

**Dapto Camera Club Magazine.**

# **Viewfinder.**

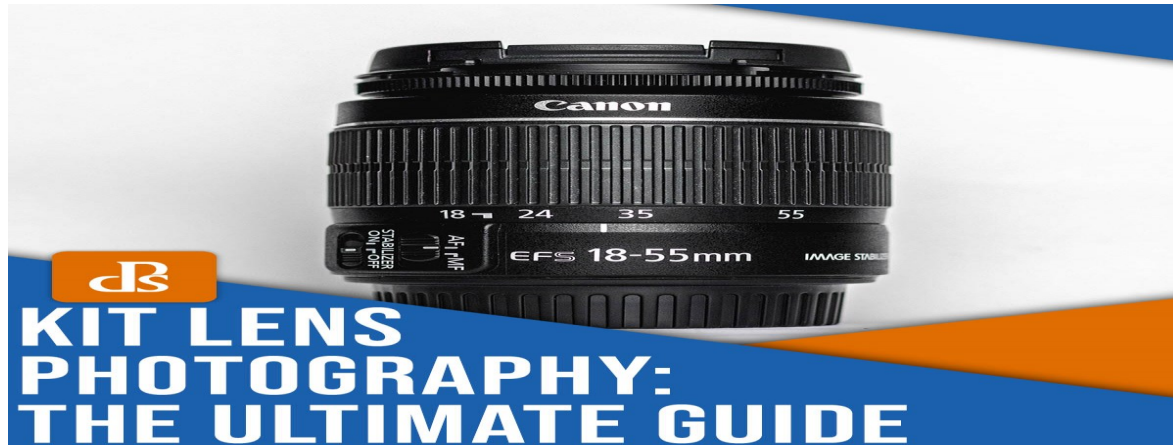
**July 2023**





# Kit Lens Photography: The Ultimate Guide (With 18-55mm Examples)

By: Andrew S. Gibson



Kit lenses are an essential part of nearly every photographer's journey, yet they receive a *lot* of criticism from established photographers.

But is this criticism deserved? Honestly, I don't think so. Sure, these lenses might not have the widest apertures or the sharpest optics, but they're far from useless. In fact, they offer several key benefits and can be a valuable asset to photographers of all levels.

In this article, I explore the ins and outs of kit lens photography. I share the strengths and weaknesses of these little lenses, and I also share my Favorite tricks and techniques to maximize their potential.

So whether you're a beginner looking to make the most of your basic glass or a seasoned pro seeking a fresh perspective, buckle up and get ready for an eye-opening journey!

## What is a kit lens?

A kit lens is a lens that comes bundled with a camera. It's typically inexpensive and offers basic features that cater to the needs of entry-level photographers.

### Links of Interest:

Viewbug - <http://www.viewbug.com/>

ePHOTOzine - <http://www.ephotozine.com/>

Federation of Camera Clubs [NSW] - <http://www.photographynsw.org.au/>

Australian Photographic Society - <http://www.a-p-s.org.au/>

Gurushots - <https://gurushots.com/>

Free Lessons with Serge Ramelli - <http://photoserge.com/free-lessons/all>

Viewfinder cover photo taken by.

**Tony Crampton**

One notable kit lens characteristic is a generous focal-length range. These lenses aim to cover a wide spectrum of shooting scenarios so beginners can capture a wide variety of subjects and compositions. The most common kit lenses are 18-55mm models, although variations like 16-50mm and 15-45mm do exist. There are also telephoto kit lenses available, which often span from 55-200mm. (Some cameras even offer the option to bundle two kit lenses together: an 18-55mm model and a telephoto model!) It's important to note that not all cameras come with kit lenses. The more expensive the camera, the less likely it is that it'll come with a lens.

(Higher-level cameras do sometimes include the option to bundle in a lens for a discount, but these products are usually much more expensive and don't have the basic kit-lens characteristics.)

## **Reasons to use a kit lens for your photography**

Not sure if a kit lens is right for you? Here are some reasons why you might want to use that handy kit lens instead of purchasing a different model:

### **1. Kit lenses are inexpensive**

Lenses can be eye-wateringly expensive. In fact, intermediate-level lenses often cost more than a camera! Fortunately, kit lenses break the pattern. They offer a budget-friendly option for photographers who are just starting out or don't have thousands of dollars to spend. Since most kit lenses are priced at a few hundred dollars, they provide an affordable entry point into the world of DSLR and mirrorless photography. Plus, even if you have extra money, you can spend it on other essential accessories. Investing in a sturdy tripod or a versatile lighting setup can greatly enhance your photography. So if you're looking to stretch your dollar, a kit lens is a practical choice.

