

DIGITAL PHOTOGRAPHY

LANDSCAPE PHOTOGRAPHY

Introduction



Porto Cervo lighthouse (SS) © Giuseppe Gessa

Summary

DIGITAL PHOTOGRAPHY	1
LANDSCAPE PHOTOGRAPHY	1
The light	3
Hard and direct light.....	3
Soft light	4
Structure of a camera	5
Body	5
Sensor	10
Light meter	14
Shutter	15
Diaphragm	16
Shutter button	18
The camera modes (P,A,S,M)	18
Auto	18
P	20
S (Tv)	20
A (Av)	22
M.....	23
Video.....	24
Scene	24
Landscape	25
Equipment	25
Earth	30
Sky.....	36
Water	41
Nocturnal.....	46
Conclusion	50

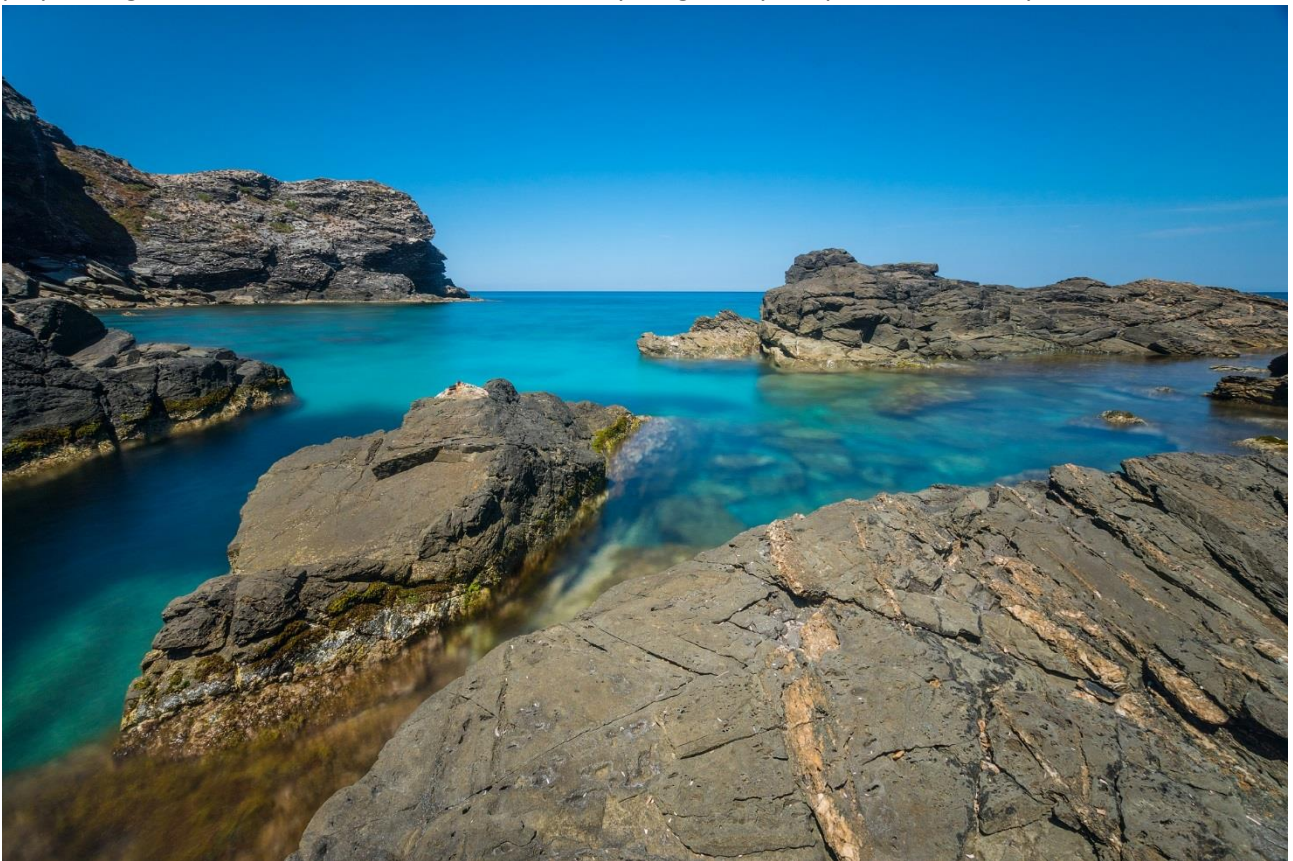
The light

It will be trivial, but the light in photography is essential, without it we would not have any photos and often the right light will make the difference between a beautiful photo and a trivial one.

I have no intention of making a scientific treatise on light, so just search the net (I am referring to the Internet) to find a lot of information about it, but I am more interested in paying attention to how light interacts with the environment, allowing us to predict the final result. In photography we have mainly two types of light: one hard and direct and one soft and suffused.

Hard and direct light

Since we are talking about landscape photography I am obviously referring to the light of our precious Sun, or the star that marks the times of our life and, above all, of our photographs !! On cloudless days, especially in the warm season (spring / summer), the sunlight begins to get strong and hard after a certain time in the morning. Hard because it projects very sharp shadows that generate strong and sharp contrasts between the light areas and the shadow areas, which a landscape photographer usually avoids because of that postcard effect that they don't always like. But with this hard light, however, we can look for those situations of strong contrast that give drama to the scene or amplify reflections, especially in the presence of water, or to create plays of light such as lens flares. Of course, everything always depends on what you want to achieve.



Cala Flumini (SS) © Giuseppe Gessa

Soft light

And with it you get those soft atmospheres that amplify the sense of relaxation and peace and that ... help the sensor of our camera to better record our images !!! Yes, in fact, if you do not have a camera with a fullframe sensor (it must be said that if you work hard you can burn a photo even with a full-frame ☺) having a diffused and soft light allows the exposure meter of the camera to better calculate the light in the frame, and to avoid finding areas that are too dark or too light which are then difficult to manage in post-production.

Furthermore, this type of light helps us a lot in case you want to make long exposures in the absence of the appropriate filters (the famous ND): working with the A mode of the camera, just close the diaphragm very much that surely the shutter speed will increase without too much effort. , then if we are in the most suitable time slots for this kind of photography (at sunrise or sunset), we will be able to obtain splendid effects on water or clouds.



Alghero at sunset © Giuseppe Gessa

Structure of a camera

Broadly speaking, a camera is nothing more than a box with a hole (the lens) and inside our dear old film (who remembers it?): The light enters from the hole (ehhh always this light) that goes to end up on film (which then in the modern age became an electronic sensor, and this is what we will always refer to from now on). Point!

But since we like to complicate things, and above all to better understand some things that will be explained later, let's make an overview of the main elements that make up a camera:

- Body
- Sensor
- Light meter
- Shutter
- Diaphragm
- Mode dial
- Snap button

Body

The camera body is simply the container where all the components necessary for operation are located inside it, including sensor, shutter, lens attachment bayonet, prism, etc. etc.

Before continuing, it is good to specify right now that we have mainly three types of camera bodies, which then represent the camera category, namely reflex bodies, SLT¹ bodies and mirrorless bodies.

The ones below are examples of reflex, SLT and mirrorless bodies.

