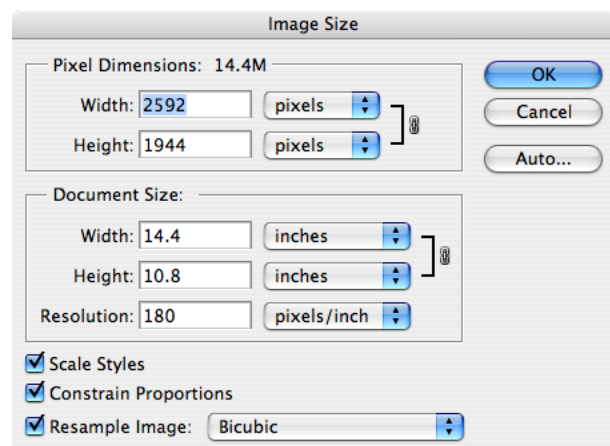Resolution: 180   pixels/inch

☑ Scale Styles
☑ Constrain Proportions
☑ Resample Image: Bicubic

Standard Resolutions

When determining the best resolution (pixels per inch, ppi) for an image you need to know where and how that image will be used. Here are some standard recommendations.

Web/Device = **72 ppi** *(some monitors display higher, 96, 108 or more for the Retina, but the industry standard is 72)*

Laser/Inkjet Printers = **150 – 225 ppi**

Press Quality = **300 ppi** *(the formula is really 2x your line screen, magazine quality is typically 150 lpi, lines per inch, 2 x 150 = 300)*

Note: Many people refer to dpi (dots per inch) as image resolution, pixels are square, dots implies round and is technically less accurate, because it doesn't differentiate hardware from software. However; dpi is used so often that it is commonly interchangeable with ppi (in the right context.)

Quick Selection Tool

Complex backgrounds used to be very difficult to work with. If the subject you are trying to select has a lot of the same tones as the background, making a selection can be a lot of work. Not anymore! I use the Quick Selection tool (**W**) to make 85% of my selections in Photoshop. Simply click and drag over the object you are trying to select. This tool uses brush size, the smaller the brush, the more careful the selection is.

Brush Size Shortcuts
Bracket keys

    Brush Smaller... [
    Brush Bigger ....]
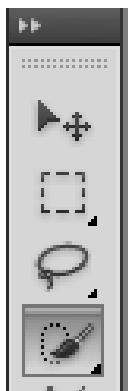
Tip
When you are using the Quick Selection tool, **stay away from the edge** of the object you are trying to select. In the image on the left, I kept my Quick Selection brush **well inside** the boy and let Photoshop do the work of finding the edge.

Image courtesy of Jessica Epstein: **jessepstein.com**

Refine Edge for Better Selections

The **Refine Edge** button is on the **Options bar** at the top of your screen, when you're on any selection tool *(Magic wand, Lasso, Rectangular marquee)*. Refine Edge improves *(and refines)* the quality of selection edges allowing you to extract objects, or people with better edges *(also great for masks)*.

1. Create a selection with any selection tool, then click **Refine Edge** in the options bar at the top of your screen (*or choose* **Select > Refine Edge**).

2. Adjust these options in the dialog:
   View Mode: Choose a mode to change how the selection is displayed: On Black, On White, Quick Mask, Transparent, etc.
   Show Original: Shows the original selection *(for comparison)*.
   Show Radius: Displays where the edge refinement is happening *(on the border of your selection)*.
   Smart Radius: Automatically adjusts the radius for hard and soft edges found in the border region.
   Radius: The size of the border where edge refinement occurs *(a small radius is better for sharp edges, a large radius for softer edges)*.
   **Smooth:** Reduces jagged edges in the selection often rounding off portions of the selected area.
   Feather: Feathers or softens the edge between your selection and the surrounding pixels.
   Contrast: Higher numbers make the selection edge more abrupt *(or sharp)*.
   Shift Edge: Negative values move the soft-edged borders inside the selection area. Positive numbers move the selection outside. Shifting to the negative often helps remove some of the original background from the selection.
   Decontaminate Colors: Replaces color fringes with the color of fully selected pixels nearby. *(Only works on new Layers, not Selections)*
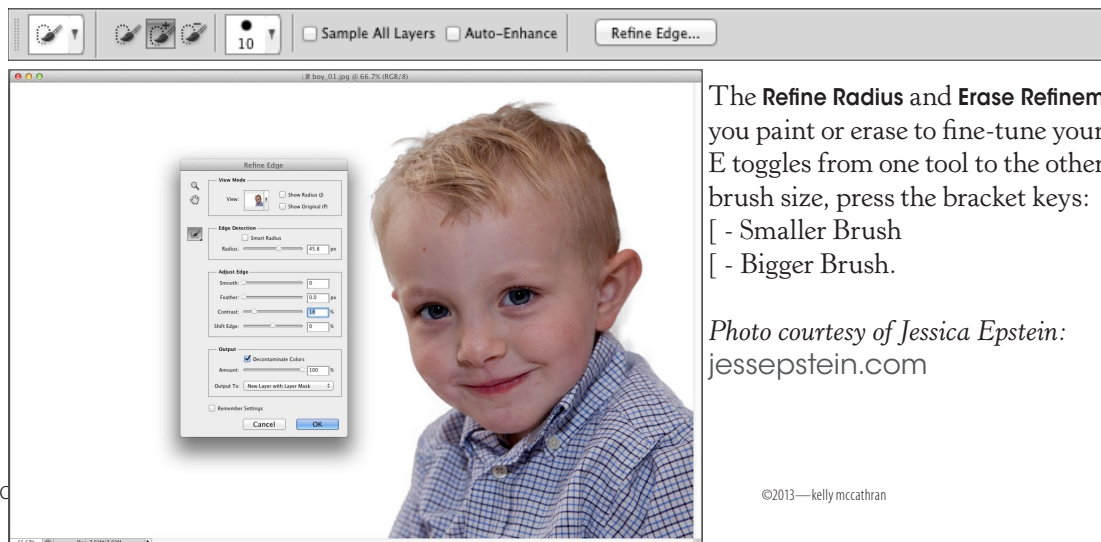

The **Refine Radius** and **Erase Refinements** tools let you paint or erase to fine-tune your selection. Shift E toggles from one tool to the other. To change the brush size, press the bracket keys:
[- Smaller Brush
[- Bigger Brush.

*Photo courtesy of Jessica Epstein:*
jessepstein.com

Graphics Info

All computer based images fall into one of two categories **Raster** or **Vector**. Adobe® Illustrator® is the most common **Vector-based** drawing application *(vectors are also called* **Bézier Curve***)*. Vector graphics consist of lines and curves defined mathematically and are based on **points**. **Raster-based** images which most commonly come from Adobe® Photoshop® which are made up of **pixels** *(Raster is sometimes called Bitmap)*. Because of the points, vector images have **no resolution**. That means they have smaller file sizes and can be printed at 2% or 2,000% without a quality loss.

Raster *(pixels)*   ## **Vector** *(points)*

pixels ⟶

direction handle ⟶

anchor point ⟶
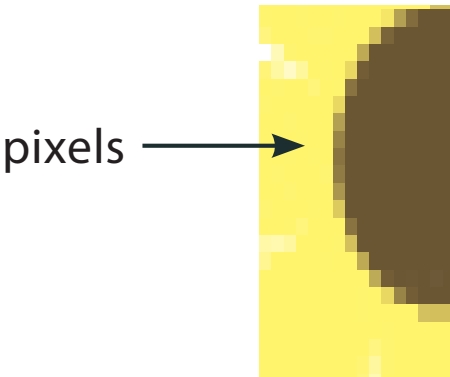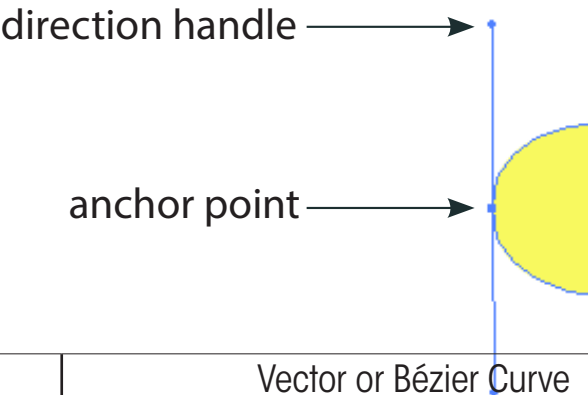
Raster or Bitmap	Vector or Bézier Curve
• The image resolution made up of **Pixels** *(it is measured in pixels per inch, ppi)*	• Has **no** resolution and is made up of **Points**
• Images typically **can not** be **scaled** up beyond 120% or they become jaggy	• Printed images will look good at 2% or 2,000%
• Raster images are usually much larger than vector	• Vector images are typically smaller than raster at the same size

How Resolution Affects File Size

Every time you double the resolution of a Raster image, the file size gets 4x bigger. Here are some sample file sizes:

8.5 x 11 • 72 ppi • RGB = 1.39 MB

8.5 x 11 • 150 ppi • RGB = 6 MB

8.5 x 11 • 300 ppi • RGB = 24 MB

8.5 x 11 • 600 ppi • RGB = 96 MB

These file sizes are for flat PSD images, when you add layers the file grows larger.
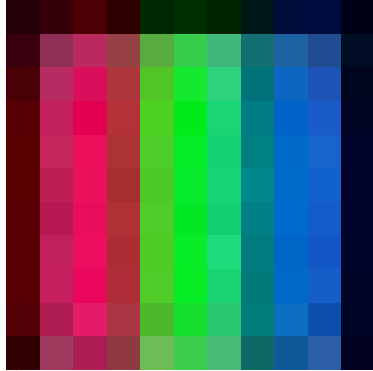
Transforming Raster Images

If you take an image that starts at a decent laser printer resolution, for example 150 ppi, then scale it down and decide to scale it up again later, significant quality loss occurs.
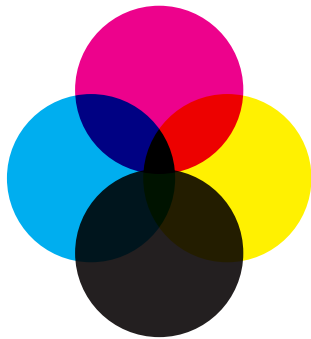
Color Modes

There are two primary color spaces for images: RGB *(Web Only)* and CMYK *(Print)*.

RGB

RGB *(Red, Green and Blue)* is used primarily for web-based images and is known as **Additive** color. RGB is measured in Color Levels from 0 - 255, for a total of 256 shades.

CMYK

CMYK *(Cyan, Magenta, Yellow and Black)* are the four primary print colors for all printing presses and color printers. CMYK is known as **Subtractive** color and is typically referred to by printers as **Process** color. CMYK is measured in Percent from 0% - 100%.

Bitmap/Line Art

Other print modes include **Bitmap**, which includes **no shades** of **Gray** instead it's black or white only. Truly Bit on or Bit off, hence the name Bitmap.
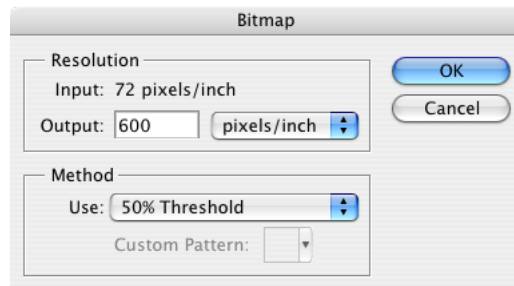
Duotone

When dealing with less expensive *(commonly two color , also known as spot color)* print jobs the use of Duotone mode may be necessary. In order to convert to Duotone, you must first go to **Image > Mode > Grayscale**, then choose **Image > Mode > Duotone**.
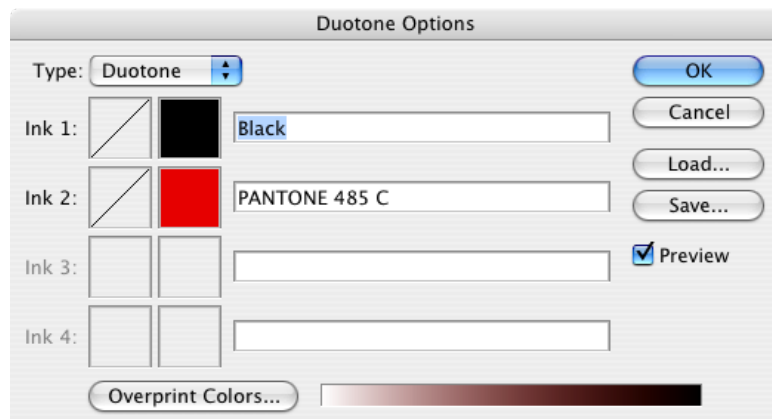
Resolution Formula

The formula below is to be used for all Grayscale, RGB and CMYK images.

2 x Line Screen = Ideal Resolution

1.5 x Line Screen = Minimum acceptable Resolution

Practice

LPI = 85 Ideal = _____ Minimum = _____

LPI = 100 Ideal = _____ Minimum = _____

LPI = 133 Ideal = _____ Minimum = _____

LPI = 150 Ideal = _____ Minimum = _____

LPI = 175 Ideal = _____ Minimum = _____

LPI = 200 Ideal = _____ Minimum = _____

Common Line Screens

Newspaper = 85 — 100 lpi

Magazine = 133 — 175 lpi

Coffee Table Books = 200 lpi and up

DPI vs PPI

DPI *(Dots Per Inch)* technically refers to dots in an inch, also called spi. **PPI** *(Pixels Per Inch)*, usually refers to scanned resolution. It is displayed in Photoshop under image size and is also called dpi. When referring to hardware resolution, **SPI** *(Spots Per Inch)* is more technically accurate. PPI is a better method of differentiating between hardware and software terminology. PPI would mean software, SPI would mean hardware, unfortunately DPI is used commonly to describe both.

60 lpi

150 lpi

LPI

LPI *(Lines Per Inch)* refers to **Halftone Screen** or **Line Screen** or **Frequency**. When printing on offset presses, gray ink is not actually used. A screen is created of black dots that trick the eye into seeing shades of gray and simulate continuous tone. Fewer lines in an inch create lighter shades of gray. More lines in an inch create darker shades of gray.

After the Scan

Determining Proper Resolution after an image has been scaled.

