



Darran Leal's KISS PHOTO TIPS

1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

A series of quick tips to help you improve your photography and inspire you to better results.



WORLD
PHOTO
ADVENTURES

E: julia@worldadventures.com.au
W: worldphotoadventures.com.au

© Darran Leal 2023



W: snaphappytv.com



1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

Darran has been offering KISS (Keep It Simple Shooter) tips & techniques since 1981. Note that the following information is general in nature due to the many different cameras available and situations to shoot. If you have difficulty with the suggestions, your camera setup might require a slightly different approach. Use this information as a guide only. Joining Darran and the WPA team in the field will offer you an ultimate photo education experience.

HOW TO: GET SHARP RESULTS AND FREEZE MOTION

The starting point for most of our photography interests is to achieve a sharp result. However, this does not always occur. Why is this so?

In theory, sharp results are easier to achieve today than just a few years ago as we can now increase our ISO, this helping to optimise a faster shutter speed. However, shutter speed is not the only answer. Read on to understand the base principles required and how to solve problems.

1. OPTIMAL SHUTTER SPEED

Ensuring the best shutter speed for the situation is crucial to achieving a sharp result and it is especially true to freezing motion. Increasing ISO can help, but be cautious of introducing too much noise. That said, we now have Denoise available, which will be covered later.

As a default, I often aim for at least 1/125th of a second when I or the subject is not moving. Hence I often shoot landscapes at f11 and the shutter speed might be 1/125th of a second. That works for me, but if you have a shaky hand, then use 1/250th as your approximate default. Once one facet of the formula is moving, then I will very quickly increase to at least 1/500th of a second. Of course, it all depends on the light available. This guideline helps prevent motion blur when either you or your subject are moving.

MATCHING SHUTTER SPEED TO FOCAL LENGTH: This is an old text book way of using minimum shutter speeds for hand held shooting. Use a shutter speed at least equal to the focal length of your lens. For example, with a 100mm lens, use a minimum of 1/125th of a second. For a 400mm lens, aim for a minimum of 1/500th of a second. These are a good minimum, but I often aim for faster shutter speeds and occasionally, on purpose slower shutter speeds. Check your results over time and you will see what works and what fails. TIP: I would prefer my shutter to be a little faster, than slower.

IMAGES BELOW

A crocodile not moving and you are not moving is easy to photograph at a shutter speed from 1/125th of a second. However, because it might move as in the example right, with the crocodile sliding in the mud, or because you want to limit the DOF, you will often photograph such a subject at 1/1000th of a second. Remember it is better to be a bit faster with your shutter speeds than too slow.





1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

FAST SHUTTER SPEED FOR ACTION: Aim for a minimum shutter speed of 1/1000th of a second when capturing most action subjects. Adjust as needed based on the speed of both you and the subject. For example your subject is not moving fast, but you are in a fast boat, you will need a fast shutter speed. Or visa versa. Any movement can cause blur, if the shutter speed is slow. Consider even using a faster shutter speed, like 1/2000th of a second or higher, for better success rates with birds in flight or racing cars. But as your shutter speed goes up, you will either need to open up your aperture or increase your ISO. These three points are linked and key to your success.

2. I HAVE TWO FAVOURITE CAMERA SETTINGS TO FREEZE MOVEMENT

1. **APERTURE PRIORITY:** Is my old default method of controlling my settings for a sharp result. It is easy on a sunny day - I open the aperture up to f5.6, ISO to 400, sometimes 800 and I will get at least 1/1000th of a second. This method has no complications and I only need to watch my shutter speed if the light changes. If it drops due to cloud cover for example, I increase my ISO to 800, 1600 or more.

2. **MANUAL MODE:** A more modern method that suits use with Mirrorless cameras in particular, is to use Manual Mode, 1/2000th of a second, f5.6 or f8 and Auto ISO. This works fine in good conditions but will need care in lower light. My camera is setup with a Custom Function Button (1). This setting automatically alters the ISO and even the shutter speed as the light gets lower. This optimises the quality of my results.

So when photographing birds in good lighting conditions, I can be f8 1/2000th of a second at 400ISO. In low light I can be f5.6 1/500th of a second at 10000ISO. (Yes ten thousand and even 20000!) I try not to use this, but with Denoise, I can still get a great result. This new technical feature with better sensor and Denoise, has opened up amazing new bird photography for me. I can not recommend it highly enough also for smaller sensor cameras like Olympus and Panasonic. Don't be scared to increase your ISO! Each camera brand handles this a bit differently.

