

Rocky Mountain Reflections Photography, Inc.

# HISTOGRAM

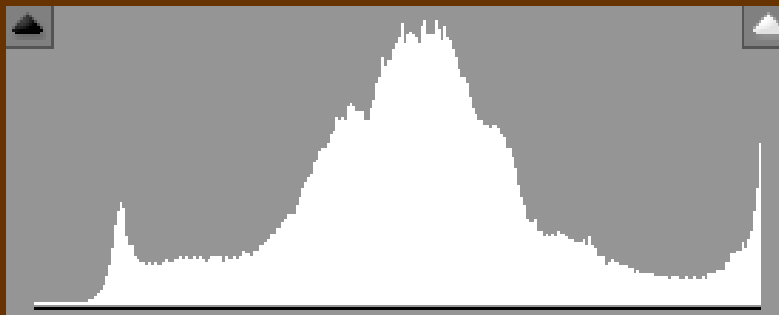


This is a discussion on histograms. Before viewing this, new photographers, should view our “Manual Metering Lesson”.

Ok, so we've learned how to work the camera in the manual shooting mode.

How can we check the exposure, in the field, to ensure we captured a proper exposure for the scene?

By reviewing the histogram of the image.

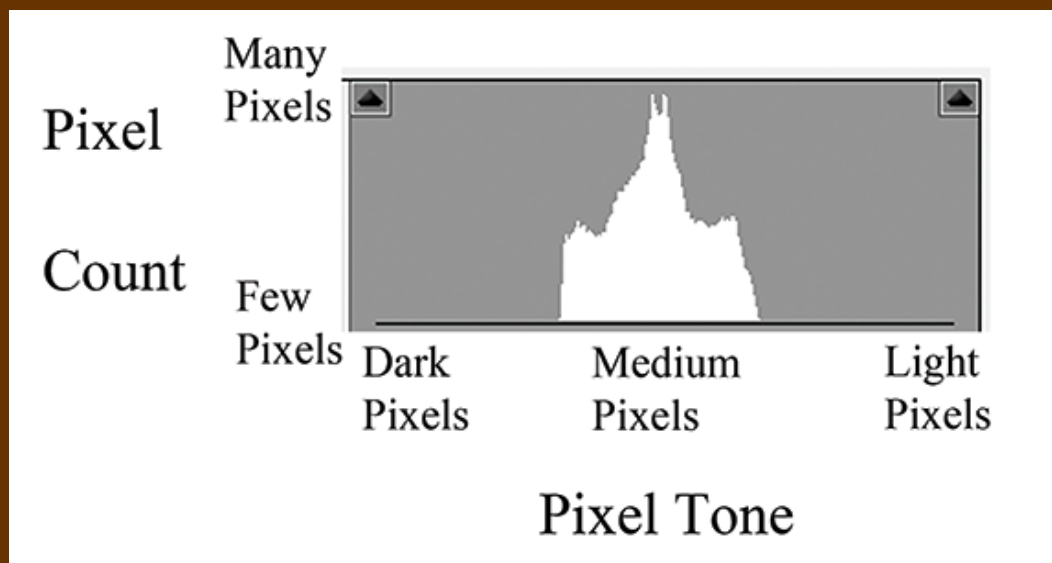


What is a histogram?

A histogram is a graphical representation of the tonalities present in an image.

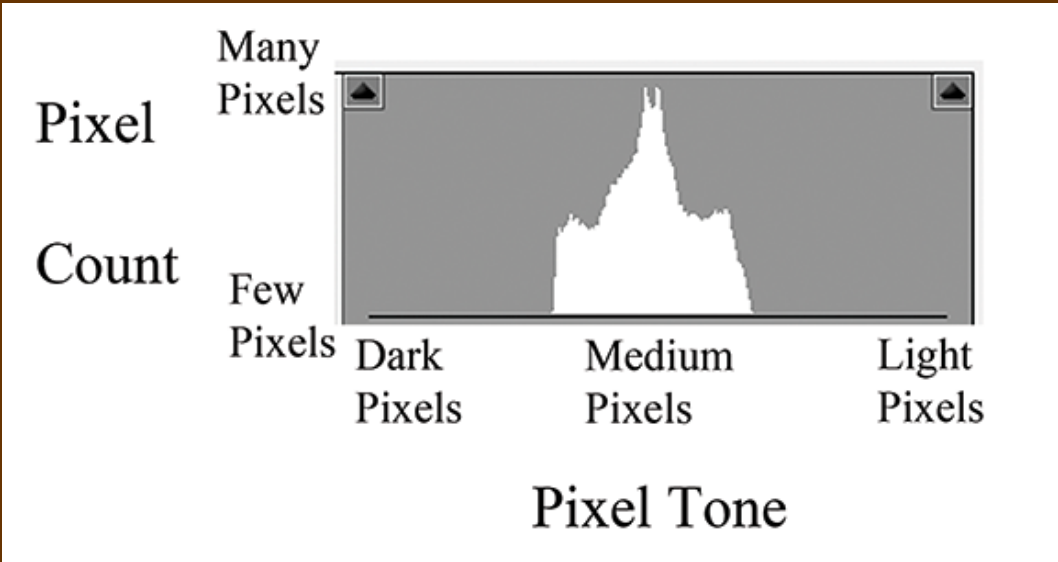
The tonalities range along the horizontal axis from dark on the left, to light on the right.