¹ SLT = Single Lens Translucent; https://en.wikipedia.org/wiki/Sony_SLT_camera



Nikon D750, reflex

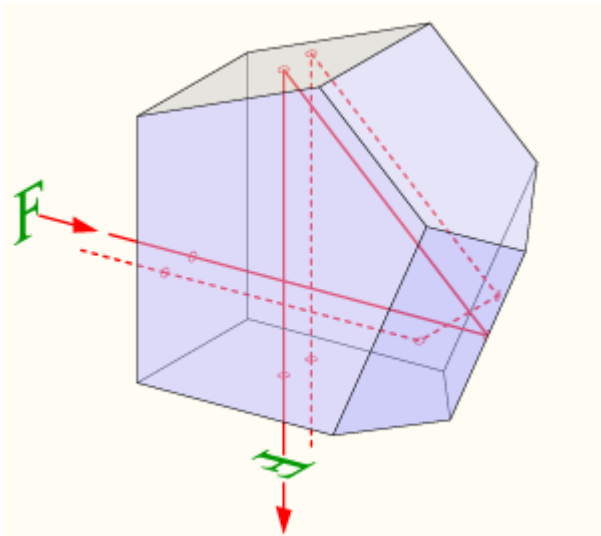


Sony A99II, SLT



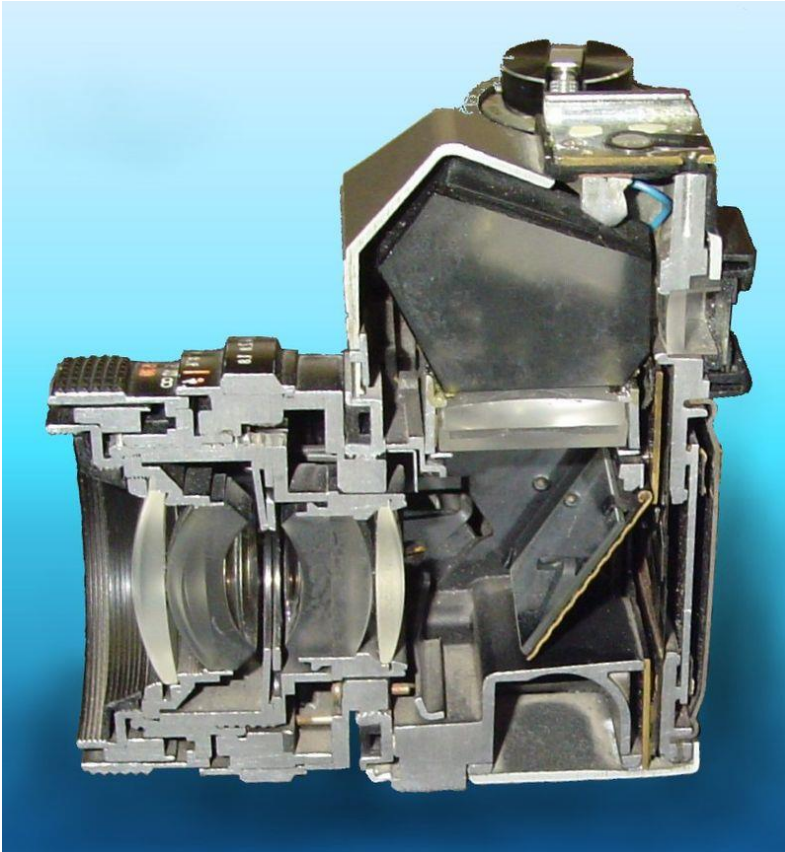
Sony A9, mirrorless

Reflex cameras are characterized by the presence in front of the sensor of a mirror which when it is lowered reflects the light coming from the lens towards a prism (called roof pentaprism²) which directs it to the camera viewfinder, and which allows us to see the image to photograph.



Roof pentaprism

² <https://it.wikipedia.org/wiki/Pentaprisma>



In this photograph you can see the longitudinal section of a camera in which, at the top, there is the pentaprism on the roof and at the bottom the mirror that reflects the light coming from the lens. When the shutter button is pressed, the mirror will be raised to let the light reach the sensor and, finally, save the image on the memory card.

The SLT³ bodies, on the other hand, as we can see in the section below, have a semi-reflective mirror where part of the light coming from the lens is deflected onto the sensor (which also generates the image on the electronic viewfinder) and a part onto the AF⁴ sensor. So in an SLT camera there are three substantial differences compared to a classic reflex:

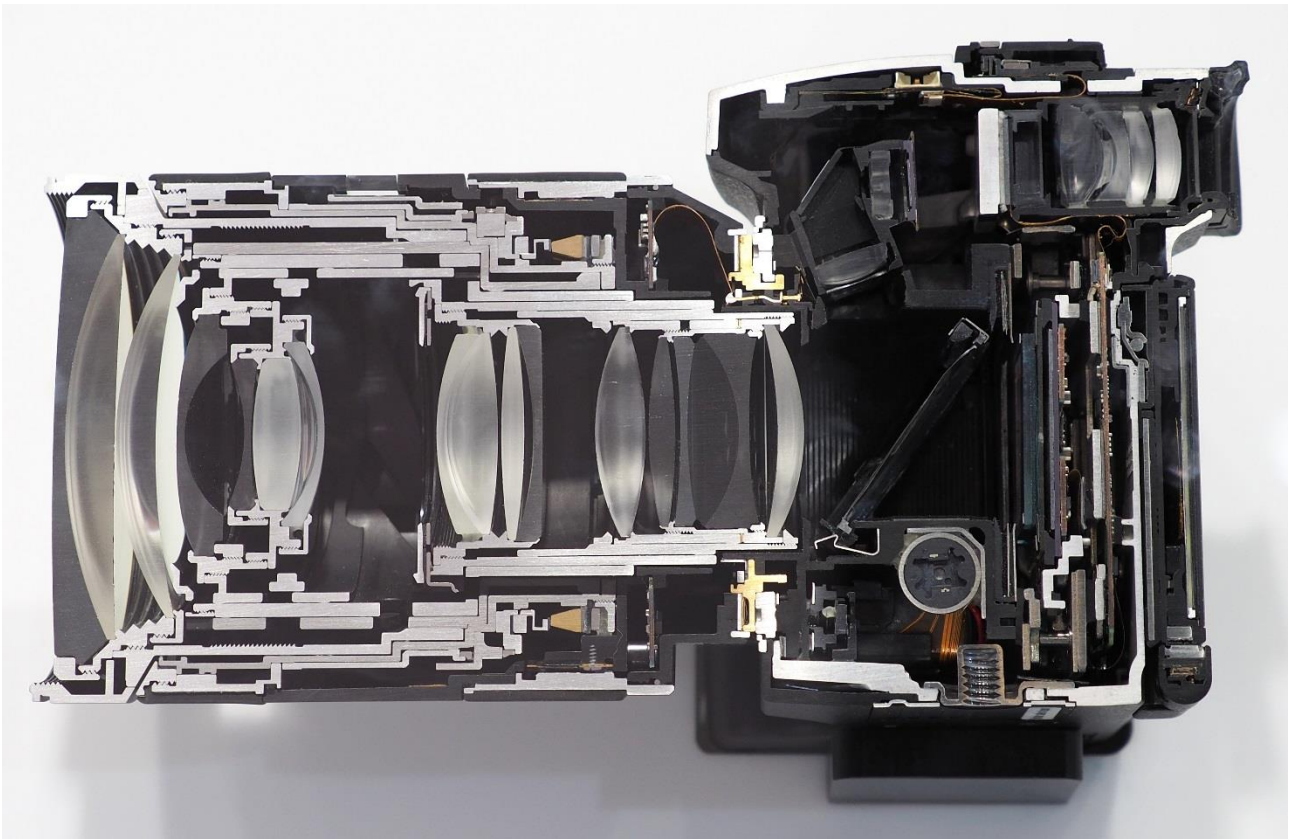
1. Fixed translucent mirror instead of movable mirror
2. Absence of pentaprism
3. Electronic viewfinder instead of optical viewfinder.

This technology generally allows to obtain much more reactive and precise AF performance than a classic reflex and a higher FPS⁵, especially useful in nature and sports photography, but also in videos that can be supported by continuous AF even directly from the viewfinder.

