

SHUTTER SPEEDS

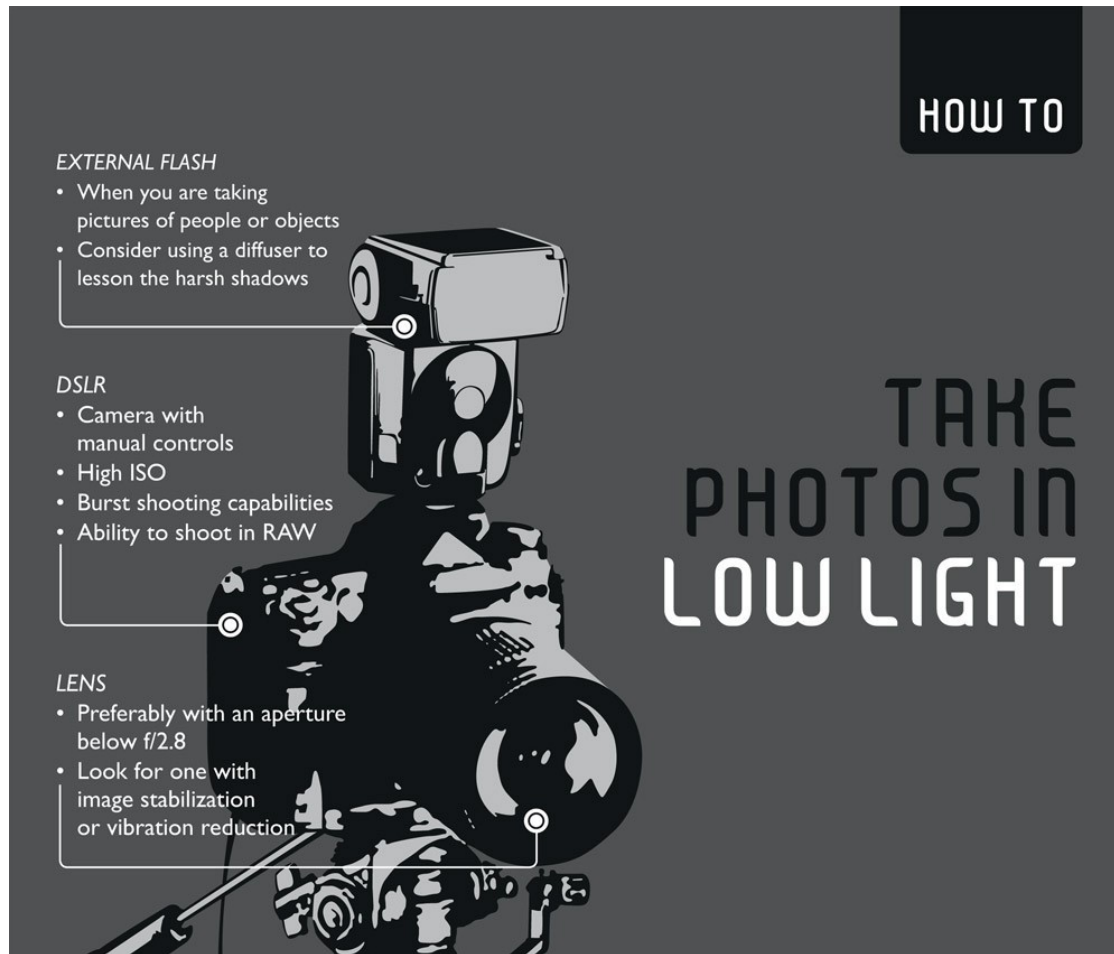
PANNING

LOW LIGHT

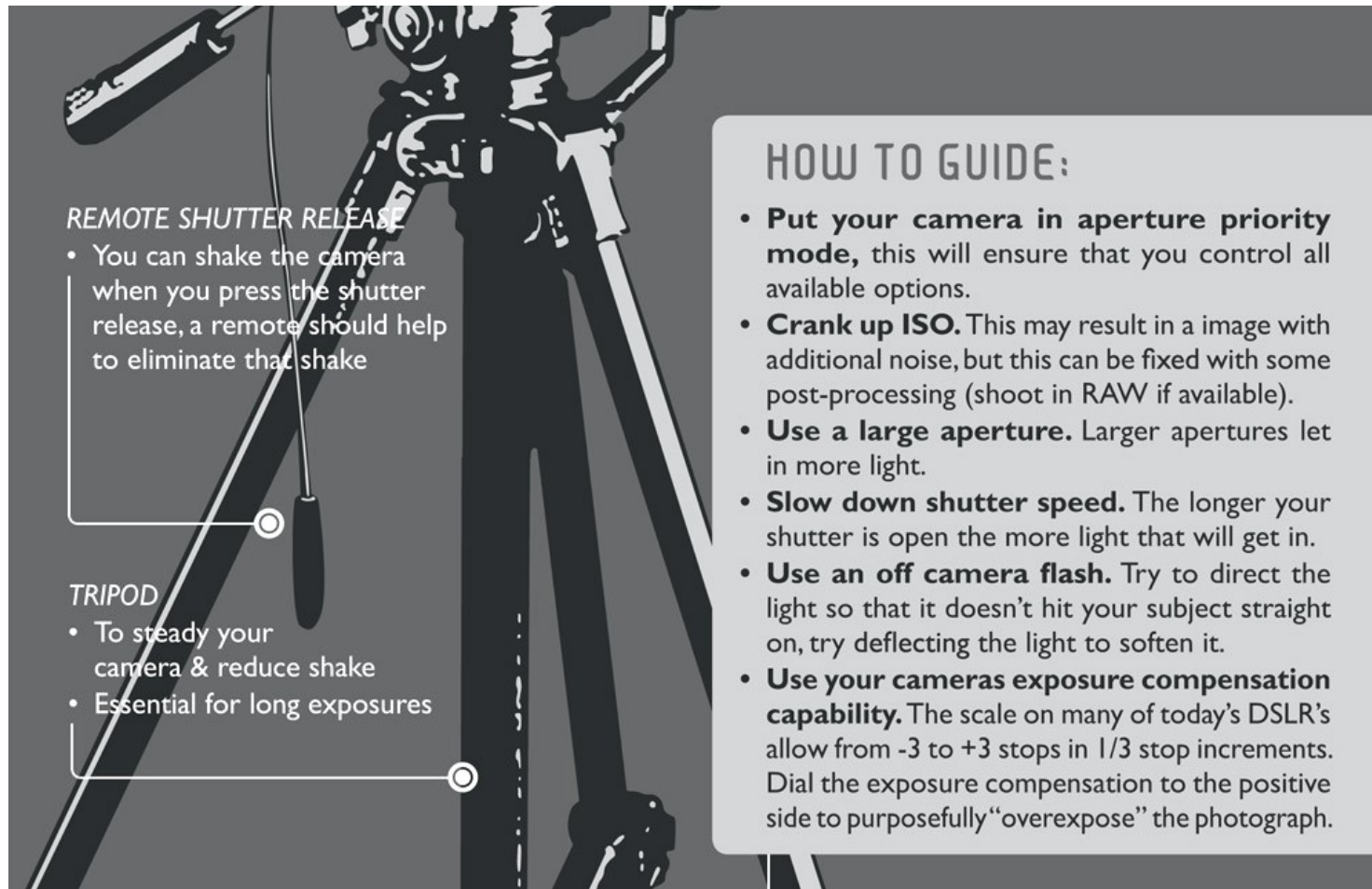
HIGH SPEED

SHUTTER SPEEDS

Let us begin with Dimly Lit areas



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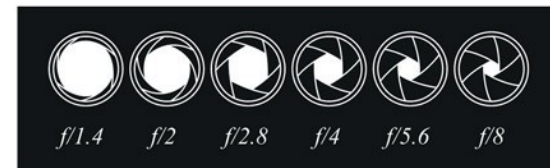
SETTING'S FOR YOUR CAMERA:

