

Tips to get the most out of your

telephoto lens



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Introduction

For those who use the simpler name for a 'telephoto lens,' a *zoom lens*.

Imagine not too long ago, the first 80-400 Nikkor lens was 'state of the art.'

Today we have image stabilizers in all of the long-reach lenses, as well as auto focusing at speeds we could only dream about. Today we can focus on the 'other' factors and techniques in order to take a decent shot.

So, let's look at a few tips for getting the most out of your long-reach telephoto lens.

You have less than a second to catch this action which never lasts long

- 1 Establish a shooting system
- 2 Get close
- 3 Use back button focus
- 4 Know your buttons and use them correctly
- 5 Use the reciprocal rule of photography
- 6 How to shoot the moon
- 7 Post-processing

1 Establish a shooting system with a telephoto lens

You may be doing this already without thinking about it. It's a combination of settings to start from before you lift your camera to take your first shot of the day. For example, for a bird shoot, set the camera at f/5.6 1/800s, and 800 ISO.

A few other important settings to check before leaving for a shoot are as follows:

- Exposure metering – Use spot metering for birds due to their small sizes, center-weighted for wildlife, and matrix for landscapes.
- Continuous shooting mode for fast-moving subjects.
- Back-button focus for birds

What is the purpose of a shooting system?

- You don't get caught when you quickly have to take your first shot of the day (which may be the best subject for the whole day).
- It sets you 'in the middle' of the settings you will need during the day. If you get caught off-guard and have to quickly take a shot, you will be within the dynamic range where your photo editing tool will be able to do the needed adjustments to produce something decent
- In the case of birds, your lens should always be extended to full reach.

For wildlife start with the shortest reach. If you have to take a quick shot and get only one chance, the animal is large enough to be cropped closer in in post-processing.

Key Lesson: An established shooting system is one of the most valuable (and Underestimated) tools available to lower your chances of getting caught off-guard during a shoot. It also elevates the probability that you will be able to successfully rescue an image taken in a rush.

It is important to have a checklist which you can tick off before leaving home for a shoot.

Note: Don't forget to adjust your settings in time as circumstances change during your shoot (e.g. it suddenly becomes cloudy/bright sunshine sets in etc.).

2 Get close with a telephoto lens

This is one of the most misunderstood/overlooked points about using a long-range lens. As the most valuable features of a telephoto lens is the ability to bring a distant subject closer. These images would rarely be among your favorites though. As the favorites are those where you were really close to your subject and you zoomed in enough to fill your frame, or even closer.

By getting really close to the subject, the following happens:

- Your lens is able to expose every feature of your subject in perfect detail. You may even find yourself looking at a bird previously perceived as 'dull' with totally different eyes. Want to see every detail in a bird's eye or feathers? Get close!
- You manage to get the most fantastic bokeh (soft background) which serves to highlight your subject's features even more.
- You may be able to snap your subject without fully extending your lens. In general, zoom lenses are not at their sharpest when fully extended.

This unlocks other advantages. If you shorten your focal distance), then you can lower your shutter speed and still be within the limits of the reciprocal rule of photography. lower your shutter speed, lower ISO and keep the same level of light.

If you're not sure how close your subject will allow you to get to it, start taking your first shot from a distance. Then move closer cautiously and take another shot after every five or ten steps until it gets ready to move off or fly away.

Key Lesson: It is not always possible to get really close to your subject, but if you can and you don't do it, then you're settling for second best.

3 Use back button focus

Back button focus is a gem to anyone shooting moving subjects or when you want to focus on a subject and then swivel your camera away from it without losing focus on it. It works as follows:

- In a 'standard' camera setup, your camera focuses on a subject when you have pressed your shutter release button halfway down. It then does not do any refocusing while taking the photo.
- With back button focus, your shutter release button does not do trigger focusing at all. That function is taken over by the back button on your camera. When you set your camera on continuous focusing mode at the same time (, then the camera will keep on refocusing as long as you're pressing the back button.

This is important to capture an image of a moving object. In the standard camera setup, an object may have moved a meter or two closer to you from the time the camera focuses until the time the shutter release button is fully pressed and released. The image would thus be blurred or will not be perfectly sharp.

With back button focus plus continuous focusing, the camera will keep on focusing on the subject as it moves toward/away from you, so by the moment the shutter release button is fully pressed down, the subject will still be in focus.

When you want to focus on a subject and then move the camera away slightly , you push the back button with the focus point on your subject. You then release the back button (the camera won't refocus thereafter) and move your camera away until your subject is in the desired position in the frame.

Key Lesson: Back button focus is one of the most valuable tools in the toolbox of photographers shooting moving objects. You can achieve the same in the standard camera setup by just setting continuous focus and then holding your shutter release button halfway down, but it is easy to accidentally take the shot at the wrong moment.

When using back button focus in continuous shooting mode, the lens will keep on focusing on your subject as it moves closer to you and you take shot after shot, split-seconds apart – as long as your lens keeps on refocusing fast enough on your subject.

4 Know your buttons and use them correctly

humans are lazy. The tendency is to mount your lens on the camera and everything should 'work.' probably. But are you getting the most out of your lens? You're paying top dollar so why not use it to its fullest? Every button is there for a reason and for your benefit, after all!