### **2. Kit lenses are compact and lightweight**

When it comes to convenience and portability, kit lenses reign supreme. These compact and lightweight products are great for travel photographers. Imagine effortlessly attaching a lens to your camera and capturing the world *without* being weighed down by bulky equipment. That's the beauty of a kit lens. Because kit lenses are so portable, you can carry them with ease, whether you're strolling through the city streets or venturing into the great outdoors. Pop one in your pocket, slip it into your purse, or tuck it snugly in your backpack, and you're good to go. No need to lug around heavy lenses that make your shoulders ache!

But it's not just about convenience. The compact size of kit lenses offers another advantage: inconspicuousness. Whether you're shooting candid street scenes or capturing memorable moments at events, blending into the surroundings is key. Kit lenses, with their unassuming appearance, allow you to fly under the radar and capture authentic moments without drawing unwanted attention.

### **3. Kit lenses offer a great range of focal lengths**

One of the major advantages of using a kit lens is the versatile focal length range. They're specifically designed to give photographers the most bang for their buck, ensuring that they can capture a wide range of subjects without needing to invest in multiple lenses.

Imagine you're out exploring a breathtaking landscape, and you want to capture the vastness of the scene. With an 18-55mm kit lens, you can zoom out to 18mm and capture the expansive beauty of the environment.

Now let's switch gears and say you're strolling through a bustling city street. You spot some intriguing architecture and decide to take a shot. With the same kit lens, you can zoom in to around 35mm and capture the details of the building.

But what if you come across a charming face in the crowd and you want to capture a captivating portrait? No worries! Simply zoom in to 55mm, and your kit lens will allow you to create a beautiful portrait with a pleasing background blur.

And if your camera comes with a telephoto kit lens, you can capture all sorts of subjects, including wildlife, pets, and birds.

So whether you're photographing landscapes, street scenes, portraits, or even wildlife, a kit lens has got your back. Its focal length range offers you the flexibility to adapt to different shooting situations, ensuring that you're always ready to capture a great photo. Don't underestimate the power of a single lens that can do so much!

## **Kit lens drawbacks**

Now it's time to talk about the not-so-glamorous side of kit lenses. While they have their strengths, it's important to be aware of their limitations. Here are a few drawbacks to consider:

## **1. Kit lenses offer poor build quality**

Kit lenses aren't the toughest kids on the block. They often have a plasticky feel (it's one of the ways manufacturers keep the prices down).

Now, if you're a casual shooter or work in relatively safe conditions, this might not be a big concern for you. But if you find yourself frequently venturing into the great outdoors, whether to sandy beaches, snowy landscapes, or rainy streets, your kit lens might struggle to cope with the elements.

Unlike their more expensive counterparts, kit lenses generally lack rugged designs and weather sealing. So it's worth considering whether you need that extra level of durability and protection. If you're the adventurous type or shoot in challenging environments, investing in a sturdier lens could be a smart move.

## **2. Kit lens optics are less impressive**

When it comes to image quality, kit lenses do have their limitations. While they are certainly capable of capturing professional-level images, they often fall slightly short compared to their more expensive counterparts, especially in terms of overall sharpness.

Now, don't get me wrong: Kit lenses are not inherently soft or unusable. In fact, for most casual shooters, the difference in image quality between a kit lens and a non-kit lens isn't even noticeable. However, if you're someone who values razor-sharp details and wants to squeeze every bit of clarity out of your shots, you might find that kit lenses can be a tad softer, particularly at wider apertures.

Ultimately, if image quality is a top priority for you and you demand absolute precision, then investing in higher-end lenses might be worth considering. On the other hand, kit lenses provide more than adequate image quality for everyday shooting – and with the right techniques (explored below), they *can* be used to produce professional shots.

## **3. Kit lens autofocus can be slower**

In my experience, kit lenses can feel a bit sluggish when acquiring focus. If you're shooting subjects in motion, such as sports, wildlife, pets, or even hyperactive kids, this can be a serious concern.

It's not all doom and gloom, however. If your photography mainly revolves around still subjects like landscapes, products, or flowers, the slower autofocus of a kit lens won't pose much of a problem.

This type of portrait photo is easy to capture with a kit lens!

But if you find yourself drawn to fast-paced action or capturing split-second moments, you may become frustrated by the plodding autofocus of a kit lens – and it could be a good idea to look at more action-focused glass.

## **4. Kit lenses have narrow maximum apertures**

Every lens has a maximum aperture, which determines how much light it can let in. Professional lenses often boast maximum apertures of f/2.8 or even wider, and this allows for handheld shooting in low-light conditions. It also helps create that dreamy background blur photographers love.

Kit lenses, on the other hand, have more modest maximum apertures. At the wide end of the focal length range, kit lenses usually offer a maximum aperture of around f/3.5 or f/4, and at the telephoto end, such as 55mm, the maximum aperture can be as small as f/5.6. These apertures are fine for shooting in daylight or well-lit environments, but they aren't so great for low-light situations, and they're also not ideal if you're looking to create shallow depth-of-field effects.