Starting PPI ÷ Scaling %

Example: 300 ppi ÷ 200% (2) = 150 ppi • or 300/2 = 150

Practice

PPI = 100 Scaling = 200 % New Printed Resolution = _____

PPI = 200 Scaling = 150% New Printed Resolution = _____

PPI = 300 Scaling = 50% New Printed Resolution = _____

Resolution vs Quality
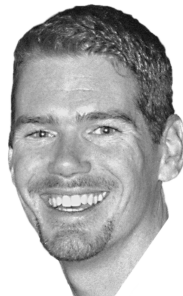

30 ppi ▪ 12 KB

72 ppi ▪ 28 KB

100 ppi ▪ 40 KB

225 ppi ▪ 144 KB
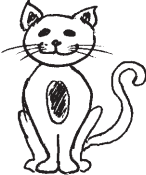
300 ppi▪ 240 KB

500 ppi ▪ 644 KB

Exception to the Rule

LineArt/Bitmap is the exception to the scanning rule. All LineArt images should be scanned at 600 - 1200 ppi. You may go as high as your imagesetter output resolution, for example 2400 or 2540 ppi.

100 PPI • 16 KB

300 PPI • 76 KB

600 PPI • 284 KB

1200 PPI • 1 MB

2400 PPI • 4.2 MB

Graphic File Formats

It is important as a graphics professional to choose the correct format for the intended use of the image. Here is a summary of the most popular file formats.

Print Formats

PSD

Adobe® Photoshop™ Document is the default file format for newly created images with layers. This encoded format is the only one that supports all available image modes *(Bitmap, Grayscale, Duotone, Indexed Color, RGB, CMYK, Lab, and Multi-channel)*. As well as other features such as guides, grids, alpha channels, and layers (including adjustment layers).

TIFF

TIFF *(Tagged Image File Format)* was developed by Aldus Corporation as a standard for images created by scanners. TIFF is one of the two primary print applications. TIFF is used for black and white (bitmap), grayscale, indexed, RGB and CMYK.

- Always smaller than EPS (unless the EPS is JPEG compressed)
- Can do LZW (Lossless) compression
- Whites are transparent in Bitmap (LineArt) by default

Lempel-Ziv Welch compression

LZW was designed by Terry Welch in 1984 in hardware for high-performance disk controllers. It is a variant of LZ78, one of the two Lempel-Ziv compression schemes. LZW compression and decompression are licensed under Unisys Corporation's 1984 U.S. Patent 4,558,302 and equivalent foreign patents.

EPS (not recommended today)

EPS *(Encapsulated PostScript)* is a platform-independent graphic file format that is supported by most illustration and page layout programs. An EPS file has two parts, PostScript code that describes the image and a graphic used as the on-screen preview. When printed the PostScript portion of the file is sent to the output device. When printing to a non-PostScript printer, the preview is printed instead. An EPS can be **Raster** *(made of* **Pixels***)* or **Vector** *(made of* **Points***)* EPS is usually larger because it can store special things in the header of the file that TIFF can not.

Those things are:

- A Clipping Path *(Silhouette)*, this can be done on TIFF's now
- Spot Colors, such as Pantone®
- JPEG Compression *(inside the EPS file, not raw JPEG)*
- DCS *(Desktop Color Separation)*, 5 file format which pre-separates the images in the file structure
- Transfer Function *(Curve)*
- Fixed Line Screen *(to override what is sent by the Page Layout program to the output device)*
- Photoshop EPS also supports transparent whites in Bitmap mode.

An image must be in EPS format if it is a Monotone, Duotone, Tritone, Quadtone, fixed line screen or has a custom transfer curve.

Note: *Save the EPS with a* **TIFF preview** *(also known as PC format). The Mac OS 72 ppi PICT preview is stored in the file's resource fork. Since Windows applications cannot read the Mac resource fork, a PICT preview does not display on Windows. Instead, the words "PostScript Picture" display on a gray background in the picture box. If you save the EPS on a Windows computer, choose a TIFF preview instead of a WMF preview.*

DCS

Desktop Color Separation (DCS), was developed by Quark Inc. and it enables certain applications, such as QuarkXPress, to print Low Resolution placement files with separations off and High Resolution data with separations on. When you save a CMYK image in Photoshop EPS format, you have the option of saving the image as an extension of the standard EPS format. Saving in DCS format creates five files: one file for each of the color channels in the CMYK image and a fifth master file corresponding to the composite color channel. To save the file in standard EPS format without the DCS option, choose Off. This method allows the RIP to process the file faster, because it is pre-separated.

DCS 2

Same as the DCS listed above, except that it now supports more than four colors from Photoshop. DCS 2 also creates one file, instead of five separate files on your hard drive

Web Formats

PNG

PNG (Portable Network Graphic) has 2 flavors: 8-bit & 24-bit. The 8-bit format gives you up to 256 colors. The 24-bit format gives you all the colors of a JPEG *(16,777,216)* with the added bonus of transparency and animation. PNG can be larger or smaller than JPEG depending on the colors and the image itself.
Format benefits:

- Transparency
- Animation
- 16+ million colors *(in 24 bit)*

JPEG (ok for print today)

JPEG *(Joint Photographic Experts Group)* is a **LOSSY** format that can greatly reduce the size of a file. If you do too much compression or save a JPEG many times you will experience **PERMANENT quality loss**. JPEG supports 24-bit color, grayscale, RGB, and CMYK. JPEG typically defaults to RGB color space *(and is the default format for most smartphones, tablets and digital cameras)*. JPEG was designed for continuous-tone images, so it won't work well with line art *(logos & maps, for example)* or images that contain only a few colors. JPEG files cannot be transparent or have silhouettes , so they will **always** appear **rectangular** on a web page or device screen.
Format benefits:

- Millions of Colors
- Smaller file size with higher compression settings

GIF

GIF *(Graphics Interchange Format)* is an older, highly compressed format that is dying off today and being replaced by PNG. GIF has three main benefits. The first benefit of GIF is interlacing. Interlaced images do not need to be completely downloaded before a user begins to see the image on a web page. GIFs start by showing a very low-resolution version of the image. Then, the image becomes gradually sharper as more of the image is downloaded.

The second benefit of a GIF is the ability to have a transparent background *(or silhouettes)*. The last benefit of a GIF is animation. GIF images are stored in Indexed color space and should **NEVER** be used for print.

Formats to Avoid

PICT

The PICT *(Picture)* format is widely used among Macintosh® graphics and page-layout applications as an intermediary file format for transferring files between applications. The PICT format is especially effective at compressing images that contain large areas of solid color. This compression can be dramatic for alpha channels, which often consist of large areas of white and black. When saving an RGB image in PICT format, you can choose either a 16-bit or 32-bit pixel resolution. For a grayscale image, you can choose from 2, 4, or 8 bits per pixel. If you're using a Macintosh with QuickTime installed, you can also choose from four JPEG compression options for the file.

BMP

The BMP *(Bit Mapped Paint)* format is widely used among office based PC users. BMP is typically in RGB (Red, Green, Blue) color space and low resolution (72 ppi). This should be avoided by people who want to print. It is acceptable for on-screen use only. BMP contains black&white, 16-color, 256-color and Truecolor image data. The paletized 16-color and 256-color images may be compressed with run length encoding.

WMF

The WMF (Windows MetaFile) format is also widely used among office based PC users, it was developed by Microsoft. WMF is typically in RGB (Red, Green, Blue) color space and low resolution (72 ppi). This should be avoided by people who want to print. It is acceptable for on-screen use only. It file consists of a set of Windows specific instructions to draw a Vector (point-based) graphic. This is an nice format for image interchange between Windows applications, but is not very useful on other platforms.

Adobe Bridge

Adobe Bridge acts as a **central launchpad** for all Creative Cloud files *(and many other file types)*. Bridge also aides in many automation tasks from Photoshop including: Batch rename, Convert to different file formats, batch processing of Camera Raw & jpeg files, building seamless panoramic images and much more.

Using bridge you can browse, organize, label, and preview Photoshop, Illustrator, PDF and InDesign *(CS3 and newer)* documents, templates, and **snippets**. However; you are not limited to Adobe files, bridge can be used to globally **batch rename** or organize **virtually any file type** *(although you may not have a preview for all file types)*. The **Preview** section can be scaled to give a larger, more detailed view of the image. In the lower right corner of the Bridge window you can select several different preview types.

If you would like to launch Adobe Bridge from any Creative Cloud program, choose **File > Browse in Bridge** (**Command Option O** *or* **Ctrl Alt O**).

Tip: To select non-consecutive items, hold down the **Command** *key on the Mac or* **Ctrl** *on Windows. The* **Shift** *key will select rows, or consecutive items.*

Normal View *(with a custom Kelly workspace)*

Search bar

Thumbnail Size   Optional Views
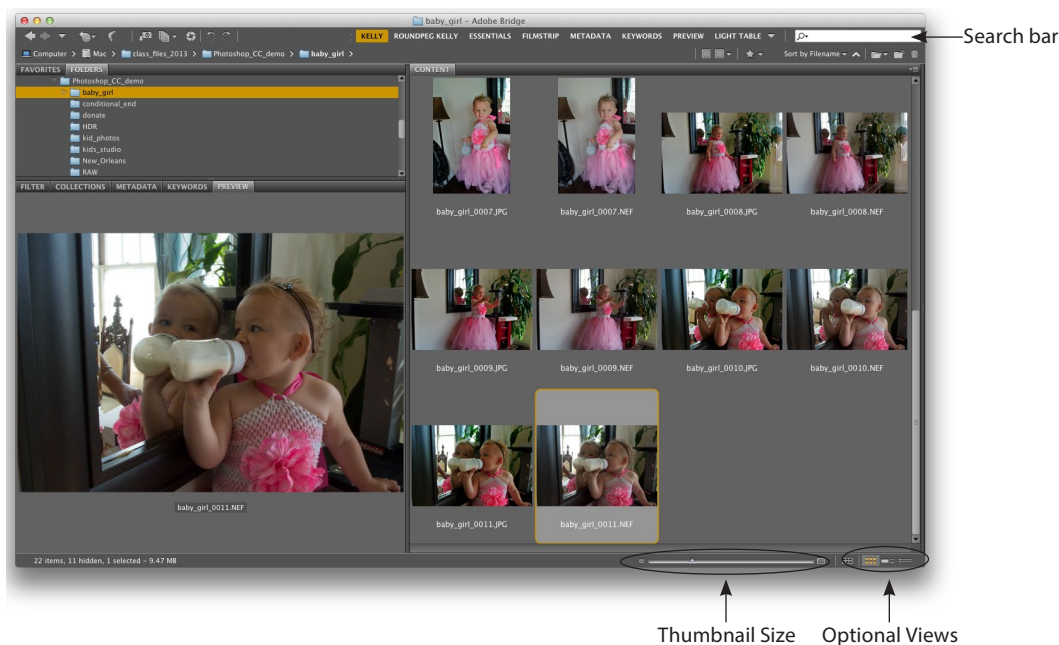
Full Screen Slideshow

One of my favorite features to review a folder full of images is **View > Slideshow** (**Command L** *or* **Ctrl L**).

Shortcuts: **H** will hide or show the menu
Spacebar key pause or play the slideshow
Esc key will exit the show
The number **1–5** will rate an image

Preview Panel Loupe Tool

Bridge CS3 has added a **Loupe tool** to the Preview window. To use the Loupe, simply click on the image in the Preview window anywhere. To **zoom in**, use your **scroll wheel** on your mouse or the **+** on your keyboard **zoom out** hit the **–** key. To make the Loupe tool go away, click anywhere in the Loupe window, in CS4 they added a small X at the lower right corner to close the loupe window.
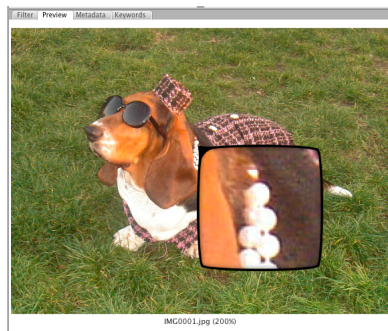
Batch Rename

It seems these days that everyone has a digital camera, even my grandparents, who don't own a computer. All cameras seem to pick useless-arbitrary names, this can be easily solved using Bridge.

1. In Bridge, select the folder of images you would like to rename *(if you've clicked on an image, Select All before starting)*. Choose **Tools > Batch Rename** (**Command Shift R** or **Ctrl Shift R**). If the default setting doesn't let you give your files a custom name, **Click** on **Current Filename** and choose **Text**.
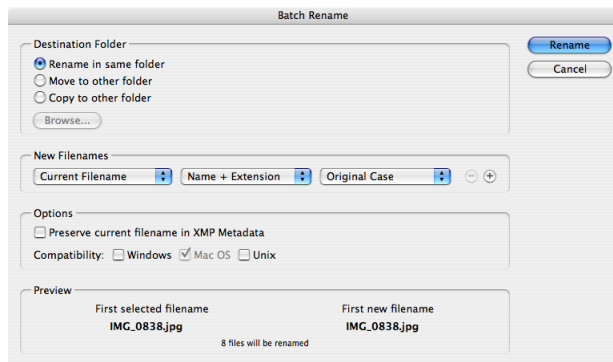
2. After you've selected **Text**, type the desired filename *(recommendations for naming are on the right margin of this page)*. Typically, you will want a **sequence number** or letter to separate the items. The **plus sign** to the right of text will let you add a variety of items to the filename, such as date, number, letter, current filename and more. I recommend that you use a 2 digit number, if there are more than 100 images 3 digits is recommended.
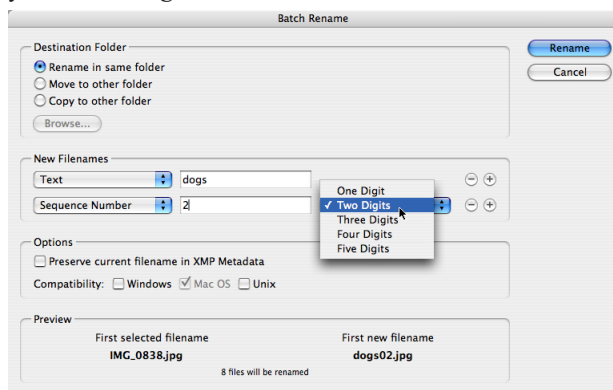
Many Unix servers, which are often used in print shops, may have a problem with illegal characters such as / & : ; and may be sensitive about the use of a period (Windows machines won't read past the first period). To build good work habits, you should always name files with lower case characters, instead of a space use underscore_ and never use more than one period in a file name, separating it from it's proper 3 or 4 letter extension.

