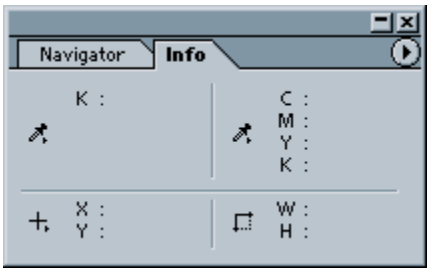
Adjusting Color Images

WHAT CAUSES A COLOR IMAGE TO HAVE IMPERFECTIONS?

When correcting a 4 color image, the 2 biggest tasks at hand are exposing color casts and maintaining proper color balance that will reproduce properly on newsprint paper. Color casts are often introduced by the equipment used to record the image information. For example, photos taken with a standard or digital camera will rarely capture what is seen with the naked eye and depending on the circumstances, this may cause colors to be distorted. Film processing and scanning can also lead to color casts and incorrect color balance. Our goal in color correction is to remove color casts and balance the color compensating for dot gain on newsprint paper.



Info Pallet

21%
6%
51%
0%

In the above image, the stone of this building is our "clue" to correcting the color cast/balance. Notice how high the yellow channel is.

18%
18%
16%
4%

The "After" image shows a correctly adjust neutral gray - the color cast has been removed from this image.

MAKE SURE THE INFO PALLET IS SHOWING BEFORE YOU BEGIN.

Under the Window menu select SHOW INFO (if not already showing).

LOCATE "CLUES" TO DETERMINE COLOR CASTS AND COLOR BALANCE

Move the cursor around the image and notice how the INFO window reports what values are being read. All four colors are shown represented by C - Cyan, M - Magenta, Y - Yellow, K - Black. First, we need to locate elements of "known" color. Two examples would be neutral grays and skin tones. Through experience, values have been developed that will reproduce skin tones consistently and with excellent quality. Refer to the chart below for target values - if an image does not contain these values, use the levels Dialog box to edit the individual channels to remove color casts and to adjust color balance. The concept of measuring a natural gray is rather simple - it's safe to assume that most cement or stone structures do not contain extra color in any one channel. In the example on the left, you will notice how much stronger the yellow channel is compared to the others. Neutral midtone/subject areas should be reading values between 20 - 30% with minimal black, compensating for a 30% dot gain.

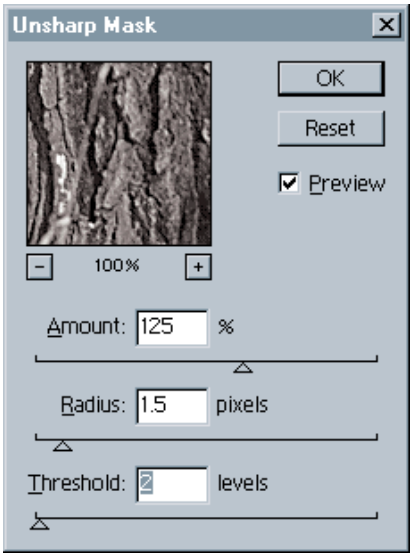
When measuring skin tones, try to find a flat neutral area with no severe light reflections or heavy make-up.

Ideal Skin tone values:	**These numbers represent an average caucasian skin tone in adequate light. The darker the skin, the darker the values - keeping the same proportions**
Cyan = 5-8% Magenta = 20-30% Yellow = 20-30% Black = 5-12%	(Yellow is usually 2% less than Magenta due to the color of the paper)

39%
48%
44%
2%

6%
23%
20%
2%

Adjusting Color Images (cont.)



Unsharp Mask

UNSHARP MASK TO ENHANCE EDGE CONTRAST

When the tonal adjustment is complete, the final step will be to perform the Unsharp Mask filter. Use the following numbers to achieve the desired sharpness:

Amount: between 125 - 150%
Radius: between 1.0 - 2.5 pixels
Threshold: between 2-7 levels

Use these numbers for base settings, sometimes the values will deviate from the above settings depending on the image. As a rule, the monitor is a satisfactory representation of how sharp the image will be, therefore an image should look slightly over sharpened to reproduce the unsharp mask filter when printed. 4 color images have the advantage of being sharpened in only the Black channel if undesirable results occur sharpening all 4 channels at once.


Original image


Color Correction Only


Color Correction and Unsharp Mask

BOOST THE SHADOW IN THE BLACK CHANNEL

Go to the Black Channel - If there is a gap of space between the Black "Shadow" slider and the Histogram - slide the Black "Shadow" slider up to where the information begins (see example). Pull back the Gray "Midtone" slider if midtones become too dark.