Nikon Z 7 / Z 6 Experience

The Still Photography Guide to Operation and Image Creation with the Nikon Z 7 and Nikon Z 6

an e-book by:
Douglas J. Klostermann

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PREVIEW of

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Cover design and photograph by the author. All photographs by the author, with the exception of select *AI/ Non-AI lens* photographs by Andrew Martin of www.smallcirclestudio.com

Special thanks to **Newtonville Camera** of Waltham, Mass.
https://newtonville.camera

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PDF Version 1.0 - ***PREVIEW***
December 2018

Published by Full Stop Media. *good writing for better photography*
Arlington, Massachusetts, USA
www.fullstopbooks.com

Author's website: www.dojoklo.com
Author's blog: http://blog.dojoklo.com/
Facebook: https://www.facebook.com/FullStopDSLRGuides/

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1. INTRODUCTION to the Z 7 and Z 6

After several years of speculation and anticipation, Nikon has introduced their first full-frame mirrorless cameras, the Nikon Z 7 and the Nikon Z 6. While both make use of a backside-illuminated CMOS sensor, the Z 7 is a higher-resolution model boasting 45.7 megapixels, and the Z 6 is a 24.5 megapixel model. The two cameras share most of the same controls, features, and menu options, though there are some important differences in addition to the sensor resolution including the ISO range, continuous frame rates, and image buffer size. And while they both have hybrid autofocus systems, which make use of phase-detection AF and contrast-detection AF, the autofocus system of the Z 7 has 493 AF points, while the Z 6 has 273 AF points. With the AF points spread widely across nearly the entire frame, both cameras will allow you to focus on and track subjects and faces throughout most of the scene.

Figure 1.1 - Detail of the Nikon Z 7 full-frame mirrorless camera, with the 24-70 f/4 S lens.

Both models offer great image quality at high ISO settings for low-light shooting, with the native ISO range of the Z 7 at 64 - 25,600, and the native ISO range of the Z 6 at 100 - 51,200. Both are expandable to slightly lower, and much higher ISO settings, up to 102,400 (Z 7) and 204,800 (Z 6). Both models offer in-camera 5-axis image stabilization for Z-mount lenses, which can be enabled for both stills and video shooting. (Plus 3-axis image stabilization is available with F-mount lenses attached via the FTZ Adapter.) And they both make use of the Expeed 6 processor, which enables new

features such as a mid-range sharpening Picture Control option, diffraction compensation ideal for use with small apertures in landscape shooting, new Creative Picture Controls, and in-camera batch RAW processing.

The Z 7 and the Z 6 both offer fast continuous shooting for capturing bursts of images in action situations. The Z 7 is capable of up to 9 frames per second (fps), while the Z 6 boasts a faster 12 frames per second. However, in order to capture 14-bit RAW images, with focus and exposure updated for each image in the burst, the maximum frame rate of both cameras is about 5.5 fps. Depending on the RAW bit-rate and compression settings, the bursts can be maintained for up to 23 images for the Z 7, and 43 images for the Z 6. And a Silent Photography mode will allow you to shoot in sensitive situations, with no shutter sounds and no wear on the mechanical shutter. A new Focus Shift Shooting mode allows you to automatically shoot up to 300 images of a scene at varying focus distances, which can be combined into a focus-stacked image, using optional software.

Figure 1.2 - Detail of Fallen Birch Tree - Whipple Hill, Lexington, Mass. Nikon Z 7, Shutter speed 1/200, Aperture f/4.0, ISO 2200.

Most of the camera controls and the touch screens of these mirrorless models are similar to what you may be used to with a Nikon dSLR. The Sub-Selector joystick is used to quickly select the desired autofocus point while shooting, and can be used as a focus lock and exposure lock button when pressed straight in. It can even be customized to perform functions such as temporarily switching to a different Metering

Mode during shooting. The touch screen can be used for menu selection, image playback, as well as for adjusting exposure settings, autofocusing, and shutter release. And the 3.2" high-resolution (2100K dot) rear monitor tilts to assist shooting from unique high and low vantage points. The inclusion of the i Button, now standard on current Nikon models, allows photographers to quickly access mode-specific settings, whether shooting through the viewfinder, working on the rear monitor, in movie mode, or during image playback.

The electronic viewfinder of mirrorless cameras differs from the optical viewfinder of a dSLR. The high-resolution (3690K dot) OLED viewfinder, with 100% coverage, will enable you to preview the exposure, white balance, Picture Control settings, and depth of field of the final image, as you shoot, as well as make use of a virtual horizon to keep your images level. You can also make use of the customizable i Menu in the viewfinder, so that you can change numerous camera settings without taking the camera from your eye. And you can utilize focus peaking and scene-magnification in the viewfinder, as well as the electronic Rangefinder function, to assist with manual focusing.

Filmmakers will be able to take advantage of the numerous video improvements, including 4K Ultra High Definition (UHD) video in addition to Full HD frame rates and sizes, with the 4K UHD video making use of the entire width of the sensor. The Z 7 offers full-pixel readout in the DX image area, and the Z 6 offers full-pixel readout in the FX image area. Plus the Z 7 and Z 6 include focus peaking for manual focusing, 5-axis sensor-based *Vibration Reduction* with Z-mount lenses, plus *Electronic Vibration Reduction* for additional stabilization. The cameras offer uncompressed 10-bit output to an optional external recorder via the HDMI terminal (or simultaneous 8-bit output to the memory card plus external recorder). The 10-bit N-Log gamma output option will capture a wide dynamic range when recording to an optional external device, with View Assist to help visualize the final, processed footage. Audio features include built-in stereo microphones with selectable frequency ranges and a new attenuation option. The *Flat* Picture Style is designed to retain shadows and highlights for post-production, and *Highlight Display* “zebra stripes” can be enabled for displaying overexposed areas of the scene when viewed on the camera’s Monitor. The *Power Aperture* feature will allow cinematographers to smoothly change the aperture size while recording to either an external device or to the memory card. The Z 7 and Z 6 also offer slow-motion video options as well as 4K Time-Lapse Movie shooting. The Z 7 is capable of 8K time-lapse video by using the Interval Timer feature to capture still images that will be combined into an 8K time-lapse using optional software.

The Z 7 and Z 6 cameras introduce a new lens mount, the Z-mount. Three new Z-mount lenses are initially available, as well as an F to Z (FTZ) adaptor which enables you to use many of your F-mount Nikkor lenses. The new, wider Z-mount will allow for future lenses with extremely wide maximum apertures. In addition, the Z 7 and Z 6 include an XQD memory card slot, a ruggedly built, weather-sealed magnesium alloy body, Wi-Fi and Bluetooth capabilities through Nikon’s SnapBridge app, and numerous customization options.

The high-resolution image sensors of these cameras, along with their highly versatile and customizable autofocus systems, on-sensor exposure metering with scene recognition and face detection, and fast continuous frame rates will serve the needs of dedicated photographers of every level, from enthusiasts to professionals. The advanced features and customizable controls of the Nikon Z 7 and Z 6 will enable photographers to consistently capture sharp, clean, and well-exposed images in a wide range of shooting situations.

Figure 1.3 - Autumn Leaves, Concord, Mass. - Focus Modes, exposure metering mode, aperture, shutter speed, ISO, and white balance all considered, even in creating this simple image. Nikon Z 7, Shutter speed 1/640, Aperture f/4.0, ISO 100.

But the Z 7 and Z 6 are merely tools. It is up to you to make use of their features and capabilities to create the images you envision. While the camera manuals can tell you about all the settings and controls, how to change them, and their intended functions, this guide will build upon that and explain when and why you may wish to use them. All of the buttons, dials, menu items, and Custom Settings of the Z 7 and Z 6 are there for a reason: to help you consistently capture the images you want. Some of them are more useful to different types of photographers and shooting situations, and you don't necessarily need to learn and use them all immediately, but this guide will help to give you the knowledge to confidently use the features that turn your Nikon Z 7 or Z 6 into an image capturing tool that works best for you.

