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PHOTZY SNAP CARDS

HOW TO HOLD THE CAMERA

A sharp photograph results from several factors- all of which are of equal importance. These factors are: properly holding the camera, enough DOF, the lowest ISO setting possible, and a fast enough shutter speed to prevent camera shake.

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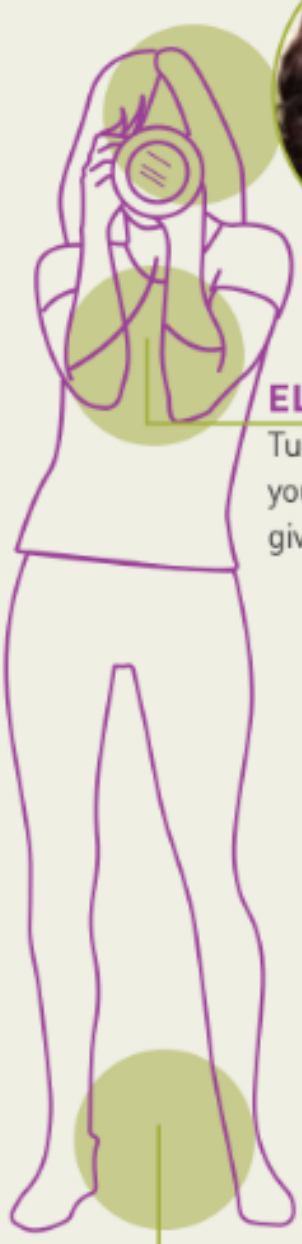
EYEBROW TOUCH

Rest the viewfinder against your eyebrow to create more support.

HANDS

Use your right hand to grip the camera body and your index finger to press the shutter release. Cup the lens with your left hand, to create more support and stabilization.



ELBOWS IN

Tuck your elbows in, resting your arms on your sides. This gives you a sturdy support.

PORTRAIT

Turn the camera so the shutter release is at the top. Cradle the bottom of the camera with your left hand.

BREATHING

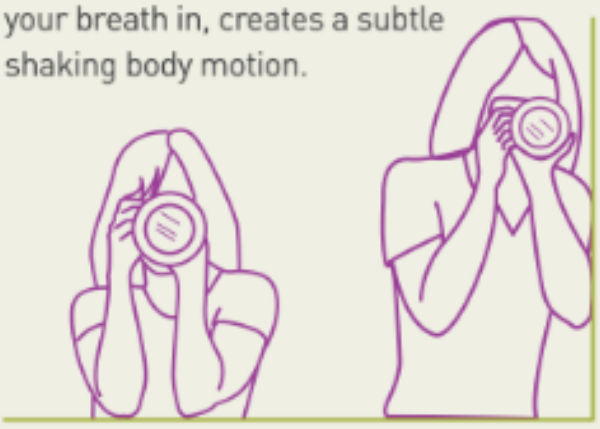
Breath out when taking a picture. Holding your breath in, creates a subtle shaking body motion.

KNEELING

Bring one leg up and rest your elbow on the knee. This basically creates a tripod-like shape.

LEGS

Legs should be shoulder-length apart to create balance. If you need to lean in, move one leg forward and bend the knees slightly.



LEAN IN

Use a wall, flat surface or even another person's shoulder to create support. This is helpful when using a slow shutter speed and a tripod is not available.

LENS FOCAL LENGTH

The focal length tells us the angle of view: how much of the scene will be captured. And the magnification: how large individual elements will be recorded.

