

INTRODUCTION TO  
DIGITAL PHOTOGRAPHY

by Paul Hibbert

# 3 Main Camera Controls

- **Shutter Speed**

*Camera Control*

Controls the length of time the shutter is open, allowing the sensor to be exposed to the light from the lens.

- **ISO**

*Camera Control*

Controls the sensor's sensitivity to light.

- **Aperture**

*Lens Control*

Controls the amount of light that can pass through the lens.

Measured in Focal Stops known as  $f$ -stops.

# 3 Main Camera Controls

- **Shutter Speed**  
*Camera Control*
- **ISO**  
*Camera Control*
- **Aperture**  
*Lens Control*
- Has an effect on the image sharpness. Helps to avoid Camera Shake.
- Has an effect on the image noise, clarity and smoothness.
- Has an effect on the depth-of-field (depth-of-focus).

# Rules & Guides

- **Shutter Speed:**

- The shutter speed should not fall below the focal length of the lens (numbers) for hand held shots.

- Example: For a 200mm telephoto lens, the minimum hand held exposure should be 1/200 second.

For a 35mm Wide-Angle lens, the minimum hand held exposure should be 1/35 second.

# Rules & Guides

- **Aperture:**
- Work within the optimum aperture range for the lens you have fitted (usually 1 stop below maximum to 1 stop above minimum).
- Example: for a lens with a range of  $f/2.8$  to  $f/22$ , try to work within the range of  $f/4$  to  $f/16$ .
- Lenses set to their maximum or minimum apertures will not give the best quality, except for some very expensive lenses!

# Rules & Guides

- **Aperture cont'd:**
- The effects of the aperture on Depth-of-field are relevant to the focal length of the lens and the distance of the subject to the camera.
- The shorter the focal length of the lens is, the greater the Depth-of-field.
- The shorter the distance of the subject to the camera is, the shorter the Depth-of-field.

# Rules & Guides

- **ISO:**
- Use the lowest ISO possible to obtain the exposure you need, try to avoid high ISO numbers.
- ISO settings of less than 800 (1600 on some later cameras) will give very good results, where as higher settings will cause more image noise.

Questions?