1.1 Take Control of Your Camera

Since the camera is a tool to take the images you want to take, you obviously can't always allow the camera to make decisions for you. You have to take control of the camera to ensure that you capture exactly the images you intend - by autofocusing precisely where you intend, setting the aperture and shutter speed that you want, and obtaining the exposure you desire. While the Z 7 and Z 6 are intelligent cameras, they cannot read your mind and your intentions and do not know that you wish to focus on and properly expose the autumn leaves in the foreground, while making the background appear out of focus, and the leaves to be caught still and not be blurred from the motion of the wind, on a bright, sunny day (see *Figure 1.3*).

You have to tell the camera to do all of this, through the various controls and settings, such as the Focus Mode and AF-Area Mode (lock focus on the desired leaves), the exposure metering mode (properly expose the leaves and the scene), the aperture setting (the out-of-focus background), the shutter speed (freezing the motion of the leaves from the wind), the ISO (bright day) and the white balance (sunny day). Taking control of all of these functions and settings will enable you to consistently create the dramatic and compelling images you envision.

Learning to use and get the most out of an advanced digital camera like the Z 7 or the Z 6 takes time, practice, patience, mistakes, and experimentation. If you are used to working with a dSLR, there will be some adjustments to using a mirrorless camera, including the electronic viewfinder and the autofocus system. However, you may find that these differences can help you to successfully capture scenes and situations that you may have been limited in consistently attaining before. The sophisticated and accurate autofocus systems of the two cameras, coupled with their fast continuous shooting speed, plus their exposure metering system and high ISO capabilities will help you get sharp images of subjects and moments that previously you may have missed.

If you are still in the process of learning all the controls of your camera and the exposure concepts of digital photography, you have perhaps jumped into the proverbial deep end of the pool by choosing the advanced Z 7 or Z 6! But don't worry, this book will help guide you through their features, controls, and capabilities. Be sure to take it slowly and patiently as you learn the features and concepts that I will explain. With practice and experience you will soon be shooting with confidence and can begin to take advantage of your camera's more advanced functions. Even if you are an intermediate or experienced photographer, don't expect to just pick up all the new information at once, in one reading of a single book. (In fact, you wouldn't want to, as the never ending journey of learning and mastering photography is a big part of what it's all about!) Try not to become frustrated if you don't quite understand something or aren't always getting the results you desire. Instead learn the controls, functions, settings, and concepts bit by bit, try them out in real life shooting situations, and return to this guide, the *Nikon Z 7 / Z 6 Reference Manual,* and other photography books to address questions and problems you encounter. Continue to learn and to photograph often and

it should all begin to come together, sometimes slowly and sometimes in rapid bursts of discovery and understanding.

Figure 1.4 - Detail of Volkswagen Beetle - Transporterfest, Larz Anderson Auto Museum, Brookline, Mass. Nikon Z 7, Shutter speed 1/125, Aperture f/5.6, ISO 100.

1.2 Using This Guide

There are many different ways to use an advanced digital camera and its controls to capture images, and many diverse situations in which photographers work. I'm going to concentrate on the techniques that I believe are the most practical, useful, and effective for the majority of enthusiast and advanced photographers using the Z 7 or Z 6, while also explaining how settings can apply to specialized uses. The settings and techniques I discuss can apply to various types of photography including general photography, action, wildlife, portrait, and travel photography. Once you have a firm grasp of the controls, settings, and basic techniques you will have the tools and knowledge to address different issues, specific situations, and challenging scenes. I encourage you to then experiment and continue to learn, and to find the techniques that work best and are most comfortable or intuitive for you.

The Z 7 and Z 6 are highly sophisticated tools that deserve to be used to their full potential, and that involves taking control of your camera and its numerous functions. While this may be challenging at first, these are the techniques that are necessary to take full advantage of the capabilities of any camera including the Z 7 or Z 6, and will

3. MENUS and CUSTOM SETTINGS

3.1 Setting Up the Z 7 and Z 6

The Menus and Custom Settings of the Nikon Z 7 and the Z 6 allow you to have greater, more precise control over how your camera functions. They are an important part of what make the Z 7 and Z 6 much more powerful and exacting tools than mid-level cameras, and they allow you to customize the camera to work for you, to work how *you* work. Using them you can also fine-tune settings and operations including white balance, metering, exposure, and autofocusing. I highly recommend that you carefully go through these menus and change the settings to the options that allow you to use the camera in the manner that works best for you and your shooting needs.

Some of the Menu items are only used when shooting, reviewing, or processing images, but several of them should be set up in advance. Below are explanations and suggested settings for the Menus and Custom Settings of the Nikon Z 7 and the Z 6. I realize that reading this section at the beginning of this book presents a conflicting situation in that these menu items need to be explained first so that you can initially set up your camera, but you may not yet have the knowledge to fully understand all these menu items until you read through the rest of this guide! So don't get overwhelmed if you don't yet understand the settings or terminology used to describe the Menu and Custom Settings and their options. You will likely wish to return to them later after you have begun to better understand your camera and its controls and start to determine how you want to work.

And I understand that it is not as compelling to read through these lists of menu items as it is to read the more-flowing instructional text later in the book. But you will begin to learn much about the Z 7 and Z 6 as you patiently work through this Menus and Custom Settings chapter. As I mentioned in the **Introduction**, this section will often refer to upcoming chapters and sections, but it is not necessary for you to jump ahead. This is merely a "heads-up" that the menu item or function that you are currently setting up will be explained in detail later in the guide, in the applicable section of the text (such as **Autofocusing** or **Metering Modes**, etc.).

Also, if you don't yet understand some of the settings or why you might wish to change them, leave those on the default or recommended settings for now. If you have worked with a Nikon D500, D850, D750, D610, or D7500 body (or their recent predecessors) before using the Z 7 and Z 6, you will find that several of these Menus and Custom Settings options are similar, and you may wish to continue to use most of the same settings that you have determined work best for you. However there are many new additions, functions, and options with the Z 7 and the Z 6, and some items have moved to different menus. Note that the time and date will need to be set in the Setup Menu (*Time Zone and Date*) in order to access certain menu items, such as Time-Lapse Movie and Focus Shift Shooting.

3.3 Playback Menu

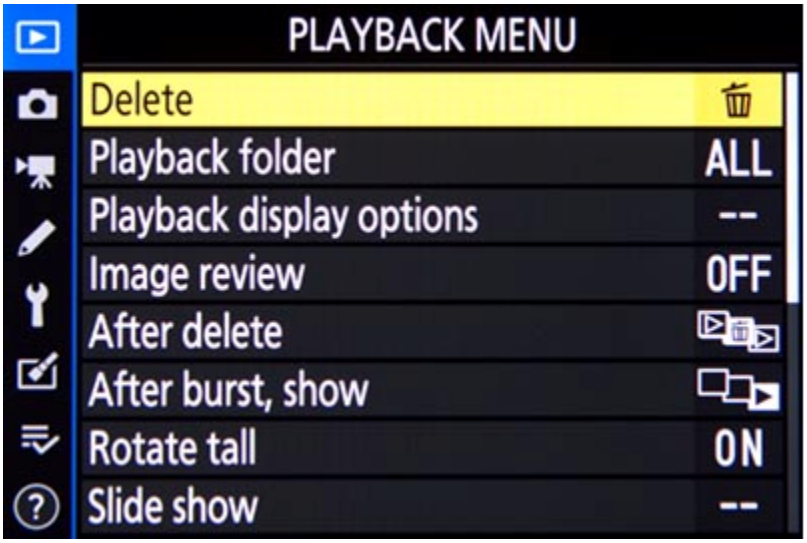

Figure 3.1 - Playback Menu

Delete
Use this to delete a single image or selected number of images (*Selected*), all images taken on a selected date (*Select date*), or all images in the current playback folder on the selected memory card (*All*), (see *Figure 3.2*). If selecting images, use the Multi Selector to navigate to the desired image, and press the Zoom-out Button to select it. You can continue to select multiple images, then press the OK Button to delete.