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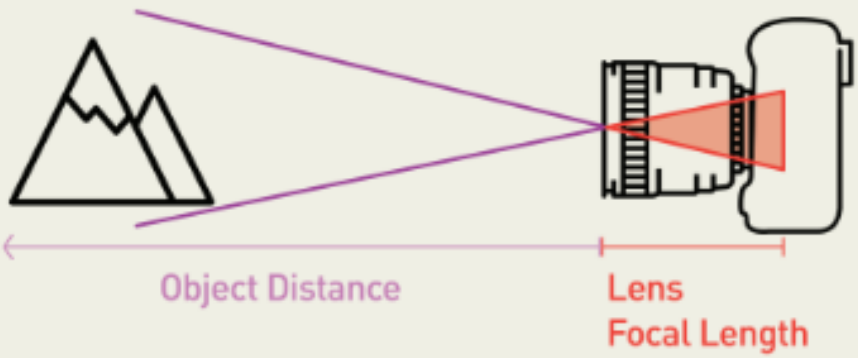
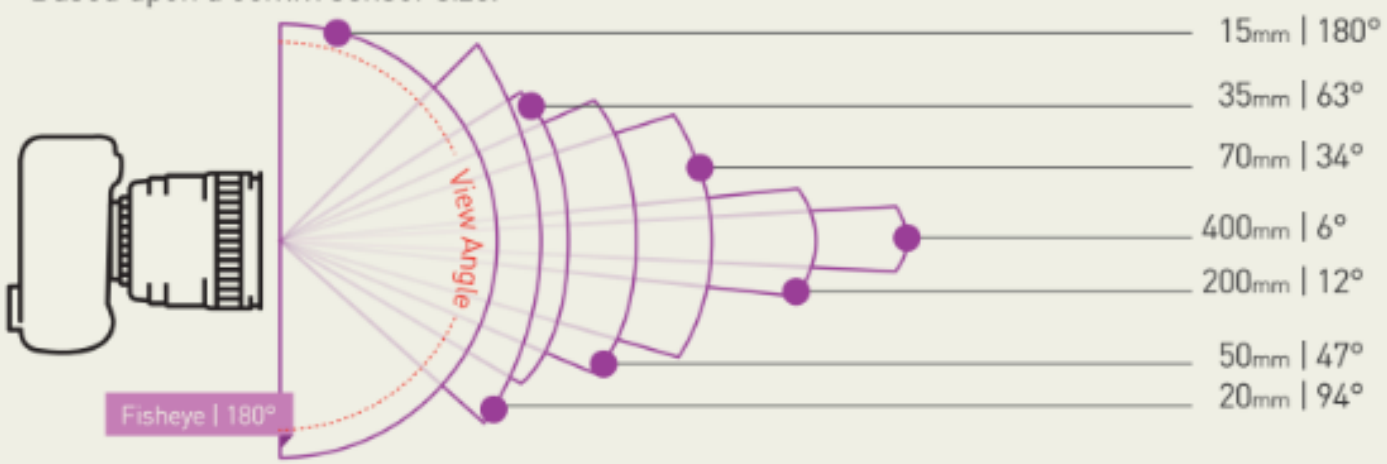
WHAT IT IS AND HOW IT WORKS



It is represented in millimeters (mm), and **it is not the actual length of the lens**, but the optical distance from the point where the light rays converge to form an image of an object onto the digital sensor (or film) at the focal plane within the camera.

ANGLE OF VIEW EXPLAINED*

* Based upon a 35mm sensor size.



CLASSIFICATION AND BEST USAGE

The shorter the focal length, the wider the angle of view and the lower the magnification.

The longer the focal length, the narrower the angle of view and the higher the magnification.

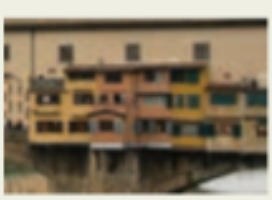
10mm 18mm 35mm 50mm 70mm 100mm 135mm 200mm 300mm +

WIDE ANGLE | NORMAL | MEDIUM TELEPHOTO | TELEPHOTO

Architecture, Landscape

Street, Portraits, Documentary

Nature, Wildlife



Nature, Wildlife, Sports

BASIC CAMERA OPERATION

TAKING SHARP PICTURES

A sharp photograph results from several factors- all of which are of equal importance. These factors are: properly holding the camera, enough DOF, the lowest ISO setting possible, and a fast enough shutter speed to prevent camera shake.

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BEFORE SHOOTING

• PICK A MID-LEVEL APERTURE

f/5.6 to f/8 is a safe spot to give you enough depth-of-field (DOF) with most lenses.

• HOLD THE CAMERA STEADY

Make sure that your arms are always in a comfortable position, with your elbows resting on your sides, legs or a steady surface. If not possible, use a tripod.

• MIND THE ISO

Use a low to mid (200 to 640) ISO range to allow a good exposure, along with a proper shutter speed, and a mid-level aperture. A noisy image at higher ISO settings, **may seem** to appear unsharp.

• SHUTTER SPEED AND FOCAL LENGTH

When handholding the camera, the shutter speed shouldn't be slower than the focal length of the lens in use. This rule does not apply if using a tripod.