Only use:

letters

numbers

under_score

hy-phen

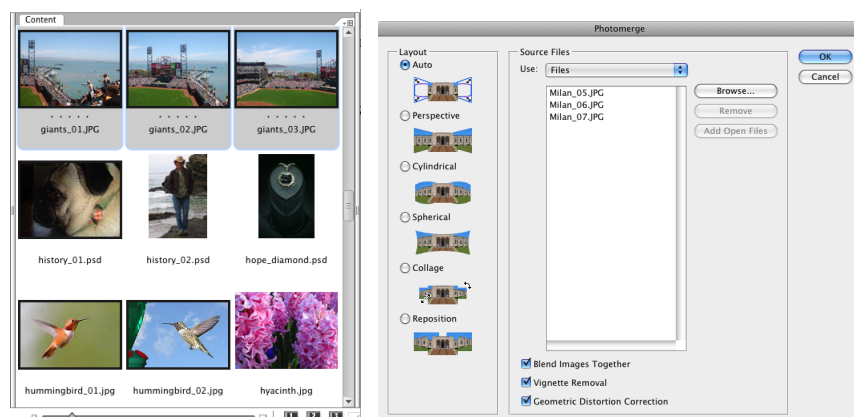one period *(separating the extension)*
Maximum of 31 characters

Example:

wedding_1942.tif *(correct)*

Wedding 1942 kfm *(incorrect)*

Photomerge for Panoramic

Bridge allows you to assemble your own panoramic shots. To start, select **3 shots** in Bridge to build a Panoramic. Photoshop will find the overlapping pixels and blend the edges. Choose **Tools > Photoshop > Photomerge**.


Photoshop preserves the **Layer masks** that were used to blend the image. To disable the mask temporarily (seeing the blending) hold down **Shift** and click on the **mask icon** in the **Layers panel**. To turn the mask back on, **Shift** click the mask icon in Layers again.

Image Processor

This is one of the easiest and most useful tools in Bridge, next to Batch Rename. The **Image Processor** will take a folder full of images and convert them to another format. Often this is useful to take your camera's raw JPEG images and convert them to an un-compressed format such as PSD or Tiff. In Bridge choose **Tools > Photoshop > Image Processor**. This will create a new folder for all the images, in this case the folder will be named PSD. If you changed the format to Tiff the folder would be named TIFF.
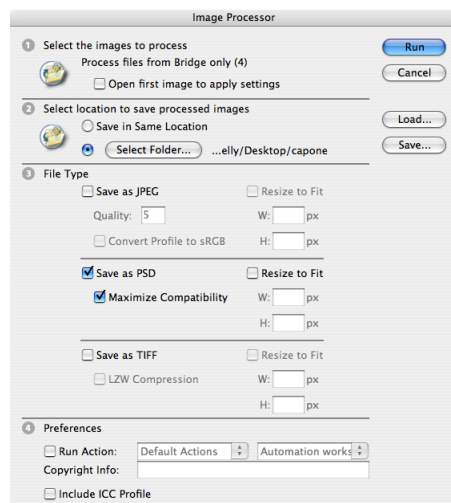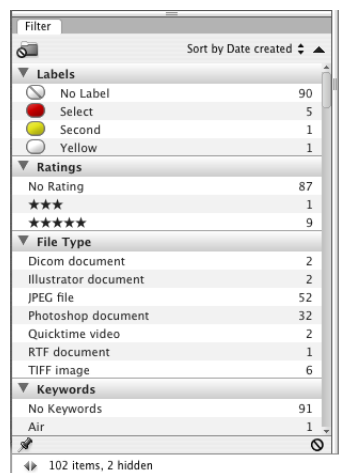
Savable Workspaces

Once you have all your panels organized, it helps to save a workspace to keep their position.
**Window > Workspace > Save Workspace**.
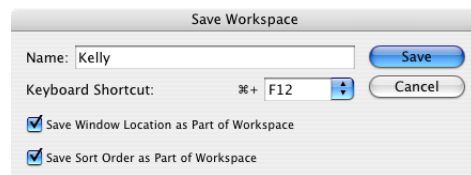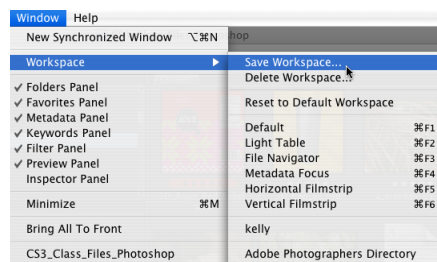
Filter Panel

This is a wonderful tool added to Bridge CS3, the **Filter panel** allows you to control which files you see in the **Content panel** by checking or un-checking items to display.


Optional Views

Bridge offers many different sort and view options, found under **View > Sort**. If you drag images to a new spot in Thumbnail view, the sort order may change to Manually. To correct it to **By Filename**, go back to **View > Sort**.
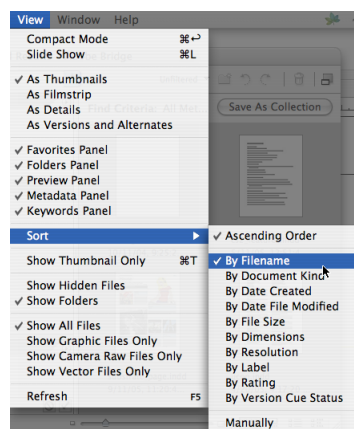
Metadata & Copyright

Metadata *(located in the lower left hand corner of the Bridge window)* is information about the image such as: creation date, width, height, resolution, copyright info, etc. Bridge even displays **Camera** specific **EXIF** *(Exchangable Image File Format)* information like: did the flash fire, what was the aperture value, date, time, etc. Also, **Metadata** can be searched for keywords, colors, and image resolution and much more. One common task is to batch attach Metadata to a series of images. The Shift key will select **consecutive** items, the **Command** *(Mac)* or **Ctrl** *(PC)* key will select **not-adjacent** items. Using the **ITPC** *(International Press Telecommunications Council)* section of the Metadata pane you can now attach up to **30 fields** of **custom Metadata**.
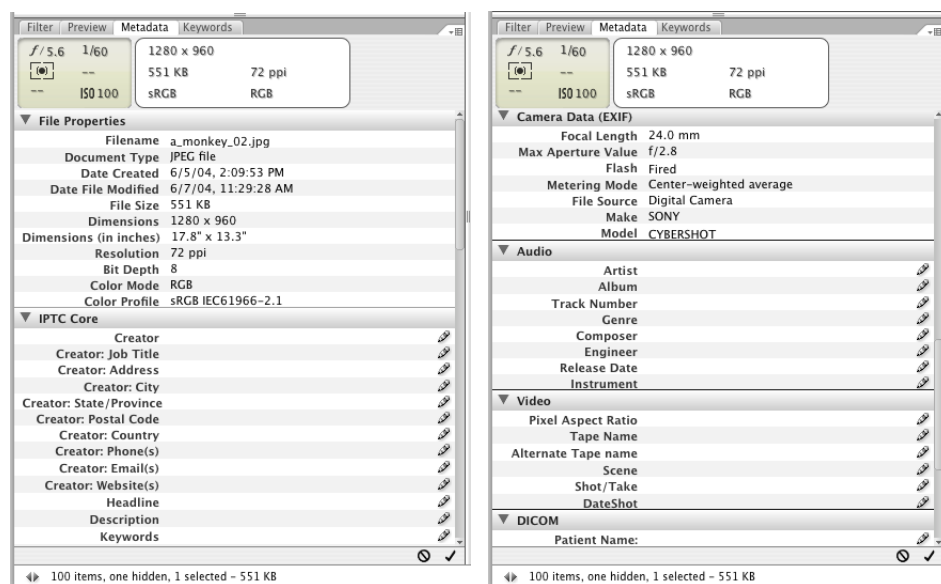
Metadata preferences

Bridge CS3 hid the Camera model display in the Metadata panel. To turn this back on, choose the Metadata pop-up menu and select Preferences. Just above GPS you'll see **Make** and **Model**, check those 2 boxes to turn the camera make & model back on.
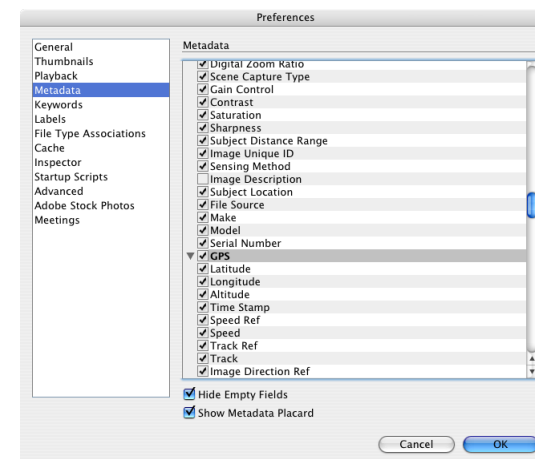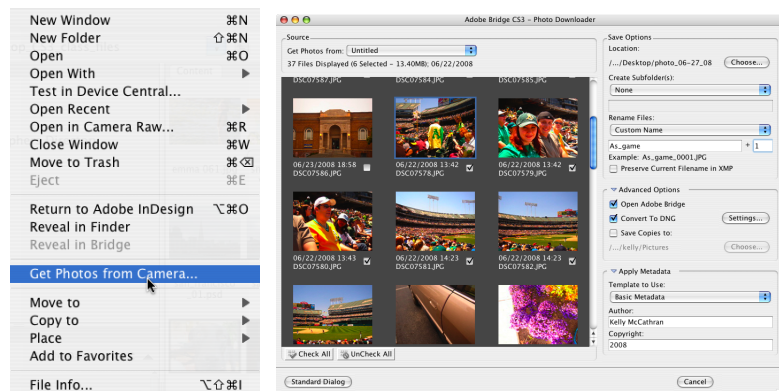
Photo Downloader in Bridge (bypass iPhoto)

For users who don't like where iPhoto stores your images, you can bypass it all together through Bridge's new photo importer. In this dialog *(when you click Advanced)* you can custom name the files, select which ones to be imported and choose where they land on your Hard Drive. **File > Get Photos From Camera...**


Web Photo Gallery or PDF Contact Sheets (GONE in CC)

Bridge can automatically assemble a Web Photo Gallery or PDF Contact sheet *(in Bridge CS2 – CS6)* by choosing **Window > Workspace > Output**. THIS is **GONE** in **Photoshop CC**! You can create Contact Sheets in InDesign by using **Window > Utilities > Scripts**, then expanding JavaScript and/or AppleScript and running ImageCatalog.applescript or Image-Catalog.jsx *(respectively)*.
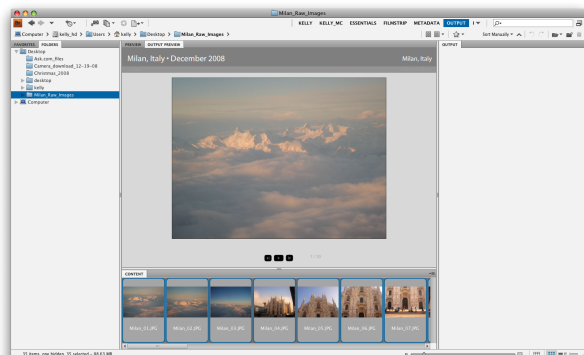
Bridge Preferences

If you'd like a lighter background go to **Bridge > Preferences** *(Mac)* or **Edit > Preferences** *(PC)* and choose **General**. Then slide **User Interface Brightness**.
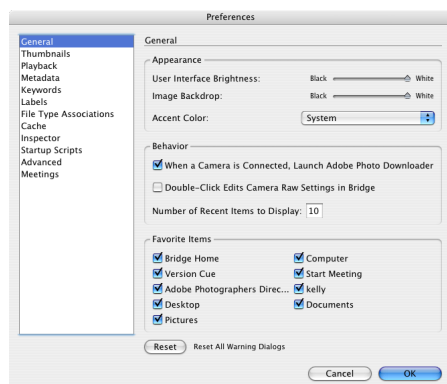

Rotate Multiple Images

How often do you purchase stock photography and they are all in the wrong orientation? Well, now you don't have to build an action to correct the image. Under the **Edit** menu you can locate **Rotate 90° Horizontal**, Vertical or 180°. There are also buttons at the top right corner of the Bridge window to rotate.

Powerful Searching

In Bridge choose **Edit > Search**, in the dialog box under **Criteria** choose **All Metadata**. In the example below, a folder was searched for the **font Myriad Pro** and returned **four results**. Other attributes you can search for are: Pantone® colors, Camera Model, Keywords, File Name and much, much more.
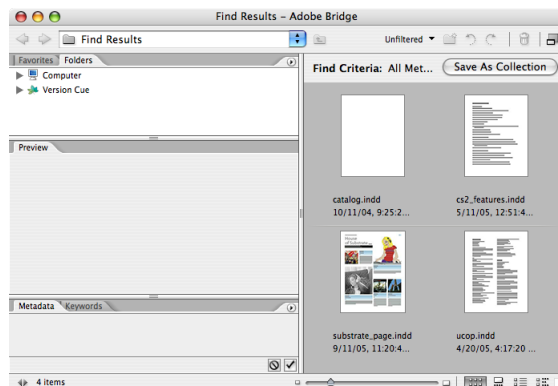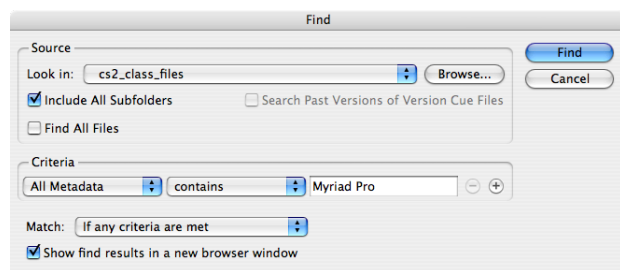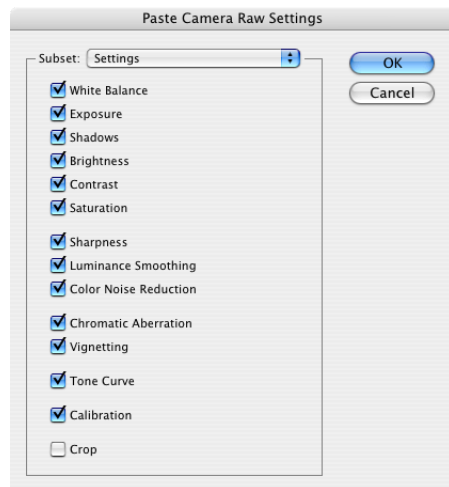
Multi-Image Camera Raw

When processing many images from one shoot, Camera Raw (CRW) is the absolute best format to choose. Using this format, images can be opened in Adobe Bridge, Settings can be applied to one photo, then Copied and Pasted to an entire series. These settings are also nondestructive and the images can be restored back to the original at any time.