The vertical axis measures the number of pixels with a particular tone; higher up this axis means more pixels with a particular tone, lower means fewer pixels.



What tonalities are present in the image that produced the histogram above?

Middle tones; medium tones.



The histogram does not reveal any information about the composition of an image, or the arrangement of tonalities within the image.

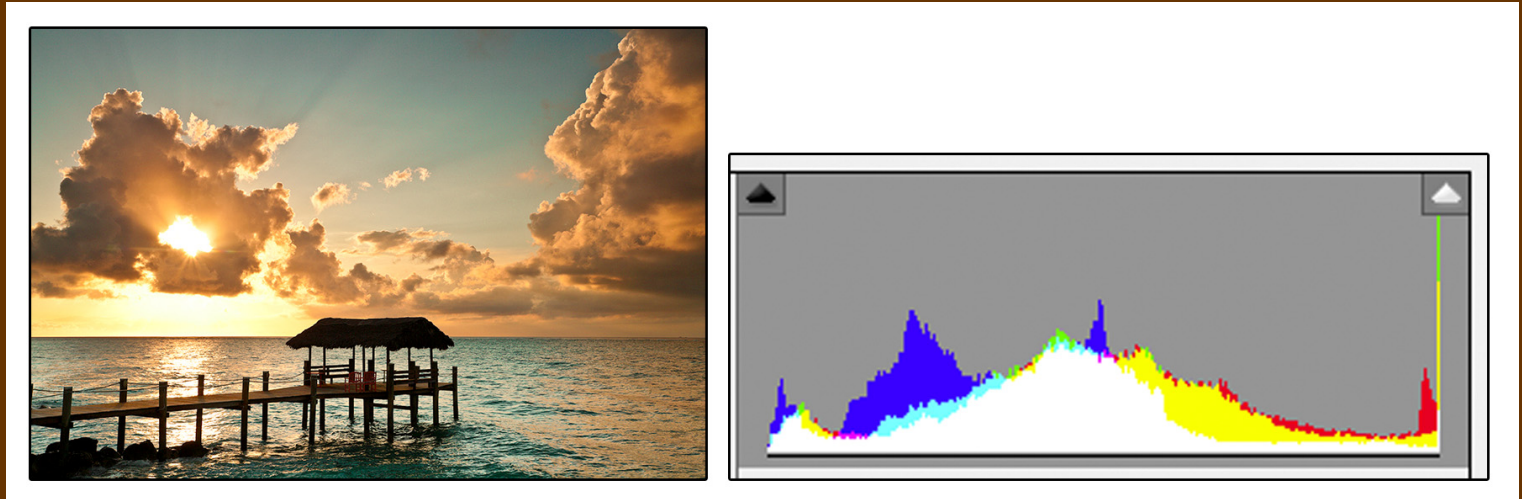
There is no such thing as a “correct” or “ideal” histogram. However, histograms are very useful in determining if a correct exposure was made.

## What is a correct exposure?

A correct exposure is an exposure that happened exactly as the photographer intended.

For any given scene a correct exposure may mean different setting for each photographer shooting the scene.

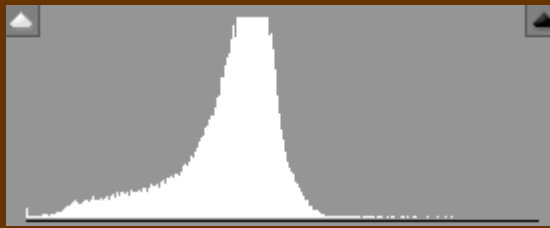
# Example



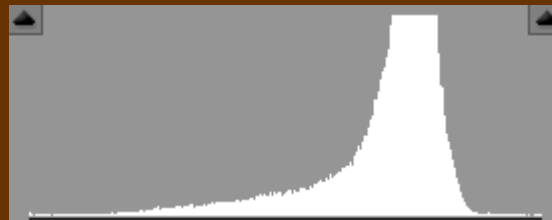
The dark toned pixels on the left of the histogram are in the pier area of the image.

The light toned pixels on the right of the histogram are around the sun.

This histogram shows that a fair amount of pixels in the image are close to a medium tone.