Telephoto - 70mm
Shutter Speed: 1/80 and faster

Wide angle - 28mm
Shutter Speed: 1/30 and faster

REFERENCE GUIDE*

● Not recommended ● Depends on the situation ● Recommended

HANDHELD - WITHOUT THE BENEFIT OF IMAGE STABILIZATION

Focal Length \ Shutter Speed	1/10	1/20	1/60	1/125	1/400	1/1000	1/2500
15mm	●	●	●	●	●	●	●
28mm	●	●	●	●	●	●	●
50mm	●	●	●	●	●	●	●
200mm	●	●	●	●	●	●	●

HANDHELD - WITH IMAGE STABILIZATION

Focal Length \ Shutter Speed	1/10	1/20	1/60	1/125	1/400	1/1000	1/2500
15mm	●	●	●	●	●	●	●
28mm	●	●	●	●	●	●	●
50mm	●	●	●	●	●	●	●
200mm	●	●	●	●	●	●	●

* This information should be taken as a general reference guide, since the results may vary depending on camera and lens models.

SCENE MODES

The use of "scene modes" helps a beginning photographer to understand camera settings by using pre-programmed information.

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MODE	DESCRIPTION	USES
BEACH / SNOW	This mode compensates the exposure based on the premise that the scene should be primarily light tones, and brightly lit, with highly-reflective surfaces.	For scenes with a lot of white or light colors in it.
NIGHT SCENE	The camera self-adjusts the ISO to a medium-high setting. It also turns the flash off and sets a slow shutter speed, while exposing to preserve the highlights, and keeping the shadows detailed.	For night scenes without a central subject that needs special lighting.
NIGHT PORTRAIT	This mode behaves just Night Scene mode, except it usually turns on the electronic flash, red-eye detection, and in some cameras-face detection.	For night scenes with a particular central subject that needs additional light.
FIREWORKS	This is very similar to Night Scene mode, but it sets an even slower shutter speed to catch the trails of light from the fireworks.	Fireworks or moving lights with a dark background.
LANDSCAPE*	In order to get as much of the scene in focus as possible, the camera will set the focal length to a relatively wide angle (if the camera has zoom control), with a small aperture, and will set the focus to infinity.	Daylight or very well-lit landscapes or cityscapes.
MACRO/ PORTRAIT*	Either mode allows close focusing with a large aperture to blur the background. The camera sets the ISO as necessary.	Small subjects and portraits.
CANDLELIGHT**	This mode is a variation of Night Scene, but usually disables the flash to preserve the ambiance of the light, and adjusts the white balance toward the warm end of the light spectrum.	Low-light scene in with a subject illuminated by a soft, non-global light source.
SUNSET & FOLIAGE	These two modes bump up the contrast and saturation settings, and usually lowers the ISO while setting a faster shutter speed. The saturation increase only affects the .jpg files.	Dawn or dusk scenes or scenes where it's important to emphasize the colors.
SPORTS	To freeze fast-moving subjects, the camera will bump the shutter speed as high as possible, therefore raising ISO sensitivity to achieve a proper exposure. Many models might shift the camera to continuous drive and focus tracking.	Daylight or well-lit sporting events, fast-moving subjects, kids, and pets in movement.
MUSEUM	The camera turns off the flash, sets a relatively higher ISO, and a slow shutter speed.	Indoor scenes where the use of flash is not allowed.
FOOD*	Combines Macro and Night Portrait mode settings, and may also bump the saturation to bring up the colors of the food.	Indoor close-ups

* This mode is not recommended, since results are not guaranteed. Instead, try Aperture Priority Mode.
** This mode is not recomended. Instead, try Auto ISO and Shutter Priority Mode

AUTO-FOCUS MODES

The auto-focus mode allows you to tell the camera how you wish it to react when focusing.

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AF-A

AUTO-SERVO AF

When you select AF-A, you are giving the camera control over whether to select AF-S or AF-C. This selection works best when you have a camera with many focus points (50 or more).

AF-S

SINGLE-SERVO AF

In this mode, when the shutter-release button is pressed down halfway, **the focus is locked**. Use it when photographing stationary subjects, or when you wish to pinpoint exactly where the focus will be placed (such as a subject's eyes).