That said, kit lenses can still produce great images within their limitations. If you plan to work in bright light or use a tripod, you'll have no trouble capturing stunning shots. Additionally, understanding the characteristics of your lens and making the most of its capabilities is key. Learning to adapt your shooting techniques and leveraging the available light will help you overcome the challenges posed by narrow maximum apertures.

## **5 kit lens photography tips**

If you've decided that you like the idea of shooting with a kit lens, here are a handful of tips to start you off:

### **1. Carry your lens with you everywhere**

One of the best things about using a kit lens is its portability – and that's why I encourage you to carry your kit lens with you everywhere you go.

After all, you never know when inspiration might strike or when you'll stumble upon an incredible scene. By having your lens mounted on your camera and at the ready, you'll be prepared to seize those spontaneous moments that make for the most memorable photographs.

At first, taking your gear everywhere might feel like a bit of a hassle, but the rewards will be worth it. So make it a habit to keep your kit lens within reach, whether you're going for a walk in the park, traveling to a new city, or even just running errands.

### **2. Narrow the aperture for sharper photos**



Are your kit lens photos looking a tad soft? It's a common problem – but did you know that by narrowing the aperture setting, you can enhance the overall sharpness of your photos?

Here's how to do it:

First, set your shooting mode to either Aperture Priority or Manual. This will give you control over the aperture setting. (If you're unsure of how to switch between modes, consult your camera manual.)

Next, locate the knob or dial on the back of your camera that adjusts the aperture and turn it to increase the f-stop.

Wide apertures, represented by smaller f-stop numbers (e.g., f/2.8), tend to produce softer shots, especially when using a kit lens. But by increasing the f-stop number, you narrow the aperture, which results in sharper images.

Be mindful not to push the aperture too far, as ultra-narrow apertures can cause diffraction, leading to a loss of overall sharpness. Additionally, narrow apertures may force your camera to use slower shutter speeds to compensate for the reduced light, which can introduce motion blur if you're handholding the camera. Consider using a tripod or adjusting other exposure settings, such as ISO, to maintain optimal image quality.

Every lens is different, but after narrowing the aperture, you may discover that your kit lens is capable of delivering remarkably sharp results. Experiment with different aperture settings to find the sweet spot that suits your desired level of sharpness (and depth of field).

### **3. Start thinking about the light**

Light has the power to transform an ordinary scene into something extraordinary – and as you delve into photography, it's crucial to start observing and understanding the role of light in your images. In fact, if an image has great light, it often doesn't really even matter if it's tack-sharp.

The best light often appears during the golden hours, the times just after sunrise and just before sunset. The sun's rays become warm, soft, and flattering. It's a time when landscapes glow, portraits come alive, and even the simplest subjects gain a touch of enchantment.

But don't limit yourself to only shooting with golden-hour light. Great photos can be captured on cloudy days or even in the harsh light of midday. Each lighting situation presents unique opportunities and challenges. Cloudy days, for example, provide a soft, diffused light that can add a sense of moodiness, while bright sunny days will help produce vibrant colors and strong contrast.

Take the time to experiment with different lighting conditions. Venture out in various situations and observe how the light interacts with your subjects. Pay attention to the direction, intensity, and quality of light. Notice the interplay of shadows and highlights, and how they can shape the mood of your photos. Over time, you'll develop a keen eye for understanding and utilizing light to its fullest potential. You'll learn to adapt your shooting techniques and settings to the specific lighting conditions, maximizing the capabilities of your kit lens.

### **4. Experiment with creative techniques**

Kit lenses are perfect for anyone looking to push the boundaries and explore the artistic side of photography, in part because the low price means you don't have to worry quite so much about their well-being. One technique you can try is freelensing, which is somewhat unconventional but can give great results. Simply detach your lens from the camera body and hold it in front of the sensor, tilting it at different angles to create a selective focus effect. It's a bit risky, as dust can find its way into your camera or you might accidentally drop your lens. However, when done carefully, you'll be amazed by the dreamy, ethereal images that you can achieve.

Another creative technique worth trying is intentional camera movement (ICM). By deliberately lengthening your shutter speed and then moving your camera while pressing the shutter button, you can produce wonderfully captivating abstract images.

So don't be afraid to step out of your comfort zone and experiment with these creative techniques. Embrace the freedom that your kit lens provides, and let your imagination run wild!

### **5. Get close to your subjects**

While kit lenses may not offer true macro magnifications, don't underestimate their close-focusing capabilities. Often, you can get a lot closer to your subjects than you might think!

I encourage you to take a moment and test out your kit lens's minimum focusing distance. You might be pleasantly surprised by how much detail you can capture, and once you've started exploring the macro world, you'll never want to stop. From flowers to fabrics, insects to leaves, and even the intricate details of eyes, there's so much waiting to be photographed.