	Tripod	Flash	ISO	Aperture	Exposure
Indoor	—	✓	High	Wide	Fast
Hand Held	X	—	High	Wide	Fast
City Lights	✓	X	Low	Medium	Long
Stars	✓	X	Low	Medium	Long
Light Painting	✓	X	Low	Narrow	Long

QUICK TIPS:

- **Shine a light** on your subject and auto focus on that, then turn your light and auto focus off and take the picture.
- **Do not be afraid** to turn up your ISO, crank it up as high as you need, do not worry about the noise, get the shot.
- **When using a flash** bounce the light off a wall or other object will help to reduce harsh shadows on your subject.

- **What is ISO:** How sensitive the camera sensor is to light.
- **What is Shutter Speed (Exposure):** How long your shutter is open, allowing light to reach the sensor.
- **What is Aperture:** The diameter of the lens opening, which controls how much light gets to the sensor.



Wide ← → Narrow

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your subject.

- **Motion blur** can be a cool effect, experiment with a moving subject and a longer exposure time.
- If your camera, or lens has **image stabilization** make sure its on.
- **Do not be afraid** to make a mistake, you can learn a lot from a mistake.
- **Hand-held shots** should be no slower than 1/60th of a second other wise use a tripod to reduce blur.
- Buy a **50mm lens f/1.8**.
- If you aim your camera towards the **north star**, the stars will appear to spiral.

LIGHT GRAFFITI AND PAINTING WITH LIGHT:

- Wear dark clothing.
- Find a dark location.
- Set your camera shutter speed to a long exposure, 20+ seconds or bulb setting.
- Set your camera on a tripod.
- Press shutter.
- Begin painting with your flashlight, sparkler or glow stick.
- Experiment with aperture, ISO and shutter speed until you get the look you are going for.
- Check your work and try it again if you are not happy.

TAKE A PHOTOS LIKE A SNIPER:

- Brace yourself and your camera against wall, ground or other solid object.
- Relax when you hold the camera, a tense hand will cause you to shake the camera.
- Avoid zooming in on your subject.
- Take a deep breath, and exhale slowly then photograph.
- Gently press the shutter button and leave your finger on it.
- Triple tap your subject (take multiple photos in a short succession).



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Do not be afraid to increase the ISO



ISO 3200, f/4, 1/25th - 17-35mm lens at 35mm

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ISO 12,800, f/3.2, 1/160th - 17-35mm lens at 17mm

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ISO 200, f/7.1, 4 seconds - 17-35mm lens

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ISO 100, f/11, 15 seconds - 17mm lens

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ISO 6400, f/1.4, 1/80th - 50mm f/1.4 lens

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Photograph by Terry Waldron

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- Just a quick PANNING shot. This is 2 photos combined from a bracketing set.



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- More Panning.



45th sec

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Shutter Speed Calculator

[hide advanced](#)

Camera Settings

Digital compact with 1/2.3" sensor

Lens Focal Length mm

Subject Distance

Subject Speed in side to side direction

Camera Megapixels (optional)