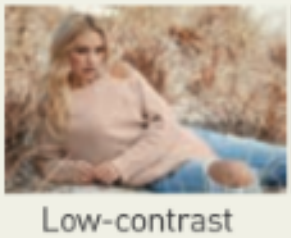
AF-C

CONTINUOUS-SERVO AF

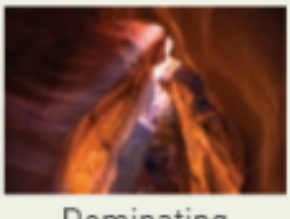
When the shutter release is pressed halfway, **the camera focuses continously,** and then engages the "predictive focus tracking". This allows the camera to track the subject's movement, and it will predict the subject's position when the shutter is released. Use it when photographing fast moving subjects.

WHEN TO AVOID IT

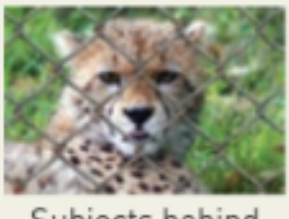
If the camera can't read the subject automatically, it might focus on the wrong area. In these cases, it's best to use manual focus.



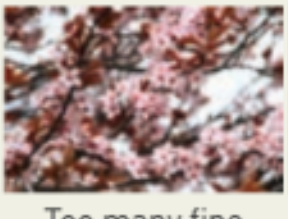
Low-contrast



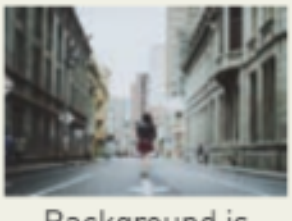
Dominating geometric patterns



Subjects behind bars, fences, etc



Too many fine details



Background is larger than subject

BACKGROUND BLUR

This guide is only meant to give a visual reference to the factors affecting background blur. Therefore, the values you will see here may or may not be precise. The numbers are not meant to be used as exact measurements of camera settings.

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APERTURE

f/1.4 f/2 f/2.8 f/4 f/5.6 f/8 f/11 f/22

SMALL f /stop NUMBER
MORE BLUR
Large aperture hole
Shallow depth of field

HIGH f /stop NUMBER
SHARPER / LESS BLUR
Small aperture hole
Wide depth of field

FOCAL LENGTH

	TELEPHOTO	NORMAL	WIDE	ULTRA WIDE
FULL FRAME	above 50mm	50mm	28mm	16mm
APS-C	above 30-35mm	30-35mm	17-18mm	10-11mm
Micro 4/3*	above 24mm	24mm	14mm	8mm

Higher millimeter number
Longer focal length
Shallow DOF
More Blur

Lower millimeter number
Shorter focal length
Wide DOF
Sharper/Less Blur

DISTANCE

FOCUSING DISTANCE

SUBJECT CLOSER TO CAMERA
Shallow DOF / More Blur

SUBJECT FARTHER FROM CAMERA
Wide DOF / Sharper Background

BACKGROUND DISTANCE

BACKGROUND FARTHER FROM SUBJECT
Background out of focus

BACKGROUND CLOSER TO SUBJECT
Background In focus or slightly out of focus

DEPTH OF FIELD

It's not only the aperture factor that will render more or less depth of field -DOF- , there are other factors- like distance of the focal plane to the subject or the background, sensor size and lens focal length also add to the equation.

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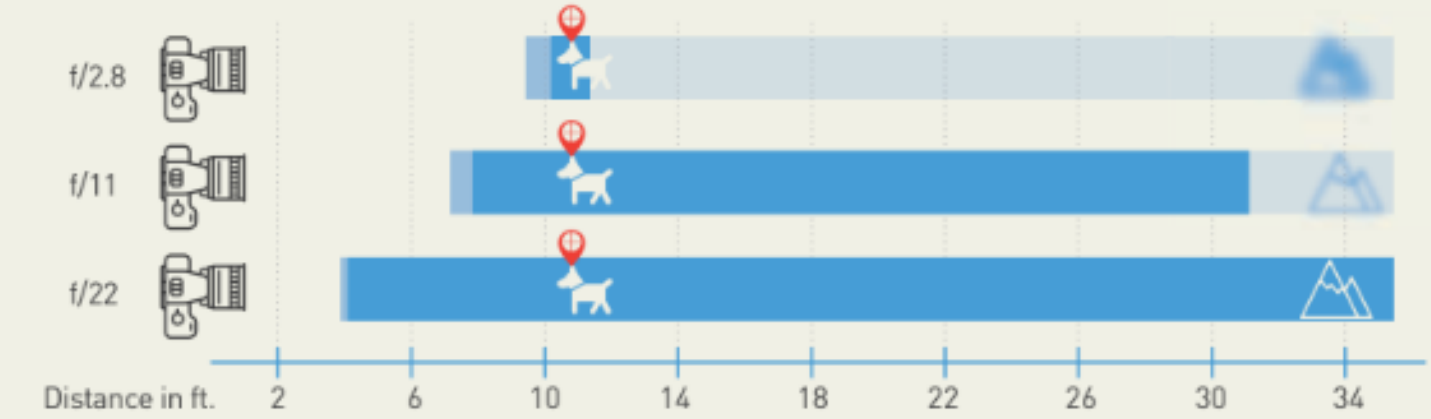
Focus point | Closest DOF Window -slight blur- | Furthest DOF Window - total blur-

