

# Getting the most out of your point and shoot camera

DOUGLAS FOULDS STUDIOS

# In today's presentation

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- ISO, aperture and shutter speed (and why you need to understand them, even with a P&S)
- Your camera's creative modes
- Light
- Composition
- Two ways to become a better photographer

# About me

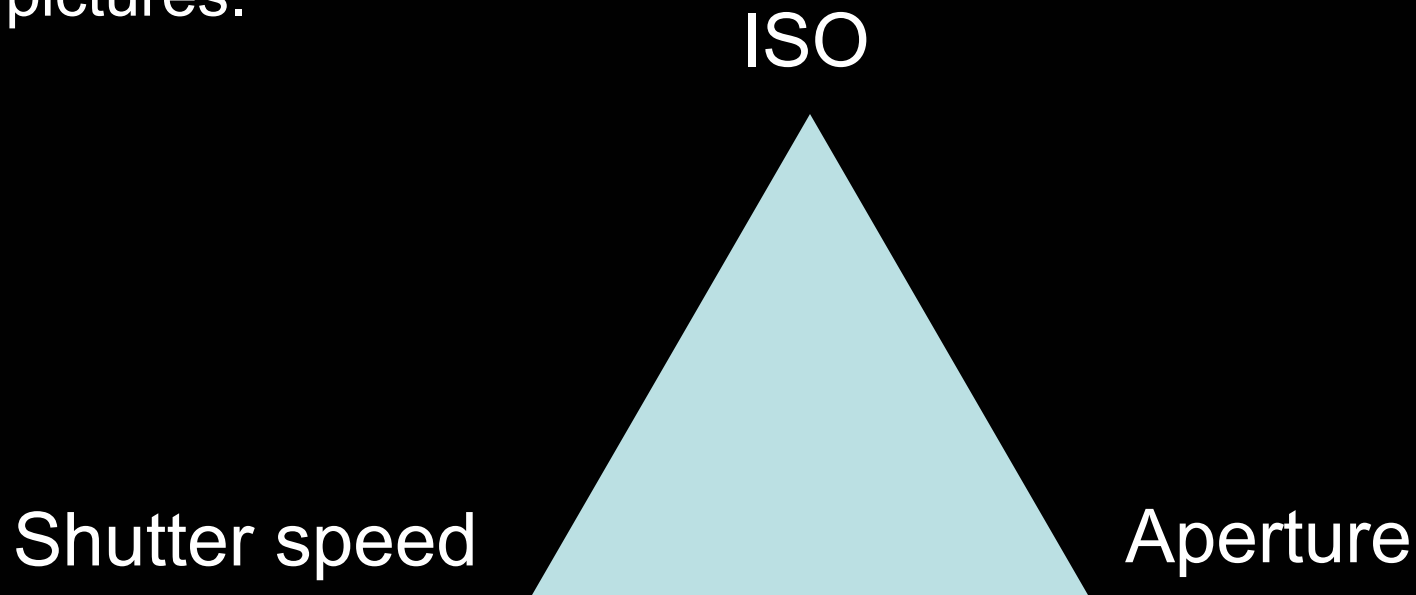
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- Wedding and portrait photographer
- 20-30 weddings per year plus other commissions, mainly portraiture
- Expanding this year!

# ISO, aperture and shutter speed

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*Together*, they determine exposure. Knowing how they work together is critical for anyone who wants to take better pictures.



# ISO

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- ISO describes how sensitive film or a sensor is to light

Lower ISO numbers = less sensitivity to light

Higher ISO numbers = more sensitivity to light

< ISO 200: Not very sensitive to light; suitable for bright sunny conditions; very little grain or noise

> ISO 800: Very sensitive to light; suitable for dimly-lit scenes with no flash; produces noticeable grain or noise

- TIP: For crisp, noise-free pictures do not go above the highest practical ISO value which, for most P&S cameras, is ISO 400 to ISO 800