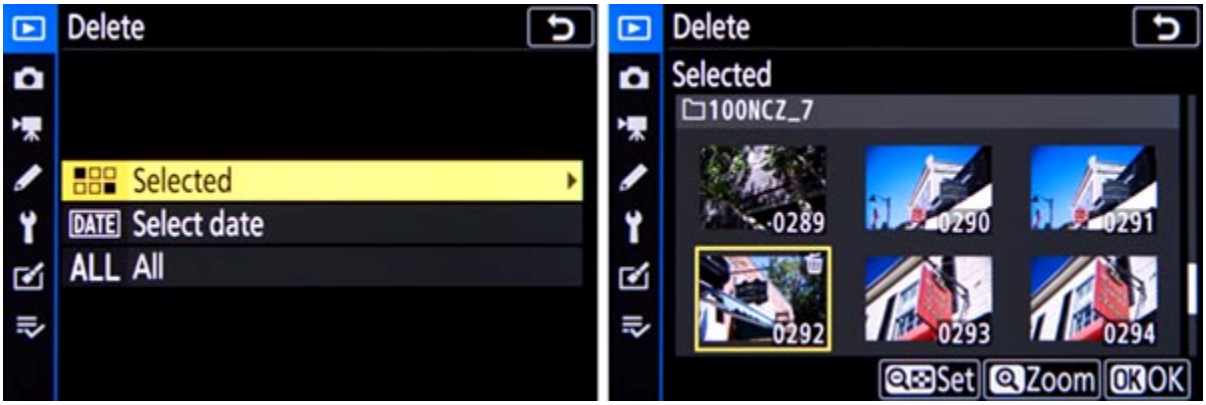

Figure 3.2 - Delete menu item (left), used to delete Selected images (right), images taken on a Select Date, or All images in the current folder. Notice the trash can icon on the thumbnail, which indicates the image is selected for deletion.

However, if you are deleting a single image or just a few, you can more easily do this using the Delete Button on the rear of the camera. If you are deleting all the images on a card, it is better to use *Format Memory Card* (explained in the Setup Menu below). Use a large enough memory card so that you don't need to worry about deleting images in camera while working, and instead it may be best to manage them on your computer after downloading all the images.

Please know that many of the “secondary” types of button uses for menus and on-screen settings don’t need to be learned or memorized, as the camera will often display tiny icon reminders on the applicable menu or screen. For example in *Figure 3.2 - right,* the icons at the bottom of the screen indicate that pressing the Zoom-out Button will mark the image for deletion, pressing the Zoom-in Button will magnify the selected thumbnail for a closer look, and the OK Button will complete the operation.

Playback Folder

This sets which images will be visible during Playback (see *Figure 3.3 - left*). Leave at the default setting (NCZ_7 or NCZ_6), and all the images taken with the camera will be visible. If you are sharing memory cards between different cameras (which is not at all recommended as it may lead to file management confusion) then you can select *All*. However, this *All* setting can help prevent you from formatting a card that may have images from another camera still on it. If you just wish to view only the images in the current folder, select *Current*. You can select and create individual folders for organizing your photos in the *Storage Folder* item in the Photo Shooting Menu. Most users will likely wish to leave this set for the default, or for *All* if sharing cards between cameras.

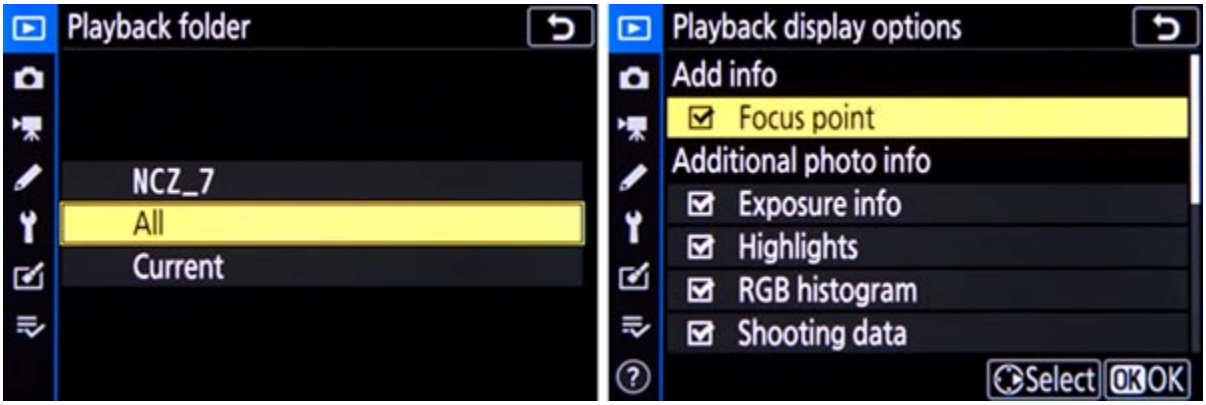

Figure 3.3 - Left: Playback Folder options, to determine which images are visible during image playback. Right: Playback Display Options, allowing you to select which information and displays are available to view during image playback.

Playback Display Options

During image playback on the rear Monitor you can cycle through various information displays in order to view your images either full screen or with various shooting data or histograms. This menu item is used to select which of these views will be available during playback (see *Figure 3.3 - right*). I recommend that you select all of the *Additional photo info* options, at least initially. Then after some use you can determine which information views you prefer and deselect the ones you don’t need. You will view the various displays during image playback by pressing up or down on the Multi Selector. These will all be illustrated in the **Image Playback** section of Chapter 4.

Exposure Info will display a full screen image with the exposure settings. *Highlights* will display blinking areas to alert you of where the image has been overexposed, which can

help you determine the proper exposure for the subsequent shots. *RGB histogram* will display histogram graphs of the various individual color channels to also assist you in determining proper exposure and help prevent the over-saturation of areas of specific colors. *Shooting data* will show additional information including the lens and focal length used, flash information, and Picture Control settings. This screen is not necessarily very informative immediately after taking the shot since you already know most of these settings, but can be helpful when later reviewing an image in-camera. *Overview* displays a thumbnail of the image along with the combined RGB histogram and shooting information (see *Figure 3.4*). This is perhaps the most important and useful information screen to use while shooting to help determine that you obtained the proper or desired exposure of an image. The *None* option will display just the image, full screen and without any shooting information, so that you can better view and inspect it. All the different elements of displayed information in these various information screens will be discussed and explained throughout the guide, particularly in the **Exposure** chapters and in the **Histogram** section.

Figure 3.4 - The Overview information display screen during image playback, showing a thumbnail of the image, the combined RGB Histogram, and shooting and file information.

The first item on the menu, *Focus point,* will show you which focus point was used when capturing an image, and will thus verify if you properly focused where you intended (unless you recomposed after locking focus). It is that tiny red square or squares superimposed on your image when you view it on the rear Monitor, but will not be on the actual image (see *Figure 3.5*). It is most helpful for when you let the camera select the autofocus point, such as in action situations, and/ or when using an AF-Area Mode other than Single Point AF - and then you can see if the camera focused where you wished.

Figure 3.5 - File information view during image playback, with focus point display enabled to show which focus point was used for autofocusing with this shot, indicated by the tiny red square located on the turn-signal lamp near the center of the image.

Keep in mind that if you selected a focus point, locked focus, and then recomposed the image before taking the shot, the image on your rear LCD will display which AF Point was used, but the displayed focus point will not actually be located in the same place on the image that the camera focused (before you recomposed), so it won't actually be helpful! This will be explained in the **Autofocusing** chapter of this text.

Image Review

Use this to set whether or not your images are immediately displayed in the electronic Viewfinder and / or on the rear Monitor after capturing them (see *Figure 3.6 - left*). If you typically review each image after taking it, turn this *On*. The electronic Viewfinder of the Z 7 and Z 6 enables review and playback images to be viewed in the Viewfinder, so that you can examine them without taking the camera from your eye. However, if you only want the Image Review images to appear on the rear Monitor and not in the Viewfinder, select *On (Monitor only)*. Then when you are making use of Live View shooting on the rear Monitor, you will view the image immediately after capture. However, if you are shooting through the Viewfinder and keep the camera to your eye, the image review will not appear on either display, and you can continue shooting. If you don't wish to review every image, turn it *Off* to help prolong the battery life, then hit the Playback Button when you wish to review an image in the Viewfinder or on the Monitor. You will adjust how long the images are displayed during image review in Custom Setting c3 - *Power off delay*.