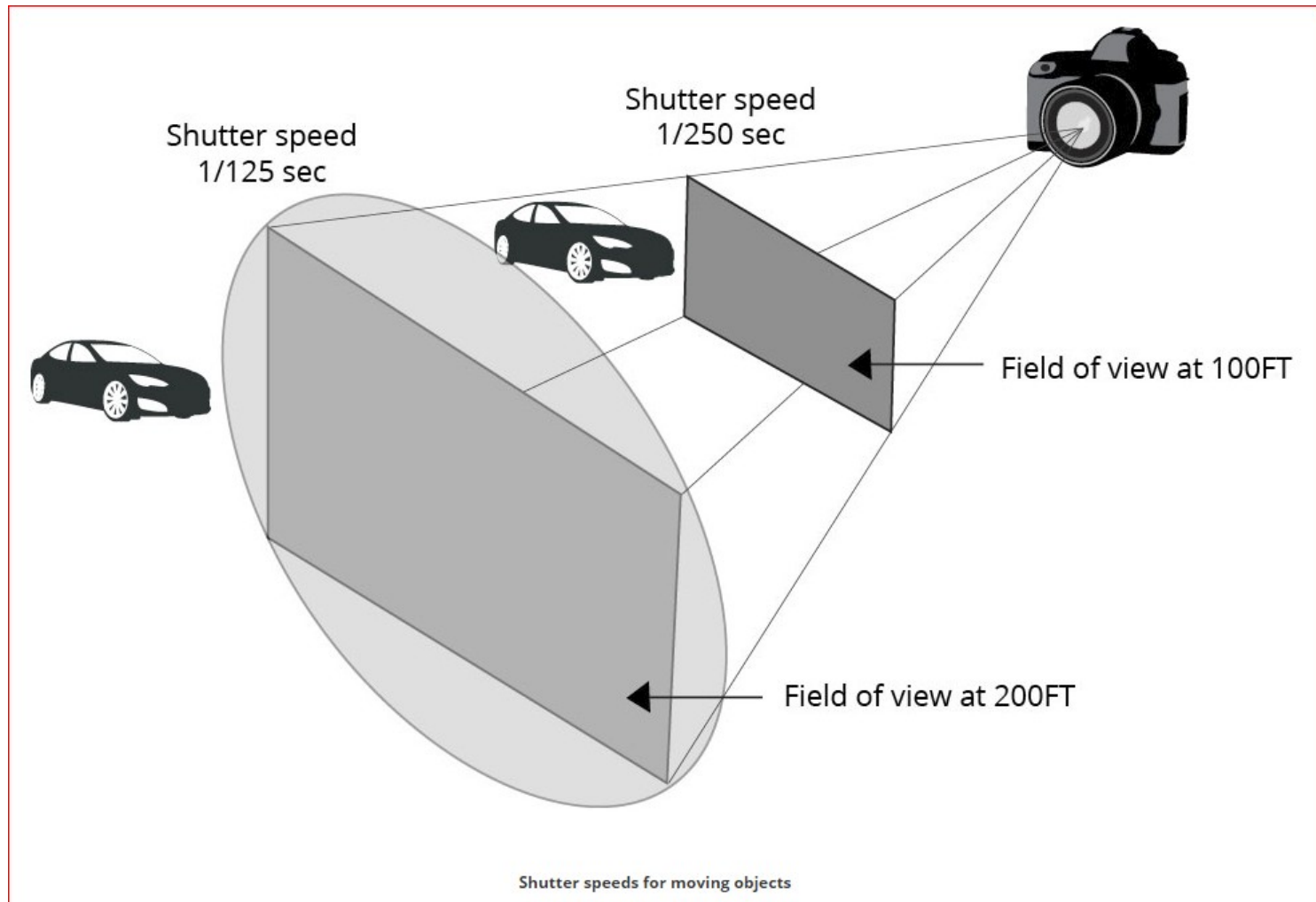
CALCULATE

Minimum Shutter Speed: **1/2850 sec**

Min shutter when viewed at 100% on-screen: **1/6541 sec**

From <https://www.cambridgeincolour.com/tutorials/camera-shutter-speed.htm>

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- **SUMMARY**

- *Use a tripod whenever possible
- *Shoot in RAW to be able to bring the most out of the file
- *Use fast glass - if it's an important shoot and you don't own a fast lens, rent one
- *Use as fast a shutter speed as possible if the subject moves
- *Bracket if the situation allows
- *Adjust your ISO accordingly but realize that noise increases as the ISO is raised
- *Open your lens to the widest aperture to let in as much light as possible
- *If you have it, use Vibration Reduction
- *Use flash creatively to create light
- *Try HDR