



ETTR vs ETTL: Exposure

ETTL

- Expose to the Left
- Used for richer colours
- Less post process work
- Immediately shareable

ETTR

- Expose to the Right
- Used for better shadow details
- More post processing work
- Can not use in camera jpeg
- Images appear washed out

THE WHY

Sensor Response to Light

Sensor Response to Light

- Sensor captures light in a linear fashion
- A stop of light is either half or twice as much as the next stop
- 2 becomes 4, becomes 8, 16, 32 etc each time it is twice as much
- 32 becomes 16, becomes 8, 4, 2 etc each time it is half as much
- That's linear

Sensor Response to Light

Linear response to light

Brightness levels. Each stop captures twice as much light as the previous one.



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Human Response to Light

Human Response to Light

- Humans see light in a non linear way
- Our eyes and brain adjust our perception automatically

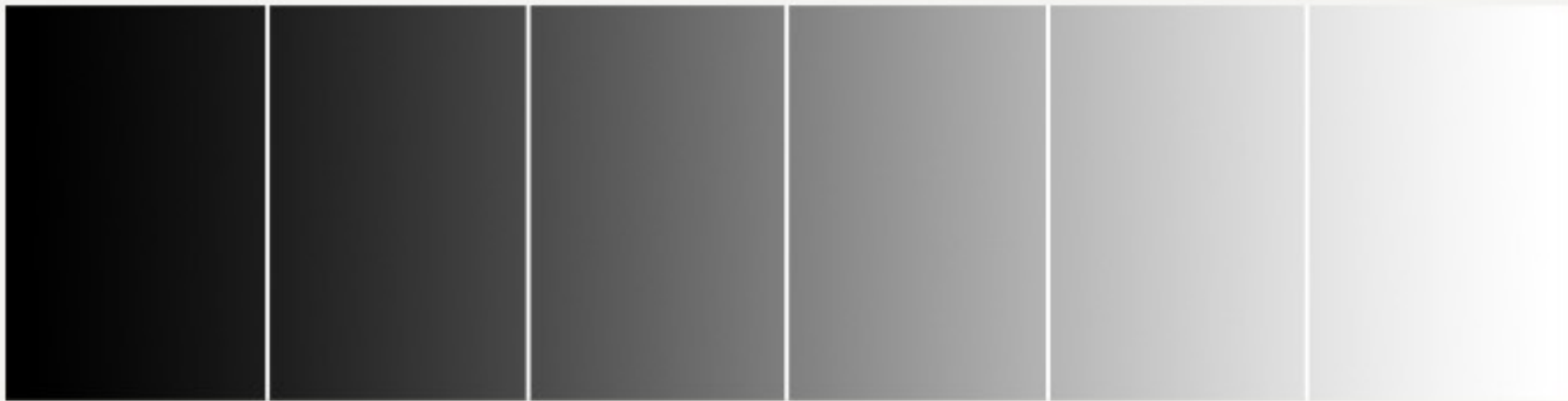
Human Response to Light



Human Response to Light

Gamma corrected distribution

All levels are equal



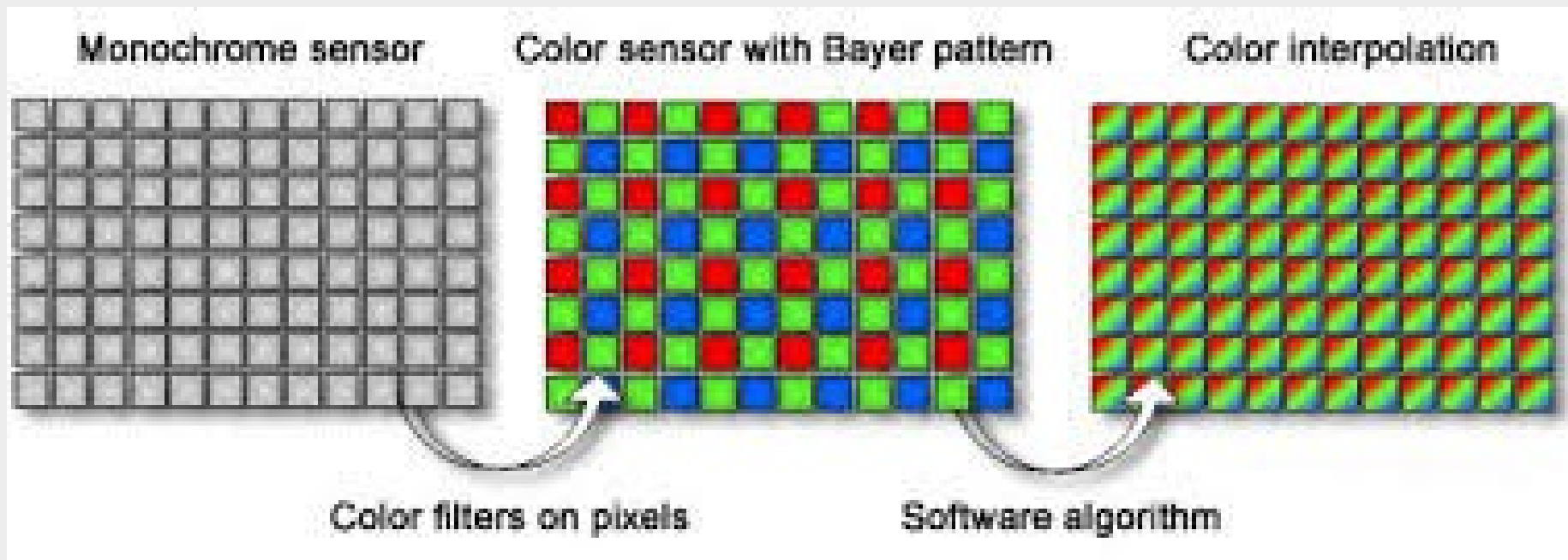
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A Camera Captures Luminance

A Camera Captures Luminance

- Only captures brightness or shades of black to white
- Each pixel is a photo site or light well
- Each pixel has two green filters and one each red and blue filter (Bayer Filter)
- Software algorithms create the colour based on the luminance values from each site