1/40 sec., f/1.4, ISO 3200

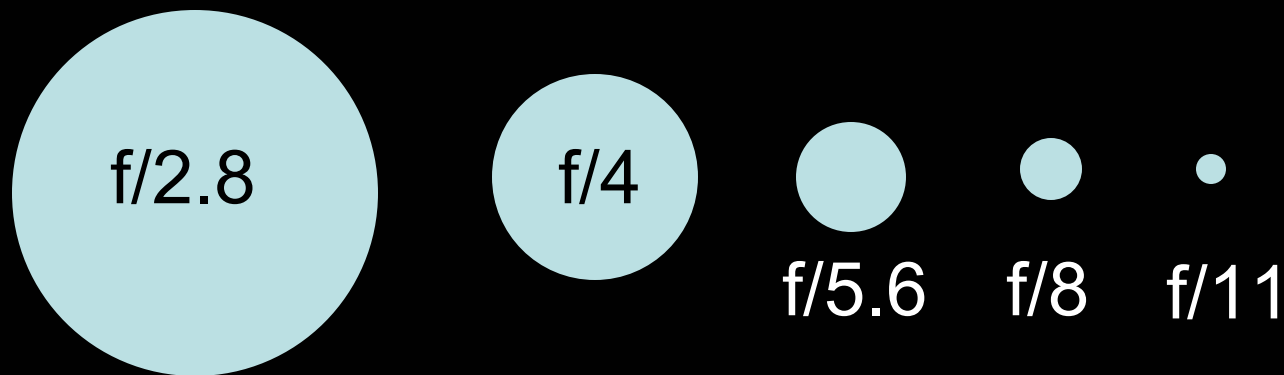
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# Aperture

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- Aperture is the opening in your lens through which light is admitted to the film or sensor
  - Measured in “f-stops”
  - Major f-stops are f/2.8, f/4, f/5.6, f/8, f/11: each one is halve (or double) the size of its neighbour
- **Lower f-stops**: shallow depth of field; good for low light
- **Higher f-stops**: greater depth of field, good for bright light





1/320, f/2.5, ISO 400



1/50, f/6.3, ISO 400

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1/60 sec., f/2.8, ISO 500

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1/250 sec., f/1.8, ISO 160

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1/200 sec., f/10, ISO 100

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# Shutter speed

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- Shutter speed is the length of time, usually in tenths, hundredths, or thousandths of a second, that light is being recorded by the film or sensor
  - **Lower** shutter speeds (~1/4 to 1/30 second): good for low-light conditions and for showing motion; may need to brace camera
  - **Higher** shutter speeds (~1/60 and faster): good for brightly-lit scenes and for stopping motion



1/5 sec., f/2.8, ISO 200

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5 sec., f/8, ISO 50

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1/3200 sec., f/5, ISO 200

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# Putting it all together

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- Closed system: changing one parameter has an effect on one (or both) of the other two. It's like squeezing a balloon: the shape changes but volume remains the same.
- Let's say you have a properly exposed image:
  - ISO 200, aperture is f/4, shutter speed is 1/30 second
- The background is distracting, so you pick a shallower depth of field:
  - You change the aperture to f/2.8
- Now, at f/2.8 you're admitting **twice the light** as f/4, so to maintain your exposure you need to **halve the time** your shutter is open **OR** select an ISO value that is **half as sensitive** —either will work:
  - ISO 100, f/2.8, 1/30 second (you have halved the ISO, shutter speed is same)
  - ISO 200, f/2.8, 1/60 second (you have halved the time, ISO is the same)





1/4 sec., f/2.8, ISO 200

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1/200, f3.5, ISO 200

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# Your camera's creative modes

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- Av or Aperture Priority
  - You pick a specific **aperture**
  - Shutter speed goes up and down automatically to maintain exposure
  - Useful when you want to record a shallow (or deep) depth of field consistently while maintaining a proper exposure
- Tv or Shutter Priority
  - You pick a specific **shutter speed**
  - Aperture opens and closes automatically to maintain exposure
  - Useful when you want to show (or stop) motion consistently while maintaining a proper exposure