A few examples:

- Does it have a zoom lock feature? To prevent from accidentally adjusting the focal length, or letting it auto adjust as you tilt the lens up or down. You can still adjust it if you really want to, but with a bit of resistance from the lens.

If it auto extends without you knowing about it, you may easily bump it against surrounding rocks or other objects.

- Does it have different image stabilization options and, if so, do you understand them and use them as recommended?

(VC Modes):

VC Mode 1: Standard mode

This mode gives you a balance between stability of the image in the viewfinder and stabilization effects. You will see the image stabilizer at work in the viewfinder as you focus on your subject. Use this mode if you're not sure which mode is best.

VC Mode 2: Panning mode

Use this mode for panning (e.g. photographing birds in flight/other moving subjects). It will allow faster auto focus.

VC Mode 3: The 'shoot now check later' mode

VC mode 3 stabilizes images at the moment of capturing them. If you look through the viewfinder it will look as if image stabilization is disabled.

• focal length range limiter options:

- 2.2m–10m –allowing you to quickly focus and refocus on subjects close by.
- 10m to eternity –prevents the lens from searching through its whole range when shooting far away subjects speeding up the focusing process.
- Full (basically 2.2m to eternity). Use this when you have no idea how far from you your next subject is going to be.

These are only a few features that may be catered for by your lens. Maybe it's time to have a look again and rediscover some of its forgotten features re read you camera manual

5 Use the reciprocal rule of photography

If you do not keep in mind the reciprocal rule of photography while shooting hand-held, then you are opening up yourself up for huge disappointments at post-processing time. At the shortest focal range you can get away with murder as far as hand shake is concerned. The longer ranges are less forgiving.

What is this rule about?

It says that if you want to compensate for hand shake, your shutter speed should be at least $1/\langle \text{your lens' focal length} \rangle$. Example, let's say you shoot at 600mm, then your shutter speed should be 1/600s or faster. It's probably an overcompensation when image stabilization is taken into account,

Important: Keep in mind that the reciprocal rule is based on a 35mm equivalent (full-frame camera) focal length. When mounting your lens on a crop sensor camera, you are working on a 1.5x 35mm focal length (or 1.6x, depending on your camera brand).

So, if you are shooting at 600mm, you are shooting at a 35mm equivalent focal length of 900mm/960mm. Your shutter speed should thus be at least 1/900s or 1/960s respectively.

Key Lesson: The reciprocal rule has been developed as a safety measure to rule out hand shake. It has been proven and tested, so use it with confidence.

Disable image stabilization when you do not need it

Why would you want to do this? Because it slows down your camera's auto focus speed.

When should you do this?

- When shooting from a tripod or other stable support
- When panning (e.g. shooting birds in flight/other fast-moving objects)

This is one of the simplest ways to help your lens focus at its fastest.

6 How to shoot the moon with a telephoto lens

this is one of the challenges that a lot of photographers are battling with

The most common mistake that first-time moon photographers make is to overexpose. The result is a white blob without any detail. The other problem is blur. One needs to keep in mind that a micromillimeter of camera shake when photographing an object 384,400 km (238,900 miles) from us is catastrophic. That micromillimeter has an increasing magnifying effect over distance and it ends up being a couple of meters by the time it reaches the moon.

The steps for successfully photographing the moon are as follows:

- Use a stable, sturdy tripod.
- Use a cable or other remote shutter release.
- Use mirror-up mode, if your camera has it. Wait two or three seconds after lifting the mirror. This will prevent camera shake as you release the shutter.
- Switch off image stabilization on your lens.
- Start with the settings f/11, 1/10s.
- Zoom out to about 66%-75% of your lens' maximum reach to increase sharpness.
- Set your ISO to your camera's lowest possible setting.
- Take your shot.
- Play around with 1/20s-1/30s and longer focal lengths.

7 Post-processing

- Crop the moon closer on a 1:1 crop, but leave a bit of space on all four sides
- You may have to burn the brightest areas a little. Do it on a tone curve if you have it in your editing software in order not to adjust everything at the same time. Use luminosity masks if you have Photoshop.
 - You might want to darken the darker areas even more (use a tone curve and/or luminosity masks).
 - Sharpen the image but be careful of over sharpening.
 - Play with color/black and white to see what looks best.
 - shoot the moon when it's not full. You will have beautiful accentuation of its craters – much more interesting than a 'flat' full moon.

Key Lesson: There are a few ways to skin a cat as far as moon photography is concerned - but not too many. Use the settings above as a starting point and play around with shutter speeds and other focal lengths not too far from the example. Focus on two things: stability and exposure.

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Bio

My name is David Wright.

I have many years experience writing procedures on how to test high tech electronic equipment. Re wrote technical manuals so that the average person could understand them.

Set up numerous training programs to train Junior techs.

My documenting skills are excellent paying attention to details satisfying the toughest ISO auditors.

I have enhanced my writing skills by successfully completing a course in Writing for Children's literature.

Completed course from AWAI in Copy writing service ,B2B copy writing, Seo management , Email marketing and web design

This has helped me write how to articles and Information Books that you will find on my website Discount E Books <http://www.discount-ebook-s.com/>

I have had a Camera in my Hand since 1965 Gone pro In 1999

Took the course from ICS in Photography

I am now at a point in life I would like to share my knowledge with the world and the best way I know how is by Print either electronically or Hard copy paper.

David Wright

Electronic service technician

Professional Photographer

Experience writer