

week::seven

Working with Color

Color and Swatch Palettes

Info Palette

- Displays numerical data about color.
- Use of this palette is critical when performing color corrections.

Eyedropper Tool (I)

- Selects a color and makes it the current foreground color.
- Options:
 - Point Sample
 - 3x3 Average
 - 5x5 Average
- Color Sampler Tool (Shift-I)
 - Creates static color sample points in your document.
 - The Info palette continuously displays the color values of all sample points.
 - Can also be created by shift-clicking with the Eyedropper tool.

Color Numbers Explained

- In RGB Color Mode:
 - Values are between 0 and 255
 - 255, 255, 255 is white
 - 0, 0, 0 is black
 - Color numbers that are the same are neutral colors (105, 105, 105)
 - 0, 0, 255 is Blue
 - 255, 255, 0 is Yellow (Blue's opposing color)

Defining Areas of Color in an Image

- Highlight
 - The lightest area of an image that you know is white and still has some detail.
 - Reflections or light sources are not considered highlight areas.
- Shadow
 - Darkest significant neutral area of an image.
- Quartertone/Midtone/Three-Quartertones
 - The intermediate regions of an image.
 - Colors that are positioned roughly 25%/50%/75% between the Highlight and the Shadow areas.
- Neutrals
 - Areas that are known to the viewer to be neutral in color.
- *Known Colors*
 - A color that the viewer has experienced in real life and knows how it should look (e.g.: concrete is most often neutral in color; skin tones are well known to viewers).

Color Adjustments

Overview

- Most can be found under the Image > Adjustments... menu.

Application

- Adjustments can be applied using one of two methods:
 - Applied directly to a layer, altering the pixels on that layer
 - Applied as an Adjustment Layer, changing only the appearance of a layer but not the pixels themselves.

Adjustment Layers

- A layer that contains an editable image adjustment.
- Affect all layers beneath the Adjustment Layer.
- Does not actually alter the pixels beneath it until it is merged (Command-E) with the layer below it.
- Allows for quick and multiple changes to an image adjustment.
 - Double-click on the layer icon to bring up the layer options
- Can be modified using standard layer controls:
 - Blending Modes and Opacity
 - Show/Hide Layer
- Adjustment Layers are stackable, and their changes affect other layers.

Basic Adjustments

- Invert (Command-I), Equalize, Threshold, Posterize, Variations, etc...

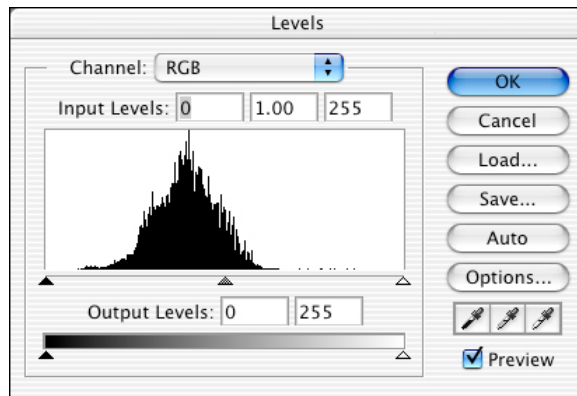
Hue/Saturation

- Allows for broad color changes to an image.
- Can be applied either to the entire image or to specific color ranges.
- Options:
 - Hue: Shifts colors to other parts of the color spectrum
 - Saturation: Controls the intensity of the colors
 - Brightness: Controls the overall brightness of the image
- Hints:
 - To isolate a color range, select the color from the pull-down menu
 - Select *Colorize* to add color to a grayscale image
 - Work with the Hue and Saturation options first to obtain the desired look, only turning to Brightness when necessary. Brightness doesn't allow for very fine control over the appearance of an image.

Levels

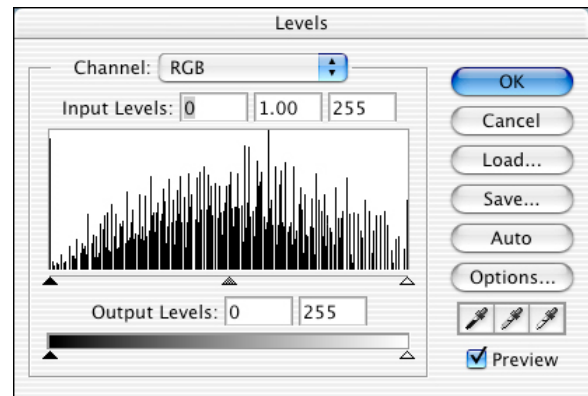
- Allows for basic control over an image's color dynamic range.
- Can either control all channels or individual channels.
- Only allows for three points of adjustment per channel: Highlight, Midtones and Shadow.
- With Input Levels, you can specify:
 - Which pixels should move toward being black (left slider)
 - Which pixels should move toward being white (right slider)
 - Where the midtone colors should fall (move left to make lighter, right for darker)
- With Output Levels, you can specify:
 - A minimum black value for pixels (left slider)
 - A minimum white value for pixels (right slider)

- Image Histograms
 - Displays the distribution of color data across an image's color spectrum.