1.   Open Adobe Bridge and navigate to the folder of Camera Raw images.
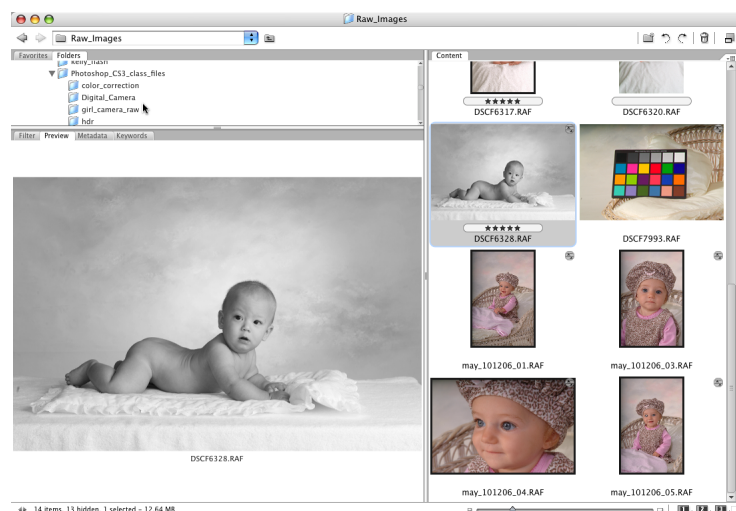
2.   **Double click** on any image in the series and **adjust the settings**.

3.   After the settings are adjusted click **Done**.

4.   Come **back to Bridge** and choose **Edit > Develop Settings > Copy Camera Raw Settings** *(***Command Option C** *or* **Ctrl Alt C***)*.

Paste Camera Raw Settings

Subset: Settings

OK
Cancel

☑ White Balance
☑ Exposure
☑ Shadows
☑ Brightness
☑ Contrast
☑ Saturation

☑ Sharpness
☑ Luminance Smoothing
☑ Color Noise Reduction

☑ Chromatic Aberration
☑ Vignetting

☑ Tone Curve

☑ Calibration

☐ Crop

5.   Select the other images in the series and choose
Edit > Develop Settings > Paste Camera Raw Settings *(***Command Option V** *or*
Ctrl Alt V*)*.

PDF Presentation (gone in CC)

If you have a collection of images that you would like to give to someone *(regardless of platform)* **Adobe Bridge** now includes the ability to create a **self-advancing slide show** as a **PDF**. From the **Bridge** window choose **Window > Workspace > Output**.

"Bridge can automatically assemble a Web Photo Gallery or PDF Contact sheet (in Bridge CS2 - CS6) by choosing Window > Workspace > Output. THIS is GONE in Photoshop CC! You can create Contact Sheets in InDesign by using Window > Utilities > Scripts, then expanding JavaScript and/or AppleScript and running ImageCatalog.applescript or ImageCatalog. jsx (respectivley)." on page 17

Note: Be nice to the person receiving the presentation and tell them that the ESC *key will exit the slideshow.*
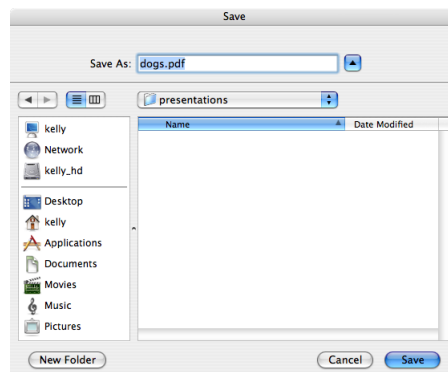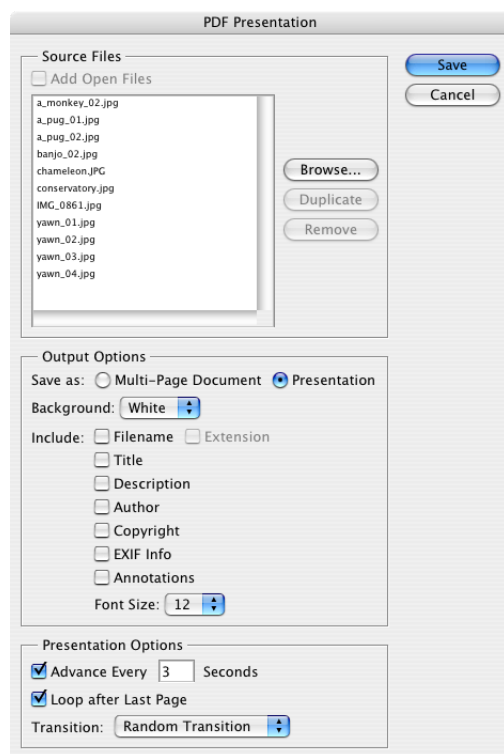
Shared PDF Settings

All Creative Cloud applications can **share Adobe PDF settings** *(formerly called Job Options)* between applications. This means if you build custom settings in any Creative Cloud application, they will be available in the other applications. For example; if you create a PDF in InDesign and Save a Preset, you can use the same settings in Illustrator and Photoshop.

When creating the PDF presentation, as shown on the previous page, it is a good idea not to change the compression settings on JPEG images *(which are the most common format for digital cameras)*. When a JPEG is first saved, it evaluates what data won't be missed and throws away pixels. For example, on the first save you might loose 1,000 pixels. On the second save of a JPEG, it will reevaluate the image and might throw away another 1,000 pixels. Therefore the image gets progressively worse in quality.

In most cases, if you're not sure which version of **Acrobat** or the **free Adobe Reader** the receiver has, it is safest to choose **Acrobat 4** for **Compatibility**. This way, anyone with Acrobat 4 or newer open the file.
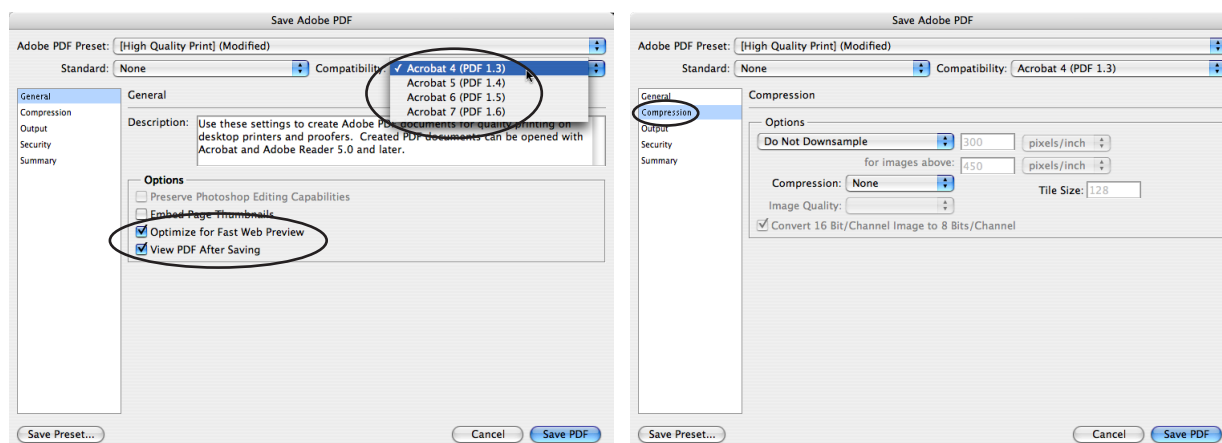
Once you have customized your options, **click Save Preset** in the **lower left corner**. **Do not** change the **default location**, or the settings will not show up in other applications.
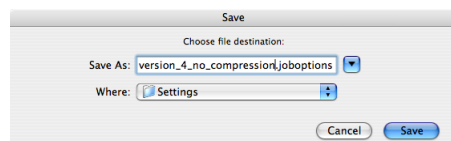
Centralized Color Settings

The Color Settings File (**csf**) you choose for each application determines how embedded color profiles are handled, how your color is converted from RGB to CMYK and how to handle profile mismatches.

Color Management settings have never been this easy to load. In Bridge, choose **Edit > Color Settings** *(***Command Shift K** *or* **Ctrl Shift K***)* and select your desired profile. Bridge will Synchronize Illustrator, Photoshop, InDesign and Acrobat *(not version 7 or older, only Acrobat 8 and newer).* The default color settings are **North America General Purpose 2**, which use **sRGB** as the standard color profile for web or on-screen images *(this profile has the lowest gamut of reproducible colors and is* **NOT RECOMMENDED** *for print).* If you do nothing else, you should switch your profile to **North America Prepress 2**, which uses the better Adobe RGB 1998 profile. This profile also works well in many browsers and on Facebook for displaying better color *(as of 2011).*
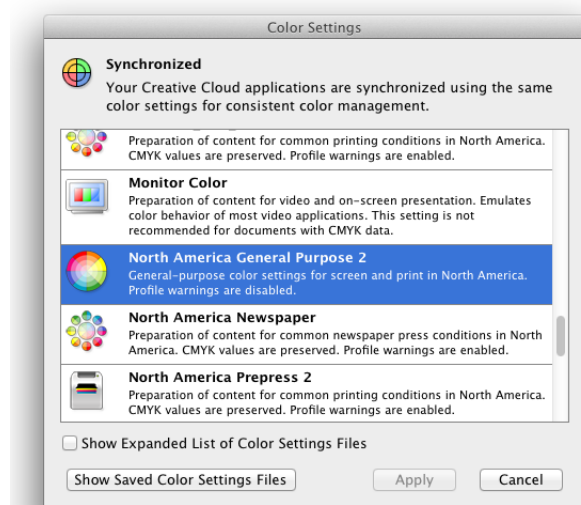
Color Management with ICC Profiles

By definition **RGB** color spaces are matrix-based color spaces. The idea of attaching or assigning a **color profile** is to map the gamut of the source space to the output space *(often smaller, or a different shaped color maps)*. Color profiles smartly re-assign and compress colors and tones as needed to go from one gamut to another.

Using the controls in ACR *(Adobe Camera Raw)* as a soft proofing environment *(wether in Bridge, Photoshop or Lightroom)* gives you control over how the re-assign and compress colors when moving from one color space (or gamut) to another. For example: moving from sRGB to Adobe RGB or ProPhoto to Adobe RGB compression and re-mapping are performed.

Converting from one gamut to another *(profile to profile)* can create color shifts. If you have a shade of blue in ProPhoto that is too saturated to be represented as sRGB, you can either:

1. Switch the profile in Photoshop, Lightroom or the Adobe Camera Raw dialog. This maps the colors for you, which means you are doing a hard clip. This can sometimes do bad things but often isn't noticeable *(especially by non-photographers)*.

2. Change the blue using some ACR control so that the re-mapped or compressed color does fit in sRGB gamut.

Edit > Assign Profile

Photoshop *(and the other Creative Cloud applications)* can change *(and attach)* a new ICC Profile by choosing **Edit > Assign Profile**. Assigning a profile gives you a better, and more accurate, soft proof it does not make a permanent change to the color of the image. **Edit > Convert to Profile** does make a permanent switch in the colors of the photo *(after you save & close the file)*.
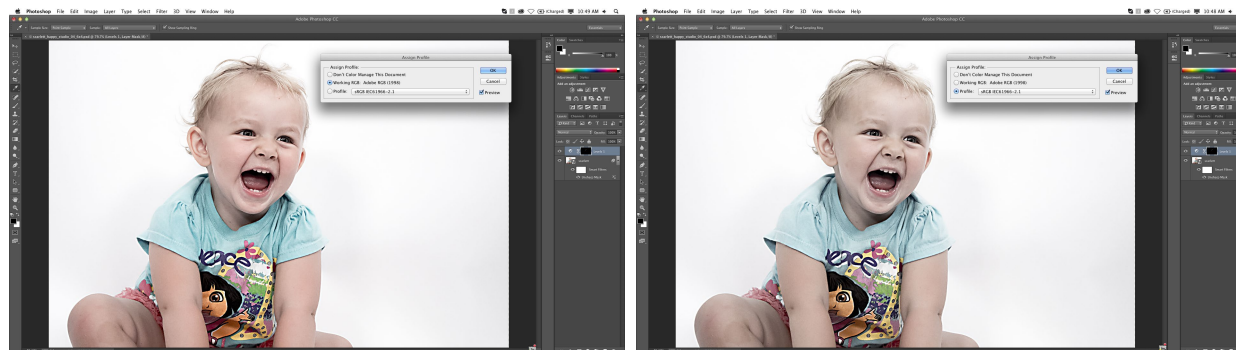
Color Management on the Camera

Different light sources produce different perceptual color in photographs. When photographing in different environments such as: studio lighting, sunlight on a clear day *(in Los Angeles)*, overcast skies *(in Seattle)*, using camera flash, office fluorescent tubes, halogen lamps and more the results will be very different. The average person does not recognize these differences because human vision does a great job of neutralizing color differences.

Cameras are not capable of neutralizing these colors without specific settings changed by the photographer. All digital cameras have white balance settings *(even your iPhone with an App)* which can be set to match the main light source of your shooting environment. This will remove strong color casts in your photos.

The Kelvin Scale was developed by William Thomson in 1864. The standard temperature for viewing photographs and shooting photos is 5000° Kelvin, there has been a movement toward 6500° Kelvin in the last 10 - 15 years.

