

Digital SLR Camera - Winter 2010

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MANUAL EXPOSURE GUIDE

Sunny 16:

Remember the “Sunny 16 rule”: on a sunny day, with the subject fully lit by the sun, the correct exposure is:

Aperture: f 16

Shutter: 1/ISO

So if your ISO is 100, then the exposure would be f16 and 1/100 sec.

If you ISO is 400, then the exposure is f16 and 1/400sec

Of course, you can adjust the aperture and shutter speed to maintain the proper exposure, by increasing one while reducing the other, and vice versa.

Other exposures:

Other rules of thumb at ISO 100, and 1/100 sec:

Subject in bright sun on snow or light sand: f 22

Subject in bright or hazy sun f 16 (Sunny 16 rule)

Subject in weak hazy sun: f 11

Subject in cloudy bright light (no shadow): f 8

Subject in open shade: f 5.6

Subject in heavy overcast: f 4

Immediately after sunset: f 2.8

10 minutes after sunset: f 2

Very brightly lighted city at night (Las Vegas), Fenway night game, store window: f 1.4

Brightly lighted city at night (Boston), Indoor sports: f 1

Using a Digital SLR Camera - Winter 2010

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ASSIGNMENT #1 – The not-so-basic basics

Exercise 1: Pick a subject, preferably one with stable light, and photograph it. Measure the light, and note the measurements, and how you measured it. Be detailed in your description.

Then vary the exposure, by randomly changing aperture, shutter speed, ISO setting.

Exercise 2: Depth of field: Pick a subject with some physical depth. Focus in the middle of the depth. Measure the light, note the measurement and ISO setting. Then keep the exposure constant, but vary the aperture over a range of at least 6 f-stops. More would be better.

Exercise 3: Motion: Pick a subject that moves. It could be your hand moving in front of the camera, a car in motion, a runner. The motion needs to be repeatable. Measure the light for the subject. Note the measurement and ISO setting. Then keep the exposure constant, but vary the shutter speed over a range of 6-10 f-stops.

Exercise 4: ISO: Pick any subject with stable light. Measure the light, and note the measurement together with the ISO setting. Then keep the exposure constant, but vary the ISO over the entire range of the camera (probably ISO 100-3200).

Bring back your results next week on a CD or thumbdrive.