



Los Angeles County Sheriff's Department
Scientific Services Bureau

Digital Camera Quick Reference Guide



DIGITAL CAMERA QUICK REFERENCE GUIDE

GENERAL CRIME SCENE PHOTOGRAPHY

Camera Exposure: Manual “M” Mode

JPEG: Large Fine

ISO: 400; use 100 for bright sun

Preferred Aperture: f/8 to f/16

Shutter Speed: As appropriate for meter reading (*avoid <1/30 sec handheld*)

Lens Stabilizer: On

Lens: Zoom 24-105mm

Focus: Automatic or manual focus as appropriate for scene and lighting

Flash: ETTL mode (use flash to fill shadows during the day)

Technique: Overall, Midrange and Close-ups

NIGHT TIME AVAILABLE LIGHT PHOTOGRAPHY

Camera Exposure: Manual “M” Mode

JPEG: Large Fine

ISO: 400 (or higher if necessary – ex. 800 to 6400)

Aperture: f/8 (use as a starting point)

Shutter Speed: 5 seconds (use as a starting point) **USE TRIPOD**

Lens Stabilizer: On

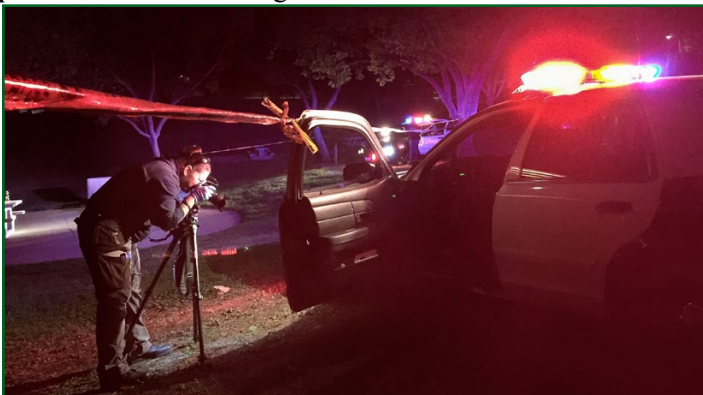
Lens: Zoom 24-105mm

Focus: Automatic or manual focus (*if needed, use a flashlight to focus*)

Support: Place camera on tripod and attach cable release

Flash: No flash (optional: use fill flash on ETTL mode for nearby shadows or to counteract bright lights facing toward the lens)

Technique: overall and midrange



DIGITAL CAMERA QUICK REFERENCE GUIDE

2D SHOE IMPRESSIONS

Camera Exposure: Manual “M” Mode

RAW + JPEG RAW Fine

ISO: 100

Aperture: f/16

Shutter Speed: 1/125th

Lens Stabilizer: On

Lens: Zoom 40-70mm (*50mm is ideal*)

Focus: Manual focus (*if needed, use a flashlight to focus*)

Place camera on tripod along with sandbag for stabilization; attach cable release

Flash: E TTL mode using off-camera flash cord

Technique: Ensure camera is parallel and square with impression; utilize an L-scale; flash held at oblique angle on all four sides about 3-5 feet away

If surface is too reflective for flash, turn off flash and use AV mode at f/16

Footprint and Shoe Impression



DIGITAL CAMERA QUICK REFERENCE GUIDE

2D LATENT/PATENT IMPRESSIONS

Camera Exposure: Manual “M” Mode

RAW + JPEG RAW Fine

ISO: 100

Aperture: f/16

Shutter Speed: 1/125th

Lens Stabilizer: On

Lens: Macro fixed 50mm

Focus: Manual focus (if needed, use a flashlight to focus)

Place camera on tripod and attach cable release

Flash: ETTL mode using off-camera flash cord

Technique: Ensure camera is parallel and square with impression; utilize a sticker scale; flash held at oblique angle on all four sides about 3-5 feet away

If surface is too reflective for flash, turn off flash and use AV mode at f/16

3D SHOE AND TIRE TRACK IMPRESSIONS

Camera Exposure: Manual “M” Mode

RAW + JPEG RAW Fine

ISO: 100

Aperture: f/16

Shutter Speed: 1/125th

Lens Stabilizer: On

Lens: Zoom 40-70mm (50mm is ideal)