³ SLT = Single Lens Translucent, Sony's proprietary technology

⁴ AF = Auto Focus

⁵ FPS = Frame Per Second



Sony A99II cutaway

A recent technology is instead that of mirrorless, or without mirror. In this case the camera no longer has the mirror that moves during shooting, but everything is handled in a similar way as for the SLTs, in fact even in mirrorless cameras there is an electronic viewfinder. Having no mirror or prism, these cameras have smaller dimensions and weights than classic cameras, all to the advantage of handling, on the other hand, being smaller they also have fewer functions directly accessible with special buttons (functions accessible from the menu). Until recently this new technology was not yet competitive compared to classic reflex cameras, especially in comparison with the flagships (the top cameras of every house), but recently Sony has introduced the A9 on the market with technical characteristics of the same level, bridging finally the performance gap of the past, but rather increasing over time some peculiarities that reflex cameras do not have such as a superior FPS (20 in the Sony A9) or the completely silent shooting due to the electronic shutter.

Probably in the future we will only have mirrorless cameras that are even more advanced and sophisticated than the current ones, with all the ensuing advantages: reduced weight, higher sensor resolution, higher operating speed, greater functionality and more.



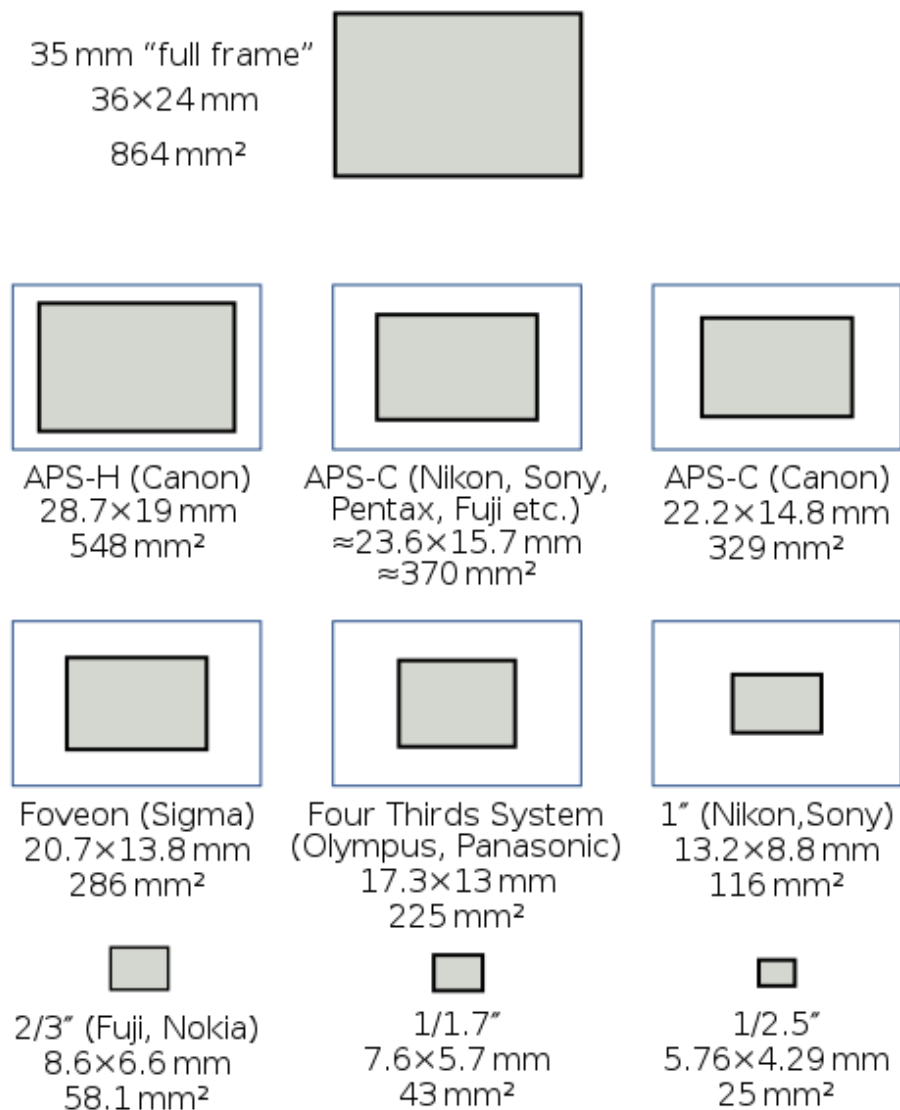
Difference of buttons between a SLR and a mirrorless

Sensor

A digital camera sensor replicates how good old film works. Also in this case I will not go into technical details, because in the meantime there is everything on the net⁶ and then for our case it has a relative influence. Broadly speaking, the sensor is an electronic device that allows you to transform light into electric current and subsequently into a digital signal, i.e. into numbers 1 and 0, so we can also define it as a digitizer like a scanner that allows you to create a copy digital of a sheet of paper (or photograph in our case). There are many types of sensors on the market and camera manufacturers often offer their own version, in some cases, however, some houses sell their sensors to others as the study, design and construction of a sensor for digital cameras has high costs, and not everyone can afford it.

What interests us most are the dimensions and resolution of a photographic sensor. The dimensions of a sensor found in commercial cameras are different, as evidenced by the diagram below:

⁶ <http://www.nadir.it/tecnica/sensori/sensore.htm>



The first on the list, the full frame, 36x24mm comes directly from the size of older SLR camera films and, among commercial cameras, is currently the largest and best sensor we could have. In truth, there are cameras with even larger sensors such as medium format or optical benches, but the target use, given the very high costs of these devices, is mostly relegated to professionals in the sector who need to have the highest quality.

In the second line of the diagram, on the other hand, we find the reduced format of the full frame, a format however associated with cameras of a certain quality and with a similar structure, as generally full frame and APS sensors are placed in camera bodies of the same size. Successivamente ci sono i sensori presenti per lo più nelle fotocamere compatte (quelle da taschino per intenderci) ed infine i sensori (ultima riga dello schema) dei cellulari/smartphone che hanno dimensioni molto piccole.

Another aspect to consider when evaluating a sensor is the multiplication factor. As you may have noticed, the focal length of the lenses, whether they are fixed or zoom, does not change anything, they are always referred to a full-frame sensor, while if used with APS⁷ sensors you have to multiply the focal length by the multiplication factor of that sensor. ; for example for Nikon and Sony sensors the multiplication factor is 1.5, while for Canon sensors it is generally 1.6.

Now with a 50mm focal length lens if used with Sony and Nikon APS cameras it would become $50 \times 1.5 = 75\text{mm}$, while with Canon we would have $50 \times 1.6 = 80\text{mm}$. So if you opt for an APS camera you always need to know what multiplication factor it has in order to be able to adjust the lenses to buy.

For landscape photography it is advisable to stay preferably and, compatibly with your finances, on cameras with full frame sensor or, at most, APS precisely to be able to take advantage of the greater size and quality of image produced.