When diving into close-up photography, keep in mind a few tips to get the best results. First, stability is

key. As you get closer to your subject, any slight movement can result in blur. Consider using a tripod or stabilizing your camera against a solid surface to ensure tack-sharp images.

Secondly, pay attention to lighting. Small subjects often require careful lighting to bring out their textures and details. Experiment with a variety of lighting techniques, such as natural light at different times of the day and even using a small LED to create interesting effects.

Lastly, don't be afraid to get creative with your compositions. Explore different angles and depths of field effects to highlight the unique characteristics of your subject. Play with selective focus to draw attention to specific details and create visually striking images.

## Kit lens photography: final words

We've reached the end of our epic journey into the world of kit lens photography. I hope you've come to realize that these little units are worth a lot more than you might have originally thought!

Sure, kit lenses may not have the reputation or the specs of their pricier counterparts, but they bring a whole lot to the table. They're affordable, portable, and versatile, giving you the freedom to capture a wide range of subjects without breaking the bank.

Remember, though, kit lenses do have their limitations. The build quality may not be especially rugged, the optics may not be tack-sharp, and the autofocus may not be lightning-fast. But with a little know-how and some experimentation, you can overcome these hurdles and create compelling photos.

So don't feel you need to upgrade the moment you purchase a camera. Recognize that your kit lens *can* take stunning photos – as long as you know how to use it well!

---

## Understanding Shutter Priority Mode

by Pete LaGregor

Your camera has several markings on them. The main shooting dial on your camera has the markings P, A, S, M, etc. There are several other markings on the camera and lens body.

The S marking is for **Shutter Priority**. On some camera systems, it's marked as Tv for Time Value, but they're all the same thing.

**Shutter priority is the setting on your camera that allows you to manually control the shutter speed and let the camera automatically adjust the aperture and sometimes ISO using the built-in camera metering.**

Switching to this mode means you're switched to Shutter Priority mode.

For clarity in this discussion, I will continue to use the letter S to signify it.

## What purpose does shutter speed serve?

The purpose of shutter speed is to control the amount of light that enters the lens. Once you better understand shutter speed and aperture, you will realize that they both do the same thing. They both control the amount of light that enters the camera.

However, while the aperture controls the size of the lens' hole (opening) to let more (or less) light enter the camera, shutter speed controls the extent or the length of time for which the shutter curtains remain open. So, they tend to do the same thing, but the mechanism is different. Of course, they control other aspects as well, and we'll learn about those aspects later.

## Working with Shutter priority mode

Once you set the main shooting dial to S mode, you will be able to control the Shutter Speed of your camera. As you turn the command dial, you realize that the shutter speed settings are changing. You can now select a shutter speed as per your choice.

Depending on your preference, you can use a fast shutter speed like 1/1000 sec or a very slow shutter speed like 1 sec.

However, changing the shutter speed comes at a price.

**Shutter speed and Aperture value have an inverse relationship.** In other words, if you change the shutter speed, you've to change the aperture value as well. Let's take an example to demonstrate this.

Shutter speed changes in stops just like the aperture does. One-stop signifies halving or doubling the amount of light that gets through.

Let's say that your shutter speed is 1/100 sec at aperture f/4.

Now, let's say you want to increase the shutter speed and choose a faster shutter speed. Let's say you set the shutter speed to 1/200 sec. What you did was push the shutter speed by one "stop." Now, the amount of light entering the camera will be exactly half of what you would have received at 1/100 sec. This is because the aperture value and the ISO remain the same as before.

Now comes the exciting part.

As I said, changing one of the values between Aperture and Shutter speed will warrant a change in the value of the other. Otherwise, your exposure will be botched.

**To compensate for the increase in shutter speed, your camera will automatically change the aperture when in shutter priority mode.**

Increasing the shutter speed resulted in less light entering the camera. How much less? Exactly one stop.

To compensate for that light loss, it will open up the aperture one stop.

The initial aperture was f/4, and now the shutter speed has gone up by one stop, so we have to compensate by opening up the aperture by one stop. So, our new aperture should be f/2.8.

In shutter priority mode, the camera will also adjust the aperture to react to changing light conditions of whatever you are pointing the camera at. So in the above example, if you kept the shutter speed the same, but pointed your camera at something darker, it would also open up the aperture to let more light in.

Aperture values are always expressed as a fraction, like this – f/1.4, f/2, f/2.8, f/4, f/5.6, f/8, f/11, and so on. If you go up the chart, the lens's aperture becomes smaller. Yes, it's a bit confusing because higher numbers mean a smaller aperture, but you'll get the hang of it quickly.

Essentially, shutter priority mode does the work for you by using its metering system to determine what the best aperture is for the shutter speed that you chose.