**Metered to 0  
A middle tone**

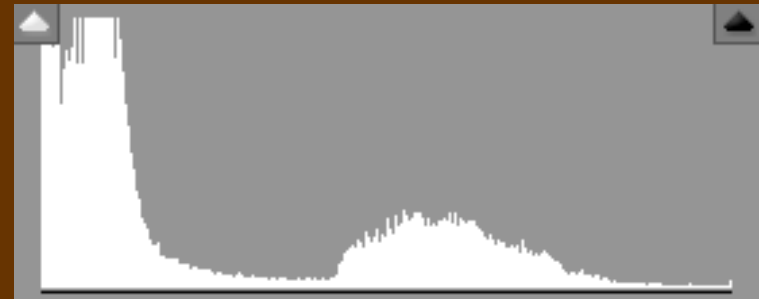
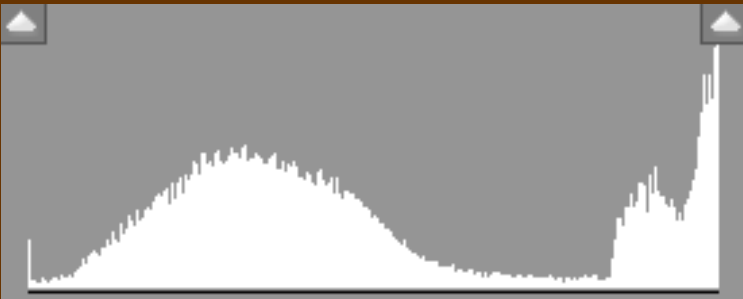


**Metered to +1  
Overexposed by 1 stop**



**Metered to +2  
Overexposed by 2 stops  
Correct exposure**

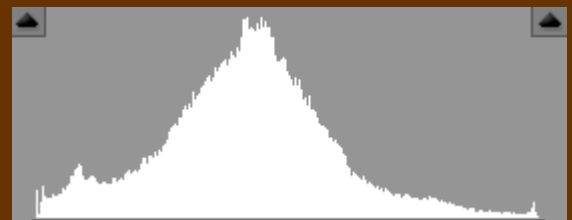
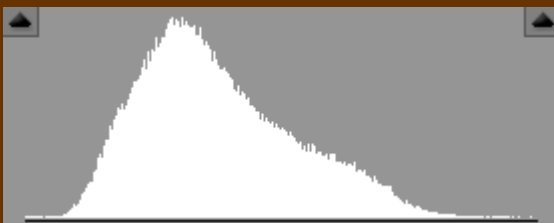
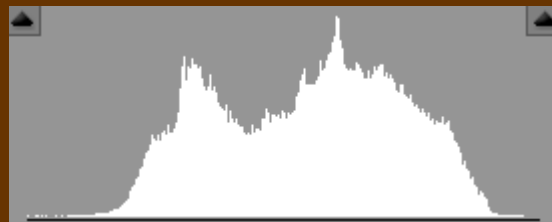




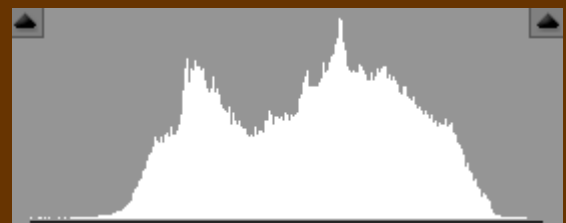
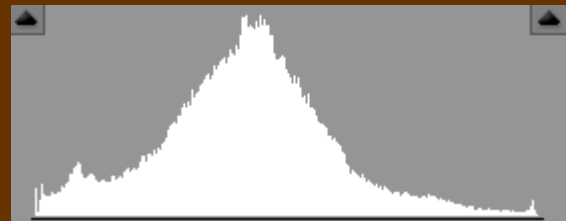
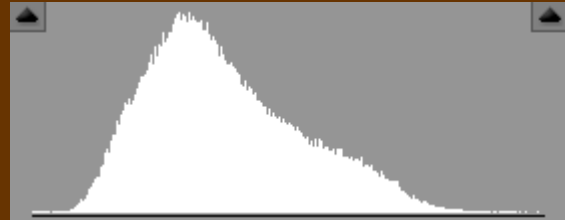
What do the histograms tell us about this scene?

That the dynamic range of the scene exceeds the dynamic range of the sensor.

Match the histograms to the images.



Answer:



Now, let's learn how to display the Histogram on the camera.

Turn on the camera and view the next page.



Nikon D80. Push and release the playback button to display the image, then push up or down on the multi selector to cycle through various information readouts including the histogram.



Canon 40D. Push and release the playback button to display the image, then push the info button to cycle through various information readouts including the histogram.

With some Nikon cameras a menu setting needs to happen before the camera will show an RGB histogram.

Press the menu button, go up to play back settings, and then into the display mode. Place a check next to the desired option, then select done.