Note that if you turn this on, the image will of course be immediately displayed in the Viewfinder and / or on the Monitor. If you are still shooting you may start pressing the Multi Selector to begin to attempt to adjust the autofocus point for the next shot as you are still looking through the Viewfinder. But you won't be able to do this because your Multi Selector presses will be changing the image review display on the rear Monitor,

not adjusting your AF Points! So be sure to turn this menu item *Off* if you typically continue to shoot without reviewing your images, and simply press the Playback Button when you wish to look at the photos.

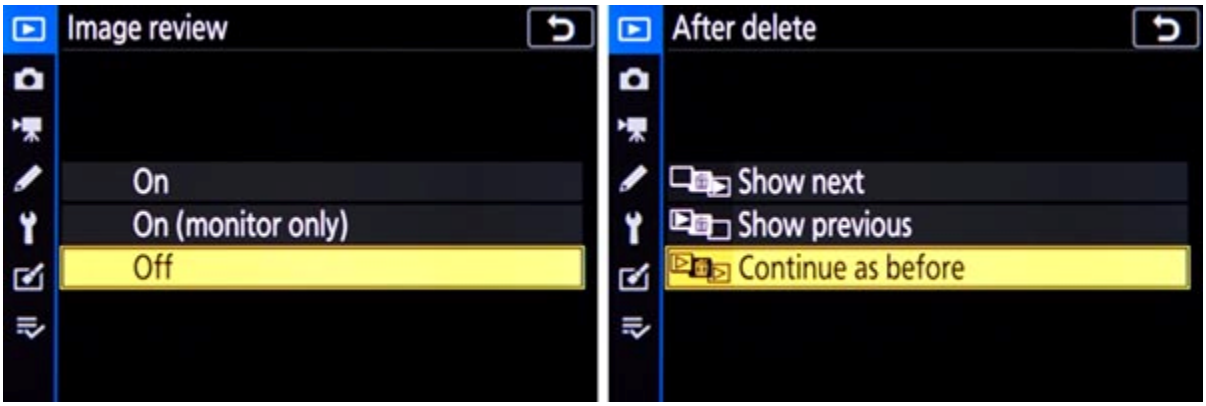

Figure 3.6 - Left: Image Review menu to enable image review in the Viewfinder and / or on the rear Monitor, immediately after capture. Right: After Delete menu item to choose which image is shown next after deleting an image during image playback.

After Delete

When reviewing photos during image playback, this menu item determines which image is shown on the rear Monitor or in the Viewfinder after an image is deleted - the next image (*Show next*), the previous image (*Show previous*), or the most intuitive option which is to set it on *Continue as before*, which will show the next or the previous image depending on which order you were just reviewing them (see *Figure 3.6 - right*).

After Burst, Show

You can take a continuous burst of images when using *Continuous High* or *Continuous Low* Release Modes. This menu item is to set which image is initially shown for image playback when the Playback Button is pressed immediately after taking a burst of continuous images. You can select to display the *First image in burst,* or the *Last image in burst* (see *Figure 3.7 - left*). This setting only functions when the *Image Review* menu item is turned *Off*. When image review is enabled, all the images in the burst will be automatically shown in succession.

Figure 3.7 (previous page) - Left: The "After Burst, Show" menu item, to set which image of a continuous burst is shown first during image playback. Right: Rotate Tall menu item for image playback, to display the images all oriented in the same direction, or to display vertically captured images "sideways" but larger.

Rotate Tall

This will automatically rotate your images to the desired orientation on the camera's rear Monitor and Viewfinder during image playback (see *Figure 3.7 - right*). Turn this *On* to view all images in the same orientation during playback. If you like seeing your vertically composed images (portrait orientation) larger but "sideways" on your rear LCD, set this to *Off* (see *Figure 3.8*). Images will only be rotated during image playback and will not be rotated during image review immediately after taking a photo, as it is assumed you are then still holding the camera in the same orientation that you just took the photo.

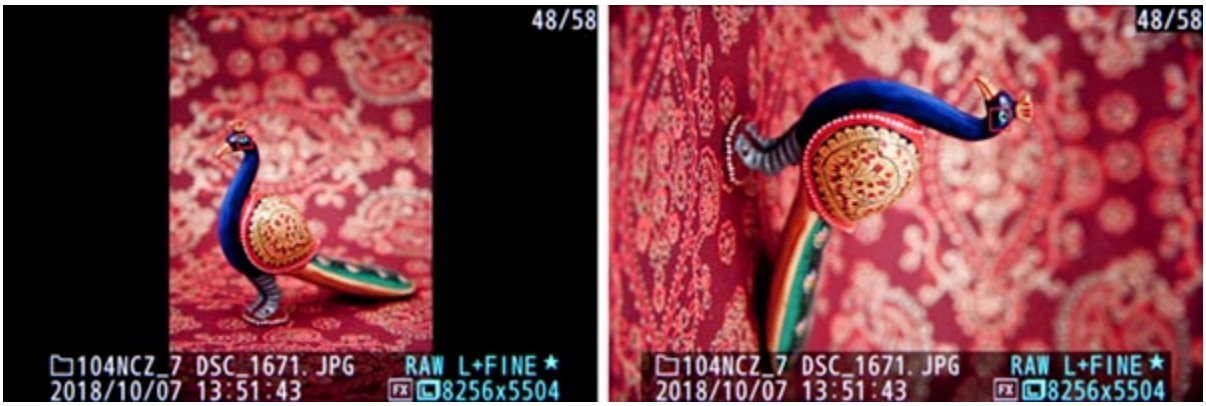

Figure 3.8 - Rotate Tall - Left: Use the Rotate Tall menu item for image playback to display your images all oriented in the same direction, by setting for "On." Right: Or display vertically captured images "sideways" but larger with setting "Off."

Slide Show

This will set up a slideshow of all the images and/ or movies in the current folder, which you can setup to watch through your TV using an HDMI cable. You can select the *Image Type* to show *Still images and movies, Still images only,* or *Movies only*. Using the *Frame interval* setting, you can select how long each image is displayed (see *Figure 3.9*). Press left or right on the Multi Selector to skip back or ahead, and press the OK Button to pause or continue the slideshow.

Figure 3.9 - Slide Show menu (left), used to select if stills and/or movies are shown, and how long each image is displayed (right).

Rating

This feature allows you to add a rating to images, in order to tag specific images for later editing. After accessing this menu (see *Figure 3.10 - left*), press right on the Multi Selector to view and then select the desired photo. When viewing the index of several images, use the Multi Selector to choose the desired image, then press up or down on the Multi Selector to select the rating (see *Figure 3.10 - right*). During this process you can press the Zoom-in Button to better view an image full-screen. Continue to rate other images, and press OK when finished. You can choose from one to five stars, or select the icon with the trash can and star to indicate an image to be deleted later, perhaps after a quick full screen review on your computer. The rating of the image will then be shown when viewing images during playback, as well as when the images are viewed on your computer. An image marked for deletion will be shown with the delete icon in ViewNX 2, and labeled as *"Reject"* in Adobe Bridge.

Figure 3.10 - After selecting the Rating menu item (left), select an image to be rated (right), and then press up or down on the Multi Selector to set the rating. Here image 0249 has been given a 3-star rating, and image 0250 has been marked for later deletion, as indicated by the trash can icon.