## **What if shutter priority mode gives me a bad exposure?**

The inherent weakness of any of the "auto" modes is that you are dependent on the camera's metering system to choose the right exposure for you and this isn't always going to give you the best result.

The good news is that **you can take some more control with the exposure compensation dial.**

Any camera that has a shutter priority mode will allow you to adjust exposure compensation in some way, usually in the form of a dial on the front or back of the camera.

Exposure compensation is simply a way to tell your camera that you want the image either brighter or darker than what the camera's metering has decided is correct.

This allows you to use a mode like "shutter priority" and still take control over what the camera is doing.

Most cameras allow you to adjust exposure compensation about 3 stops brighter or darker.

## **Creative ways to use shutter priority mode**

I will discuss a few creative ways to use the shutter priority mode to conclude this discussion.

A majority of the creative ways of using the shutter priority mode is to drag the shutter or use a long shutter speed.

Let's say that you want to capture images of a fireworks display. The best approach is setting up your camera on a tripod, switching off image stabilization, setting your camera to Shutter priority mode, and using a long exposure of 1 sec or more to capture the images.

This simple trick can capture light trails, light painting, and other low light genres though the shutter speed will vary based on the exposure time required.

You can use a slow shutter speed during the daytime as well. Intrigued? You will need a Neutral Density (ND) filter for that. Neutral density filters come in different strengths of light stopping power. A 4-stops ND filter will allow you to drag the shutter by four stops: brighter the conditions and longer the shutter speed required, the more light stopping power you need.

## **Should you use shutter priority mode?**

My short answer is "rarely."

As you can see with using exposure compensation, you'll usually end up making adjustments anyway to fine-tune your exposure. It's not often that the camera gets it perfectly right.

So at that point...why even bother with using one of these "auto" modes?

It can actually be far easier to put the camera in manual mode, set your shutter speed, and just adjust the aperture yourself rather than using exposure compensation.

One exception where I'll admit shutter priority mode can be helpful is when you are in a situation with fast-changing light conditions.

For example, you may be shooting a sporting event outside where the sun is coming in and out of the clouds. Using shutter priority to make sure you have a fast enough shutter speed and letting the camera adjust the aperture based on the light can be helpful.

But those situations are rare. So I am not a big fan of the priority modes. Try getting used to using your camera in manual mode, you may be surprised that it's actually easier.

---

## Snapping in the Street.

By Jo Teng, September 30, 2010.

Cameras are everywhere nowadays. They range from the tiny lens in your smartphone to convenient point-and-shoots right up to huge digital SLRs with interchangeable lenses and flashes. Anyone can do photography these days, but while aspiring photographers learn about ISO, the rule of thirds, f-stops and so on, awareness of the legal issues around the taking of photographs is less common. In this article, Arts Law looks at some of the key issues around popular photography subjects in public spaces.

### Buildings & architecture

Under sections 66 and 68 of the *Copyright Act* it is not an infringement of copyright to photograph a building, or to publish that photograph. There are, however, issues of access and restrictions on activity surrounding some building and architectural sites.

Public spaces, particularly ones that attract a lot of people, are controlled by a local council or a government authority which can impose restrictions on people and activities that take place in that space. For example, the New South Wales Sydney Harbour Foreshore Authority which manages Darling Harbour, Circular Quay, the Rocks and Luna Park prohibits commercial photography in these areas without permission, and any person who causes an annoyance or inconvenience in these areas – say a photographer stubbornly blocking a walkway with his tripod awaiting that perfect shot – can be removed by a ranger or police. Sydney Olympic Park takes this further in that anyone causing an annoyance or inconvenience by taking photographs can have their camera confiscated by an authorised person if the photographer doesn't comply with directions to stop.

Government property such as power stations, railway yards, and military stations are restricted areas, and trespassing into these places may lead to arrest and prosecution. With military stations and areas declared 'prohibited' for purposes of Commonwealth defence, photography is actually illegal, and the mere possession of a camera while in such an area can result in its confiscation and destruction along with any pictures and equipment. In serious cases, you yourself may face fines or even imprisonment.

Private property requires permission from the land owner prior to access, otherwise you may be liable for trespass. The land owner will have a right to impose restrictions on activities, for example only allowing certain areas or objects to be photographed. This is done by many museums and galleries which restrict photography of artworks as a condition of entry.

### Parks, pools, reserves & beaches

Parks, pools, beaches, nature reserves, etc. are not works for the purposes of the *Copyright Act* and as such there is no need to seek copyright permissions to photograph them. They are, however, managed or controlled by either a local council or government authority which as described above can make rules regulating photographic activities.

**Local councils:** These have responsibility for local parks, pools, and most beaches. In the wake of public concern over photography of unsuspecting swimmers in bathing suits, many local councils such as Waverley which manages Bondi Beach have imposed restrictions on photography at beaches and/or public pools. These restrictions have in some cases been extended to other sites such as streets and cemeteries. Most of these restrictions would seem to apply to commercial photography however photography of any sort may be prohibited in specific spaces such as pool changing rooms. If you are going to take photographs in a public space controlled by a local council – pool, beach, cemetery, etc. – you should check with the managing council as to whether any restrictions apply and if so, what.