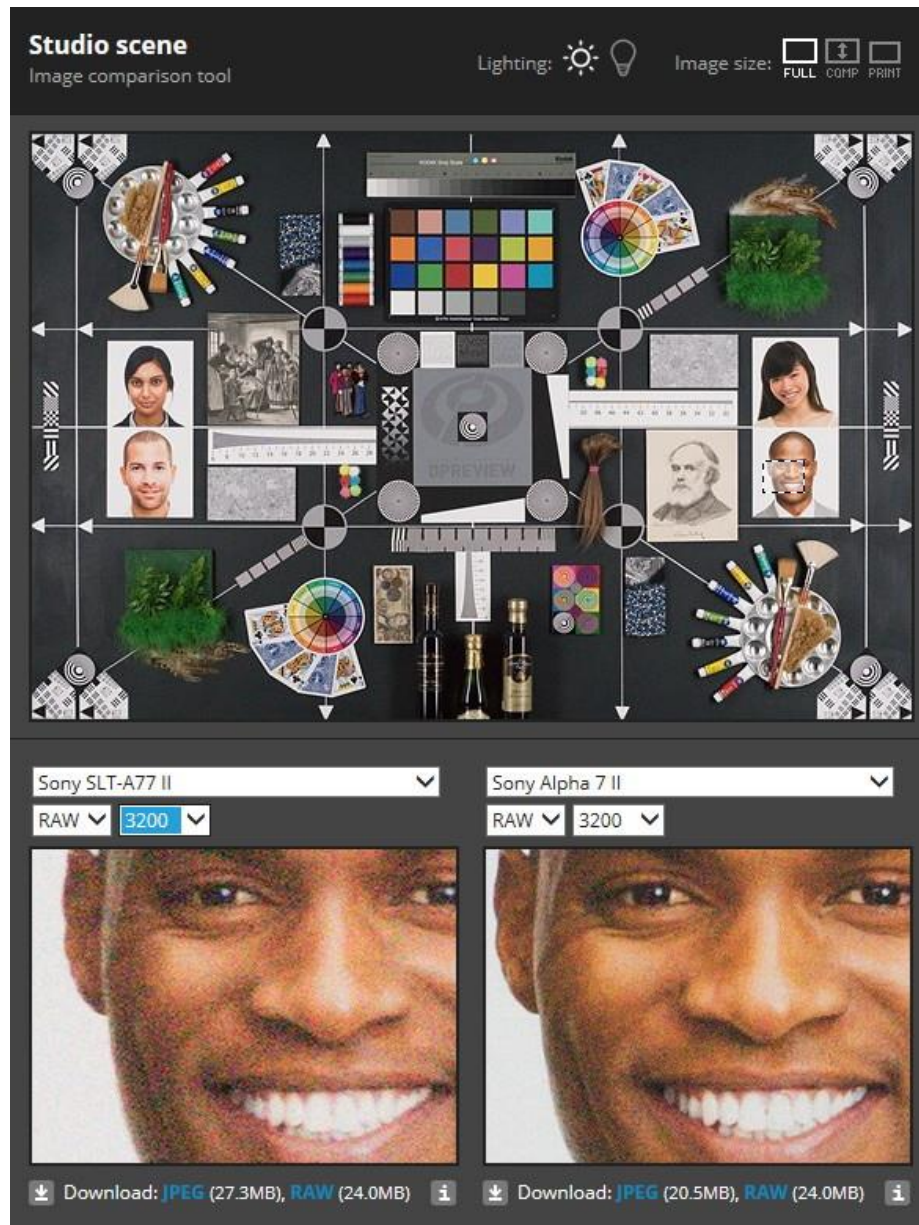
A full frame camera, compared to an APS, has the characteristic of having greater color depth⁸ which results in much sweeter shades of color. In addition, the full frame sensor generally allows you to use higher ISOs than APS and with better digital noise⁹ management, especially useful in low light shots or even in the dark (photographs of the Milky Way).

⁷ <https://it.wikipedia.org/wiki/APS-C>

⁸ https://it.wikipedia.org/wiki/Profondit%C3%A0_di_colore

⁹ [https://it.wikipedia.org/wiki/Rumore_\(immagine\)](https://it.wikipedia.org/wiki/Rumore_(immagine))

If you want to evaluate the difference, in terms of ISO, between two cameras, there is a very interesting website that allows it, DPreview¹⁰ Studio shoot comparison tool; for example this is the comparison between Sony A77II APS camera and Sony A7II full frame:



DPreview ©

As you can see by setting a raw¹¹ image format and ISO 3200, the APS camera has greater color noise and greater image clumping, as opposed to full frame which returns cleaner, more precise and contrasted images. To be fair, it must be premised that these comparisons make sense when choosing cameras with similar characteristics, such as the same resolution or type of sensor (full frame with full frame, APS with APS, etc.).

¹⁰ <https://www.dpreview.com/reviews/image-comparison>

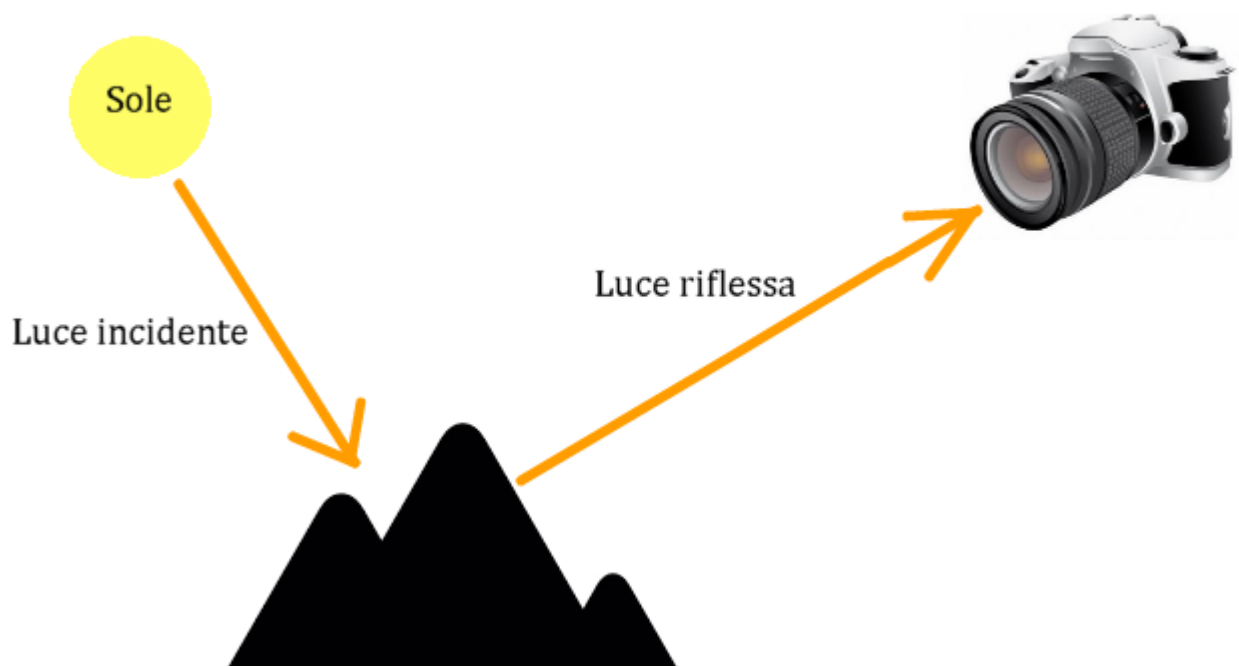
¹¹ RAW Raw format of an image captured by the sensor; [https://it.wikipedia.org/wiki/Raw_\(fotografia\)](https://it.wikipedia.org/wiki/Raw_(fotografia))

Light meter

The light meter is a system that allows you to measure the amount of light present in a system (by system I mean any situation that can be photographed).

In reflex cameras, the exposure meter is of the TTL¹² type and reads the light that passes through the lenses of the optical system and then falls on the sensor. The advantage of this system is that even by placing a colored filter, or a polarizer or other type of filter, before the lens, the meter will read and measure the light actually present. The disadvantage of the TTL exposure meters inside the reflex is that they cannot measure the incident light, but only the light reflected by the subject, thus losing some of the information necessary to actually evaluate how much light is available.

In this diagram, as you can see, the camera with its exposure meter receives only the reflected light, but not the incident light. The situation would be different if, on the other hand, an external exposure meter was used to be used in the vicinity of the object to be photographed, in that case we would have a much more precise and reliable measurement even in terms of white balance.