This Rating feature can help you begin to sort your images and thus get a head start on your image reviewing and editing before you get back to your computer. Or if you are

a - Autofocus

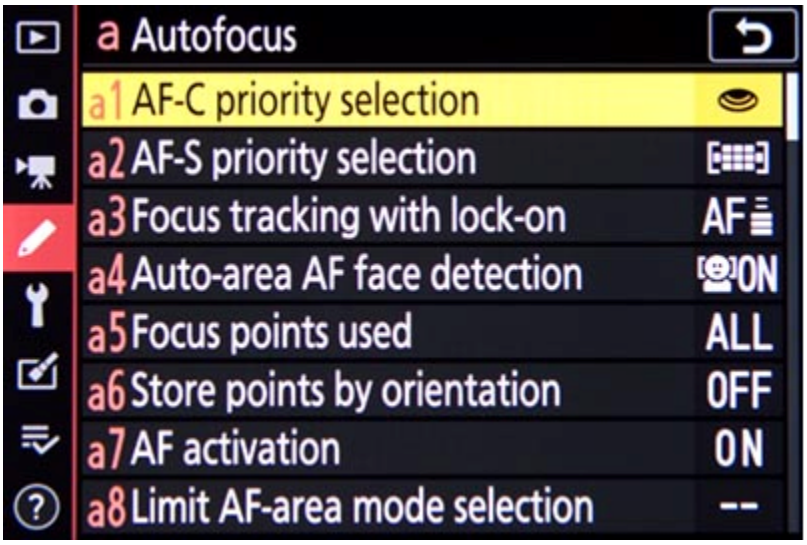

Figure 3.53 - Nikon Z 7 and Z 6 Custom Setting Menu.

a1: AF-C Priority Selection

This setting determines if attaining focus is top priority when you are working in Continuous-servo AF Mode (AF-C Focus Mode), or if you just want the shots to be taken even if exact focus is not attained for each shot (see *Figure 3.54 - left*). It is designed for when you are capturing a burst of images using a continuous Release Mode. Specifically, when you press the Shutter Button, this setting determines if the images are taken immediately (*Release*) even if the first image is not yet in focus, or if the camera waits for focus to be attained before taking the photo (*Focus*). For example, if you are tracking a moving subject such as a runner or an animal, you may wish to just capture a rapid series of shots at all costs in order to ensure getting specific moments, and exact focus of each shot may not be the priority. Or you may wish to make sure the camera has properly focused each shot before the shutter is released. This however may cause a slight (perhaps millisecond) delay for each shot and the exact moments may be missed. If capturing the images at all costs and maintaining the maximum continuous frame rate are the priorities, set for *Release*. If exact focus of every image is your priority, at the risk of missing some shots and encountering small shutter release delays, set on *Focus*.

Both Nikon as well as experienced sports and wildlife photographers suggest that this be set for *Release* for many different types of sports and action situations. Their experience shows that the autofocus system is going to be able to focus for most all of the shots in a burst, and that it is not worth interrupting the rapid frame rate for the camera to briefly pause and acquire focus. And even when the camera may not be able to confirm focus, critical areas of the subject are likely still in focus, and thus the *Release* setting can result in more “keepers.” (However, you will need to try and keep the active AF Point located on the subject as you begin and continue the burst.)

Figure 3.54 - Left: AF-C Priority Selection options, to determine if shutter release and maintaining the maximum continuous frame rate are the priorities, or if exact focus of each shot is the priority. Right: The similar AF-S Priority Selection options, for when working in AF-S Focus Mode.

a2: AF-S Priority Selection
This is similar to *AF-C Priority Selection* above, except that this setting is for when you are working in Single-servo AF Mode (AF-S Focus Mode), typically used when your subject is stationary, relatively still, or when you are not tracking a moving subject (see *Figure 3.54 - right*). Again, determine if getting the shot (*Release*) or exact focus (*Focus*) is your priority. Since AF-S Focus Mode is typically used with subjects that are not moving, it generally makes more sense to ensure focus is attained, thus you may wish to select *Focus* for this setting.

If *Focus* is selected for Custom Setting a2, then this setting coordinates with Custom Setting a7 - *AF Activation* if you have the camera set up for certain back-button focus techniques where you lock focus and recompose the framing of the shot before taking the photo using the AF-ON Button. The Custom Setting a7 options can allow you to make use of, or avoid, the “trap focus” set up. This will be explained in Custom Setting a7, and in the **Trap Focus** and the **Back-Button Focusing** sections.

a3: Focus Tracking with Lock-On
The *Blocked Shot AF Response* setting determines how the autofocus system reacts to sudden, dramatic changes in the distance of the subject when you are working in AF-C Focus Mode and have the shutter button half-pressed or fully pressed, such as when another, closer object enters the frame and blocks your original subject. The camera can be set to wait a brief period of time before refocusing at the new distance with setting *1 (Quick),* or wait a longer period of time with setting *5 (Delayed),* or steps in-between, from 1 to 5 (see *Figure 3.55 - left*).

For example, you may be tracking a football player across the field when another player much closer to you temporarily comes between you and your intended subject. This setting will determine if and how quickly the camera then focuses on this nearer player, or if it continues to focus at the original distance, as the closer player passes through your field of view. If you do not wish for the camera to suddenly change focus to the

nearer player, set to a longer period such as *4* or *5*. If you wish to switch focus to a closer or farther object, then set for a shorter period, *1* or *2*, and focus will quickly change. Keep this option in mind with the various AF-C Focus Mode and AF-Area Mode configurations (which will be discussed in the **Autofocusing** chapter), as your preference will likely vary depending on your subject and situation. This setting doesn't just apply to blocked shots, but will also affect how quickly you are able to refocus at a different distance, as you are half-pressing the shutter button to track a moving subject, or fully pressing the shutter button to take a continuous burst. Sometimes you may not want the camera to quickly refocus on a closer or more distant subject, while other times you might.

Figure 3.55 - Left: Focus Tracking With Lock-On settings - When working in AF-C Focus Mode and tracking a subject, this setting determines how long the camera waits before refocusing on a subject at a different distance. Right: Auto-Area AF Face-Detection item, to enable face-detection when using Auto-Area AF-Area Mode.

a4: Auto-Area AF Face Detection

This option applies when using the *Auto-Area AF* Area Mode, where the camera automatically selects the subject (see *Figure 3.55 - right*). When this is enabled and used with *Auto-Area AF* Area Mode and *AF-S* Focus Mode, the camera will locate a face to focus on, rather than simply locating the nearest subject or object. If multiple faces are detected, you can use the Multi Selector or touch screen to select the desired subject. With *Auto-Area AF* Area Mode and *AF-C* Focus Mode, you can choose an initial AF Area to begin tracking a moving subject, and then the camera will retain focus on the subject as it moves about the frame. When this menu option is enabled (*On*), the camera will also make use of face detection in order to automatically locate and follow a face. Again, you can select a different face if there are multiple faces in the scene. This feature can obviously be helpful if the subject you are focusing on or tracking is a person, and if their face will remain visible to the camera. The Z 7 and Z 6 will also look at the upper body of the subject, so that it can ideally continue to track the subject even if the camera momentarily loses sight of the face if it turns or is obscured.

a5: Focus Points Used

This setting determines the number of autofocus points that are available for selection on the rear Monitor or in the Viewfinder (see *Figure 3.56 - left*). If you are manually

selecting your focus point (as you typically should) you may find that it is quicker and easier, at least at first or in certain situations, to limit the number of AF Points to *Every other point*. But to take full advantage of the Z 7 and Z 6 autofocus system, you will want to make use of all of the selectable AF Points, as will be explained in the **Autofocus** chapter. If you prefer to have all the AF Points available for your selection, set this at *All*. If you set to *1/2 - Every other point,* the points available for selection will be reduced by three quarters, but all of the points will still be used by the camera in subject tracking (such as when working in AF-C Focus Mode along with one of the AF-Area Modes that uses multiple AF Points), so the camera is still potentially taking advantage of all the focus points of the autofocus system. When using *Wide-area AF (L)* Area Mode, the number of available focus points does not change.

Figure 3.56 - Left: Number of focus points, to choose if All Points are selectable, or if Every Other Point is selectable. Right: Store Points By Orientation, to choose if the camera remembers the last focus point and/or AF-Area Mode used when the camera is held in a specific orientation.

a6: Store Points by Orientation

This can be used to have a specific AF Point be automatically selected when you hold the camera in a certain orientation (see *Figure 3.56 - right*). If you set this for *Off,* the current AF Point that you have selected will remain the active AF Point when you change camera orientation, as you would generally expect. However, if you set this for *Yes,* the camera will return to the AF Point last selected when the camera was in that orientation.