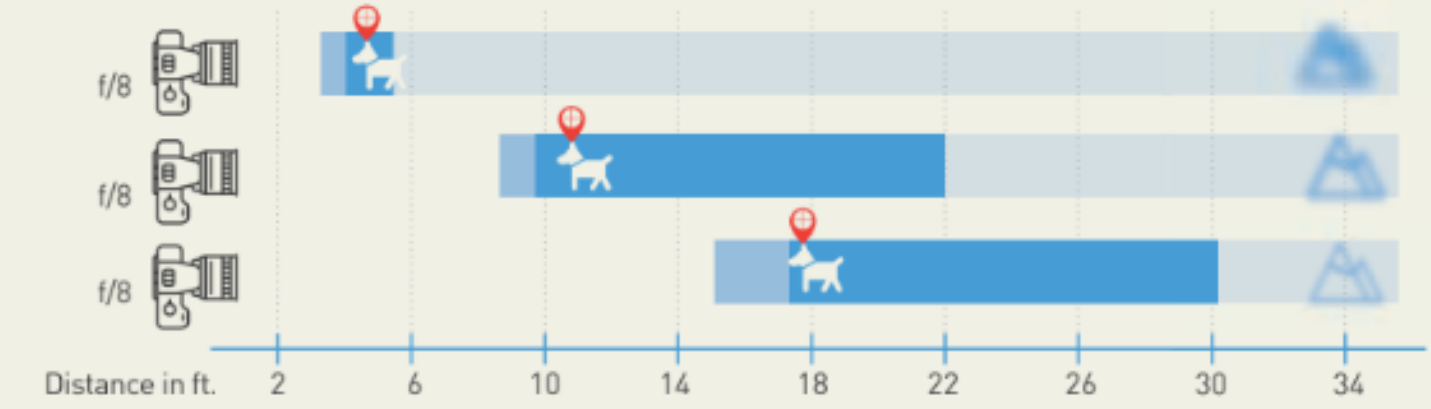
APERTURE*

The wider the aperture, the less depth of field -more blur-.