¹² Through The Lens

Shutter

The shutter is a mechanical or electronic device that allows the sensor (or the film in the past) to be exposed to light for a certain time, also called exposure time. There are two types of shutters:

1. Concentric
2. Drop down

Concentric ones are generally used in lenses and are formed by overlapping blades which, when opening or closing, allow light to pass through the lens or not:



Concentric shutter

On the contrary, a curtain shutter is composed of two surfaces of fabric, or metal, placed near the sensor, which can slide vertically or horizontally:



Curtain shutter

As mentioned before, the shutter determines the shutter speed which is measured in seconds or fractions of a second; the maximum usable time is 30 seconds, but there is also the BULB mode, or B exposure, which keeps the shutter open for as long as you want using a special remote control. The lower times of 30 seconds are coded in stop and 1 stop is about half of the previous one; for example a shutter speed of 15 seconds is 1 stop less than a time of 30 seconds.

The list of encoded shutter speeds is as follows:

30 15 8 4 2 1s ½ ¼ 1/8 1/15 1/30 1/60 1/125 1/250 1/500 1/1000 1/2000 1/4000 1/8000

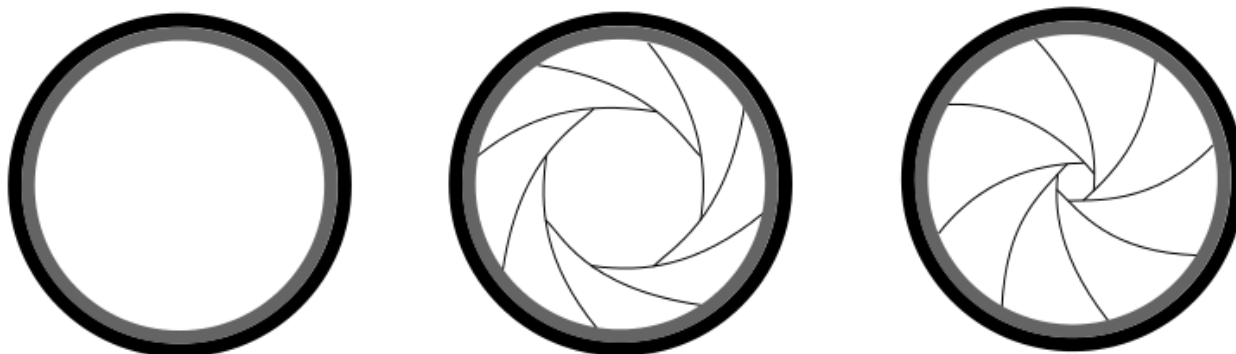
But in mirrorless cameras equipped with electronic shutters, these allow even faster shutter speeds, that is, you can also have times of 1/16000 and 1/32000 of a second.

Understanding how the shutter works and what it is used for allows us to create very interesting effects in photography, such as the silk effect in photographs of waterfalls or the sea, or the blur or panning of a racing car.

Diaphragm

Another important component of a camera is the aperture. To be precise, however, the diaphragm always refers to an optical system, such as the camera lens, and has the function of regulating the amount of light that passes through it.

A diaphragm is made up of concentric fan blades, as shown in the figure below:



Usually the minimum number of blades that form a diaphragm is 7, but it is possible to find high-quality lenses with 9 or more blades on the market, resulting in better blur effects (with smoother and more gradual passages between the in-focus and out-of-focus parts of the image) or bokeh¹³.

Depending on the operating mode chosen in the camera, the diaphragm works closely with the shutter, defining the shutter speed: to give an example, for the same exposure (amount of light in the system) an open diaphragm will determine shutter speeds. shorter (faster) shutter speeds, while a small aperture will result in longer (slow) shutter speeds.

As for the shutter speed, also for the aperture we use the stop as the unit of measurement, and we can have the following values:

f/1 - f/1,4 - f/2 - f/2,8 - f/4 - f/5,6 - f/8 - f/11 - f/16 - f/22 - f/32 - f/45 - f/64 - f/90 - f/128 (etc).

¹³ <https://it.wikipedia.org/wiki/Bokeh>

As with the shutter, understanding the operation of the diaphragm well allows us to obtain much more interesting shots or those that meet specific needs, such as in landscapes where you try to have the whole scene in focus.

Shutter button

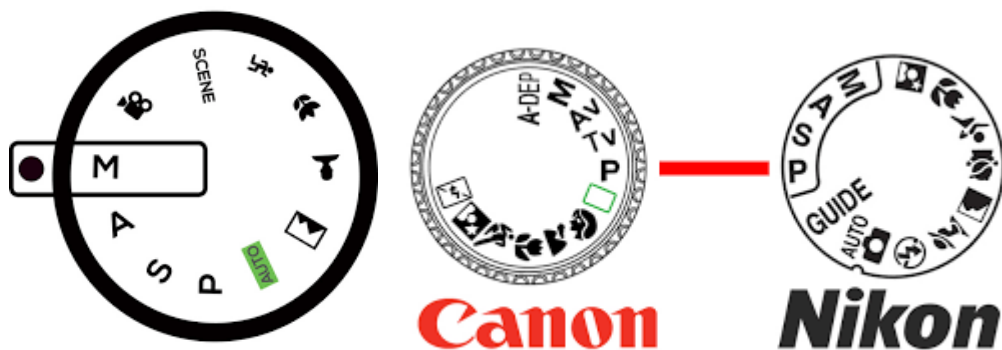
The shutter button in a camera is not a simple button, but a complex function that initially evaluates the light present in the scene (exposure), then focuses on how the camera is set up and finally takes the actual photograph. your own by saving it to the memory card. To evaluate the exposure and focus you have to press the button halfway, while to shoot you have to press it fully.

The camera modes (P,A,S,M)

The camera mode dial is a wheel located at the top, right or left, of the camera body, and allows you to quickly select one of the many shooting modes made available by our beautiful camera. Usually there are the following options:

- Auto
- P
- S
- A
- M
- Video
- Scene

In the figures below they represent, in a schematic way, the icons of the various modes which are usually the same for the various brands, except for Canon which indicates the shooting mode Tv instead of S used by Sony and Nikon, just to name a couple.



Auto

This is the mode usually preferred by beginners because it automatically performs all the settings necessary to take a photo, and the only thing the user has to do is press the shutter button. This mode can be valid at the beginning when you still do not have clear ideas about how a digital camera works, but it would be good to forget its existence, otherwise you will get photographs similar to those of any compact camera or mobile phone.

The good thing about this function is that the camera tries to "understand" the shooting situation (scene), for example in the dark, low light, against the sun, etc. , and adjusts accordingly by automatically setting what you need, without however ensuring that you always manage to get what you want.

P

This mode, also called Program, allows you to take shots with the exposure calculated automatically, both in terms of shutter speed and aperture. It is quite similar to Auto mode but without scene recognition and allows you to vary the shooting parameters by turning the front / rear wheels.

S (Tv)

Time priority mode. It allows you to manage the shutter speed, making the camera automatically calculate the aperture value, then acting on the shutter. This mode is useful for various cases such as panning¹⁴ of a moving object:



Wikipedia source

¹⁴ <https://it.wikipedia.org/wiki/Panning>

Or to "freeze" a movement, such as the flight of birds:



Little owl (Athene noctua) © Giuseppe Gessa

In this case you have to set a very fast shutter speed, which also depends on the focal length used and in general must be two or three times greater than the focal length¹⁵.

¹⁵ For example, with a 300mm lens it is better to use a shutter speed of at least 1/1000 "or more.

A (Av)

Aperture-priority mode. With this mode it is possible to vary the aperture by making the camera calculate the shutter speed automatically. With this mode you have the possibility to better highlight any subjects / objects in the foreground by blurring the background, or to have everything in focus as in landscapes. In fashion and portrait photography it is widely used for the reasons just indicated:



Without source



Weasel (Mustela nivalis) © Giuseppe Gessa



Stintino (SS) © Giuseppe Gessa

M

Manual mode. With this mode you have to set all the shooting parameters: exposure time, aperture and possibly ISO¹⁶, leaving you full freedom of expression but also of error because if you are not an expert it is easy to make mistakes. However, there are some types of subjects that cannot be separated from the use of this mode as for night photography, where it is absolutely necessary to set everything without the focus, including focus. An example of night photography is that of our galaxy, the Milky Way:

¹⁶ https://it.wikipedia.org/wiki/Velocit%C3%A0_della_pellicola



Tamuli (NU) © Giuseppe Gessa

Video

This mode is specific for shooting short videos (the duration depends on the camera, but generally does not exceed 30 minutes). Depending on the lens mounted, you can also have autofocus, but we often prefer to focus manually to prevent the system from focusing where we don't want to. For the landscape photographer it could be interesting to make short reportages.