So, for example, set this for *Yes,* then hold the camera in the standard orientation and select a far-right AF Point. Then position the camera vertically with the grip side up and select a far-left AF Point. When you return the camera to the standard horizontal orientation, the camera will return to the far-right point as the active AF Point. When you return the camera to the grip-up orientation, it will jump again back to the far left point.

The camera will recognize three different orientations: horizontal, vertical with the camera grip side of the camera up, and vertical with the camera grip facing down. This can be handy in situations such as when you are taking portraits and you switch between horizontal and vertical camera orientation, yet you want an AF Point at the

relative “upper-right” position to remain selected, near where you have located the model’s face.

However if you enable this option and then use your camera later and forget that you have it set this way, the AF Points will seem to be acting extremely erratic as you change camera orientation, until you remember to set this back to *Off*.

a7: AF Activation
This is used to determine which button or buttons can be used to initiate autofocusing. By default the camera is set to *Shutter/AF-ON* and thus either the Shutter Button can be half-pressed or the rear AF-ON Button can be pressed to start autofocusing. If you wish to disable the autofocusing function from the Shutter Button, set for *AF-ON only* and then you will need to press the rear AF-ON Button to focus on your subject (see *Figure 3.57 - left*). This *AF-ON only* option is used for a technique called back-button focusing, which will be explained in Section 5.6 - **Back-Button Focusing**. This technique can allow you to separate the exposure and the autofocusing functions to two different buttons, can be used to lock focus at a certain distance while you recompose slightly and take a series of photos when working in AF-S Focus Mode, or can be used to start and stop focus tracking when working in AF-C Focus Mode. It can also enable you to take advantage of a technique called trap focus, which will be explained in Section 5.7 - **Trap Focus**.

Figure 3.57 - Left: AF Activation menu, to choose if both the Shutter Button and the AF-ON Button will activate autofocus, or just the AF-ON Button. Right: If “AF-ON Only” is selected, press right to access the “Out-of-focus release” sub-menu. Typically set this for Enable, unless you wish to make use of trap focus.

If you select the *AF-ON only* option, press right to access a sub-menu which allows you to enable or disable *Out-of-focus release* (see *Figure 3.57 - right*). If the *Out-of-focus release* option is set for *Enable,* then the camera can take an image when the Shutter Button is fully pressed, even if the subject is not in focus. If set for *Enable,* you will obviously need to remember that you are using back-button focus and need to focus with the AF-ON Button, otherwise you could be pressing the Shutter Button and capturing images, but the camera will not have focused.

If set for *Disable,* then the camera will not take an image when you press the Shutter Button if the subject at the active AF Point is not in focus. You will need to be sure to first focus the camera using the AF-ON Button. This setting works in conjunction with Custom Setting *a1: AF-C Priority Selection* and *a2: AF-S Priority Selection,* which each must be set for *Focus* for this *Out-of-focus release > Disable* setting to apply. It also does not apply to *Auto-Area* AF-Area Mode. This *Disable* setting is used for a technique called trap focus, which is discussed in Section 5.7 of this guide, and should not be used until you fully understand how it works.

So if you are using the *AF-ON only* option, for back-button focusing, I suggest you leave the sub-menu for *Enable,* unless you wish to make use of trap focus. While this introduces the possibility of taking out of focus shots if you fail to focus first with the AF-ON Button, it also eliminates the issue where you are pressing the Shutter Button to take a single image or burst, but the shutter is not being released.

a8: Limit AF-Area Mode Selection
This setting is used to enable or disable the different autofocus AF-Area Modes so that you will be able to choose from them all, or so that you can limit the number of modes available for selection if you do not ever wish to use some of them. The available modes include *Pinpoint AF, Dynamic-Area AF, Wide-Area AF (S), Wide-Area AF (L),* and *Auto-Area AF*. You cannot deselect *Single-Point AF* (see *Figure 3.58 - left*).

When setting this menu item, press up and down on the Multi Selector to highlight the desired mode, then press right on the Multi Selector to select or deselect it. You may wish to enable all of them at first and experiment with the different modes, and then later possibly disable the ones you find that you do not wish to use. That way when you are later quickly selecting between the different AF-Area Modes, you won't have to dial through all the options to get to the mode you desire. For example, when taking bird shots, you may only wish to quickly switch between *Single-point AF, Dynamic-area AF,* and *Auto-Area AF,* and don't want to be slowed down by having to click through the other Area Modes. The **Autofocus AF-Area Modes**, the differences between them, and their uses will be fully explained in Chapter 5 - **Autofocusing**.

Figure 3.58 - Left: Limit AF-Area Mode Selection menu, which allows you to limit the selectable AF-Area Modes to just the ones you use, which can save time during

5. AUTOFOCUSING

5.1 Using Autofocus

One of the essential steps in taking a successful and sharp photo is controlling where and how the camera autofocuses. The versatile and customizable autofocus systems of the Z 7 and Z 6 are a major part of what makes them such powerful cameras, and in any Exposure Mode you can, and should, take control of the autofocus system. The autofocus system includes the autofocus related controls (see *Figure 5.1*), the Focus Modes (such as *Single-servo AF* (AF-S) and *Continuous-Servo AF* (AF-C), the focus points and AF-Area Modes (such as *Single-Point AF* and *Dynamic-Area AF*), and the autofocus related menu and Custom Setting items which customize how the AF system works. You will select a Focus Mode generally based on whether the subject is still or moving, and select an AF-Area Mode based on where and how you want the camera to locate and focus on your intended subject - ranging from a single point, to a Dynamic-Area or Wide-Area, to all the available points. You can set the Focus Modes and AF-Area Modes in a variety of combinations based on what and how you are shooting.

The autofocus system of the Nikon Z 7 and Nikon Z 6 differs from what you may be used to with a dSLR camera. The AF system makes use of on-sensor phase-detection AF for quick autofocusing, as well as contrast-detection AF for additional fine-tuning and accuracy. Since the AF system makes use of the sensor itself to focus, properly focused images (using lenses fully compatible with the Z 7 / Z 6 AF system) should always be in-focus, without back-focus or front-focus issues. This also allows for AF Points to be located across nearly the entire frame. So rather than the 55 selectable AF Points of the D850, for example, the Z 7 boasts 493 AF Points covering 90% of the frame. The Z 6 offers 273 AF Points also covering 90% of the frame.

With such a large number of AF Points, the AF Area Modes will also differ from a dSLR. While there is still the *Single-Point AF* and *Dynamic-Area AF* Area Modes, there are also the *Pin-Point AF, Wide-Area AF (Small)* and *Wide-Area AF (Large)* Area Modes. Also, the Z 7 and Z 6 ***do not*** have the *3D-Tracking AF* Area Mode that you may know from a Nikon dSLR, however the *Auto-Area AF,* mode, with available face-detection, can be used in a somewhat similar manner to track a subject throughout the frame along with AF-C Focus Mode.

Figure 5.1 - Autofocus controls and other shooting-related controls of the Nikon Z 7 and Z 6.

If you allow the camera to autofocus by automatically choosing its own focus point(s), such as when using *Auto-Area AF* or *Wide-Area AF (L)* Area Modes, it typically focuses on the closest object or subject. This may or may not be what you want to focus on, so you should select or at least narrow down where the camera focuses using the *Single-Point AF* or the *Dynamic-Area AF* group of points. By doing so you are telling the camera exactly where to autofocus or where to look to find a moving subject to track. For example, you often want to focus on a subject's eyes, but if you allow the camera to choose the autofocus point by itself, it may select another part of the face to focus on, or somewhere else on the body, or even a raised hand that is nearer to the camera than the face. If you are capturing an image of a bird in a tree the camera has no idea you want the autofocus system to zero in on the bird so that it is in sharp focus, and not on the branches or leaves near it, or perhaps even on the leaves closer to you.