Flash: Manual mode using off-camera flash cord; if flash is too strong, use ETTL

Focus: Manual focus on bottom of impression (*if needed, use a flashlight to focus*)

Place camera on tripod along with sandbag for stabilization; attach cable release

Technique: ensure camera is parallel and square with impression; utilize an L-scale; flash held at ankle, calf, knee heights on all four sides about 3-5 feet away

DIGITAL CAMERA QUICK REFERENCE GUIDE

PAINTING WITH LIGHT INSUFFICIENT LIGHT OR LARGE AREA

Camera Exposure: Bulb “B” Mode

JPEG: Large Fine

ISO: 400

Aperture: f/8 (for more depth of field – f/11)

Shutter Speed: Shutter open until flash or flashlight sequence is completed

Lens Stabilizer: On

Focus: Manual focus (if needed, use a flashlight to focus)

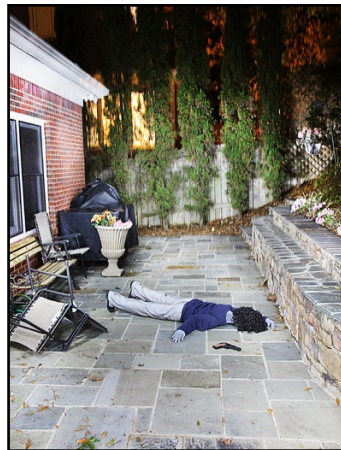
Place camera on tripod and attach cable release

Flash: Manual “M” 1/1 (flash will be off camera)

With camera composed, focused, and pointed toward subject area, depress cable release and lock it in “open” position. With flash in hand, quickly walk and manually flash an equal pattern around subject area (outside camera’s angle of view). Ensure to flash parallel to the deck toward desired areas to be lit. Return to camera and release the lock on cable release to take photo. **Note:** *A flashlight can also be used to paint.*

The “painting with light” technique, allows you to light and image a large area using a single electronic strobe light, a spotlight, or—in some cases—even a good flashlight. To accomplish this, the photographer moves the light throughout the scene, exposing one part at a time, while the camera lens and shutter remains open the entire time.

Painting with Light



(Courtesy Evidence Technology Magazine)

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ALTERNATE LIGHT SOURCE (ALS) PHOTOGRAPHY OF SEMINAL FLUID

Camera Exposure: Aperture Value “AV” Mode

JPEG: Large Fine

ISO: 400

Aperture: f/11 or f/16

Shutter Speed: Camera will automatically select

Lens Stabilizer: On

Lens: Zoom

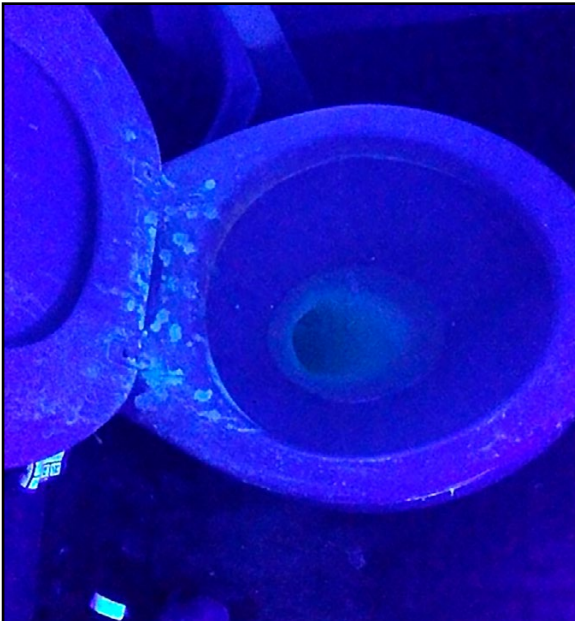
Focus: Automatic or manual focus

Flash: no flash

Place camera on tripod and attach cable release

Technique: Remove lens shade. A criminalist will have the filter and the ALS unit. Place orange barrier filter in front of lens, without touching the lens to the filter. *Low ambient light is preferred.* Depending on the ALS intensity, the exposure may be from one to several seconds. Make several exposures, making sure that the focus remains sharp.

