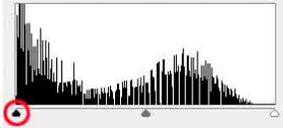
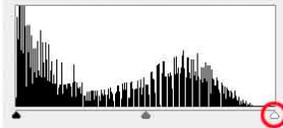


## Manual Global Color Corrections in Photoshop

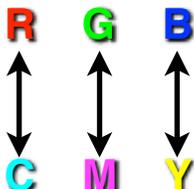
1. Either properly scan or convert your RAW file so that the image appears in Photoshop.
2. Arrange your workspace so that the following palettes are visible:  
**Info, Color, Histogram, Layers**
3. Use Image>Adjustments>Levels to find and set sample points for your Highlights and Shadows:
  - a. Move the Levels window so that it is visible but away from the image and histogram palette
  - b. Hold the Option(alt) key while dragging the shadow arrow in the Levels window to find the deepest shadow (see below)



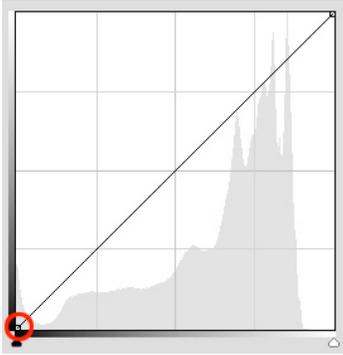
- c. Hold the Shift key and click on the deepest shadow in the image area.  
(a #1 sample point is created in the image and listed in the info palette)  
Then move the shadow arrow back to its original position
- d. Hold the Option(alt) key this time dragging the highlight arrow to find the brightest and cleanest usable highlights (not specular reflections).



- e. Hold the Shift key and click on the brightest clean spot in the image area.  
(a #2 sample point is created in the image and listed in the info palette)
  - f. Press the **CANCEL** button.
2. Choose the Eyedropper tool and change the Sample Size option to 5 by 5 Average. Then look carefully at the image and Shift+click on two areas of the image that would be **neutral gray**.  
(#3 and #4 sample points will be created in the images and listed in the info palette)
  3. Create an adjustment layer for Levels and adjust the tonal range and overall brightness.  
Toggle the preview on/off to see the before and after.
  4. Create an adjustment layer for Curves and adjust the color balance for each channel based on the readouts from the Info palette, Colors palette, as well as visual interpretation. Now using the information in your info palette, do your best to neutralize the shadows, highlights and mid-tones in your image in order to color-correct your photograph. Remember the basic principle of opposite primaries below when working with curves in the next few steps:
    - a. Color balance point #1, the shadows
    - b. Color balance point #2, the highlights
    - c. Color balance point #3 and/or #4, as needed for gray objects

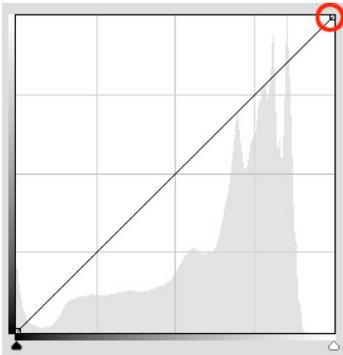


- Using your Curves adjustment, work on your shadows while looking at the info palette for point #1. For each channel, Red, Green and Blue adjust the shadow point until all three numbers match in the info palette for that sampler. I recommend shooting for a target number of between 10-25 or so depending on the image.



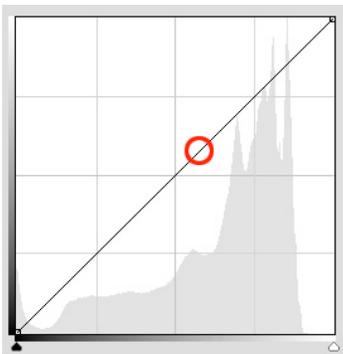
Adjust this point for each channel. When dragging the shadow endpoint for each channel, drag it against the left edge if moving it up and down. Drag it against the bottom edge if moving left and right.

- Work on your highlights while looking at the info palette for point #2. For each channel, Red, Green and Blue adjust the highlight point until all three numbers match in the info palette for that sampler. I recommend shooting for a target number of between 245-254 or so depending on the image.



Adjust this point for each channel. When dragging the shadow endpoint for each channel, drag it against the right edge if moving it up and down. Drag it against the bottom edge if moving left and right.

- Work on your midtones while looking at the info palette for points #3 and #4. For each channel, Red, Green and Blue place a point in the middle of the curve and adjust until all three numbers match in the info palette for each sampler. Depending on the “neutral” objects you’re sampling, you may be able to get both samplers to neutralize, but it’s more typical to have to choose between neutralizing point #3 or point #4.



Adjust a mid-point for each channel. Be aware that changes you make here can skew your shadow and highlight samplers. It’s a good idea to check all samplers and adjust as necessary after cleaning the mid-points.

On some images it may be good to try two or more separate mid-points in the quarter-tones of channel. Just don’t distort the shape of the line too much.

- When finished color correcting, you may want to add a slight “S”-shape to your composite RGB curve in order to finely control contrast and tonal response.
- You should avoid stacking too many adjustment layers if you want to avoid unpredictable behavior and color. You should be able to do most everything you need with one Levels and one Curves adjustment. Be sure you save your file as a **PSD** or **TIF** file so that you can preserve your adjustment layers.