

Da Vinci Vision

Smell the Roses



BASIC
PHOTOGRAPHY

The eCard

Light as seen and photographed.

The understanding and the wise use of light is the basis of all photography. The meaning of “photography” is derived from the classical languages : “photo”= light and “graphy” meaning to draw.

Light is captured by the eye and it is processed and stored in the brain.

The same workflow is carried out in the photography system.

Camera captured: processed by chemical or digital means and stored on paper or on disk whatever the need be.

The information that follows covers a number of topics.

Lighting terms,
Measuring light.
Using light

When lighting is use on a given subject, such as in portraits ,then particular methods and terms apply to that unique subject.

CONTENT:

Light	1
Lighting. terms	2
Contrast.	3
Workflow	4

Properties of light

The physics books name three properties of light:

Hue: Meaning colour : visible light from infrared to ultra violet.

Saturation: Meaning how vivid or alive such as pastel or solid.

Lightness: How light or dark the tone .

Two “ Q’s” of light : the quantity and quality.

Tonal Range. The difference between light and dark areas of same image. The terms used are **dynamic range and/ or contrast range.**
This has nothing to do with colour.

Colour temperature: The colour of light from warm to cool. Measured in Kelvin. Standard daylight is about 5000 -5600 degrees Kelvin while candle light is about 2400 and deep shade is 7500-15000 degrees.

Ambient: The existing, natural lighting in the scene. Usually not under the direct control of the photographer/

Main Light: The light which illuminates the important areas of the subject.

Fill Light: The light which is subordinate to the main light. This could be the “ambient” light. This is often added so as to reduce the contrast or tonal range so as the reproduction of the image is acceptable.

Measurement: The quantity of light used in total or in part.

Distance: The distance from the light to the subject.

Closer= stronger and softer

Further= weaker and harder.

Hard light: Produces sharper well defined shadows.

Soft light: Produces indistinct shadows.

Ratio: The difference between one light and another.

Hair light: A light which illuminates the hair in portraits

Background light: A light which illuminates the background.

Kicker or cutter: A light that illuminates a small slice of the subject.

High Key: Lighting that produces a high percentage of lighter tones.

Low Key: Lighting that produces a high percentage of darker tones.

Spectral: A light which produces bright sparkling highlights.

TIPS.

Things you will need to produce acceptable lighting.

A grey card.

An exposure meter.

A tape measure.

A reflector.

Dark glasses.

Equipment.

Two flash lights.

2 iBounce Cards,

A radio trigger.



The BASIC lighting system.

The basic lighting system that is used for all work is based on the principle of “one light and a reflector.” This is the natural way of lighting: sunlight and reflector, the moon, sky, clouds etc.

In photography we can equate this to a “main” light and a “fill” light.

There is two lights used on the flower above. Two flash lights fitted with iBounce cards were employed. One mounted on the camera and the other fired by radio slave placed about 80 centimeters away on the left.

The ambient daylight was calculated to be one stop less than the main off camera light. This was effectively 2 lights as the on camera light and the ambient were the same value.

This basic lighting method produces more separation in the tones, thus giving more pleasing images.

The ambient or natural light can be used as the “fill” light if it is of an acceptable quality.

Decide on what is the best quality of light that is practical to use and then supplement with another light to illuminate the shadows.

TIP:

The lighting ratio that has been used by many over the years has been 3:1.

This is obtained by setting a one stop difference between the main and fill light. { Measured independently. }

When measured together the total is then used to set the camera f stop.

The set f stop is one half stop above the main light.

For example.

Fill light = f 5.6

Main light = f 8

Camera setting.

= F 8-11. { f 9 or 10 }

Step by Step.

There is a step by step procedure to follow when taking pictures.

1. Conceive a mental image of the picture you want to create.
2. Plan the equipment you need for the image/s.
3. Take a custom white balance and note the exposure from the eCard. [This card is available from Rod Pferr. }
The eCard image should peak in the centre of the histogram on the camera screen.
- 4 Photograph the card in the same position as the subject. You can check the contrast between you main and fill light. Make sure that this is about 3:1 or one stop difference between the two.
- 5 Take your images.
- 6 Import the al the images into Photoshop.
- 7 Open image of the eCard.
- 8 Note and make the grey section of the card 128. using the grey balance eyedropper tool in level and/or curves.
This is a little subjective. I may include an important part subject in the reference image. Set the grey card section to be equal in RGB. This value can be between 105 to 150.
- 9 Set the black value using the “shadow” tool at 20 RGB.
- 10 Apply the correction to the image.
- 11 Open a image from the series you have taken.
- 12 Now apply the curve or level you have made in the previous set to this image.
- 13 Magic happen. The image will be near perfect.

This curve or level can now be applied to all the images in the series.

This may seem tedious. With a little practice this camera procedure will take less than 30 seconds. The application of the curve can then be automated with an action.

I personally turn the contrast control down { less contrast } in my camera and increase the colour saturation.

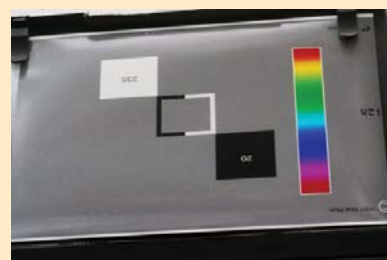
This gives me files where the difference between Jpeg and Raw files are almost impossible to discern. In fact most viewers will pick the Jpeg as their preferred image.

This combination of camera and photoshop control will save you a hugh amount of time.

Putting it all together.



- 1 Read the camera manual .



- 2 Take a white balance and exposure measurement from the card.
Take a frame of the for reference.



- 3 Take your images.
- 4 Open the card image in Photoshop.
- 5 Apply the curve or level obtained from the card to the image.