

# **SOME ESSENTIAL DIGITAL IMAGING SKILLS FOR PHOTOGRAPHERS**

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## **METHODS FOR MAKING TONE AND COLOR CORRECTIONS**

### **USING EYEDROPPER AND COLOR SAMPLER TOOLS TO SELECT BLACK AND WHITE POINTS AND GRAYBALANCE:**

Hold SHIFT key and the cursor turns into a color sampler  
Zoom in (Press Spacebar + Command)  
Use THRESHOLD adjustment layer to find both black and white points.  
Hold down SHIFT key and place color samplers  
Hold Spacebar + Option to zoom out.  
Then cancel Threshold adjustment layer.

Now set numbers for both Black point and White points.  
Then assign to the two color samples on the image.

Now read the image with the Eyedropper tool  
Neutralize the midtones with "Greybalance" using Levels.  
This uses the same amount of RG&B.  
The grey is not 18% grey, but is *neutral*.

If this makes the image too washed out.  
Select the Levels mask  
Use Brush with low opacity, and black foreground color.  
Paint onto the levels mask.  
SHIFT +click to make the mask invisible in order to judge its saturation.  
Use fine brushes for details.

### **SETTING LEVELS WITHOUT COLOR CASTS USING THE INFO PALETTE:**

Color sampler tool

Sample size: Point, 3X3, or 5X5 (for high resolution file)

Set Blackpoint and Whitepoint:

Add Threshold adjustment layer and identify Blackpoint and Whitepoint:

Zoom in (spacebar + Command)

Set numbered color sample for blackpoint

Zoom out (spacebar + Command + Option)

Zoom in (spacebar + Command)

Set numbered color sample for whitepoint

Zoom out (spacebar + Command + Option)

Then cancel Threshold adjustment layer leaving numbered options on the image.

Add LEVELS adjustment layer

Goal: use with Channel pulldown menu to neutralize the 3 numerical readings in the Info Palette for the red, green and blue channels.

1. Black point: make all 3 channel numbers equal to the lowest numerical reading by moving Shadow Slider all the way to the left and then move it slowly to the right until the first significant black areas are identified in the image.  
Check the values in the Info Palette.
2. Highlight point: make all 3 numbers equal to the highest reading.  
Move highlight slider all the way to the left and then move slowly to the right.
3. Change Levels to RGB composite.  
Bring in slider on Shadows and Highlights.
4. Neutralize the Midtones:  
Set 3<sup>rd</sup> Color Sampler on midtone area you want to be neutral.  
Open CURVES adjustment layer because this is best for midtones.  
Go into each channel and adjust to equal the middle number of the gray color sample. Pick the *middle number* and have the other two match it.  
Protect the *shadows* and *highlights* by first “anchoring” them in the one-quarter and three-quarter areas of the Curves grid.  
Go into each channel and adjust the midtones (use arrow keys).  
Clear samplers by clicking on “Clear” in Options bar.

#### Dodging individual elements within the image

- Make a loose selection with the lasso tool.
- Make a Curves adjustment layer and lighten the midtones of the selection.
- Now blur the Curves Layer mask to get rid of the hard edge of the selection by using FILTER/BLUR/GAUSSIAN BLUR.

#### Getting rid of color casts in specific areas

- Use Wand or other selection tool to select area.
- Add/Delete selections you do not want with SHIFT/OPTION keys.
- Make HUE AND SATURATION adjustment layer and reduce Saturation.
- Now blur the Layer mask to soften the edges.

### **CHANGING COLOR ELEMENTS WITHIN AN IMAGE USING A SELECTIVE COLOR ADJUSTMENT LAYER:**

You can use HUE & SATURATION or SELECTIVE COLOR adjustment layers but they change the colors in the *entire* image.

*Try also using the different channels in this dialog box.* Most often, you will use a selection + a SELECTIVE COLOR adjustment layer.