Be sure to read the **Menus and Custom Settings** section first to make sure your camera is properly set up to make use of all the autofocus points, to take advantage of face-detection if desired, and various other recommended autofocus settings. Most of these settings are in the Custom Setting *a: Autofocus* menu.

Autofocus works in part by looking for contrast so try to focus (locate your focus point as you view it in the Viewfinder) on a texture or a detail with a pronounced line or some amount of contrast between light and dark. It may not be able to focus on a large area of consistent color - such as a white wall or clear blue sky, or even a uniformly colored and illuminated shirt - or on a subject or scene that is too dark. It can be disrupted by regular patterns and fine detail, or confused when looking through close objects to objects farther away, such as looking through a screen or fence. And it sometimes fails to work well in highly contrasting or dim light.

Because the Z 7 and Z 6 are mirrorless cameras with electronic Viewfinders and without separate AF sensors, autofocusing when working in Live View, in Movie Live View, and through the Viewfinder will all be similar.

Figure 5.2 - Simulated view of the Nikon Z 7 Viewfinder, showing the location of all 493 AF Points. Note that you will not actually see all 493 AF Points in the Viewfinder or on the Monitor, only the active point or area. The Z 6 has 273 AF Points. Background image shown at 75% opacity to better see Viewfinder elements.

When discussing autofocusing, I will assume that Custom Setting a7 - *AF Activation* is set for *Shutter/AF-ON,* so that both the Shutter Button and the AF-ON Button can be used to initiate and/or lock autofocus. The exception to this is when I discuss **Back-Button Focusing** and **Trap Focus**, where I will specify that Custom Setting a7 be set for *AF-ON only,* so that only the rear AF-ON Button is used for focusing and not the Shutter Button.

Before diving into the autofocus system, I'll briefly explain how autofocus point selection works. You will select your desired autofocus point (also called focus point or AF Point) using the Multi Selector thumb pad, as you look through the Viewfinder. If you set Custom Setting f3 - *OK Button* for *Select center focus point*, you can use the OK button to quickly select the center AF Point. You can also use the Sub-Selector joystick to select the AF Point. And in Custom Setting f2 - *Custom Control Assignment,* you can assign the Sub-Selector Center press to the *Select center focus point* option so that you can also press this control to select the center AF Point.

Use the Focus Mode item of the Photo Shooting Menu or the i Menu to set the Focus Mode to *AF-S* (Single-servo AF), and use the AF-Area Mode item of the Photo Shooting Menu or the i Menu to set the AF-Area Mode to *Single-Point AF*. If you have assigned one of the Fn Buttons to the *AF Mode/AF-Area Mode* option, you can press that button and set the Focus Mode to AF-S (Single-servo AF) using the rear Main Command Dial, and set the AF-Area Mode to Single-Point AF using the front Sub-Command Dial. Look at the rear Monitor or Viewfinder to view the settings as you change them. The Fn2 Button is assigned to this function by default.

1. Set the Exposure Mode to P (Program), or to the mode of your choice if you are familiar with them.

2. Tap the Shutter Button with a half-press to wake up the camera and start the exposure metering.

3. Looking through the Viewfinder or at the Live View scene on the rear Monitor, use the Multi Selector thumb pad or Sub-Selector joystick to select the focus point that is nearest to where you want to focus.

4. Place that point over your intended subject.

5. Press and hold the Shutter Button halfway down and see that point turn green. You have locked the focus.

6. Keeping the Shutter Button pressed halfway, recompose if necessary, and take the shot by fully pressing the Shutter Button.

You can also press and hold the AF-ON Button to focus, and then keep it fully pressed as you recompose and then press the Shutter Button to capture the image.

If the camera does not take the photo, the camera may not be finding something to focus on, may not be finding enough contrast to lock in on, the lighting may be too dim, or you may be too close to your subject for the lens to focus.

Although some people are in the habit of using only the center focus point, there are reasons to make use of all the focus points and not just the center one all the time, which will be discussed. It may sound difficult to manually select the focus point each time, but it is actually very quickly done and will become instinctive. You may even start to set your AF Point as you approach a scene before even bringing your camera to your

eye, using your thumb on the Multi Selector or Sub-Selector. For example, press right multiple times so that when you bring the camera to your eye, a far-right AF Point is already selected. And remember that Custom Setting a5 - *Focus points used* allows you to limit the number of selectable points, to perhaps make this process more manageable at first.

Touch Shutter

The touch screen capability of the rear Monitor allows you to tap the screen to focus on the subject or desired part of the scene (*Touch AF*), or to both focus and release the shutter (*Touch shutter/AF*). Or you can turn this feature off. To enable this feature, tap the Touch Shutter icon, located on the left side of the Live View screen. Tap it repeatedly to choose your desired setting (see *Figure 5.3*). If *Touch shutter/AF* is enabled, touching the screen will position the AF Point and focus at that area, and removing your finger will release the shutter. The *Touch AF* setting will simply select the area of focus and will autofocus when you touch the screen, but will not release the shutter. The *Off* setting will disable this feature.

Figure 5.3 - Repeatedly tap the Touch Shutter icon (on the left side of the screen) to enable its different options. Left: Here it is being set for "Touch Shutter/AF: On", which will enable you to tap the screen to focus and release the shutter. Right: The "Touch AF: On" setting will allow you to focus by tapping the screen, but the shutter will not be released.

You can use the Touch Shutter with the various AF-Area Modes, to locate the AF Point or area, select the desired face, or select the desired subject for tracking. If *Touch shutter/AF* is in use, you can still use the Shutter Button to take the image, and you will need to use the Shutter Button if you are using one of the Continuous Release Modes, as the Touch Shutter will only take one image.

5.2 Focus Modes

The Z 7 and Z 6 have two different Focus Modes to choose from for still image shooting, *AF-S* and *AF-C*. You will typically make your selection based on if your subject is still, or if it is moving and you wish to track its movement and remain continuously focused on it. There is an additional Focus Mode available for video shooting, called *AF-F,* which

will be explained. The cameras also have several different autofocus AF-Area Modes (discussed in the next section) to specify how many of the focus points are active and how they follow or track a moving object. You can set these two functions in various combinations. First the Focus Modes will be explained. Select the Focus Mode in the Photo Shooting Menu, or via the i Menu. Using the i Menu, highlight the Focus Mode item, and press the OK Button to view and change the setting, as you view it on the rear Monitor or in the Viewfinder (see *Figure 5.4*). Or highlight the item, and turn the rear Main Command Dial to change the setting directly on the screen (see *Figure 5.5 - left*). If you have assigned one of the Fn Buttons to the *AF Mode/AF Area Mode* option, you can press that button and rotate the rear Main Command Dial to change the setting, while viewing the settings on the rear Monitor or in the Viewfinder. By default, the Fn2 Button is assigned to this function. The front Sub-Command Dial can then be used to change the AF-Area Mode (see *Figure 5.5 - right*).

Figure 5.4 - The Focus Mode setting can be found on the i Menu (left). Highlight that icon and press the OK Button to view and change the setting on the rear Monitor or in the Viewfinder (right).

Figure 5.5 - Left: Or after highlighting the Focus Mode icon on the i Menu, turn the rear Main Command Dial to view and change the setting. Right: If you assign one of the Fn Buttons to the "Focus Mode/AF-Area Mode" option, you can press that button and turn the Command Dials to view and change those settings on the rear Monitor or in the

Viewfinder. Use the rear Main Command Dial to change the Focus Mode, as indicated on the screen.

Single-Servo AF (AF-S)

Use this mode when your subject is stationary, or is still and not going to move. It can also be used if your subject is not going to move very much, or if the distance between you and the subject is not going to change between the time you lock focus, recompose, and take the shot. Lock focus on the subject by half-pressing the Shutter Button (or pressing and holding the AF-ON Button) and recompose if necessary. This mode can even be used for moving people or subjects if you quickly take the shot after establishing or locking focus. When using AF-S, you can select from these AF-Area Modes: *Pinpoint AF* where you select a small focus point, *Single-Point AF* where you select a focus point, *Wide-Area AF (S)* or *Wide-Area AF (L)* where you select a focus area, or *Auto-Area AF* where the camera selects the AF Point(s) for you. The *Auto-Area AF* Focus Mode can also take advantage of face-detection AF. For still subjects, I suggest you nearly always select an individual *Single* AF point and position it at the subject, so that the camera autofocuses exactly where you want it to.