Auto White Balance (**AWB**) seems like a good idea to start with *(for beginners)*. More experienced photographers know this is not the best choice. AWB uses different algorithms to neutralize the color of the environment for every picture taken *(even of the same scene in the same lighting conditions)*. This will cause the color to shift with each photo taken. Unless you are shooting in **Camera RAW** (DNG, NEF, CRW, CR2, and more) you should set the white balance to match the light source. Refer to the camera manual to learn what the icons look like and how to change them. Set to local conditions: tungsten for indoors, sunlight for clear sky, overcast for cloudy days, etc.
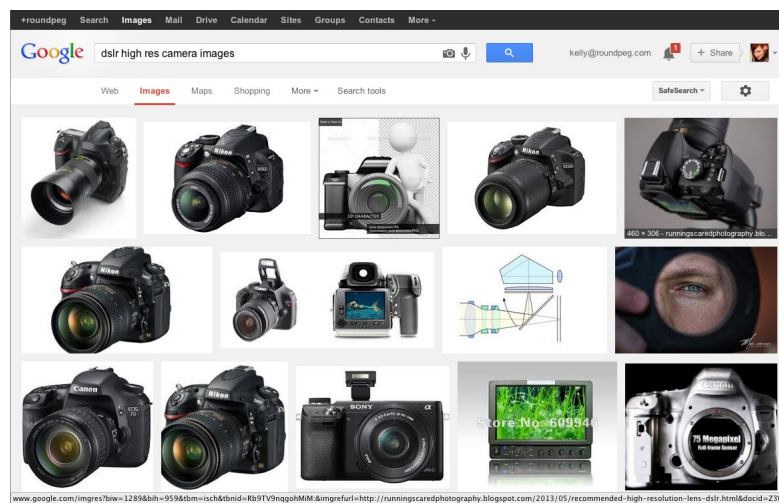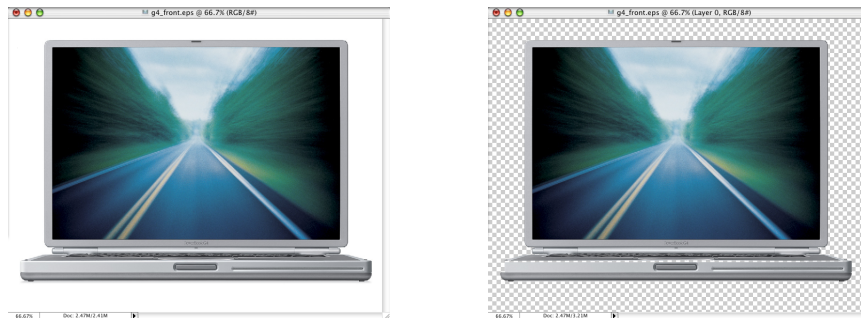
Erasing a Background

To quickly remove the background of a layer:

1. Choose the **Magic eraser** tool *(which is hidden under the eraser tool).*
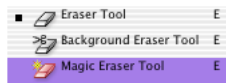
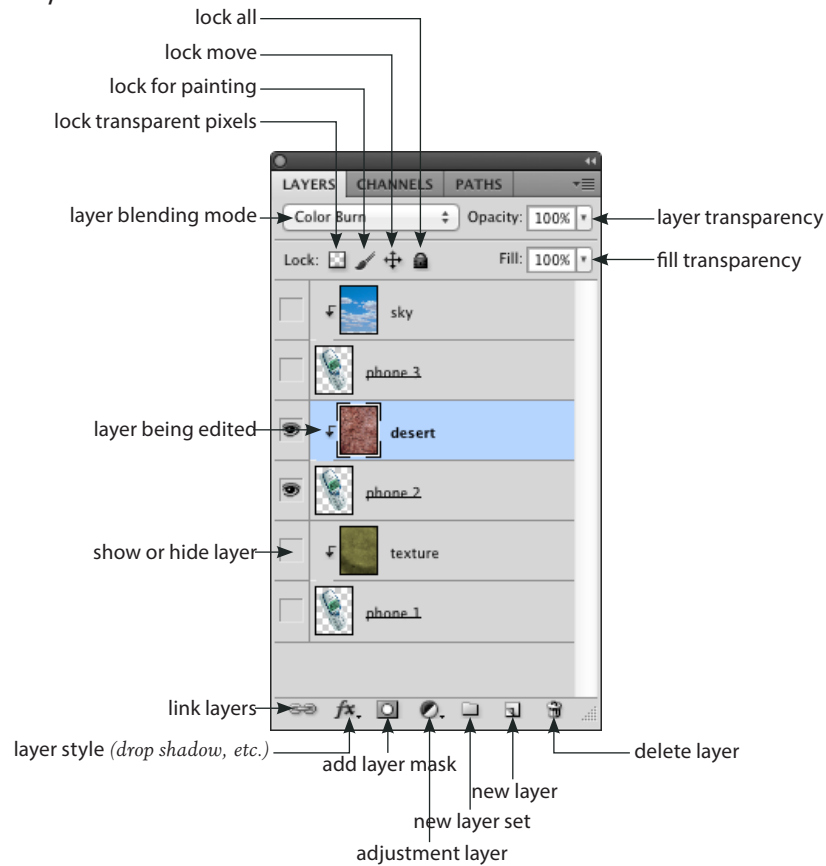2. **Click** on a **solid area** of the background.

The **checkerboard** pattern indicates the **transparent area** of the image.

Photoshop Layers

Layers can be thought of as clear pieces of acetate stacked on top of one another. If there is no image on a layer, you can see through to the layers underneath. Layers also control the **stacking order of objects**. There are also special features such as adjustment layers, layer styles and fill layers for creating high end effects.

The Layers Panel

lock all

lock move

lock for painting

lock transparent pixels

layer blending mode

layer transparency

fill transparency

LAYERS   CHANNELS   PATHS

Color Burn   Opacity: 100%

Lock: Fill: 100%

sky

phone 3

layer being edited — desert

phone 2

show or hide layer — texture

phone 1

link layers

layer style *(drop shadow, etc.)*

add layer mask

adjustment layer

new layer set

new layer

delete layer

Linking Layers

Now in the Layers panel, you can use the **Shift key** to select consecutive Layers, to select **non-consecutive Layers** use **Command** *(Mac)* or **Ctrl** *(Windows)*. To link layers, select them, go to the **Layers panel menu** and choose **Link Layers**.
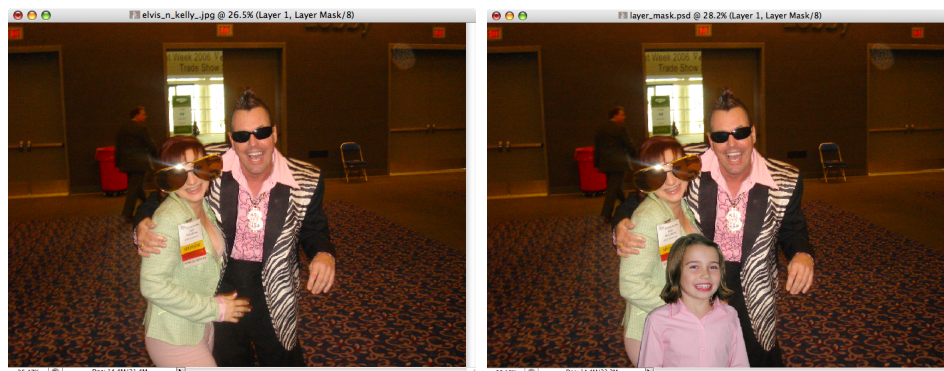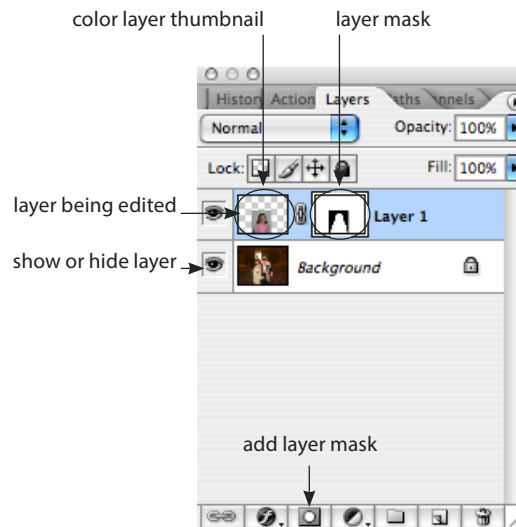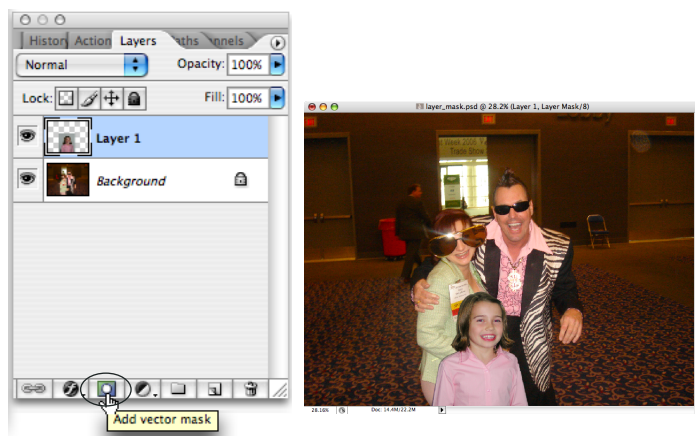
Selecting Layers

Linking Layers

©2013—kelly mccathran
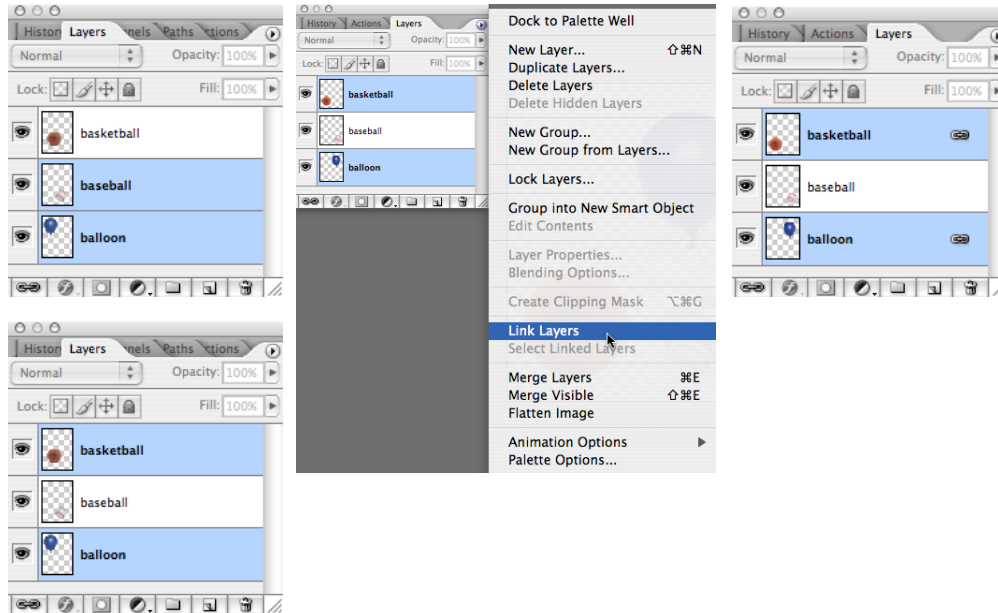
Layer Masks

When it comes to **dropping in backgrounds** or putting **new people in photos**, there is no better method than a **Layer Mask**. Layer masks never harm the original image and if you mess up in your selection, painting tools such as Erase and Paintbrush can be used to hide or reveal parts of the image.

1. In Bridge, select your two images and go to **Tools > Photoshop > Load Files into Photoshop Layers**.

2. Use the **Quick Selection** tool (**W**) or your favorite selection tool to select the area to be hidden *(masked)* from the layer.

3. Once you are happy with the selection go to **Select > Refine Edge**, or click the **Refine Edge button** on the Options Bar.
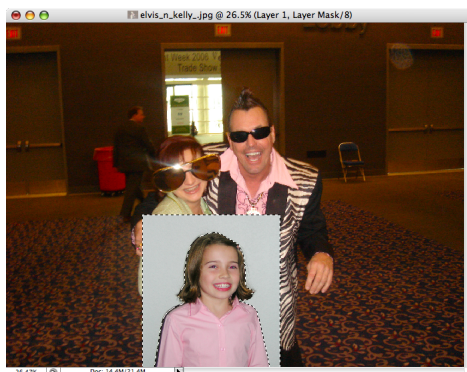
4. Once the selection is made, click the **Add Layer Mask button** at the bottom of the **Layers panel**. Now the desired area is hidden from the layer.

color layer thumbnail   layer mask

layer being edited

show or hide layer

add layer mask

Add vector mask

5. To modify the mask, be sure you have the **black and white** Layer **mask thumbnail** selected and switch to the **Paintbrush** tool **(b)**. Painting with **Black**, *BLOCKS*, to refine your selection. Painting with **White**, *REVEALS* the original image.

6. If the overall tone looks different than the background image *(too light or too dark)*, use **Image > Adjustments > Curves** or **Image > Adjustments > Levels** to lighten or darken the image over all.
Note: Before attempting to adjust curves or levels, click on the color layer thumbnail in the panel to affect the image, **not the mask**.

Adjustment Layers

Adjustment layers allow for non-destructive, editable color corrections. They are the safest way to approach image adjustments. Once the Adjustment layer is added, you can see it in the layers panel. If you
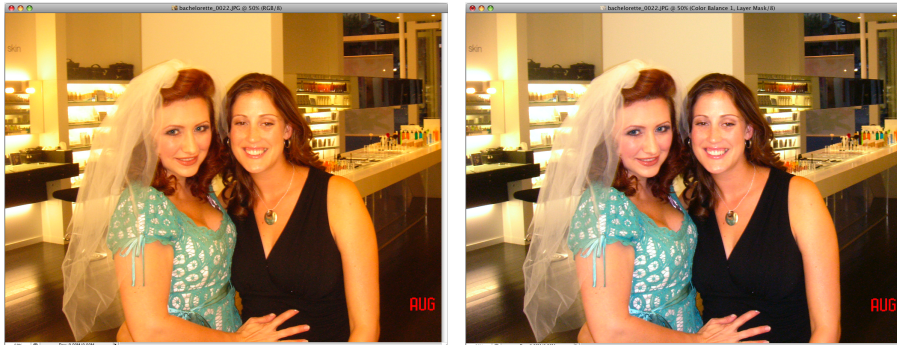
1. Click the icon at the bottom of the Layers panel to add a new adjustment layer.

2. Select your adjustment.

3. Double click the adjustment icon in the Layers panel to edit the adjustment.
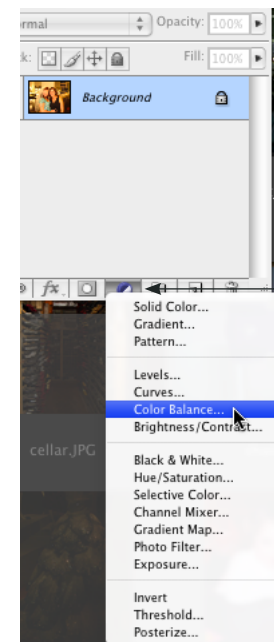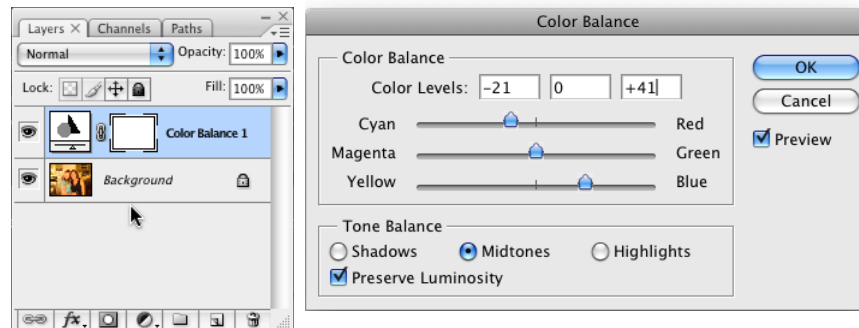
new adjustment layer

Clipping Group for Patterns or Textures

For applying textures to objects, the **Clipping Group** feature is very useful.