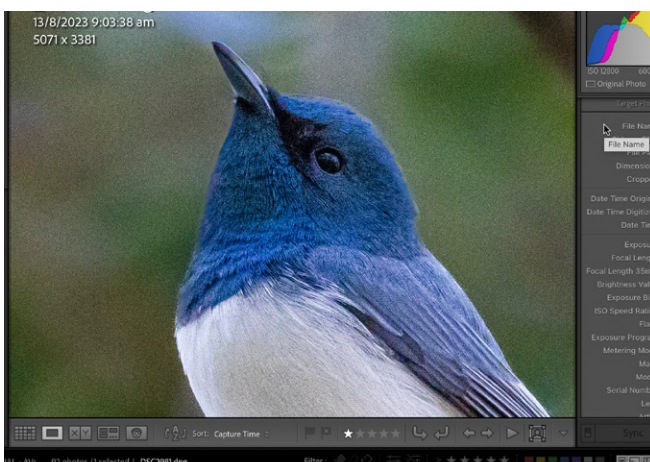
3. OTHER TOOLS

A: BUILT-IN IMAGE STABILIZATION: Some lenses and camera bodies have built-in image stabilization mechanisms. These can help compensate for small movements, allowing for sharper images, especially in low-light situations.

B: USE A TRIPOD OR STABILIZATION EQUIPMENT: In situations where a slow shutter speed is necessary, using a tripod or other stabilizing equipment can eliminate camera shake and ensure sharpness.

IMAGES BELOW

The image left is the original RAW file. Note the noise (grain). It was shot at 12800ISO 600mm f8 1/1250th of a second. The image right is the same file, but I have used Denoise in Adobe Lighroom Classic. Now I am shooting faster shutter speeds, plus higher ISO and using my camera gear in a different way, this to maximise achieving regular sharp results. It has changed my photography!





1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

C: DENOISE AI: This is a fantastic feature! I use Adobe Lightroom Classic so that I can look at, sort, and process my images. At the end of an adventure, my images are sorted and ready to use, no matter where I am in the world. Denoise AI (Artificial Intelligence) allows me to shoot very high ISO and in seconds, take out the excess grain and sharpen up the image. I now take photographs that I never thought possible before. Rainforest birds that are rare and difficult to capture is just one example. It is a must understand, and must use modern tool. Note that I only use Denoise on high ISO images. Not with every image I shoot.

D: 100ISO IS DEAD: For most of the history of photography, we have been limited to 100ISO or slower, to achieve the best quality results with no or limited Noise. (Grain) This is no longer the case! Don't listen to YouTubers who say otherwise. Try higher ISO and see the results yourself. With today's great sensors and software like Adobe Lightroom Classic, (Denoise) you will be amazed at the quality offered from 3200, 6400 and even higher. I now use higher ISO as a tool to achieve images I once thought not possible.

4. FOCUSING

Accurate focusing is paramount for sharp results. Make sure to focus on the key point you want to be sharp. This may require different autofocus settings or occasionally manual focus to ensure precision. Today, I use two focus point techniques.

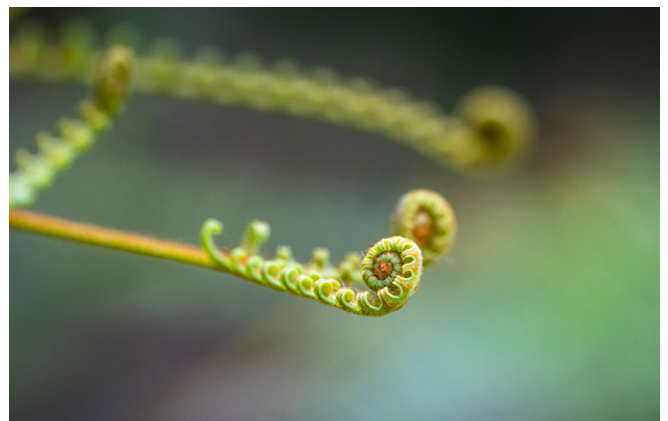
A: AI WIDE SCREEN FOCUS POINTS AND CONTINUOUS FOCUSING: My camera offers hundreds of focus points, these covering most of my viewing screen. I have my AI tracking turned on to target subjects. This is outstanding as a default setting. All I need to check is that it is correctly targeting my key focus point. I use Custom Button Settings to target Birds, Animals etc. This will vary a little from camera to camera.