Focus on your subject by pressing the Shutter Button halfway. The active AF Point will turn from red to green, and the camera will beep if you have the Beep function enabled. Continue to press the Shutter Button all the way to take the shot. If you half-press the Shutter Button to lock focus on your subject, the camera will remain focused at that distance as long as you keep half-pressing the Shutter Button. Or you can press and hold the AF-ON Button to lock focus. You can recompose the shot as you wish and then fully press the Shutter Button to take the photo. Again, if the camera does not take the photo, the camera may not be finding enough contrast to focus on, you may be too close to your subject for the lens to focus, or the lighting may be too dim for the AF system to work well.

However, if you are photographing a subject that is approaching or receding from you at a relatively constant rate, or photographing fast or erratic or unpredictably moving subjects, or photographing sports, action, or wildlife you will usually want to use Continuous-Servo AF (AF-C) Focus Mode.

Continuous-Servo AF (AF-C)

This mode, used in conjunction with the various AF-Area Modes, can help you to capture images of action and motion (see *Figure 5.6*). To take full advantage of this mode you will need to also understand the AF-Area Modes, as described in the **Autofocus AF-Area Modes** section just below. Continuous-Servo AF mode is used to track and maintain continuous focus on moving subjects, and is ideal for capturing sports and wildlife including birds. If the subject is moving towards you or away from you, the camera will keep evaluating the focus distance. And if the subject is moving from side to side or throughout the frame, the camera can track it as it passes from one AF Point to other ones (depending on the selected AF-Area Mode). Custom Setting a3 - *Focus tracking with lock-on > Blocked shot AF response* will even allow you to tell the

camera exactly how fast to react to changes in focus distance, in order to refocus on a subject at a different distance, such as new subjects that come into the frame or that pass between you and your subject.

Figure 5.6 - Continuous-Servo (AF-C) Focus Mode can be used to track and retain focus on a moving subject, such as this blue heron taking flight. Shutter speed 1/1600, Aperture f/4.0, ISO 640.

You first need to select which focus point the camera uses to start tracking the subject, place that point over the subject, and press the Shutter Button half-way. Or you can press and hold the AF-ON Button. Then as long as you keep the selected AF Point on the subject and the Shutter Button pressed half-way or the AF-ON Button pressed, the camera will continuously evaluate the focus distance so that the subject will be in focus when the shot is taken. If the subject is going to be difficult to follow or keep located as a single AF Point, you can use the *Dynamic-Area AF* Area Modes so that the surrounding points will help retain focus if the subject temporarily moves away from the selected focus point. Or you can use one of the *Wide-Area AF* Area Modes so that an area of AF Points will be used to focus-on and track the subject. If the subject will be moving across your field of view as you keep the camera relatively still, you can make use of the *Auto-Area AF* area mode to track a selected subject. The exact procedure for identifying and tracking a subject with AF-C and Auto-Area AF will be explained in the **Autofocus AF-Area Modes** section below.

This subject tracking of AF-C will even work in conjunction with continuous shooting. If you keep the Shutter Button fully pressed and continue to take photos, even at 9 (Z 7) or 12 (Z 6) frames per second, the camera will (ideally) keep focusing on the moving subject. As you can imagine, this is effective for tracking a player running across a field, a dog running toward you, a toddler in action, or a bird moving across the frame. Note that when shooting with Continuous High, not every shot may be in sharp focus as the camera sometimes can't keep up and accurately predict the subject's speed or location.

While other Nikon models have an AF-A Focus Mode that automatically switches from AF-S to AF-C if a still subject starts moving, the Z 7 and Z 6 do not offer this option. However, switching between AF-S and AF-C is sometimes useful, such as photographing a still bird that suddenly takes flight. In this type of situation, you will not have a chance to switch your camera from AF-S to AF-C. The solution to this is to use AF-C and back-button focusing (which will be fully explained in the **Back Button Focusing** section of Chapter 5). This is sometimes also referred to as AF-ON Button Focusing. To do this, assign Custom Setting a7 - *AF activation* to the *AF-ON only* setting, which means the Shutter Button will no longer perform any autofocusing functions, only the AF-ON Button will (see *Figure 5.7 - left*). When choosing this *AF-ON only* setting, press right to access the *Out-of-focus* sub-menu, and set for *Enable* (see *Figure 5.7 - right*). (The *Disable* setting can be used for the trap focus technique.) Then set the camera to AF-C Focus Mode. This technique is best understood and learned if used first with *Single-Point AF* Autofocus Area Mode, so that you know exactly where the camera is supposed to be focusing. However, it can successfully be used with the *Dynamic-Area AF* mode as well, when you understand how this area mode operates (which will be explained in the next section).

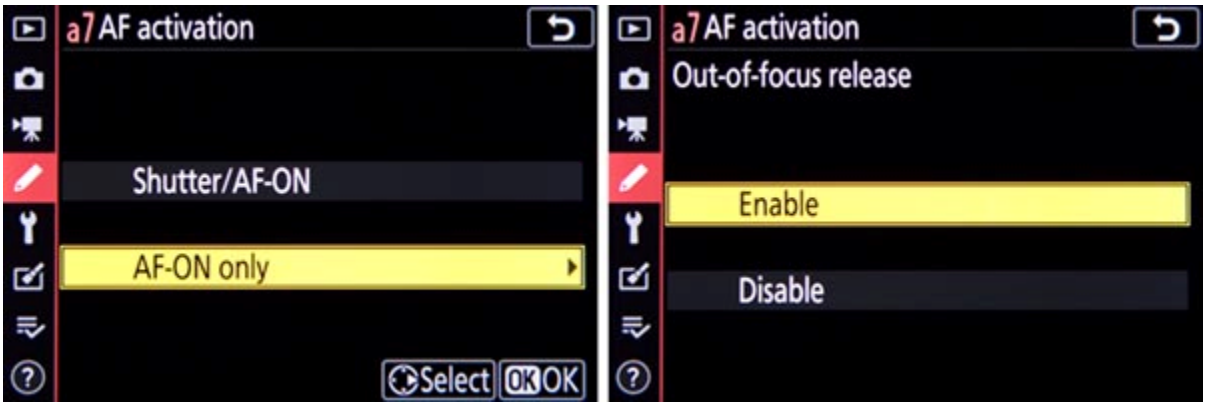

Figure 5.7 - Custom Setting a7 - Left: AF Activation set to the AF-ON only setting, which means the Shutter Button will no longer perform any autofocusing functions. Right: Access the AF-ON sub-menu to set "Out-of-Focus Release" for Enable.

With this setup, when the AF-ON Button is pressed and held, the camera will continue to autofocus on a moving subject located at the active AF Point. However, if you press the AF-ON Button to focus on a still subject and then let go of the button, the camera will remain focused at that distance, and will not refocus when the Shutter Button is pressed. You can then take an in-focus image of a still subject, as long as the subject

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About the Author

Douglas Klostermann is a travel, culture, and humanitarian photographer, as well as the author and publisher of *Full Stop* e-book camera guides including the best-selling *Nikon D850 Experience* and *Nikon D7500 Experience*. He has photographed for numerous organizations in the United States and Latin America, been recognized by the *United Nations Development Programme* for his humanitarian photography, and been published in magazines, books, and websites including *Conde Nast Traveler, Sherman's Travel, NationalGeographic.org, South American Explorer,* and *Viva Travel Guides*. Doug is a member of the North American Nature Photography Association (NANPA).

Learn more about photography techniques and equipment on his blog *Picturing Change* at http://blog.dojoklo.com/, view his photography and e-books at www.dojoklo.com, and follow him on Twitter at @dojoklo.