1. Copy and paste *(or drag and drop)* the texture on a layer above the object you'd like the pattern to be applied to.

2. Then move between the two layers and hold down the **Option** or **Alt** key *(small **bubbles** will appear, you can also use* **Layer > Create Clipping Mask**, **Command G** *or* **Ctrl G***)*.

3. The texture will be clipped to the **non-transparent** areas of the image.

Type Rising Through an Image with a Pattern

This is an effect you've probably seen many times, making type look like it's embossed in an image or rising up through a photo. There are lots ways to accomplish this, here is my recommendation.

1. Open an image.

2. Choose **Edit > Define Pattern**, you can leave the name as is or type a new one. The pattern will be used to fill our type and it will be available to apply to other Photoshop documents.
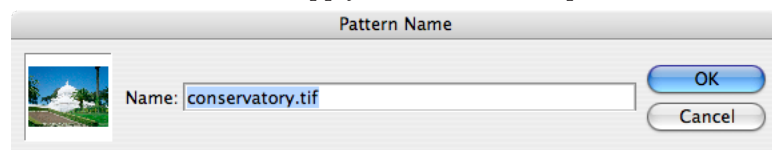

3. Select the **Type** tool (**T**) and click on the image to enter the text.
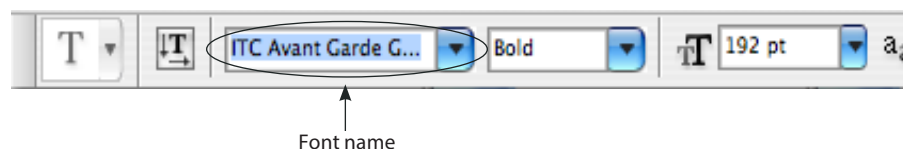

Font name

Tip: *If you select text, then* **highlight** *the* **font name** *(instead of clicking on the arrow to the right, click directly on the name) and press the up ↑ or down arrow ↓ on your keyboard Photoshop will change the highlighted text to the next alphabetic font in the list.*

In essence, this let's you play with the design until you discover the perfect typeface to use. This works on **any field** *in* **any Adobe application** *(even dialog boxes). For example, click on the size field and press the up arrow or down arrow key and the type will get bigger or smaller one point at a time.*

4. Go to the **Move tool (V)** *(in order to get out of text entry mode)* then click on the **Layer Style** button at the bottom of the Layers panel, choose **Drop Shadow**. The type needs to have an effect applied in order to show up. If you fill the text with a pattern and you don't have a drop shadow or bevel and emboss effect applied, the text will vanish.


Layer Style
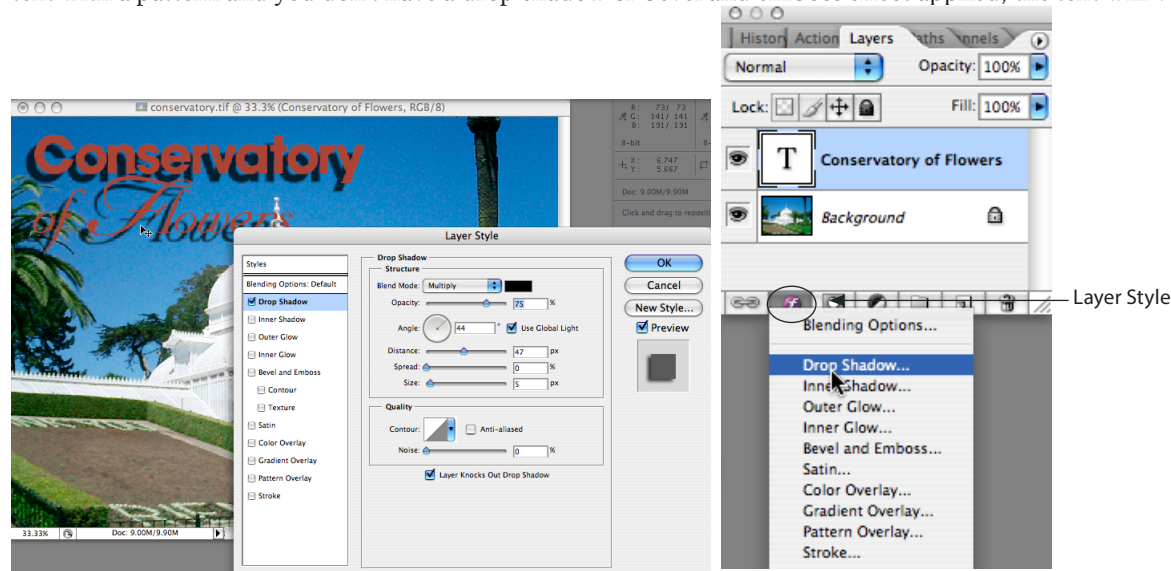
5. Check **Bevel and Emboss** effect, then clicked on the words **Pattern Overlay** *(not just the check box)*. The default pattern is blue bubbles, click the **arrow to the right** of the Pattern icon *(the blue bubbles)* and choose the image you defined as the pattern in step 2. Finally, **uncheck Link with Layer**.

click to select
your pattern
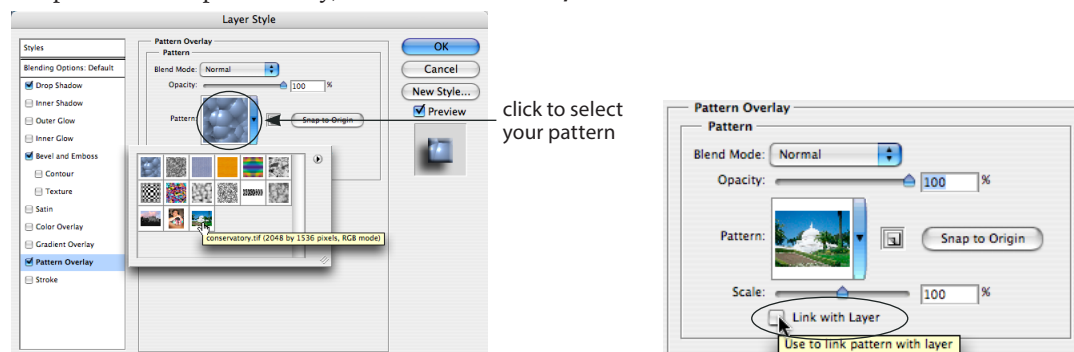
Replace Color

Replace color is one way to completely change the color of something .
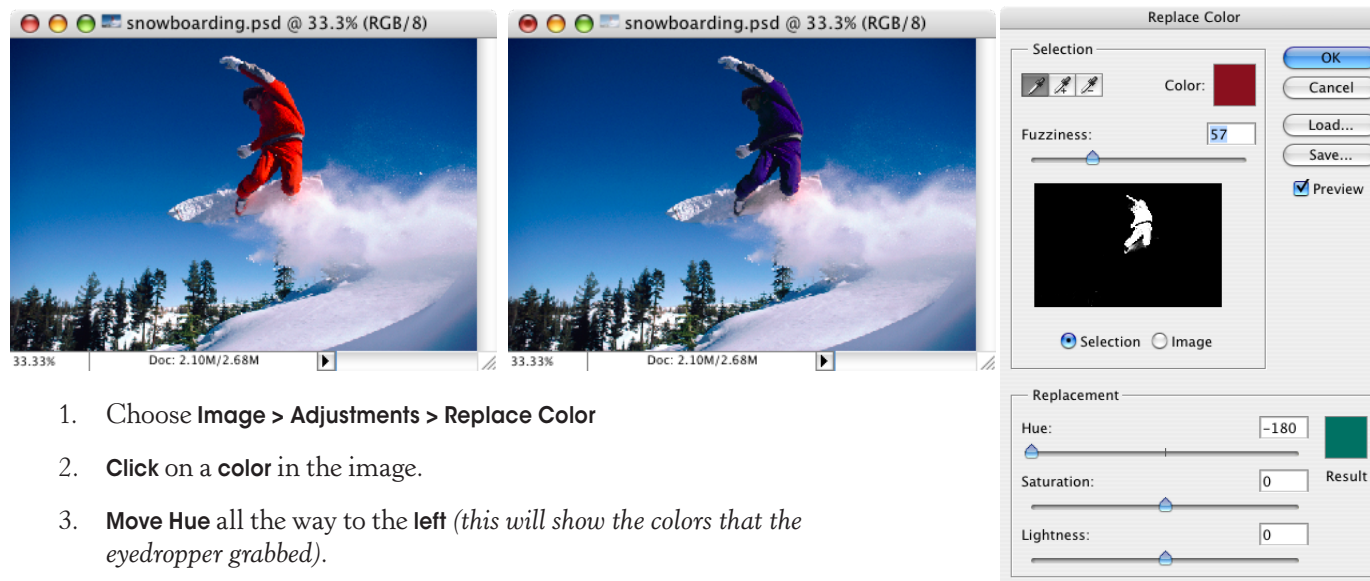
1. Choose **Image > Adjustments > Replace Color**

2. **Click** on a **color** in the image.

3. **Move Hue** all the way to the **left** *(this will show the colors that the eyedropper grabbed).*

4. Hold down **Shift** and click on colors that were not changed.

5. Slide **Fuzziness up** to include more shades of the selected color.

6. Now **slide Hue** to **any shade** in the Rainbow.

Vanishing Point Filter

Vanishing Point allows you to paste, clone and paint selected portions of an image while matching the **perspective planes** in the shot. To use this **Open** an image and choose **Filter > Vanishing Point** (**Command Option V** *or* **Ctrl Alt V**).
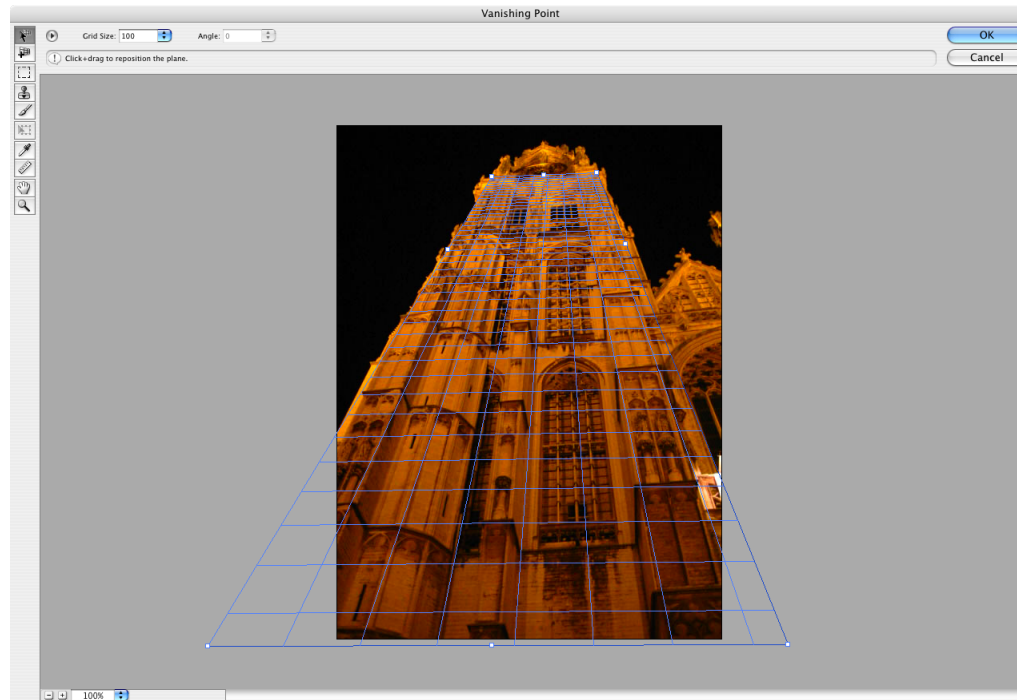
Smart Objects & Smart Filters

Perform nondestructive transforms of embedded vector and of pixel data. The images that are turned into Smart Objects do not need to travel with the Photoshop file. To create a **Smart Object**, choose **File > Place** and select an AI, EPS or Raster image. You can make a *"protected"* layer and run **editable** filters by choosing **Filter > Convert for Smart Filters**.
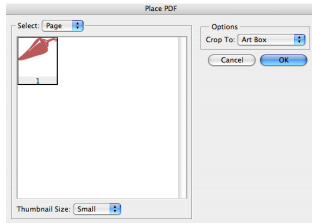
Placing Smart Objects

When you place you will have to double click to accept the image, it will automatically become a Smart Object.
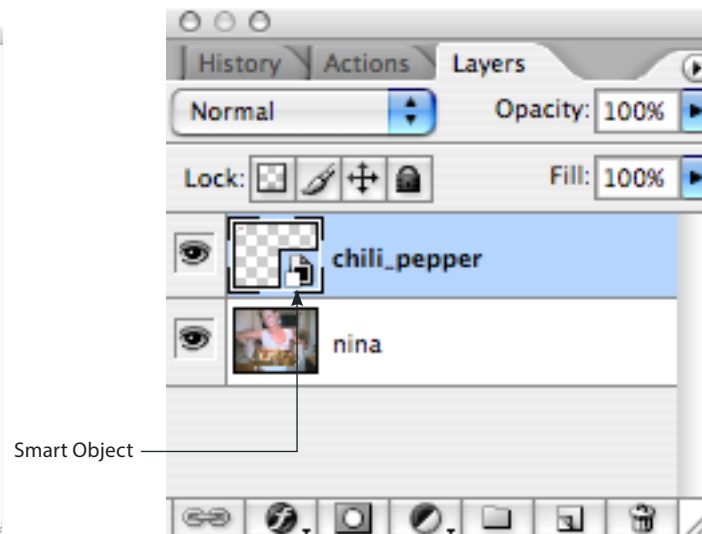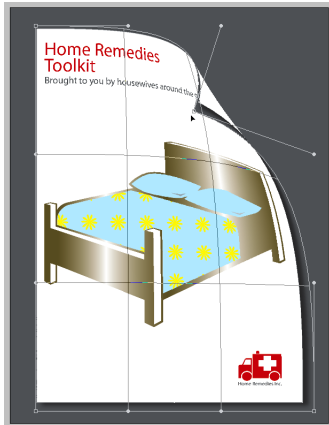

Smart Object

Image Warp

The Text Warp tool has been in Photoshop for several versions, now the same effects can be applied to images. Open the image to be warped and choose **Edit > Transform > Warp**.