- Make a selection
- COMMAND + J to copy it on a separate layer.
- COMMAND + click on layer to select the actual image pixels
- Add Selective Color adjustment layer. Within the Selective Color adjustment layer: select a color channel, then change the CMYK within that area. Relative mode = add or subtract the percentage of color already there. Absolute = drastic changes throughout the image.

## SELECTIVE COLORING:

- Evaluate the individual channels (Command + 1 for R, Command + 2 for G, Command + 3 for B).
- Add a Channel Mixer adjustment layer.
- Convert from color to grayscale using Monochrome and mixing the appropriate layers together.
- Now paint on the mask with Black to reveal individual colored elements on the layer below.
- Shift + click to turn layer mask on/off
- Option + click to see only the layer mask

## DODGING AND BURNING USING SOFT LIGHT AND HARD LIGHT BLENDING MODES:

- Use blank layer set to Softlight blending mode:
  - OPTION + click on New layer icon so that the *complete* dialog box opens.
  - Name the new layer (example: “Dodge & Burn”).
  - Set with “Soft Light” + click on box to fill the layer with 50% (invisible) gray.
  - Make selection of area that you do *not* want to dodge or burn.
  - Save the selection as a new channel.
  - Load, then invert the selection.
  - Choose BLACK as the Foreground Color with low opacity.
  - Paint over areas that you wish to darken with an appropriate brush.
  - To dodge: invert the selection, then make WHITE the foreground color with low opacity. Paint over areas that you wish to lighten with an appropriate brush.
- Then set Blackpoint and Whitepoint using Levels adjustment layer.

## CORRECTING BLOCKED SHADOW AREAS BY LUMINOSITY MASKING:

This works for images that have too great an exposure range—that is, in an image where if you get the highlights right the shadows will have no detail, and vice versa:

- Save the file into two files sub-labeled “highlight” and “shadow” and have both open on your desktop.
- Add a Curves Adjustment layer to the “Shadow” file and raise the values in the shadows.
- Double click on the Quickmask icon. In the “Quickmask Options” dialog box change the default so that 100% color indicates the selected areas.
- Make the file fit your desktop by pressing COMMAND + 0.
- Select all the luminosity values by pressing COMMAND + OPTION + ~.
- Now press “Q” to re-enter the Quickmask mode. You will then see that everything *but* the shadow areas are in the Quickmask color. You want the *shadows* to be selected—so exit Quickmask mode by pressing “Q” and simply inverse your selection by pressing SHIFT + COMMAND + I. This will leave you with only the shadows selected in the Quickmask color. Press “Q” to exit Quickmask and return to the Standard mode. The shadows will remain selected.
- Add a Levels Adjustment layer and adjust the left slider so that the color is completely dense over the shadow areas that need more detail.
- Reduce the size of this file by pressing COMMAND + - so that you see both files.

- Select the Move tool, and press the SHIFT key and drag the shadow selection into the “highlight” file. The SHIFT key will register the shadow selection exactly over those same parts in the “highlight” file.
- With the selection still active, click on the Layer Mask icon. Click on the mask and paint it with black to remove any parts of the selection or white to add to the selection.
- Place the remaining selection on its own layer by pressing SHIFT + COMMAND + J and changing the blending mode to Screen to lighten the selection. If it needs more lightening, duplicate the layer with the Screen blending mode.

### **INCREASING THE GAMMA OF AN RGB FILE WITHOUT INCREASING ITS SATURATION:**

- Add a Curves adjustment layer and lighten/darken the midtones using the Normal blending mode. Note how both the *tonal range* and the *saturation* are changed.
- Now simply change the blending mode to LUMINOSITY so that the *saturation* will remain same as you change the gamma.

### **COLORIZING GREYSCALE IMAGES:**

You cannot add a Hue & Saturation adjustment layer on a greyscale image (that is why the adjustment layer is grayed out in grayscale.)

- Therefore, convert the grayscale image to RGB.
- Now apply the HUE & SATURATION adjustment layer.
- Check the Colorize box.
- Merge layers.
- In the History Palette make a New Snapshot and name it “Colorize”
- Apply the appropriate filter, etc., on the image.
- Now place the History Brush on the Colorize snapshot and brush the filter away using Normal Blending Mode.