**Government authorities:** These have responsibility for national parks and wildlife reserves. It is necessary to identify whether the government authority is a State one or a Federal one. For example, the Federal Government has control over Commonwealth Marine Parks and Reserves, Kakadu National Park, Australian National Botanic Gardens, and restricts the taking and commercial use of photographs in these areas without a permit. State and Territory governments will also control various parks in their jurisdiction such as regional parks, historic sites, and state conservation areas. If you are planning a trip to these types of sites



for photography you should make inquiries as to which specific body manages it in order to identify the laws and regulations that may affect you.

## Public art & street art

Murals and sculptures enhance a public space and are attractive photography subjects, however because they are art works, they are likely to be protected by copyright. This means a photographer will need to seek permission to reproduce the work in a photograph unless an exception applies. Whether or not there is an exception will depend on the type of art work being photographed.

**Sculptures:** Under section 65 of the *Copyright Act*, it is not an infringement of copyright to photograph or publish a photograph of a sculpture if the sculpture is permanently situated in a public place or in premises open to the public. This would include sculptures in a park or city street, but also sculptures such as headstones and statues in a publicly accessible cemetery.

**Murals and graffiti:** Although murals and graffiti are generally situated in a public place, because they are two-dimensional artworks the section 65 exemption does not apply. As such, if you substantially reproduce a mural or graffiti work in a photograph you may be infringing the copyright in that mural or graffiti work. Substantial reproduction is not a question of how much has been reproduced like 10% or 70%, but rather a question of quality (i.e., what has been reproduced). This means a photograph looking down a street that happens to have a mural wall running down one side adding perspective is less likely to infringe copyright than a photograph that focuses on a key part of the mural making it the main subject of the photograph, even though the first photograph shows more of the mural.

## Logos and trade marks

The way advertising and marketing work nowadays, it is almost impossible to take pictures in an urban area without catching some company's logo or trade mark. A trade mark, especially a registered one, gives a trade mark owner exclusive right to use the trade mark and authorise its use on particular goods and services. However, a trade mark is only considered infringed if it is used *as a trade mark* by another person without authorisation. That means while it's okay to take a picture of yourself standing in front of the gigantic Coca-Cola sign in Kings Cross and share it on Facebook, using that picture in association your own line of drinks will not be.

## People

Finally, people. The first thing to know about people photography is that there is no personal or publicity right in one's personal image, so there's no need to 'clear' anything before taking pictures of someone's face. Current privacy laws are concerned more with the collection and storage of personal information meaning there is no right of privacy, and neither is there (at least thus far) a tort of invasion of privacy. As such, snapping a picture of someone in the street in an urban scene or because you like their fashion sense is generally allowed.

Things get a little more complicated when you photograph people for a commercial purpose, such as a poster where someone's face is used to sell or advertise a product or service. In this case the subject of the photograph will need to have signed a model release form in order for their picture to be taken. If a photograph of a person is used commercially without that person's permission, you could potentially be liable for misrepresentation, the tort of passing off, or defamation.

Be aware also that there is sensitivities around the photography of people in certain circumstances, and also children. Snapping pictures of people in a private act where they would reasonably expect to be afforded privacy without their permission such as in the bath, on the toilet, or engaged in sexual activities, is a punishable offence under New South Wales law. With children, charges can be laid in many states such for taking "indecent" photographs of a child under the age of 16 without a legitimate reason, even the child was in a public place. These are criminal offences and can result in a fine or imprisonment.

## Conclusion

As far as photography in public goes, there is no need to seek permission to take a picture whether the camera is aimed at a building or a person. There may, however, be issues of access to the space, and, where people are concerned, how the photograph is going to be used. And of course, there is one important thing to always remember as a photographer, namely that any photograph you take is protected by copyright owned by you.

*Jo Teng is a solicitor at Arts Law who enjoys taking photographs in her spare time.*

# The beginner's guide to photographing the night sky

By Jamie Carter

From star fields to the Milky Way, wide-field astrophotography is easier than you think



Night-sky photography is getting very popular, and the internet – particularly Instagram – is full of stunning images of star fields and the Milky Way.

They may look like highly polished images taken by photographers with years of experience, but it's actually advances in modern cameras that are the main reason for the genre's sudden popularity.

If you've a camera with a good deal of manual control and a clear sky, taking pictures of the night sky is much easier than you might think.