Clone Source Panel

Images can now have up to 5 Clone Source(s) and you have far more options when cloning. You can find this panel under **Window > Clone Source**. To use the Clone tool you first **Option** or **Alt** click on the start point, then move your mouse over the area to be corrected–click & drag.
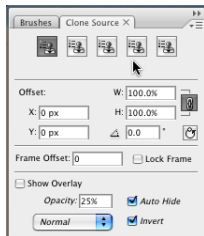
Auto Align and Auto Blend Layers

If you have images that need to be blended together to make a panoramic, or lined up to create a layer mask these two features will save you a ton of time.
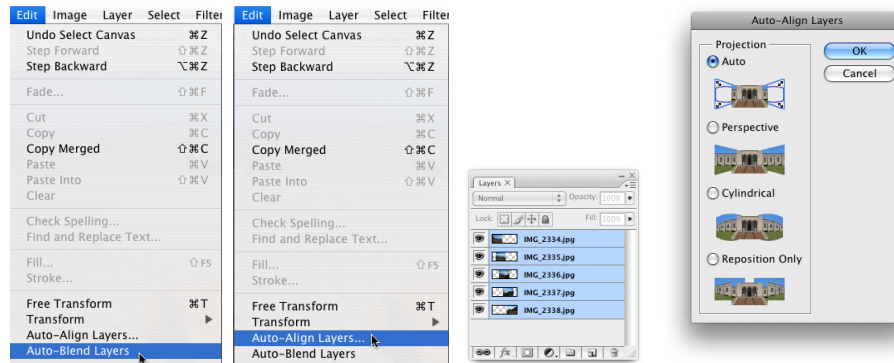
History

History is not new, but it is probably one of the most powerful and most under-utilized features in Photoshop. All the steps below can be accomplished using Photoshop 6 and newer. Most people have discovered how to use History to step back several steps, what they aren't aware of is the Keyboard shortcuts for Multiple undos.

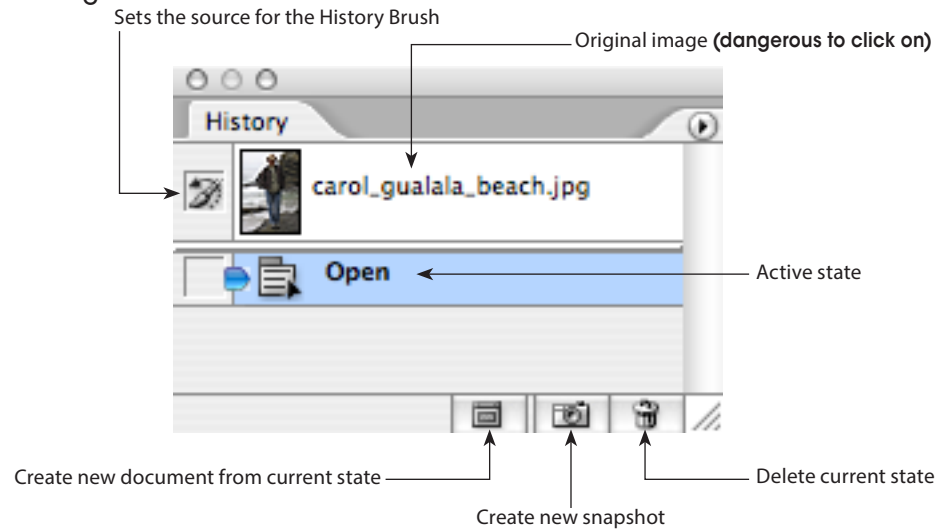|	
Undo One Step	**Command Z** or **Ctrl Z**
Redo One Step	**Command Z** or **Ctrl Z**
Multiple Undo	**Command Option Z** or **Ctrl Alt Z**
Multiple Redo	**Command Shift Z** or **Ctrl Shift Z**

These shortcuts are found under the **Edit** menu, they are listed as **Step Forward** and **Step Backward**, which moves up and down the History panel. History steps can now be increased up to 1000, the default is 20.

History Panel Diagram

Sets the source for the History Brush

Original image **(dangerous to click on)**

Active state

Create new document from current state

Create new snapshot

Delete current state

Using History

We're going to use a technique I call *"painting with the past"*. Often, I see people wasting a majority of their time in Photoshop making selections, History makes selections virtually unnecessary. The shot we're correcting has a shadow over the face, we're going to use History to paint in a lighter state.

1. Start by **opening carol_gualala_beach.psd**.

2. Choose **Image > Adjustments > Curves** (**Command M** *or* **Ctrl M**). Pull the **curve slider up** until the entire image is lighter, ignoring that this may be blowing out detail in the background.
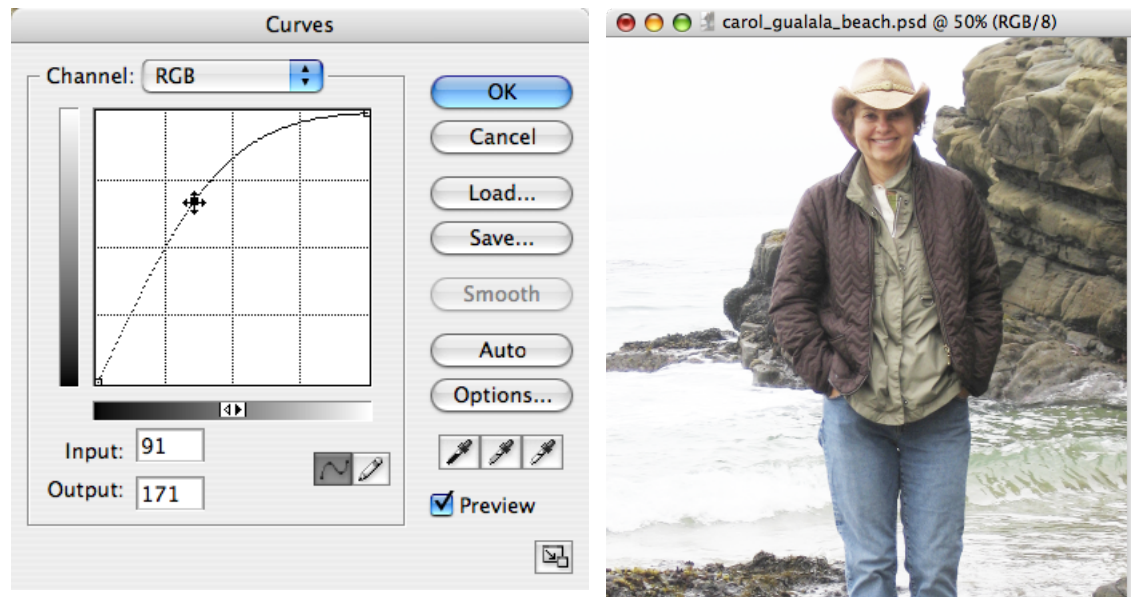

3. At the bottom of the History panel, **click** the **Create new snapshot** button.

4. In the History panel, **click** on the **Open state** to undo the Curves step *(don't worry, we've got it saved in a snapshot).*
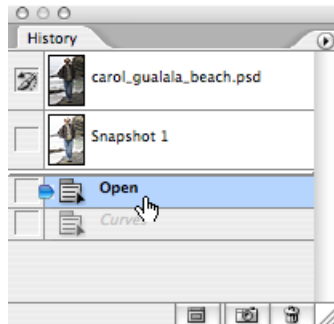
5. Now, click in the **Left Column** next to **Snapshot 1** to **Set the source for the history brush**. This will use what the snapshot looks like to paint changes in the image. If you mess up, you can switch your history brush target back to the original image (the top left column of the History panel).
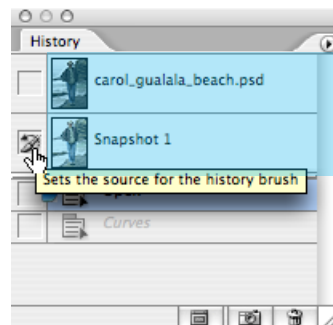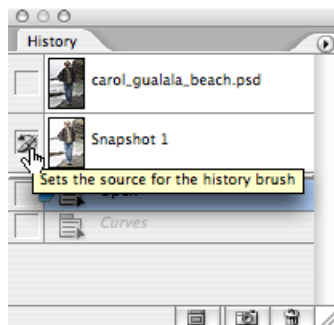
Danger zone! Do not click on the icon or words here, you could loose all your undos.

6. Switch to the **History brush** in the toolbar *(the letter **Y** on your keyboard will get you there).*
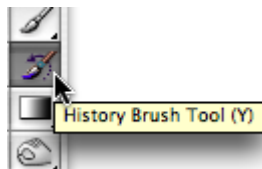
7. Paint in the face and it will lighten, you can't go to far *(unlike the dodge tool)*. The History brush will only lighten as much as your snapshot.


Note: *When you close your document the History will be lost, it is not savable.*

Curves vs Levels

There are many varying opinions on which is the better tool *(or more powerful tool)* in Photoshop. In my opinion, they both accomplish the same task and **Levels** is an easier & safer tool. Curves is a more powerful *(and more dangerous)* tool.

Levels Color Correction

Levels has the power to adjust brightness, contrast and tonal range by adjusting the black point, white point and midtones in a histogram.
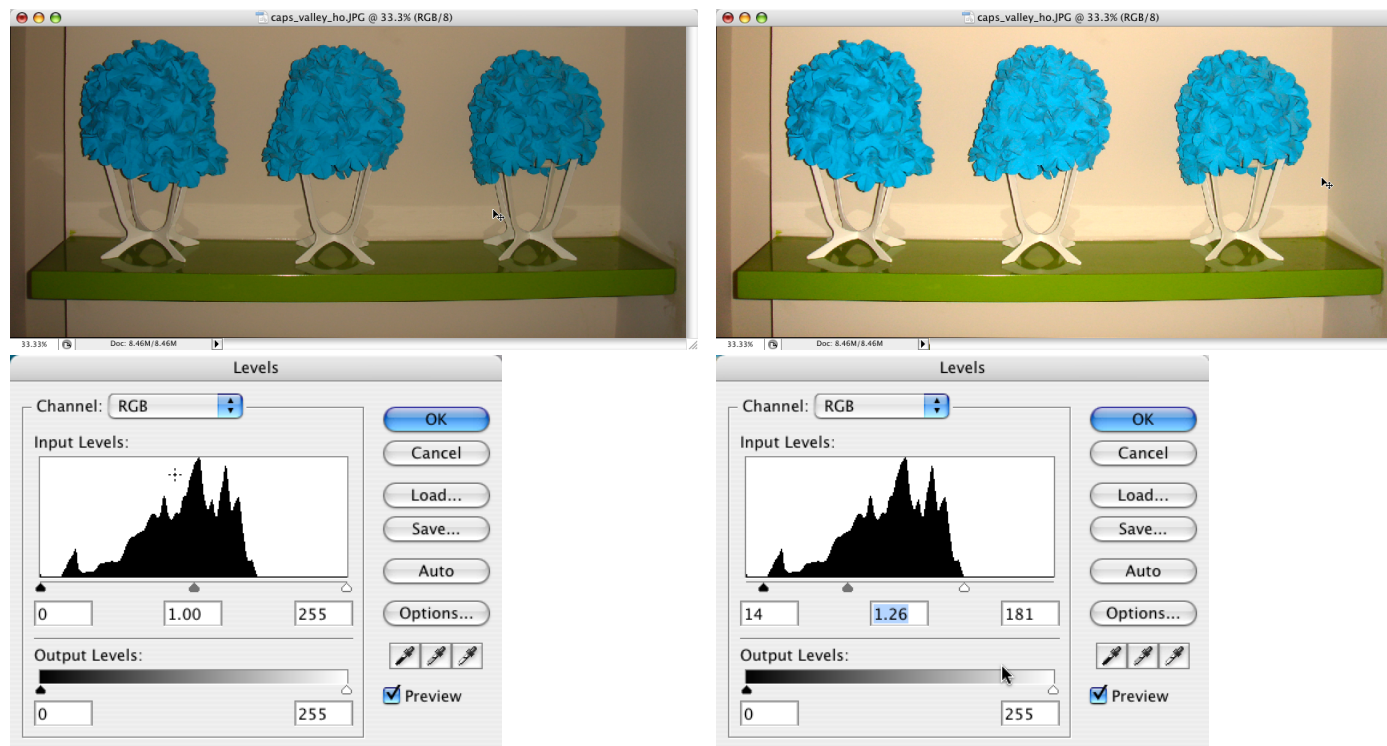
Curves Color Correction

We will follow the same directions as correcting black & white photos, only this time there will be more numbers.

1. **Open** a color photo.

2. Choose **File > Save As...** add **your initials** to the end.

3. To clean our work area press **Tab** to **Hide All the Palettes** and **Press F** to jump to **Full Screen Mode** with a neutral gray background.

4. Now, bring up your **on-screen densitometer**, the Info palette **Window > Info** *(F8)*.

Setting the Defaults

Now we will set our **highlight** and **shadow** values with **Image > Adjustments > Curves** (**Command M** *or* **Ctrl M**).

set black point — set white point
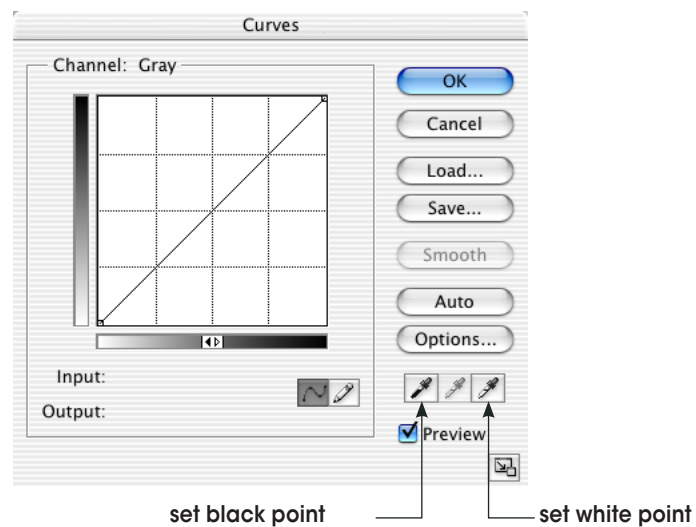
1. The human eye is well adapted to adjust the color information it receives so that objects we know to be white, appear white, even if in reality objects look yellow under tungsten light, green under fluorescent, etc. In a scanned image or digital camera shot, you will often need to correct objects back to what looks like white, to compensate for their lighting conditions. To do this, **Double click** on the **White Point tool**. Set the values to:
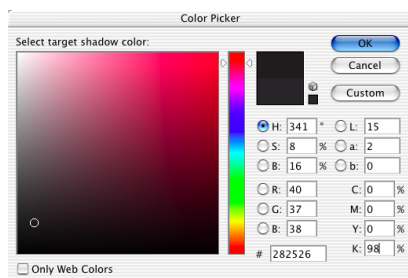
Printing Press

C:	5	or	4
M:	3		2
Y:	3		2
K:	0		0

2. Click **Ok**.

3. **Double click** the **Set Black Point tool** and set the values to:

|			
C:	75	or	70
M:	70		65
Y:	70		65
K:	95		90

Note:

The 2nd set of numbers for the Black point is for Uncoated paper.