### **HANDCOLORING A GREYSCALE IMAGE:**

Rule: put each separate color on its *own* layer. Then you can change you mind on one color and not have to change *all* the colors.

- Convert Grayscale image to RGB.
  - Make a new layer and name it “Colorize”.
  - Paint individual elements with these blending modes: Normal, multiply, overlay, color.
  - Choose color and brush
  - Make new selection. EDIT/FILL.
  - Make other selections
  - Then add new adjustment layer. Name it “solid color”.
- Hold OPTION, then change to Overlay before picking the color. This will allow you to see the accurate color AS you pick it.

## **METHODS FOR SOLVING MISCELANEOUS PROBLEMS**

### **CREATING ARTIFICIAL SHADOWS:**

Method #1:

- Make copy of element (Shift Command + J) to new layer.
- Edit/Fill/Black
- Filter/Blur/Gaussian blur
- Edit/Transform/Flip Vertical (if appropriate)
- Edit/Transform/Skew (or other Transform tool).

Method #2 (a bit more sophisticated):

- Duplicate the element or layer.
- Select only the pixels within that layer by pressing COMMAND + click on the image icon.
- EDIT/FILL with black.
- Apply a Gaussian Blur to the element.
- Stretch the shadow with one of the Transform tools (EDIT/TRANSFORM/SCALE, for example).
- Adjust the blending mode and lower the opacity of the layer.
- Apply a Motion Blur to the layer.
- In order to simulate the fall-off of light intensity as shadows are cast further away from their object, apply a Layer Mask in order to diminish the intensity of the shadow at the far edges: LAYER/ADD LAYER MASK/REVEAL ALL. Create a gray-to-white gradient in the Layer Mask.

### **CORRECTING ARCHITECTURAL PERSPECTIVES:**

This technique is especially useful to correct the incorrect perspective in photographs of tall buildings looking upwards from ground level with a 35mm camera.

- Get ruler (Command + R)
- Pull guides and align each one to the point that you wish to bring the building's edges to.
- Select everything that you want included inside the guides with the Marquee tool. With that selection active:
- EDIT/FREE TRANFORM. Hold the Command key down to “dislodge” the individual sides of the transform box and pull in/out to correct the perspective on each side. Do not worry now about the seeming “rips” in the image—simply pull until the perspective is corrected.
- Hit Enter or Return
- Crop the “rips” out.

### **SCANNING OLD OR DAMAGED B&W PHOTOS:**

- Scan black & white photos in RGB color.
- Then go to the CHANNELS PALETTE and click on each of the channels and compare each resulting image to the original. Often, one of the channels will appear to “clean up” the damaged photo.
- Discard the other two channels by dragging into the trash.

## REMOVING DUST AND SCRATCHES ON GREYSCALE IMAGES:

Theory: blur copy of image which will cover over the dust, then grab the blurred image information and import it into the original file.

- Filter/Blur/Gaussian Blur (4-5 pixels)
- Set History Brush to blurred state.
- Set mode to Darken to *darken* white areas or Lighen to *lighten* dark areas.

Also use Clone tool with “Use all Layers”.

## ADDING VIGNETTES TO OLD PHOTOGRAPHS:

- To find the center of the image: Command + R for the Ruler.
- Go into the ruler bar area and press CONTROL + click to select *Percentage*.
- Choose the Elliptical marquee tool. Referring to the ruler find the area within the image that is 50% vertical and 50% horizontal.  
OPTION + pull out to draw the ellipse from the center outwards.
- Feather this selection (20-30 pixels)
- Invert the selection
- New layer
- Edit/Fill and choose white or black.  
(or Option + Delete to fill new layer with White)

## MAKING A NEW PHOTOGRAPH SEEM OLD:

- Convert image to single hue: select Hue & Saturation adjustment layer.
- Click “colorize” box.
- Select your hue and saturation by adjusting sliders.
- Filter/Distort/Diffuse Glow
- Filter/Noise/Add Noise
- For edge burns make a new gradient layer
- Command + R = rulers
- Control + click in the rulers to get the Percentage
- Apply the Gradient tool with default colors to the edges. Select Foreground to Transparent with Multiply Blending Mode.