B: SINGLE FOCUS POINT FOR DIFFICULT SHOTS: As above, this will vary a little with each camera. I use mine for subjects like birds in grass, shooting people with facets out of focus like pillars in a temple. I use it anytime I need a fine tuned focusing result that has added complications that will not allow a broader focus area to target.

My Sony camera (and I know most others are similar) has seen a major improvement of this technical aspect of photography for me. I can use my Custom Button 1 setting which is set up for birds. It offers wide screen, hundreds of focus points for most of my shooting (AI focusing) and with one click of another button, toggle through to a one point centre bias focus option. My eye does not leave the viewfinder. This is outstanding! Take time to work out how your camera can offer similar. We help photographers with such settings at all of our tours and workshops. Some YouTubers offer good information, while others may set you back. Be careful...

IMAGES BELOW

While I mainly use AI multiple focus points (most cameras now offer hundreds of points), I like to be able to quickly jump to one focus point. The image left is one focus point on the bee and f11 to offer more DOF. The image right is less DOF (f7.1) and a single point on the leading fern frond. My camera is setup that the same setting for birds, will quickly adapt to also work for other shoot scenarios. So I can go from birds to macro in seconds. Learn how to set this up in your camera. It will be a game changer!





1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

5. CONSIDER DEPTH OF FIELD (DOF)

Understanding how aperture affects DOF is important. A wider aperture (smaller f-number) creates a shallower DOF, which can be used creatively but requires precise focusing. A narrower aperture (larger f-number) increases DOF, making it easier to achieve overall sharpness. Negative to the latter is that as you increase your DOF, you lower your shutter speed. This can be fixed by increasing your ISO. At some point it all has limitations.

I often hear, but I want all of the bird sharp, from wing tip to eye. Technically the only way this is possible is to close down your aperture to say f11 or even f16, shoot the bird small in frame (200mm rather than 500mm) and you will achieve the result. However, your final image will most likely be shot at high ISO and will need a lot of cropping, which means limited use to limited information. This is changing as we speak with new Enhancement AI technology. Personally, I would shoot at the 500mm end to get best magnification and not worry about 'everything in focus'. Artistic license...

6. STEADY HAND AND CORRECT HOLDING TECHNIQUE

Ensure you hold the camera steadily and correctly. Use your left hand as a "human tripod" to support the weight of the camera and lens. Stand a little side on and have some flexibility in your knees. Squeeze off the trigger. I am always surprised at how many photographers do not shoot with good basic handling techniques. You might consider leaning against a tree, or down on one knee, use your other knee as your tripod. I go down to very slow shutter speeds with this technique. I will even have a go at 1 second! However, take several shots to back yourself up. Remember, if you or your subject is not moving, then shutter speeds become less specific.

7. LENS QUALITY

Did you know that your old lens might not be able to resolve the sharpness you are trying to achieve, especially if you have bought a new large Mega Pixel camera? This can cause softer looking results. This is easy to solve by investing in modern, high-quality lenses compatible with the new camera. Often, you will immediately see a noticeable difference in image sharpness.

Another point to lens quality is that more expensive lenses generally produce sharper images, when used correctly. That is a key reason for the extra cost. Also they are often faster, meaning they allow in more light. So a general quality lens might be f5.6 at its maximum aperture, compared to f2.8 for the more expensive lens. This helps you to achieve a faster shutter speed at a lower ISO. Cheaper or older lenses may not perform as well, especially on newer high-resolution cameras.

IMAGES BELOW

I have decades of digital files in storage. Most are very good quality, sharp and usable without much processing. It is clear that today's technology is a leap ahead of equipment even 5 years ago. I highly recommend that you do not mix the equipment, this offering you the sensor with the best lens of that era.





1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

Investing in good quality glass can significantly improve image sharpness. Yes that adaptor that the shop said would allow you to use your old lenses on the new camera is in fact defeating most of the reason you wanted the new technology. That is, to achieve sharper and better results.