Scene

Every camera, even the compact ones, generally have predefined settings for every kind of photography. If in general this mode can be useful, because it allows you to immediately take the photo you want, it is also true that it does not allow you to understand what are the real settings to use using the other modes (P, A, S, M), so I strongly advise against it.

Landscape

The landscape is, for many people who approach photography, one of the first topics covered as it is easy to find, in fact it is enough to take a walk in some seaside or mountain location, but not only, to find some beautiful scene to photograph. Despite this, however, taking landscape photography is not trivial, and it is important to know at least the basic rules necessary to have a good result, then with time and experience you can experiment with new ways.

Equipment

But let's go in order and start with the equipment. It will be obvious but the camera, reflex, slt or mirrorless, it takes, then a wide angle lens will help a lot and to finish the tripod.

If for the camera we have already said previously, for the wide angle it is good to say immediately that the quality is paid for and if we can go to a fixed focal lens it is certainly better, otherwise on the market there are various zooms, even super wide angle ones, with good performance and not too exaggerated price. For the focal length it mostly depends on your personal tastes; I personally like the extreme wide angle, so from 14 to 18mm on full-frame (on APS you always have to multiply by the relative multiplication factor), while in the zoom there are also 10-20mm very valid for APS, while for full-frame a classic is the 16-35mm f / 2.8 with excellent features but with a very high price.



Sigma 10-20mm f/4-5.6



Sony 16-35mm f/2.8

However, if the budget is very limited, as often happens in the beginning, a manual lens, or without AF motor, could also be very interesting, which saves a lot of money while maintaining excellent optical and mechanical qualities. An example can be the Samyang 14mm f / 2.8:



Which you can find for all brands and cost a few hundred euros. This lens, despite some flaws, has an excellent quality / price ratio and not having the AF motor does not affect landscape photography in any way, as often the focus is at infinity, and with the lens rings you can carry out everything without problems. The real problem with this kind of lenses, rather, is the impossibility of using standard screw or plate filters, if not buying special holders that increase the price of our equipment (but if you want to take the road of landscape photography some expense you have to put into account).

Then we come to the tripod. I consider this accessory essential, and must first of all be robust and, with an adequate head, must be able to withstand a high load, at least ten kg (between the camera body and the lens). On the market there are many tripods, both in aluminum and carbon. The latter are definitely the best because of the lower weight, greater rigidity and better resistance to atmospheric agents, but the cost is obviously higher than those in aluminum.



Manfrotto Befree in alluminio con testa a sfera



Benro GC169TB1 carbon

Regardless of the type, however, the main feature it should have is the possibility of positioning the central shaft horizontally, so as to be able to take low-level photographs, or that the shaft does not have it at all, then lightness and small dimensions they will be appreciated in case of long trekking or even simple walks.

There would also be other equipment as equipment, but I consider it to be a peripheral equipment, therefore not essential and that we may see from time to time depending on the use cases.

Earth

Certainly the landscape linked to the earth, understood as countryside and mountains, with all possible nuances, certainly represents a good slice of landscape photography, also thanks to the ease in reaching these places. The difficulty is knowing how to enhance them or find an interesting PDR¹⁷ that can attract the attention of those who look at the photograph.



Osilo's dawn (SS) © Giuseppe Gessa

Exif: 35mm; ¼"; f/13, ISO100; tripod

If those who live in places with already wonderful landscapes, such as the Dolomites, have an advantage for this specific kind of photography, we must not give up if we live in less striking places, because with a certain habit of observation we can find points, but above all, situations that make a photo not trivial. Observation, however, presupposes a certain type of study, perhaps even at a table, of the territory in search of places that we want to immortalize with our photos, and I believe this is fundamental for the subsequent planning of the photo session. In fact, I often study on the computer the photo I would like to take by "browsing" with Google Maps¹⁸ in the area that interests me and looking at any photos shared by users to evaluate the situation, and in fact, many times there are photos of very beautiful places that did not even know each other. From this then, if I am still not sure step to exploration, on the field to understand in reality the potential of the chosen place. On the spot I think it is important to give our "artistic" sensitivity time to savor what you see, because you are not always able to immediately grasp the most beautiful and interesting points and sometimes they are not even there! But when they are found then the work is not done yet. That is the time

¹⁷ PDR = Punto Di Ripresa

¹⁸ <https://www.google.it/maps>

to decide how our photo will be composed: is there a main subject to highlight? Are there any elements that can guide the eye in the image? If they are not there, can we add something natural, like a log, a stone, some flowers?

An example could be this:



Nest Point, Scotland © Giuseppe Gessa

Exif: 25mm; 1/250"; f/9, ISO100

In which the rocks in the foreground lead the eye towards the cliffs in the background, or this:



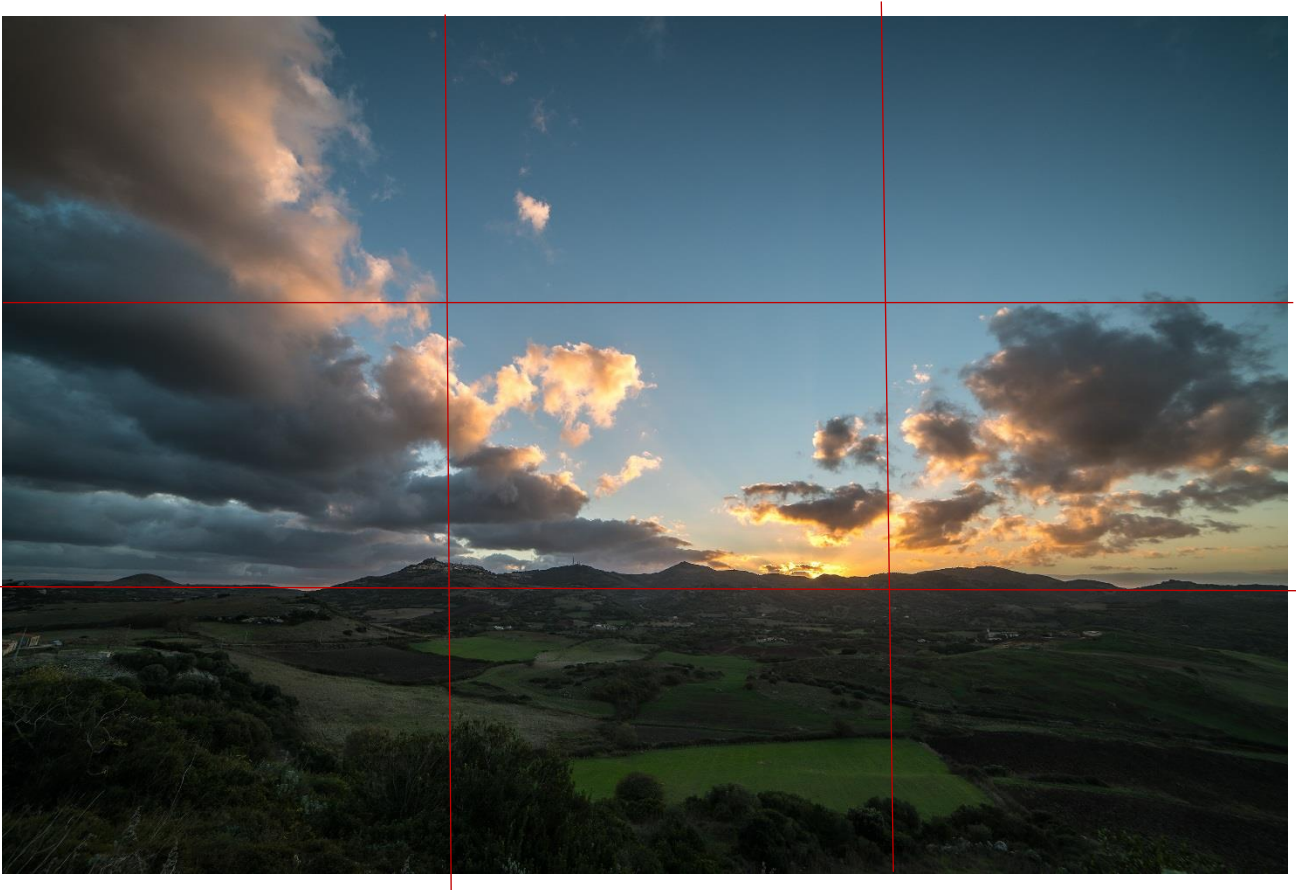
Staffin Bay, Scotland © Giuseppe Gessa

Exif: 18mm; 1/15"; f/20, ISO100

In which the small flowers and the mirror of water lead the eye towards the mountains.

Another important compositional aspect is the relationship between heaven and earth, that is how much we want to make one of the two components important. For example, in the photo of Nest Point the sky was interesting so I preferred to give it equal dignity too, so I composed everything by centralizing the image and placing the horizon in the center, while in the Staffin Bay photo I didn't like the sky a lot and I left him only the upper quarter, giving importance to everything else.

Even in landscape photos the rule of thirds helps a lot by giving dynamism to the whole; in the photo below I put the ground in the second line of thirds¹⁹ and the Osilo mountain in the third intersection in order to also take advantage of the diagonal created by the clouds, which give a greater sense of depth and movement.



Rule of Thirds - Osilo (SS) © Giuseppe Gessa

Exif: 14mm; 1/40"; f/11, ISO100; treppiede

A fundamental factor in photography, as already mentioned at the beginning, is the light and in the landscape the best results are usually obtained at sunrise and sunset, in fact for me they are the moments when I find myself best in this kind of photography. Of course, it is not always possible to be in the right place at the right time, like when you are on vacation somewhere, but in the case of planning, then never neglect this element that adds great charm and beauty to a photo. To bring out these moments more, then also take into account the weather and look for cloudy days that make the image less flat and anonymous.

¹⁹ https://it.wikipedia.org/wiki/Regola_dei_terzi

But there are not only sunrise and sunset ... In fact, in photography there are the lights given by the golden hour²⁰ and blue hour²¹. The golden hour is nothing more than that moment immediately after sunset, or just before sunrise, when the sky takes on warmer colors and the light casts softer shadows, making everything very suggestive and spectacular. The blue hour, on the other hand, is the time that goes from sunset to twilight, a moment in which the light takes on much colder tones, but no less interesting (in these moments it is possible to make long exposures without the use of filters precisely because of the few light).

An example of blue hour photography:



Reflected waits © Giuseppe Gessa

Exif: 35mm; 0.6"; f/11, ISO100; tripod

Lastly, but no less important for this, always look after the horizon because there is nothing worse than seeing one hanging, especially if it corresponds to the horizon of the sea. In these cases, we can use the levels on the tripod or in the head, but if there are not often the cameras have an electronic bubble function that allows us, through the display, to adjust the horizon.

If your camera does not have the aforementioned electronic bubble function, there are small bubbles on the net, like the one shown in the following photo, to be applied to the camera's hot-shoe²².

²⁰ Golden hour = Moment of the day when the light has a golden colour

²¹ Blue hour = Moment of the day when the light has a blue colour

²² https://en.wikipedia.org/wiki/Hot_shoe



Bubble for reflex on hot-shoe



Electronic bubble

Sky

What wonderful is observing the sky and its clouds on hot spring days ... Tell the truth how many times have you observed the clouds in the sky and thought you saw some face or animal or who knows what else you know ☺

Among the landscape photographs often there are beautiful ones even of the sky alone, in which the subject, or subjects, to attract our attention are the clouds with their shapes and colors, especially at dawn or at sunset when the Sun color red.

As for the terrestrial landscape, the same compositional rules also apply to the sky, but tends to reserve the first and second third of the grid of thirds for the sky, and the rest for the earth or the sea.

To take particularly interesting photographs, you can often rely on even adverse weather conditions: wind, rain, snow can give dynamism and drama to the scene, as in the example below: the photo is taken immediately after sunset and with the presence of strong wind that "carried" the clouds towards me; given the low light, by setting the shutter mode to aperture priority (A) and closing the aperture enough, the exposure meter calculates an exposure time of 25 seconds, thus giving me the opportunity to obtain "streaked" clouds on the frame.



Alghero by night © Giuseppe Gessa

Exif: 25mm; 25"; f/11, ISO100; treppiede

The same movement effect can also be obtained in broad daylight by using filters that reduce the light perceived by the exposure meter, or the ND²³ filters which, depending on the gradation chosen, allow you to decrease the light by several stops as in the following photo taken. with an ND1000 filter, a soft gradient²⁴ filter and a CPL²⁵ filter, which allowed a 314 second long exposure.



Porticciolo (SS) © Giuseppe Gessa

Exif: 18mm; 314"; f/11, ISO100; treppiede

And here is an accessory, the filter, which could be indispensable if you want to take this kind of photographs. Let me start by saying that you should go to quality products to avoid then finding photos with color casts that are difficult to remove, or photos with dark bands or other "jokes".

There are two types of filters, screw and plate. The screw ones, as the name implies, are screwed onto the lens and you can overlap several to "add" their effect, while the plate ones need a holder to be applied on the lens and have guides to insert the filter or filters. plate (usually the holders have three slots plus also the polarizer integrated in the connection ring) like the following:

²³ ND Neutral Density; https://it.wikipedia.org/wiki/Filtro_a_densit%C3%A0_neutra

²⁴ https://it.wikipedia.org/wiki/Filtro_a_densit%C3%A0_neutra_graduato

²⁵ <https://it.wikipedia.org/wiki/Polarizzatore>



Nisi V5 Kit

While an example of a screw filter is the following:



Nisi Filtro ND

As for the photography of Porticciolo (SS), the polarizing filter was used to reduce reflections on the water near the camera, while the graduated filter to balance the exposure between very bright sky and darker land, and finally the ND filter to darken the scene so that the exposure meter of the camera increases the shutter speed and obtain two effects, the first on the sea (silk effect²⁶) and the second on the clouds with the obvious streaks.

Photographing the sky and landscapes that favor it in general is simple, but you will surely have an edge at sunset or sunrise, as the soft and warm light will allow you to obtain images of greater emotional impact, rather than the usual photo taken from postcard.

Below are two photos taken at sunset, the first in Capo Nieddu (OR) and the second on Loch Fada, in Scotland, where for both the main actor are the clouds "painted" partly pink due to the sun that has just set .

²⁶ Due to the addition of the waves as the exposure time passes.



Capo Nieddu (OR) © Giuseppe Gessa

Exif: 55mm; 1/15"; f/16, ISO100; tripod

Then I recommend that you always look at the exif²⁷ data of a photo, to understand how it was performed, and get an idea of how you can set the camera to do something similar.

²⁷ https://it.wikipedia.org/wiki/Exchangeable_image_file_format



Loch Fada (Scotland) © Giuseppe Gessa

Exif: 18mm; 0.8"; f/16, ISO100; treppiede

Water

Photographing water in its various manifestations is always very beautiful and exciting, especially when it presents itself in a violent way such as in a waterfall or in a storm. But precisely in these cases we must pay more attention to our equipment to avoid getting it wet: most of the time a little water does not create problems, especially if they are drops or splashes, just dry immediately with a cloth, otherwise if for some reason the camera ends up in water or is submerged by a wave I recommend you turn it off immediately, remove the batteries and dry it as quickly as possible. Then let it dry in a warm and airy place, but not near a radiator (to prevent some plastic from deforming). Once we are sure it is completely dry try to turn it back on....