## GETTING RID OF MOIRE PATTERNS:

An image printed with inks is made up of tiny dots of varying sizes of black. The varying sizes give the feel of varying intensities of black (in actuality, ink is either all there, or not-there). When scanned, this gridlike appearance can be intensified and make the image look like subtle waves are criss-crossing the surface. This lousy-looking wave pattern is called a “moiré”.

- Evaluate a moire pattern at a 1:1 viewing ratio because higher ratios can produce an artificial moiré pattern when the pattern of the original screen meets the dot size of the monitor.
- Moire patterns can be reduced in the scan. Our high end scanners have a “de-

screening” option built in. Choose the “Descreening” option depending on where the original image appeared: in a newspaper, magazine or art book.

- Another way to diminish a moiré pattern:
  1. Scan your original with a resolution four times higher than the final resolution needed to print on a particular printer.
  2. Apply the DESPECKLE, MEDIAN or BLUR filters to soften the moiré.
  3. Resample down to the resolution you actually need.

Within Photoshop, the DESPECKLE filter and the MEDIAN filter (at a low setting) can remove some of the moiré patterns. Follow either by using the UNSHARP MASK to refocus the image (see Unsharp Mask, below).

Methods to apply in order of priority:

1. Filter/Noise/Despeckle (works in about 75% of cases)
2. Filter/Blur/Gaussian blur  
1.0 pixel blur, or less (use the down arrow key and judge from the dialog box window.
3. Filter/Noise/Median Filter  
Set radius to 1.0 pixel
4. Re-scan at an angle
5. Use the scanner’s anti-moire software.

### **GETTING RID OF DUST AND SCRATCHES:**

The “Dust & Scratches” filter looks for color breaks (such as those caused by dust or scratches) and then blurs the surrounding color into the breaks to hide them. In general, *don’t* use this filter on the *entire* image because the filter diminishes detail by averaging neighboring pixels and will therefore diminish all detail in the image. Use it only on *small* areas. Here are two main ways to work with this filter:

First method:

- Start by making a feathered selection around the break.
- Choose FILTER/ NOISE/ DUST & SCRATHES.
- Set THRESHOLD high and RADIUS low. Lower the Threshold until the break begins to go away, then raise the Radius until it’s gone.

Second method:

- Choose FILTER/NOISE/DUST&SCRATCHES. Set THRESHOLD and RADIUS just high enough to remove the offending spots.
- Go to the History Palette and make a Snapshot of this state. Choose the History Brush and place it next to the eye ikon for this state. Now select the previous History state. Choose the History Brush with a small brush set to the “Lighten” mode if the scratch is dark or to the “Darken” mode if the scratch is light. Paint out the offending dust/scratches with short, offense-specific strokes. Works like a charm.

### **REMOVING LARGE BLEMISHES:**

Use the Stamp, Smudge and Sharpen/Blur tools on a layer above the background image:

- Select the tool

- Select the “Sample Merged” in the options palette
- Open a new layer and work.

### **SMOOTHING SPOTTED AREAS:**

- Make feathered selection
- Copy it into a separate layer
- Blur.

### **SMOOTHING THE GRAIN:**

- FILTER/NOISE/ADD NOISE with small amount values (4-8). Re-apply as needed.