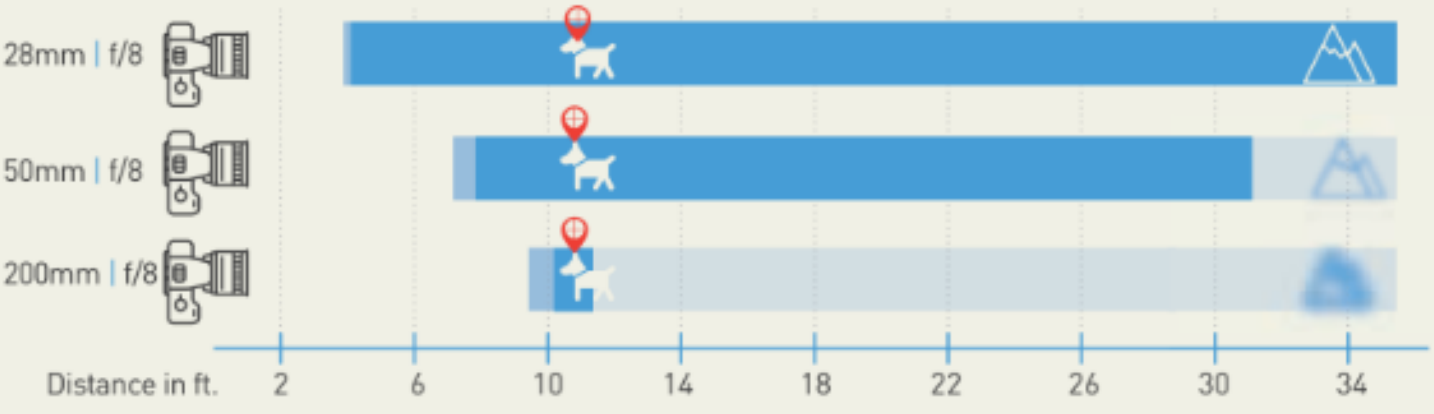
DISTANCE*

The closer the subject is to the camera, the blurrier the background will be at a given f/stop.



FOCAL LENGTH*

The wider the lens -shorter focal length-, the more depth of field -more in focus-.



*Distances and other data are to be taken for reference only. The information may not be accurate.

DRIVE MODES

The choice of drive mode is an assist function of the camera. Most of the time you will use the single shot mode. However, there are situations where you will be happy to make use of the other options.

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SINGLE SHOT

Usually, the default drive mode in most cameras. In this mode, you take a single photo each time the shutter release button is pressed.

• **USE IT FOR:** When you have time to compose a single photo. It also helps when there's little space left on the memory card and you're conserving memory.

CONTINUOUS/BURST

In this mode, the camera will take pictures continously as long as the shutter release button is pressed. **This mode has two options:**

LOW

The camera takes continous shots- but at a slower pace.

• **USE IT FOR:** Taking pictures of kids, or any subject in motion- but there's no need to caption a large range of movement. Works best with slower memory cards.

HIGH

The camera takes continous shots at a faster pace.

• **USE IT FOR:** Taking pictures of fast moving subjects, sports, birds, etc.

SELF TIMER

The camera adds a delay, from the moment the shutter release button is pressed, until the moment the picture is actually taken. The most normal default options are a 2 sec and a 10 sec delay. Some cameras offer customizable times and continous shooting self timer options.

• **USE IT FOR:** Group photos, Selfie photos, and long exposure photography.

MIRROR LOCK-UP

You can lock the mirror up completely, leaving it in its open position, and not covering the sensor. In this position, the mirror will block the viewfinder, and you will not be able to see through it. Frame up and focus the shot before activating this function. This is for long exposures such as night photography.

• **USE IT FOR:** Minimize vibration of the camera.

REMOTE

The wireless, or wired, shutter release accessory is also known as a remote release.

• **USE IT FOR:** longer exposures where you do not want to "bump" the camera by pressing the shutter release button manually.

QUIET / SILENT

This mode works just like Single Shot mode, except the mirror that moves up every time you take a photo, (causing noise), moves up slowly, minimizing the noise.

• **USE IT FOR:** Weddings, in museums, or situations that require silence.

RAW vs JPEG

A never ending debate in digital photography, these two file formats offer different options, especially post-production and workflow.

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COMPARISON

RAW

- Uncompressed file format
- Each camera maker has a different filename extension
- Traditionally needs a viewing/editing program to be processed (some newer cameras offer processing in-camera)
- Large size
- Preserves the most amount of information about an image and contains more colors and dynamic range
- Has to be post-process to get best results, the image looks dull without adjustments
- Gives extended control over exposure, colors, saturation, white balance, etc.

JPEG

- Standard file format
- The same filename extension in all cameras (.jpg)
- It's processed by the camera, so it can be opened/view in any program
- Smaller size image format
- Because it is so compressed, certain information is removed from the image.
- Capable of displaying millions of colors in a highly compressed file
- Easily post-processed but there will be a small loss in quality over time

RAW - Unprocessed
Original size: 32.3 MB

JPEG Unprocessed
Original size: 9 MB

RAW - Processed
-coverted to jpeg for printing-
Original size: 14.8 MB

WHEN TO USE IT

RAW

- Journalistic photography
- Image will be heavily processed: fashion, graphic design, etc
- Need perfect white balance and tones, or want complete control over the final look
- Image will be used for large prints

JPEG

- Everyday snapshots
- Shooting for immediate display
- Shooting for web
- Restricted memory space
- Rapid succession burst shooting

Most common camera manufacturers and raw filename extensions:

Canon: *.crw .cr2* | **Nikon:** *.nef* | **Kodak:** *.dcs* | **Sony:** *.arw .srf* | **Fuji:** *.raf* | **Samsung:** .srw

WHITE BALANCE

The White Balance setting you choose will change the color in your pictures, making it warmer or cooler depending upon the existing light.