# Light

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- Light (and the absence of light) creates shape, gives form, and reveals texture
- Light has “quality”:
  - **Hard light** produces harsh shadows: sun at noon, camera flash close to subject—that is, small, relatively powerful light sources
  - **Soft light** produces more natural images: sunset, flash bounced off ceiling, sunlight through white window sheers—that is big, diffuse light sources
- Don’t fight the light—go with it! Unless, of course, you’re up for a fight.
  - Where is the dominant light source? Outside, it’s usually the sun. Indoors, it might be a window.
  - Place the dominant light source behind you as you shoot your subjects.
    - Alternatively, place the light at an angle to your subjects—much more dramatic!
  - Best time for outdoor portraits: the hour before sunset, the “golden hour”
  - Don’t be afraid to **use flash to fill in shadows** when shooting in bright sun, particularly if the subject is backlit



1/6400 sec., f/2.2, ISO 100

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1/4000, f/4, ISO 500

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1/60 sec., f/2, ISO 800



1/100 sec., f/1.6, ISO 250

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1/1000 sec., f/5, ISO 125

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1/1600, f/2.8, ISO 640

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No flash, 1/1000 sec.

Fill flash can be *your* friend, too!

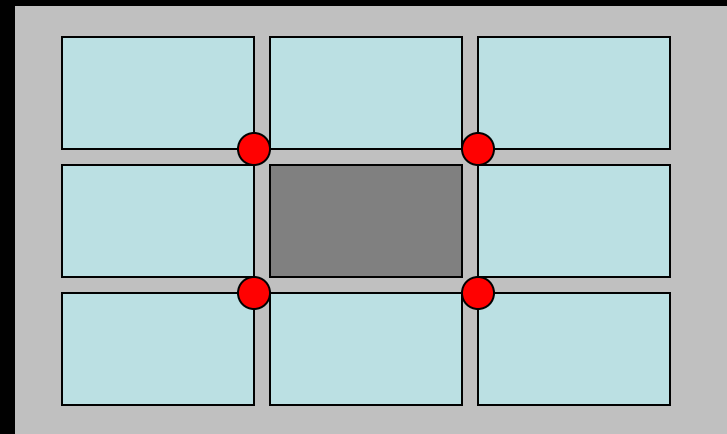


With flash, 1/500 sec.

# Composition

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- Zoom with your feet
- Discover your macro mode
- Change your perspective: up high, down low, close up
- Divide your scenes into thirds; place subjects at intersections





1/4000 sec., f/1.4, ISO 400

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1/350 sec., f/4.5, ISO 200

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1/80, f/6.3, ISO 100



1/20, f/2.8, ISO 80

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1/1000, f/5, ISO 80

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# Shoot and share

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- There are two things guaranteed to make you a better photographer: *use* your camera and *share* your work
- Flickr, Photobucket, Facebook are good choices
- Be aware of terms of use: some sites assert rights to images supplied by users

# Buying tips

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- Lens quality and maximum aperture
  - f/2.8 or f/3.5 are ideal
- Optical zoom vs. digital zoom
  - Optical is better. Digital just enlarges pixels, creating a softer image.
- Shutter lag
  - Should be sub-second response
- Batteries: proprietary or generic?
  - If proprietary, check battery life between charges—this may not be an issue.
  - Generic (i.e., AA) batteries are best for traveling
- Memory card formats
  - SD-HC is becoming the standard
- Resolution
  - 6-8 megapixels is fine. Much more is a waste and can actually degrade image quality
- File format
  - JPEG is universal, but if you want more creative control pick a camera with RAW support
- Image stabilization (IS)
  - Great for getting handheld shots in low light; allows you to shoot at lower ISOs and shutter speeds

# Recommendations

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- Any Canon G-series
- Later Canon Powershot A-series and SD-series
- Pentax Optio A- or S-series
- Casio Exilim models
  
- For DSLRs:
  - Canon 40D or Rebel XTi
  - Nikon D90 or D5000

# Questions

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