4. Take the **top right corner** *(Black point)* of the tone curve and *drag to the left* to find the **lightest spot in the image**. Make a **mental note** of the location and **put** the tone curve **marker back in the top right corner**.

5. Now, drag the **lower left corner** *(White Point)* of the tone curve **to the right** to find the **darkest spot in the image**.

6. **Click once** on the **Black Eyedropper tool**, then **locate the darkest spot** in the image using the Info palette *(highest K value, for example 90% K)* and **click once**.

7. **Click once** on the **White Eyedropper tool**, then locate the **lightest spot** in the image.

8. Now, if you want to **lighten** or **darken** the **image overall**, grab the **middle of the curve** and pull **up** or **down**.
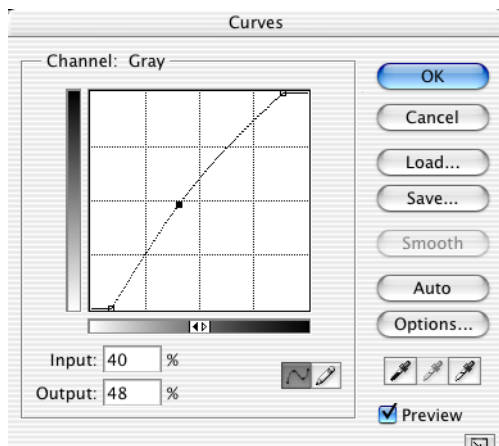
9. When you are happy with the image click **Ok**. A dialog box will appear, if this is your first correction, asking you to save the values you entered in the set white point and set black point tools as the defaults. Click **Yes**.

10. If you would like to see a **before** and **after** choose **Edit > Undo**, then **Edit > Redo** *(Command Z or* **Ctrl Z***)*.

11. Now, clean any scratches, tears, imperfections, or dust using the **Healing brush**, **Patch tool**, **Cloning Stamp** or **Filter > Noise > Dust and Scratches**.

Note: Dust and Scratches should **never** *be used on the* **whole image***. It is best to* **make a selection first***, then run the filter.*

12. The final step is **Filter > Sharpen > Unsharp Mask**.

   Amount = Detail A range of 50% - 150% is recommended (a higher value will make images very grainy)

   Radius = Contrast A value of 1.2, 1.4, 1.6 or 1.8 is common, for product shots *(like a refrigerator)* you may go as high as 5.

   Threshold = Protection A value of 0 will sharpen everywhere, a value of 10 will not sharpen within 10 color levels of the surrounding pixels. A range of 1 - 20 is recommended (values vary according to the photo).

13. When you are happy with the file, click **Ok** on Unsharp Mask, then **File > Save**.

Improved Curves Dialog

The Curves dialog (**Image > Adjustments > Curves**) has been improved several times over the last few versions of Photoshop. Adobe added a histogram on the same grid used to graph the Curve. There's also now a Show Clipping check box, now the Curves clipping display automatically toggles between showing you shadow clipping or a highlight clipping. If you click on the black point dot at the lower left of the Curves window and you'll get a shadow clipping display with everything in the image turning white except where the shadows are being clipped in at least one channel.

The Curve Display Options button at the bottom of the dialog will let you expand the window to include a number of other useful options. My most often used option is a toggle to let you select whether you want the Curve based on the amount of Light (0-255) or the amount of Pigment/Ink %. When working in RGB it defaults to Levels, but I prefer ink percentages.
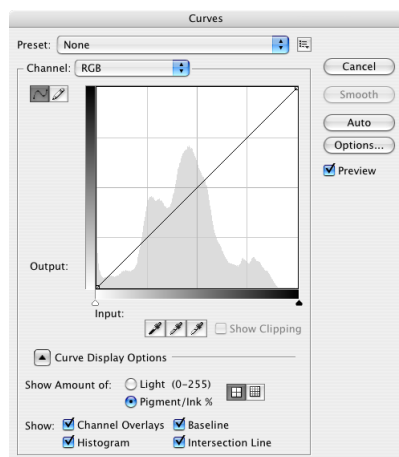
Improved Black and White Adjustment

To make better conversions from Color to Black & White, choose the **Image > Adjustments > Black and White**.
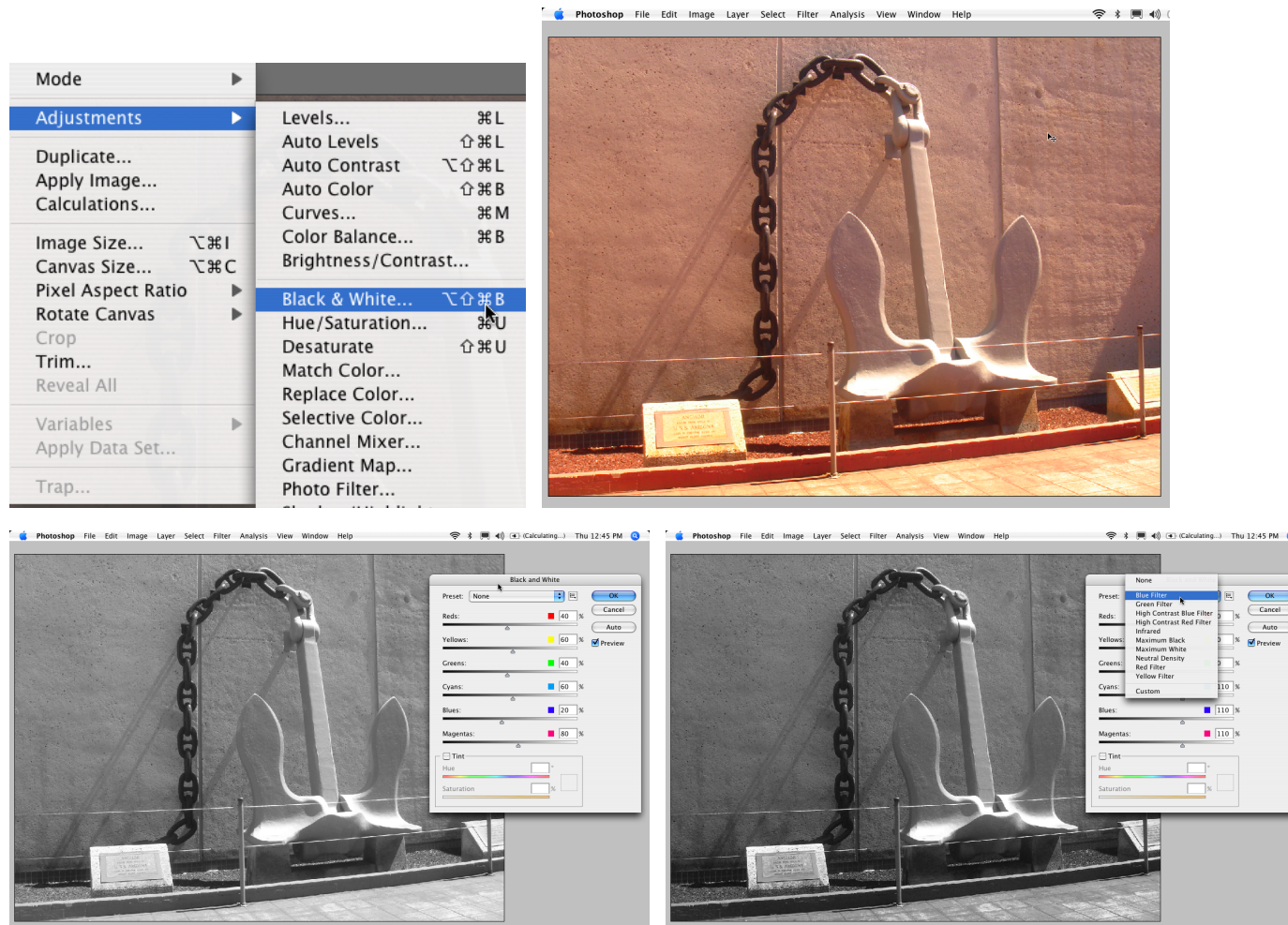
Color Balance

When all color correction has been completed and a dominant color cast still exists in the photo use
Image > Adjustments > Color Balance. The goal is to try and achieve the formula we worked with earlier in the Highlights and
Shadows *(or some fraction of this, for example 15, 9, 9 in a highlight instead of 5,3,3)*:

| **Highlight**	**Shadow**
C: 5	C: 75
M: 3	M: 70
Y: 3	Y: 70
K: 0	K: 95
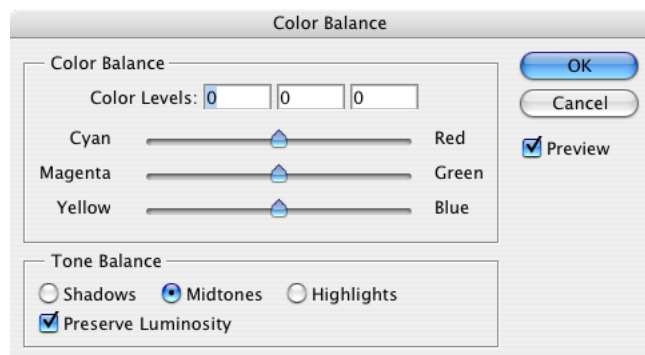
Match Color

You can take a bad shot and apply the color of a good shot under **Image > Adjustments > Match Color**. Simply open two images and the good color can be applied to the bad image.
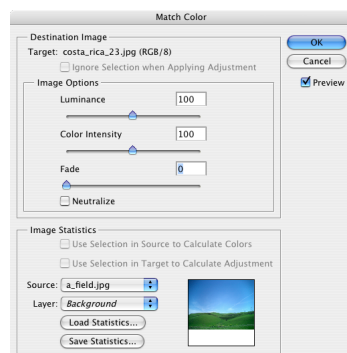

Crop & Straighten Photos

In order to save time, scans can be ganged (even if that isn't a feature of the scanner) and Photoshop can find the edges and turn each image into it's own file. Scan several photos at once and choose File > Automate > Crop and Straighten Photos.
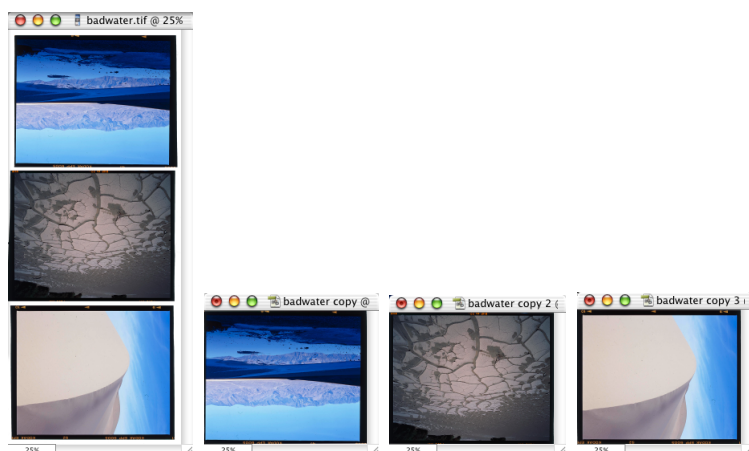
Red Eye Removal

Finally Photoshop has added **1-click Red Eye Removal**. This not only removes the red, it also darkens the pupil to prevent it from looking gray.
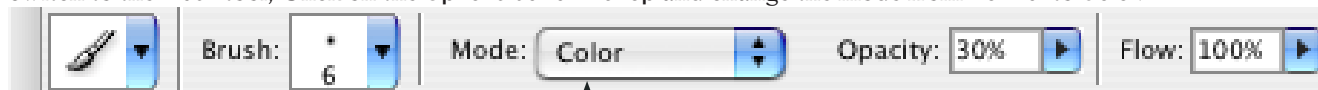
1. Click and hold *(or right-click)* on the **Spot Healing Brush** tool and slide to the **Red Eye tool**.

2. Click in the Red parts of the eye, just once.
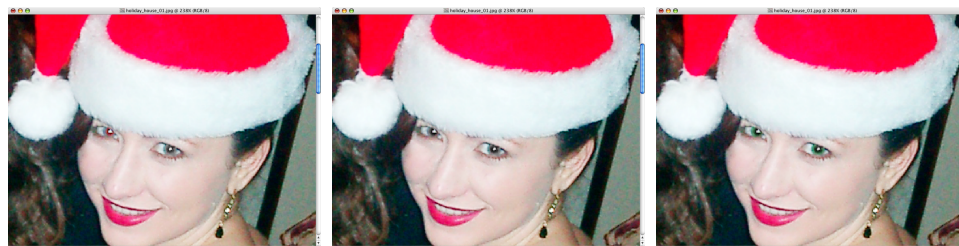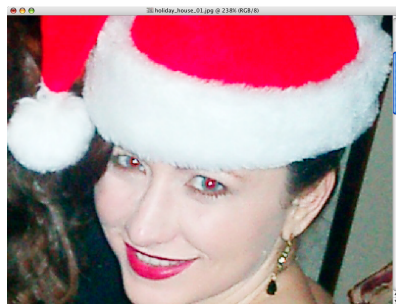
3. To Paint in new color, click on **Foreground** and choose the desired color *(green)*.

4. Switch to the **Brush** tool, Click on the **Options bar at the top** and change the mode from **Normal** to **Color**.

Paint with Color, not solid

5. Now paint in the eye, the color will change, but the detail will remain.