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WHITE BALANCE OPTIONS

AWB AUTO AUTOMATIC / AUTO

The camera sets the white balance. It can be used for snapshots, although small variations in light may change the colors from shot to shot.

TUNGSTEN / INCANDESCENT

Designed for domestic lighting, since it adds cool tones to balance the color indoors. If use in other settings, the image will look very blue.

FLUORESCENT

Designed to be used under fluorescent lights, this setting adds tones in the warm-red range to the image. It's helpful to balance images that look too green.

DAYLIGHT

This option adds warm tones to the image,to give a final neutral-colored photograph. It balances your images when shooting under direct sunlight.

CLOUDY

Cloudy days naturally cast cooler tones. To balance the image, this setting adds warmer tones.

SHADE

Designed for open shade, in daylight. It adds more warmth -orange- than the Cloudy setting, and gives more natural-looking skin tones.

FLASH / AUTO FLASH

Designed to be used with a flash unit or the in-camera flash, this option adds warm tones to the image. Using this setting prevents skin tones from looking too cold/blue.

CUSTOM

Designed to let the photographer set the white balance based on the light temperature.

Some cameras offer more options, such as:

K: Lets you manually change the Kelvin value from 2,500 to 10,000.

Preset (PRE): For color matching with a white card.

WHITE BALANCE SITUATIONS

Domestic lights Candle flame	Bright skies Noon	Early morning Late evening	Built-in flash Electronic flash	Daylight overcast sky	Shade with clear sky

APERTURE (f-stop)

The aperture (f-stop) controls the amount of light reaching the sensor through the lens. The aperture size will regulate the sensor's degree of exposure to light.

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APERTURE SCALE

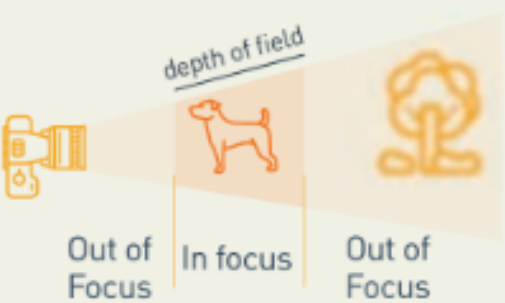
BRIGHTER
Allows MORE light in

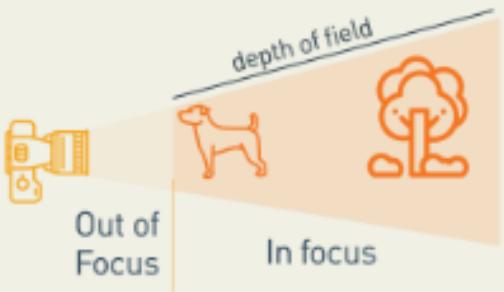
DARKER
Allows LESS light in

DEPTH OF FIELD FACTOR

BRIGHTER
SHALLOW DEPTH OF FIELD
BLURRED BACKGROUND

DARKER
DEEP DEPTH OF FIELD
EVERYTHING IN FOCUS





CREATIVE USES

f/1.4
Bokeh effect
Low light

f/2.8 - f/5.6
Portraits - Sports

f/8 - f/16
Landscapes

f/16 - f/32
Long exposure

DSLR TERMINOLOGY

Even though each camera make and model is different, this guide will help you to easily identify basic parts and functions.

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DIOPTER
It allows you to customize the viewfinder so that you can see a clear focused image.

PICTURE REVIEW BUTTON

LENS ALIGNMENT MARK
Line up the matching dots to fit the lens into the mount, and then twist until it locks.

VIEWFINDER
The main source for viewing the scene and menu options

LCD WINDOW

SHUTTER RELEASE
When pressed, the shutter of the camera is "released", so that it opens to take a picture.

DEPTH OF FIELD PREVIEW
It helps you see potential depth of field

HOTSHOE
The mounting point on the top of the camera to attach a flash unit.

SHOOTING MODE DIAL
Sets the camera to your desired shooting mode.

BATTERY SLOT

TRIPOD THREAD

LCD CONTROL PANEL
Provides information on camera settings (ISO, white balance, battery power, number of pictures left, etc.)