Luminance to Colour

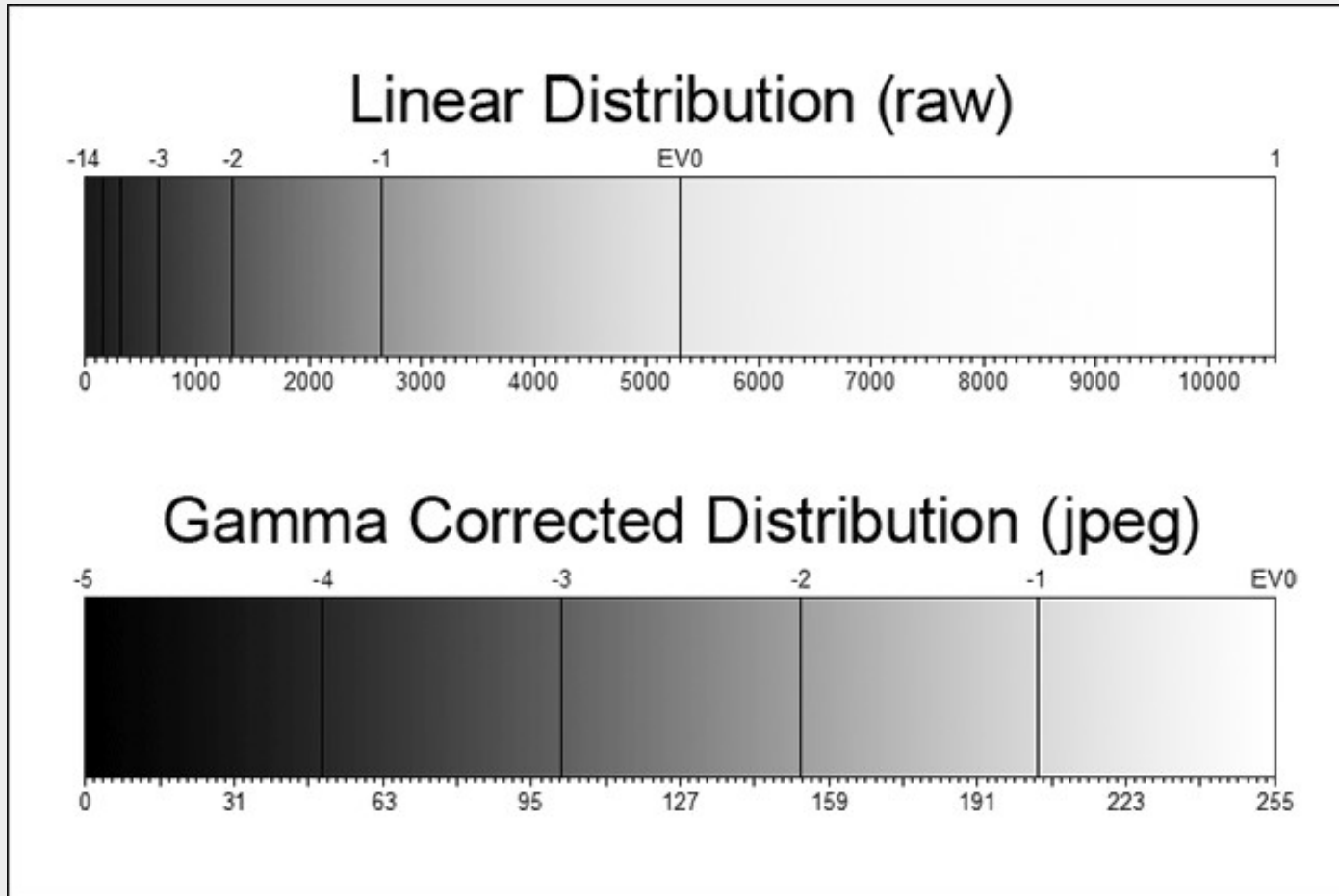


Histogram Review

Histogram Review

- Image review with a histogram gives a guide of exposure
- Live image hist not as good as post shot hist
- Histograms are built using jpeg version of the image
- RAW version of histograms are not yet in cameras!
- This means – what you see is NOT what you get.

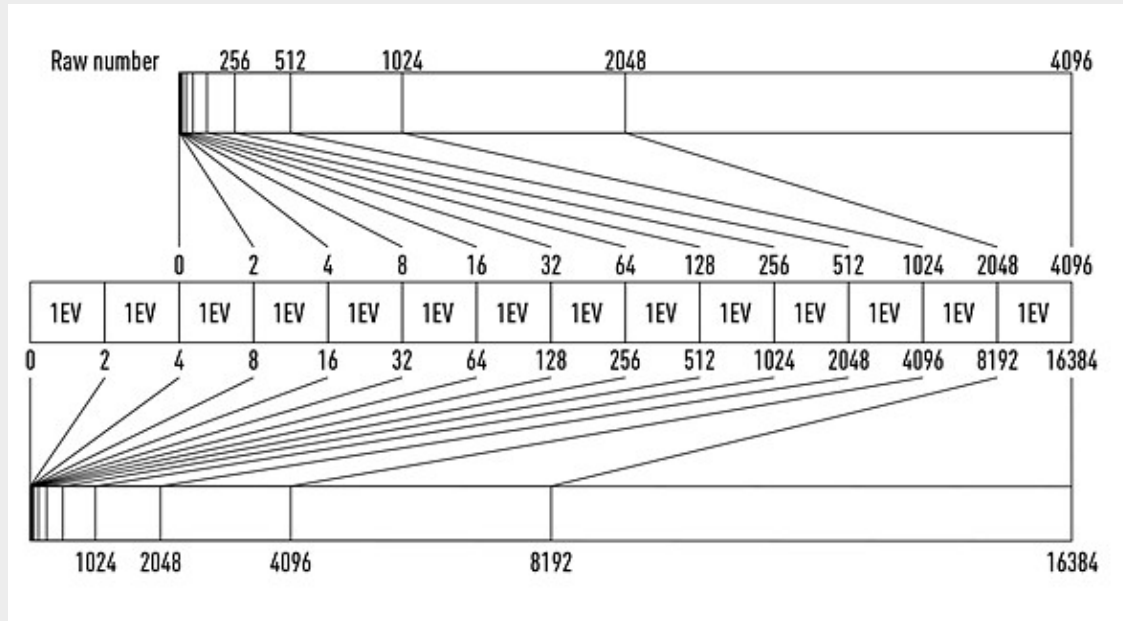
RAW to Jpeg



Sensor Bits

- Sensors are rated by how many bits they use to capture light
- Most DSLR's are 12 or 14 bit depth

12 & 14 bit Values



In Summary

- ETTR means shifting the histogram to the right as far as possible
- Jpeg histograms don't show it all so you can push the image into over exposed
- 1 to 3 stops past “clipping” - TEST IT!
- Watch the separate colour channels

In Summary

- Best used for high contrast scenes where shadows are important
- Best used where printing large prints
- Best used where some colour loss is not critical
- Best used **AFTER** you've tested your camera's abilities

Thanks!