Another example is the Sony 200-600mm lens. I have owned several \$15,000 prime 500 & 600mm lenses over the years. They are sharp and beautiful. However, they limit you to shoot to the one angle of field offered. They are also heavier and far more expensive. While not as perfect as the prime lens, at under \$3,000, the Sony 200-600mm that I use is outstanding for quality, flexibility of angle of field due to the zoom feature and it is lighter in weight. As we can now increase our ISO, I also shoot more often at f8, this offering the best optical performance of the lens.

8. WHEN ACTION IS INVOLVED

Have your camera settings and focus points configured in advance of the action opportunity. I use camera Custom Settings. Custom 1 is for birds and action. Custom 2 is for landscapes. Custom 3 is for people. I can be on any setting and with one quick change, I am ready to get that great new image with settings bias to the subject.

Different types of action may require adjustments to the default settings. So Custom 1 is set to Auto ISO, Manual Mode, 1/2000th of a second at f8 with AI bird tracking. I know how to change this very quickly to animals, or drop my shutter speed for lower light. Another example is extremely fast action, like racing cars, may necessitate even faster shutter speeds like 1/4000th of a second. Suggestion: on your deck at home, learn how to adjust these settings quickly. You will thank yourself in future.

IMAGES BELOW

The image left shows the Modes available and the Custom numbers 1-3. I use the Custom numbers to customise settings to targeted subjects. The Image right shows how I hold my camera with the Sony 200-600mm lens. This is my rest mode, waiting for the action. In this case it was an eagle, so I use Custom 1 which was set to 1/2000th of a second, f8, auto ISO and continuous focusing.





1 - HOW TO: GET SHARP RESULTS & FREEZE MOTION

9. A FEW MORE GREAT TIPS

A: USE BURST MODE WISELY: Burst mode (motor drive) allows you to capture a rapid sequence of shots. However, be mindful of storage capacity and sorting through a large number of images during post-processing. This is where a fast card is important! You want at least 300mb per second speed. I use 700mb or faster.

B: EXTRA SHOTS: When using slower shutter speeds, it's a good practice to capture multiple frames of the same scene. Don't be scared to take extra images. This increases the chances of obtaining a sharp result, especially if there are slight movements during the exposure.

C: PRACTISE AND FAMILIARITY: Practise tracking moving subjects and shooting at high speeds to become more proficient in capturing action shots. Familiarity with your camera's settings and auto focus system is key.

D: GAIN EXPERIENCE AND CONFIDENCE: As you gain experience, you'll become more comfortable experimenting with different settings, including slower shutter speeds. Practice and gradually push your boundaries to capture unique and creative shots. When applied correctly, slower shutter speeds do not mean that you can't achieve sharp results.

E: SHOOT IN RAW: Shooting in RAW format allows for greater flexibility in post-processing, including sharpening adjustments. It retains more information than JPEG, which can be helpful in achieving sharp results. I shoot RAW and convert to DNG when importing the files.

F: POST-PROCESSING: Use post-processing software to fine-tune sharpness. Be careful not to over-sharpen, as it can introduce artifacts.

FINALLY

In Botswana, shooting Skimmers (a bird) is a special experience. On one trip, I used a Nikon outfit with the Nikon 200-400mm and 400ISO f5.6. Another trip I used a Canon with its 200-400mm lens. I used aperture priority for both shoots, with the results being very similar considering the time apart, 10 years. The point is, brand of equipment is irrelevant - it's the technique.

Some might say, why not use Shutter Priority? This works fine, but has complications if the light drops. You will start to get underexposed results. Once your lens is at its widest aperture, it is offering the fastest shutter speed available for the ISO setting. That is why I prefer Aperture Priority. I use Shutter Priority for creative blur shoots.

Finally, in the old days we regularly used a tool to help freeze subjects and use a slower shutter speed - FLASH PHOTOGRAPHY. Your camera might be set to 1/125th of a second, yet a flash unit can send out light for shorter durations like 1/10,000th of a second or faster. This can freeze water droplets and allow you to capture difficult, super fast subjects. I love using flash for some specialised subjects. Today, I also like to increase my ISO, so that my shutter speed is high. What ever techniques you use, keep it simple, be passionate and you will be rewarded with great results.

More of these tips will be added from time to time. Please check our website. Another great option is to download my eBook - it's FREE and loaded with more than 100 pages of information to help you shoot great images. It is fantastic on your phone, as a quick reference, or a motivational guide.

Enjoy... *Darran*

