

How to Shoot the Super Moon

Photographing a super moon

A super Moon, or perigee, forms when a full moon coincides with its closest approach to Earth.

It's worth noting when these perigees happen because, if they coincide with an illuminated Moon, the Moon can appear up to 14 per cent larger to us on Earth and 30 per cent brighter which is excellent for photographing it! A couple of days either side of this will be an excellent opportunity to take your photos.

Of course, you can still photograph a non 'super Moon' and get great results!

What you need

- Your longest lens. 200mm, 300mm, 400mm (or longer if you have it!). You could even put on a tele-extender if you've got one. The Moon is bright but because it's so far away it will appear small in your frame so pick your longest focal length to zoom in as much as you can.
- A sturdy tripod and cable release to remove tripod wobble when pressing the shutter button. Shutter buttons are handy but not essential – a 2-second timer delay in your 'drive mode' settings will also work instead of a cable release, and you can even shoot the Moon without a tripod, providing your shutter speed is fast enough to prevent significant camera shake – you may just need to turn up your ISO a bit more to achieve this.
- A clear night.

Camera settings

Shoot in RAW

This is in your image quality settings. While shooting large JPEG's is adequate for most of your photography, in this case you'll benefit from doing a fair bit of post processing on your image so shooting in RAW allows you to pull a bit more detail out of your shots on the computer later.

Be aware that the files are significantly larger in size, so they will fill up your memory card a lot faster. For those who are really keen on post processing there is an extension section below you can try which involves stacking a few images together in order to increase saturation without introducing too much 'noise' in your final photograph.

Set (and lock) your focus.

The Moon is plenty bright enough for your camera to autofocus on. Once you've grabbed an autofocus, you can 'lock' this focus distance in by flicking the AF/MF switch on the side of your lens to MF. So long as you don't touch the manual focus ring, you'll remain locked at this focus.



Lock focus by selecting MF

If you'd like to be super accurate, you can zoom in on the Moon x10 in 'live view' on your LCD screen and tweak the manual focus ring to ensure the craters are precisely in focus.

Use a cable release (or an in-built 2-second timer delay)

This will help reduce tripod wobble, especially since you're using a long lens! When taking multiple photos, make sure you let the tripod absorb the shake between shots.

Shooting Mode

Select Aperture priority mode ('Av' on Canon or 'A' on other brands) using the mode dial of your camera. For practical purposes, as the Moon is so far away, Depth of field is not hugely important here, so you don't need a big f/number. Plus, a smaller f/number will allow more light to pour into the lens allowing for a faster shutter speed. There is no need to go to your lens' extreme, though; something around an f/8 is usually sufficient.

By being in Av mode your camera will select the shutter speed for you. Shutter speed is more important than you think. The Moon moves surprisingly quickly in the sky so long photos will therefore be less sharp. Quicker photos also help eliminate any camera shake or tripod wobble. Something around 200th second is quick enough on a stable tripod. If it's quicker than that, great! But it doesn't need to be super-fast. If the shutter speed is a little slow, just bump up the ISO a little.

ISO

Since Aperture mode is selected, increasing the ISO will automatically increase the shutter speed. However high ISO's create 'noise' in your photo and reduce image quality and reducing noise wherever possible is important as we'll be cropping the image later on the computer.

Keep your ISO as low as possible, but still make sure you're achieving a fast-enough photo. Start on ISO 100 or 200 and see what shutter speed you're getting.

If you're not getting a fast-enough photo (i.e. your photo is blurry due to camera or Moon movement), then bump up the ISO as needed.

Turn down exposure compensation

This is the secret to capturing a detailed Moon – without adjusting your exposure compensation, you'll probably get frustrated, pack up and go inside.



Dial down exposure compensation to capture the Moon's details. (Photo credit: Chris Bray Photography)

If you leave your camera's exposure compensation on zero in Evaluative metering your camera will automatically try and give you a 'mid brightness' photo. It'll interpret the scene as 'dark' and therefore try to bump up the brightness a lot to generate that default 'mid brightness' photo. This means that the Moon will be pure white, completely washed out and over exposed. All detail on the surface will be completely lost.

But by turning your exposure compensation down (e.g. minus 3, 4 or minus 5), your camera will adjust its settings (by tweaking the shutter speed) to give you a darker shot, allowing you to capture the detail in the Moon! Play around with your minus exposure compensation until you achieve the detail you're after in the moon.

Note that the longer your lens, the larger the Moon will look in your shot and the brighter that photo is supposed to be (and the brighter you'll have to set your exposure compensation). The smaller the Moon looks in your shot, the darker you'll need to set your exposure compensation to reveal its detail.

If your camera's exposure compensation doesn't go low enough – i.e. below minus 2 exposure compensation, you can still control your exposure, you just have to take complete control of your camera.

Using 'Manual' (M) mode, pick the same settings as above (a small-ish f/number and a fairly low ISO e.g. 200). Now you can play around with your shutter speed making it faster and faster until you get the detail back in the Moon.

Start at something like 200th of a second. If the Moon is too bright, make your photo faster (perhaps 300th second). By incrementally increasing the shutter speed you're letting less light into the camera, so more detail should pop up in your photos.

Later, load your RAW files into a photo editing program, crop in on the sharpest image, perhaps play with the 'contrast' a little and you've got yourself an amazing moon photo!

Quick tip

By keeping your camera on a tripod and taking a series of photos continually, you can also use a program like 'Star Stax' to create a star trail.

Star trails under moonlight can make for creative results as the foreground remains evenly lit by the Moon.

Landscape shots

Including the Moon in a landscape shot often leads to disappointment, not because it can't or shouldn't be done, but rather because we often have photographic expectations that can't be met. These expectations come from a couple of common misconceptions about photographing the Moon.

The Moon looks huge to our eyes when it's peeping over the horizon, so we grab the camera and snap a shot, only to be disappointed that the Moon looks so small in our photo.

This is the trap psychologists term the 'Moon illusion', one of the most famous of all illusions. When the Moon is on the horizon our minds interpret it to be larger than it really is, compared to when it is overhead, even though it's the same distance away.

We also get disappointed when we see landscape photos which include the Moon with all its detail as a huge circle in the scene. Most of those shots you see of the Moon in a landscape photo are in fact composite shots. The photographer has blended together two photos – one photo of the landscape taken with a wide-angle lens and another of the Moon taken with a telephoto lens as described above. It's impossible to achieve the same result with a single image.

Landscape shots can still look great with the Moon included, but just think of it more like a lightbulb. Your camera can't correctly expose for the dark foreground and the bright Moon at the same time, so your Moon will be likely overexposed. It can look great at times, especially when it's light is reflected over water) but just be aware you'll lose the detail on the Moon's surface.

Quick tip

If the photo is taken using a big f/number, it's possible to give the Moon a 'starburst' effect. If you're getting this effect unknowingly and would prefer a more rounded Moon, you'll need to take a slightly quicker photo and use a smaller f/number.