Contrary to the photographs of the sky, the sea in this case will occupy, from the compositional point of view, the second and third rows of the grid of thirds, so that it has the most importance, although there could be cases in which both the sea and both the sky are both interesting and then you can opt to keep the horizon at the center of the frame. In this situation, however, it is easy for the scene to be a bit static, so it would be good to find some element in the foreground that gives an added value, such as particularly interesting flowers or rocks or even in a small shrub.

As we know water is in motion, in rivers, seas, waterfalls, and we can decide whether to create a photo in which the water appears in motion or freeze it. The first case is also called the silk effect due to the fact that the water seems to lose its consistency and looks more like a cloud or fog, while the second case, on the

other hand, is interesting to use in the case of rough seas that break on the rocks, generating large splashes of water, as in the following example:



Cala Rossa (SS) © Giuseppe Gessa

Exif: 25mm; 1/13"; f/22, ISO100; tripod

This instead is an example of a silk effect:



Tinnari (SS) © Giuseppe Gessa

Exif: 25mm; 30"; f/14, ISO100; tripod

In which the sea water seems to be a cloud. Obviously, for such a photograph, an ND filter is needed, otherwise it is difficult to obtain a shutter speed of 30 seconds, a filter that must also be used to obtain the same effect with waterfalls, as for example in this one carried out in Villacidro (CA) :



Sa Spendula (CA) © Giuseppe Gessa

Exif: 25mm; 149"; f/13, ISO100; tripod

As you can see from the exif data, the shutter speed is 1/49 ". Now, however, with the camera it is possible to reach a maximum of 30 seconds, except that if we put the M shooting mode, that is manual, then it is possible to set Bulb, and then we decide how much to leave the shutter open. In order to avoid annoying vibrations by pressing the shutter button, a new accessory is required, namely the remote control. On the market there are two types: with or without wire. Both are composed of a small parallelepiped with buttons that replicate some camera functions, such as the shutter button; then there is usually a switch that allows you to leave the shutter open for as long as you want.



Wired control (Amazon)

The wired remote control costs very little and if you plan to use it little then I recommend it, but if you think it can be very useful and to use it often it is better to choose a wireless remote control, the important thing is that it is compatible with yours. camera; an example of a wireless remote control:



Sony RMT-DSLR2

Nocturnal

In recent years, night photography is becoming more and more present, either because of the lowering of the prices of full-frame cameras, or because of the introduction on the market of super-wide-angle lenses (12-14mm focal length) at acceptable prices.

The most popular landscapes are those in which a portion of the Milky Way is included in the scene or even the whole, as in the panoramas (union of different photos), but there are also small portions of the sky in the presence of the Moon or some other planet or the star trail, i.e. the strips of stars obtained by pointing the camera towards the Polar star and shooting at predefined intervals of time (at the end of the shooting session you will need to combine all the photos with a special software that will generate a single image sum of all the others and imprinted with the trails of the stars).

As written before for night photography it is better to have a full-frame type camera in order to exploit its intrinsic characteristics, but even with an APS type it is possible to do something as long as you do not increase the ISO value too much, which usually it is between 1600 and 2000, besides it is not convenient for the excessive noise generated by the sensor.

But let's start immediately with something practical, namely photographing the Milky Way. First of all you have to choose the right period and the right time well: the period is summer, so it will be a pleasure to be outdoors and enjoy some coolness after a hot day at the beach (but don't forget to always bring a sweatshirt for cooler moments), then the days to be preferred are those when there is no moon in the sky, or when it sets very early. The Moon is to be avoided because with its reflected light it greatly attenuates the visibility of the Milky Way. Then another very important aspect in photographing the Milky Way is the landscape that acts as a frame: a flat environment without any foreground elements that could attract attention or guide the eye towards the Milky Way, or the absence of natural structures, leave the photograph a little anonymous, so it would be good to always have something to "connect" to our galaxy, even ourselves standing in front of the camera, as I will tell you later.

As a first example, let's take this photo taken in Tamuli, an archaeological area including giants' tombs, nuraghe and a village:



Tamuli (NU) © Giuseppe Gessa

Exif: 14mm; 30"; f/2.8, ISO3200; tripod

But let's get to the composition first. Since the three tombs are not very large (they are about 1 meter high), the camera was positioned close to the ground, taking advantage of the possibility offered by the tripod to extract the central rod and position it horizontally, then opening the tripod legs as much as possible. get almost to the ground. The position of the camera was chosen in order to make the Milky Way “come out” between the first and second tombs of the giants and using the 4 intersection of the grid of thirds to give dynamism to the scene. In addition, a flash was positioned behind the second tomb which was triggered manually when the exposure of 30 seconds necessary to “record” everything started, with the result of giving greater three-dimensionality to the whole, which would not have happened. if all was dark. If you notice the stars in the photo they are point-like, except in the edges (but this is a defect of the lens in question), and this means that the chosen exposure time is adequate, because otherwise a longer time would have recorded the movement of the celestial vault and therefore the stars would be stretched. So to establish how many seconds we can set the shutter speed, there is a rule, a little empirical but that works, which is the 600 rule: that is, 600 is divided by the focal length of our lens; in the case of Tamuli's photo we have:

$$600/14 = 42,85 \text{ second about}$$

So it means that in theory I could keep the shutter open for about 42 seconds without the risk of getting the stars stretched.

But be careful that if you have an APS camera you will have to multiply the focal length of the lens by 1.5 or 1.6 (if you have Canon) and then make the division; for example:

$$600 / (14 * 1.5) = 600 / 21 = 28.57 \text{ seconds about}$$

$$600 / (14 * 1.6) = 600 / 22.4 = 26.78 \text{ seconds about}$$

And these would be the right seconds to have point stars.

Another technical aspect to take into consideration is the focus: since we are in the dark, the auto-focus of the lens cannot focus on any point at infinity, so you have to set the camera to work manually, both as a mode shooting (**M**), both as a focus mode (usually there is a special function on the camera, or directly on the lens itself). Once the camera is set up, you need to turn the lens ring and position it on the infinity symbol (if available), then enable live-view and zoom in on the scene until you see the largest possible stars; now by always acting on the focus ring we can finely adjust the focus, and then take a test shot, but if you are unable to do this procedure then you will have to try a little, always using the same technique, until you find the point stars; only then can we start shooting the Milky Way.

Said like this it seems a very complicated thing, but it is simpler than it seems and I invite you to try it without fear.

In the next photo, however, not having found any elements in the foreground or background that could give more interest, I decided to include myself in the scene and a laser pointer perfectly aligned to the Milky Way. On my head I had a headlamp to give the feeling of exploration, but it was more to see where to put your feet 😊



Lampiano Milky way © Giuseppe Gessa

Exif: 18mm; 15"; f/2.8, ISO5000; tripod

In this case, using the 600 rule I could have used at least 30 seconds of exposure, but from a first test I realized that the stars were stretched anyway, so I decreased the shutter speed up to 15 seconds and in the meantime I increased the ISO to increase the sensitivity of the sensor and capture more light, and still get a satisfactory result.

Conclusion

End this introduction to digital and landscape photography here, with the hope of having given you some interesting ideas. Certainly some aspects have been skipped or only hinted at, but I think that with this information we can tackle the topic avoiding the mistakes that many make by starting alone.

Then there would also be the post-production phase of the photos, or the old development of the roll that is now carried out through special software. If you are also interested in this aspect please let me know, as indeed if you are interested in nature photography (I am referring to animals) which is the one I like most, as we can organize something together.

See you soon.

Giuseppe



Athene noctua (little owl) © Giuseppe Gessa