## How to prepare for night-sky photography



A wide-angle lens will give you the big sky necessary for a night sky image. Image: Jamie Carter

Although you can use any camera that allows you to adjust the ISO, aperture and shutter speed, a compact with a one-inch sensor or a DSLR will yield the best results – and this is very much the case if you want to capture the Milky Way. Since you'll need to keep the camera as still as possible to take long exposures, a sturdy tripod is a must. A remote shutter-release cable is also helpful, though most cameras can be set to shoot on a two- or ten-second delay.

### • See also **Best light-light cameras**

Another must-have is torch with a red-light mode, which will help preserve your night vision (it's also worth lowering the brightness on the LCD screen to prevent a blinding glare). However, the art of night photography is as much about knowing how to manipulate your camera by touch and

feel rather than by sight. An easy (and warm) way to practice is to switch off the lights at home and see if you can set your camera up in the dark.

Remember to also prepare yourself for the night by wrapping up warmly and taking a hot drink if necessary.

## Finding a good location



A certified Dark Sky Park means you're away from artificial light. Image: Jamie Carter

If you're going to successfully capture the light of distant suns hundreds and thousands of light years away, you'll need two things: a clear sky and darkness. That's not to say that you can't capture stars from a light-polluted city – in fact, such images have a novelty value – but it's much more difficult.

When you're starting out, find a location away from artificial light, which means only one thing: go to a place where there aren't any people. The International Dark Sky Association certifies a global network of Dark Sky Parks, while the online light pollution map and the dark site finder are also useful.

Just as critical in avoiding light pollution is to think about the moon. Plan to go on a night-sky shoot from one week before new moon to a few days afterwards to ensure there will be no significant moonlight between dusk and midnight.

Once you're in a dark, moonless place at the right time, think about composition. It's often overlooked by night-sky photographers, but it's just as critical as it is for any landscape image.

Look for something interesting or unexpected to place in the foreground, such as a church, a tree, vehicle or a lake (the latter might even reflect star-light). It can be useful to arrive somewhere before dusk to scout out some locations to try, then wait until at least an hour after sunset.

## Setting up your camera



A full-frame camera can pick up all kinds of light phenomena. Image: Jamie Carter

The trick to successfully photographing the night sky is to let as much light in as possible from as much sky as you can. That means using the fastest, widest lens you can. A 10-22mm lens (or thereabouts) with an aperture of f/4 is OK, but most night-sky photographers will use a lens that reaches f/2.8 or lower.

First, set the camera to manual mode. Now focus the lens on infinity, ensuring that autofocus is deactivated. This will keep the stars sharp, though finding the exact dial position on your lens that maximizes sharpness will be a matter of trial and error. Set the white balance to tungsten or daylight (though remember that you can change this in post-processing), and tell your camera to record in Raw plus JPEG formats.

With your camera on a tripod and pointing upwards towards a clear patch of sky, try these settings for your first shot: an aperture of f/2.8, ISO 800, and a 25sec shutter speed. Zoom into the resulting image on the LCD screen to see if the stars are sharp, and nudge the focus dial if necessary. Keep checking this; even if you get the focus spot-on, it's too easy to nudge it accidentally while moving the camera, so check and re-check it.

Leave the aperture and exposure as they are (30 seconds tends to blur the stars because of Earth's rotation), and start to experiment with ISO 1600, ISO 3200 and even higher if your camera can reach higher ISOs (and there's zero artificial light around). If there is a streetlight or security light on somewhere nearby, using a higher ISO will introduce a lot of noise.

## Photographing the Milky Way



The Milky Way is seasonal, and best shot in the summer in the northern hemisphere. Image: Jamie Carter

Although a popular pastime among night-sky photographers, this one is all about timing.

Although the winter Milky Way can be pretty, it's not got as much colour or depth as summer's Milky Way.

August is the most popular time to photograph the Milky Way because it's streaming down to the southern horizon around midnight. However, you can cheat the system by going out in late spring to photograph it before dawn.

As well as good timing, you need a camera with at least a 1in sensor to successfully capture the Milky Way. Any full-frame DSLR camera or advanced compact camera will do well. Push the sensitivity up to ISO 6400 and even higher, and prepare for a



long session on Photoshop or similar to tease out a bright Milky Way. It can be time consuming, but the results can be fabulous.

## How to take a star-trail image



Star trails can be shot under almost any sky conditions. Image: Jamie Carter

Another time-consuming, but technically quite simple, iconic night-sky image is the star trail.

If you want circles, you must point your camera at Polaris, the North Star. Earth's axis points to Polaris, so all stars in the northern hemisphere appear to rotate around it. You could just point your camera towards the north, but if you want circles around, say, a church spire, you can easily find Polaris by using the stars of the easily recognizable constellation The Plough/Big Dipper.

The easiest and cleanest way is to take a series of 30-second exposures and stack them using free software. Expose for 30 seconds as a test shot, and once you're happy with the image – particularly the focus and composition – just repeat it 100

times! Put the camera in continuous shooting mode and come back in 40 minutes.