### **GETTING RID OF BACKGROUND DETAIL:**

Two ways:

- Paint out the bad object with the Stamp tool, or
- Select the background (or select the Foreground and Invert the selection) and blur it, or reduce its contrast, or reduce its color saturation to make it seem to recede (as if the depth of field was reduced).
- Rename the background layer “\_Sharp”.
- Duplicate the background layer and label it “—Blur”. Place it under the “Sharp” layer.
- Blur this layer by selecting FILTER/BLUR/GAUSSIAN BLUR.
- To avoid banding in the blurred areas when printing, add noise to the blurred layer: FILTER/NOISE/ADD NOISE. Choose “Uniform Distribution” at approximately 2-5%.
- Select “Sharp” layer and select the parts that you wish to remain sharp. Use Quickmask (“Q”) to see those parts. If you need to smooth the outlines select SELECT/MODIFY/SMOOTH and vary the intensity to taste.
- Blur the Quickmask: FILTER/BLUR/GAUSSIAN BLUR and vary the intensity of the feathering to taste (radius = 10-60 pixels).
- With the selection active, click on “Layer Mask” icon. Everything but the active selection will be masked out, allowing the underlying blurred layer to show around the sharp selection. To make any adjustments to the mask itself, hold the Option key and click on the mask thumbnail. Filters and other adjustments can now be directly applied to the mask. Hold the Shift key and click on the layer mask to turn it off.

### **USING THE BLENDING RANGE IN THE ADVANCED BLENDING MODE DIALOG BOX TO IMPORT FILES WITH BLACK OR WHITE BACKGROUNDS:**

Common usage: when you import a file with a black or a white background and want to get rid of the background in order to leave only the image element(s).

- If the imported image has a black background, the Screen blending mode will often get rid of the black. Conversely, if the imported image has a white background, the Multiply blending mode will often get rid of the white. You can cycle through the blending modes by pressing SHIFT + -, OR +. The blending modes that are best at removing black backgrounds are Screen, Color Dodge, and Lighten. The blending modes that are best at removing white



backgrounds are Multiply, Color Burn, Darken, Hue, Saturation, or Color.

OR

- Double-click the layer with the background you wish to remove in order to open the Advanced Layer Effects dialogue box. Go to the “Mix this layer” section and move the slider slightly to the right. Create a transition area that will defringe the black artifacts by pressing OPTION and dragging the right half of the triangle slider to the right. The further to the right, the softer the transition.

### **CORRECTING BLOCKED SHADOW AREAS THROUGH LUMINOSITY MASKING:**

This works for images that have too great an exposure range—that is, in an image where if you get the highlights right the shadows will have no detail, and vice versa:

- Save the file to a second file labeled “shadow” and open both files on your desktop.
- Use Levels on the “Shadow” file and raise the values in the shadows until they show the detail that you want.
- Prepare for the next action by double-clicking on the Quickmask icon and in the “Quickmask Options” dialog box change the default so that 100% color indicates the “Selected areas”. Press OK. Return to the Standard mode by pressing “Q”.
- Make the “shadow” file fit your desktop by pressing COMMAND + 0.
- Select all its luminosity values by pressing COMMAND + OPTION + ~ (the “~” is found in the upper left key of the keyboard).
- Now with the luminosity values selected, press “Q” to re-enter the Quickmask mode. You will see that everything *but* the shadow areas are in the (red) Quickmask color. But you want the *shadows* to be selected—so exit Quickmask mode by pressing “Q” and inverse your selection by pressing SHIFT + COMMAND + I. This will leave you with only the shadows selected in the Quickmask color. Press “Q” to exit Quickmask and return to the Standard mode. The shadows will remain selected.
- Choose IMAGE/ADJUST/LEVELS and adjust the left slider so that the red color covers all the shadow areas that are too block up and need more detail.
- Reduce the size of this file on the desktop by pressing COMMAND + - so that you now see this file and the original file.
- Select the Move tool, press the SHIFT key, and drag the shadow selection into the “highlight” file. The SHIFT key will register the shadow selection exactly over those same parts in the “highlight” file and will lighten the shadows of that file to the degree that you have selected in the “shadow” file.
- With the selection still active, click on the Layer Mask icon. Click on the mask and paint it with black to remove any parts of the selection (or white to add to the selection).
- Place the remaining selection on its own layer by pressing SHIFT + COMMAND + J and changing the blending mode to Screen to lighten the selection. If it needs more lightening, duplicate the layer with the Screen blending mode.