Uncorrected Histogram

Image data is not distributed evenly across the full dynamic range. Image most likely appears flat.



Corrected Histogram

Image data is more evenly spread out across the full dynamic range, allowing for better contrast and depth.

Curves

Overview

- Similar to Levels but much more powerful.
- Curves are the most important color correction tool in Photoshop.
- Can either control all channels or each channel individually.
- Allows for multiple points of adjustment per channel, including quartertones and three-quartertones.
 - Levels only allows for three points

Color Correction by Numbers

- Using Curves, the Eyedropper and the Info palette, you can make accurate color adjustments to an image.
- It's best to first make color changes globally, if possible.
 - Often a color error in one part of the image indicates problems with other parts as well.
- Try to hit target values:
 - The Highlight area should be R 250, G 250, B 250
 - The Shadow area should be R 0-20, G 0-20, B 0-20 (between 0-20 for each)
 - Neutral areas should all be nearly equal in value

Hints

- The steeper the curve, the more contrast an image will have. Making a curve steep in an area of interest brings out the detail in that area.
- One preference you can change is to set the gradient bar located at the bottom of the grid to fade from white to black beginning at the bottom-left of the grid. Click the gradient bar to make the change. This setup can be more intuitive than the default settings.
- Click on the image to get a read of a color's location on the curve.
- Command-click on a color in the image to add an anchor point for that specific color.
- Use Command-~, Command-1, Command-2, and Command-3 to cycle between Channels while creating Curves.

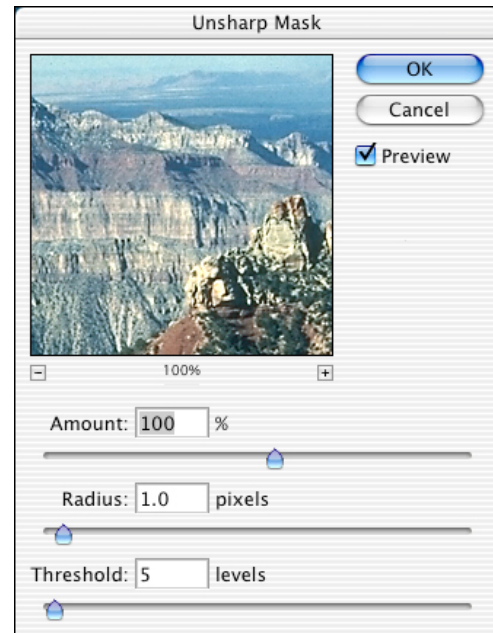
Unsharp Mask

Overview

- Unsharp Mask (USM) exaggerates the transition between adjacent pixels, creating a sort of halo effect around visual edges in an image.
 - This causes the image to appear sharper than it actually is.
- Unsharp Mask is found under the Filter > Sharpen menu.

Recommended Settings

- The settings in the screenshot to the right are often good starting values for performing an Unsharp Mask
- When fine-tuning your settings:
 - First adjust the Amount. Values between 50% and 200% are often acceptable.
 - If the image is especially blurry, increase the Radius to use more pixels.
 - The Threshold controls the number of pixels that are affected by the Unsharp Mask. High numbers mean that fewer pixels are affected. Zero means that all pixels are affected.

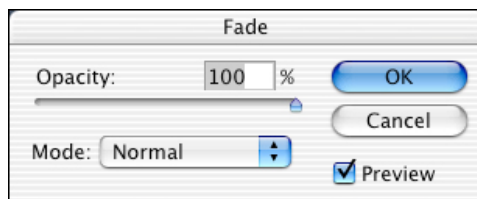


Four Unsharp Mask Traps to Avoid

- Color shifts
- Unreasonably wide halos
- Intensification of unwanted detail
- Exaggeration of grain or noise

Filter Fade

- Photoshop provides a *Fade* option for any filter effect.
- This allow you to pull-back any applied filter, sometimes providing finer control than the filter itself.
- To access the Fade option:
 - Command-Shift-F, or
 - Edit > Fade *Filter Name*
- The Fade dialog box:



- Other Filter Options
 - You can re-apply the last filter used, including the setting, by pressing Command-F, or by selecting the Filter > *Filter Name* menu item.
 - You can recall and edit your last filter settings by pressing Command-Option-F.