Seminal Fluid Under Ultraviolet Light



DIGITAL CAMERA QUICK REFERENCE GUIDE

LUMINOL PHOTOGRAPHY

Camera Exposure: Bulb "B" Mode

JPEG: Large Fine

ISO: 1600

Aperture: f/8 (for more depth of field use f/11)

Shutter Speed: 15 seconds (if using f/11, begin at 30 seconds)

Lens Stabilizer: On

Lens: Zoom

Focus: Manual focus (if needed, use a flashlight to focus)

Place camera on tripod and attach cable release

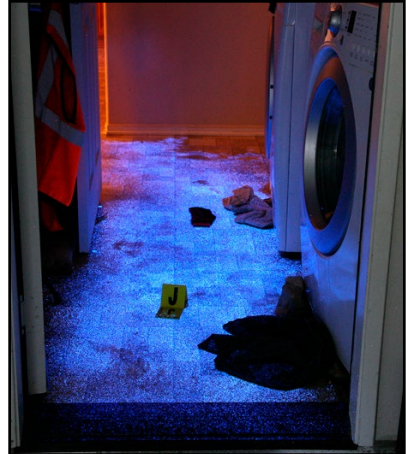
Flash: no flash

Technique: With the room lights on, take a control photo of the blood-stained area with EV markers in place. With the lights off, take a photograph (15 seconds) of the same bloodstained area. Review the captured image for correct exposure and adjust as needed. Take another photo and bounce a flash or flashlight onto the ceiling (allows you to see background).

Luminol Photography



Without Luminol



With Luminol

DIGITAL CAMERA QUICK REFERENCE GUIDE

AERIAL PHOTOGRAPHY

Camera Exposure: Time Value “TV” Mode

JPEG: Large Fine

ISO: 400 (use higher ISO 800 or higher if light level is low)

Aperture: camera will automatically select

Shutter Speed: 1/500th

Lens Stabilizer: **Off**

Lens: Zoom

Focus: Automatic

Flash: no flash

Technique: Overall, Midrange, Close-ups

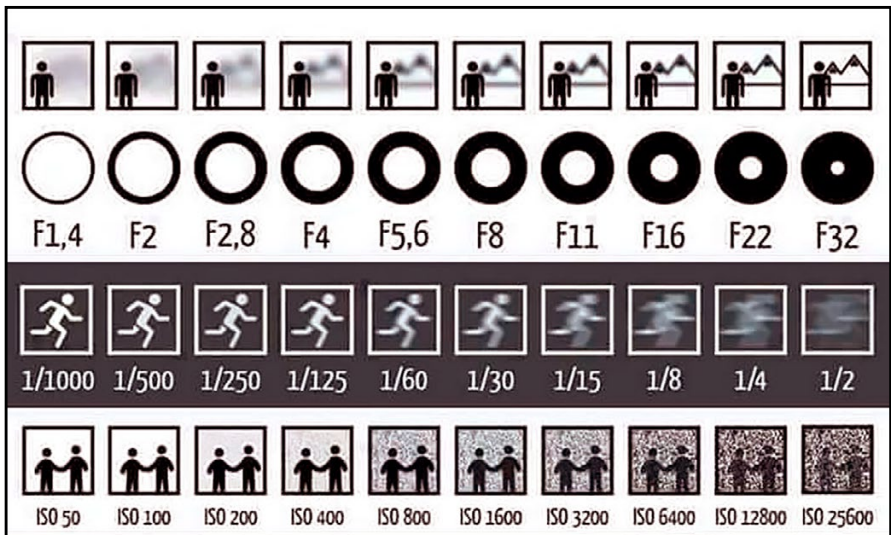
Do not touch camera to aircraft as this will add vibration!

REFERENCE INFORMATION

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Situational Awareness is the ability to identify, process, and comprehend the critical elements of information about what is happening to the team with regards to the mission. **More simply, it's knowing what is going on around you.**

DEPTH OF FIELD, SHUTTER SPEED and ISO CHART



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USEFUL PHONE NUMBERS

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PERSONAL NOTES

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PERSONAL NOTES

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