When you get home, download StarStaX to a laptop, drag in the images, and in a few minutes, it will compile a beautiful star trail. If the finished image contains dotted lines, they're airline tail lights, so remove individual frames and restart the process.

If you get really into star trails, it can be helpful to go out on a night shoot with two cameras capable of night sky shots. So, next time you're out you can set up a compact on a small tripod pointing north that can shoot frames for a star trail while you use a DSLR on a bigger tripod for that Milky Way shot nearby. However, for night sky photography all you really need is a camera with manual control, a warm coat and clear skies.

SHUTTER SPEED		
CHEAT SHEET		
THE LONGER THE SHUTTER SPEED, THE MORE LIGHT GOES TO THE SENSOR. USE LONG SPEEDS WHEN THERE ISN'T A LOT OF LIGHT, AND FAST SPEEDS WHEN YOU WANT TO FREEZE A MOMENT.		
1/4000	- FAST ANIMALS, SPORTS	
1/2000	- SUNSET/SUNRISE	
1/1000	- RACES, EXTREME SPORTS	
1/500	- SLOWER SPORTS	
1/250	- CASUAL PHOTOGRAPHY	
1/125	- PANNING FAST CARS/VEHICLES	
1/60	- PANNING SLOWER OBJECTS	
1/30	- BLURRING MOTION	
1/15	- LOW LIGHT WITHOUT A FLASH	
1/8	- BLURRING MOVING WATER	
1/4	- BLURRING MOTION	
1/2	- EXTREME LOW LIGHT	
1"	- FIREWORKS	
5-30"	- LIGHT PAINTING	

ISO	
100	Full Sun, no shade
200	Lots of sun, could be in partial shade or an overcast day out in the open
200	Inside on a sunny day, directly by a large window
400	In the shade on a sunny day or under a covered area on an overcast day
700	Inside on a sunny or overcast day (near a window)
640-800	Sun is starting to set and less light
800	Inside, quite a distance from a window (sunny outside)
850-1000	Inside, quite a distance from a window (overcast day)
1250	Inside during the evening, light bulbs are the only source of light
1600	Inside a dark room where there is a light source (theatre, school production, etc)

Noise Warning

# The histogram of the image.

By Pete @ photography goals .com

When I was first learning photography in high school, it was on a used Minolta x-370 film camera.

It had a little analog light meter but a lot of it came down to guessing or bracketing shots and hoping that I got it right.

But I had to wait until after I developed the film to see if I got it right.

Sometimes hours, sometimes days, depending on what else I had to do at the time.

Exposure is the first "ingredient" to making a great photo and it's probably the one that most photographers struggle with, especially when they're getting started in manual mode.



But the good news is that you have much more powerful tools at your disposal than that old analog light meter.

But are you using the best one?

Instead of just looking at the photo on the back of your camera, take a look at the histogram of the image...

Notice in the photo above that some of the histogram is along the right side?

That represents the brightest part of the image (the sky in this case) and this histogram is telling me that the sky is overexposed and I should make some adjustments to let less light in.

The image itself on the back of your camera can be affected by the brightness of the screen or how light it is where you're shooting, but the histogram doesn't lie.



**Key Lesson:** Wide-angle lenses also offer the advantage of being close focusing. Many of these lenses will focus all the way down to just a couple of inches.



### Self-Check Quiz:

- 1) True or False: A wide-angle lens is only suitable for landscape photography.
- 2) The wide-angle lens group is also excellent at creating the feeling of \_\_\_\_\_ space.
- 3) With a full-frame camera, at what focal length does the category of wide-angle start?
- 4) What focal length is considered a 'normal lens' on an APS-C camera?
- 5) True or False: A primary benefit of a wide-angle lens is expanded depth of field (DOF) at any given f/stop.
- 6) A wide-angle lens creates a sense of \_\_\_\_\_.
- 7) Why is it a good idea to place an object close to the camera when using a wide-angle lens?
- 8) What does a wide-angle lens do to a scene as opposed to a telephoto lens?
- 9) Why must you carefully consider the composition when using a wide-angle lens?
- 10) What is 'Crop to Stop,' and when would you use it?
- 11) True or False: Leading lines don't work well with wide-angle lenses.
- 12) True or False: Converging verticals make a wide-angle lens useless for architectural photography.
- 13) True or False: With wide-angle lenses, distortion is considered a benefit.
- 14) Name three things that might cause a vignette with a wide-angle lens.

**We are on the web !!**

**[www.daptocameraclub.org.au](http://www.daptocameraclub.org.au)**

**[www.facebook.com/groups/560318574135732/](https://www.facebook.com/groups/560318574135732/)**



**"He gets good shots!"**

**For Info or Contact - [dapto.camera.club.webmaster@gmail.com](mailto:dapto.camera.club.webmaster@gmail.com)**