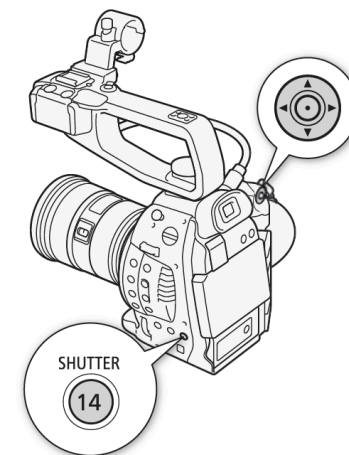


## Exposure 2 – ISO and Shutter Speed

- **Shutter speed** is the amount of time each frame is exposed for
- A shutter speed of 50 = an exposure time of  $1/50^{\text{th}}$  of a second per frame
- Lower/longer shutter speeds increase exposure time and brighten image
- Higher shutter speeds reduce exposure time, darkening image
- Shutter speed also affects **motion blur**. At higher shutter speeds individual frames appear more crisp, due to reduced motion blur. Each frame is a moment frozen in time. As a result motion appears 'choppy'.
- Motion blur occurs because the subject moves within the frame while the shutter is open. Lower shutter speeds give smoother motion.  $1/40$  to  $1/50$  is ideal.
- Shutter speed can be used creatively to create motion blur effects but a shutter speed of twice the frame rate for most situations (e.g.  $1/50^{\text{th}}$  for a frame rate of 25p).



- **ISO** measures the sensitivity of the sensor to light, so the higher the ISO, the brighter the image becomes.
- Doubling the ISO doubles the sensitivity of the sensor.
- But the higher the ISO, the noisier the image becomes
- The C100 performs very well in low light and high ISOs can still give good image quality. Look carefully at the image to judge.
- ISO should be used to set the base sensitivity of the sensor given the available light, but not changed from shot to shot.
- Lower ISOs will give a cleaner image.

