

# Nikon D3300 Experience

The Still Photography Guide to Operation  
and Image Creation with the Nikon D3300

an e-book by:  
Douglas J. Klostermann



*PREVIEW of*

# Nikon D3300 Experience

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Image Creation with the Nikon D3300*

by

Douglas J. Klostermann

Full Stop. *good writing for better photography*

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*The Still Photography Guide to Operation and Image Creation with the Nikon D3300*

by: Douglas J. Klostermann

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## 1. INTRODUCTION

The introduction of the Nikon D3300 provides a notable upgrade to its predecessor, the popular D3200. Its 24.1 megapixel sensor is capable of capturing high quality, low noise images in a wide variety of shooting situations, and is the same sensor used in the more expensive D5300 and D7100 models. And with the inclusion of the more powerful Expeed 4 processor, the D3300 can capture continuous images up to 5 frames per second (fps) and HD video at 1080/60p resolution (50p in PAL video format regions). Plus the ISO range has been increased which will assist you when shooting in challenging low-light situations, and the battery life has been improved to 700 shots. The 11 point autofocus system of the D3300 coupled with the autofocus mode options will help you capture sharp images of still and moving subjects. When shooting video, the D3300 offers full-time autofocus, plus a built-in mono microphone for recording audio. The camera can even provide wireless capabilities for image sharing and camera control, through a smart phone or tablet, with the use of the optional [WU-1a Wireless Mobile Adapter](#).



*Figure 1 - Detail of the Nikon D3300 digital SLR.*

The D3300 offers the capabilities and features required for enthusiast photographers who wish to take more control over their camera and grow in their digital photography. This dSLR provides the potential to capture sharp, clean, and well-exposed images in most any situation you wish to use it. But the D3300 is merely a tool. It is up to you to make use of its features and capabilities to create the images you envision. While the

camera's manual can tell you about all of the settings and controls, how to change them, and their intended functions, this guide will build upon that and tell you when and why you want to use them. Every button, function, and menu item of the D3300 is there for a reason: to help you 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 should help to give you the knowledge to confidently use the ones that turn your Nikon D3300 into an image capturing tool that works best for you.



*Figure 2 - Flowers, Cambridge, MA - Autofocus modes, exposure metering mode, aperture, shutter speed, ISO, and white balance all considered even in creating this simple image. Shutter speed 1/500, Aperture f/4.5, ISO 100.*

### **1.1 Take Control of Your Camera**

Since the D3300 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 envision - by autofocusing precisely where you intend, setting the aperture or shutter speed that you want, and obtaining the exposure you desire. While the D3300 is an intelligent camera, it cannot read your mind and your intentions and does not know that you wish to focus on, and properly expose, the yellow flower near the center of the frame, while making the other flowers and the background appear out of focus, and the fluttering petals and waving stems to be caught still and not be blurred from the motion of the wind, on this bright,

sunny day (see *Figure 2*). You have to tell the camera to do all of this, through the various controls and settings, such as the Autofocus Mode and AF-Area Mode (lock focus on the center flower), the exposure metering mode (properly expose the petals), the aperture setting (the out-of-focus background), the shutter speed (freezing the motion of the flowers from the wind), the ISO setting (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 a dSLR camera like the D3300 takes time, practice, patience, mistakes, and experimentation. If you have upgraded from an older dSLR to the D3300, its improved features and capabilities should more easily help you to capture high quality images that you may have been limited in consistently attaining before, such as in action and low-light situations. If you are new to dSLR photography, you may find that using the D3300 can be initially challenging but ultimately more rewarding by offering you more responsiveness and greater control over your shooting and your results. If you are not yet familiar with all the controls of a dSLR and the exposure concepts of digital photography, don't expect to just pick it all up at once, in one or two readings 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!) Taking control of the 11 point autofocus system and its Autofocus Modes and AF-Area Modes may be especially challenging at first. Try not to become frustrated when you don't quite understand something or aren't yet getting the results you desire. Instead learn the controls, functions, settings, and concepts little by little, try them out in real life shooting situations, and return to this guide, the 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 spurts of discovery and understanding. With practice and experience you will soon be shooting with confidence and can then begin to take advantage of the camera's more advanced functions.

### **1.2 Using This Guide**

There are many different ways to use a dSLR 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 photographers using the D3300. The settings and techniques I discuss can apply to various types of photography including general photography, action, portrait, landscape, 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, specialized 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.

Since this guide is intended to help you get the most out of your D3300, I will not go into great detail about all of the automatic features or Auto, Scene, and Guide Modes (though I will introduce and illustrate them). The D3300 is a capable tool that deserves

to be used to its full potential, and that involves taking control of the camera and its functions, which means taking it off automatic settings such as Auto, Scene, or Guide shooting modes and automatically selected autofocus points (when not needed). While this may be more challenging at first, these are the techniques that are necessary to take full advantage of the capabilities of any dSLR including the D3300, and will lead you to having more control and consistency over your image making. Hopefully this will inevitably lead to better images!



*Figure 3 - Detail of the Nikon D3300.*

This guide is intended to be used with the camera in your hands. That is the best way to directly follow and understand the controls, functions, and settings as they are being explained. It is also intended to be used in conjunction with the camera's manual, so I will sometimes refer to the *Nikon D3300 Reference Manual* rather than repeat its information about certain lesser-used features or processes that are clearly explained there. Among the official manual's often brief descriptions and sometimes frustratingly incomplete and disjointed explanations, there is some very valuable information, as well as the basics for buttons, controls, menu screens, and how to access and change all the settings.

As you have probably discovered by now, the camera's *D3300 User's Manual* that comes with the camera is brief and basic. The more detailed *D3300 Reference Manual* can be obtained from the Nikon website at either of the links below. Throughout this guide I will be referring to page numbers in the larger *Reference Manual*. If you have an

iPad or tablet you will find that it is helpful to download the manual onto your device for reading and reference (along with this e-book).

[http://nikonimglib.com/manual/dslr/d3300/index\\_en.html](http://nikonimglib.com/manual/dslr/d3300/index_en.html)

[https://support.nikonusa.com/app/answers/detail/a\\_id/18824](https://support.nikonusa.com/app/answers/detail/a_id/18824)

As you can see, there is a lot to make sense of regarding terminology and controls, so I recommend that you familiarize yourself with the controls and displays of the camera body, as explained in the **Camera Controls** chapter below and shown on pages 1-3 of the *D3300 Reference Manual*, as well as read through the manual at some point and attempt to understand or absorb as much as possible. Yes, much of it may be complicated and confusing at first, but this guide will explain and clarify the numerous buttons, controls, menus, and settings and explain when and why you will want to use them in your photography.

Also be sure to read and follow all the official use, safety, and handling instructions and precautions explained in the manuals provided with the camera and software, including those starting on page “x” of the preface to the Nikon *D3300 Reference Manual*, and the Live View and Movie Shooting precautions on pages 152 and 157. These and additional cautions throughout the Nikon manuals are important to read because they explain things such as the high internal temperature that the camera can reach due to prolonged Live View / Movie use, and how using a non-compatible external flash can cause your camera to malfunction.

As will be explained throughout this guide, the majority of the camera’s shooting settings can be viewed and/ or changed using the Info Button and the i Button plus the Information Display (see *Figure 4*). Press the i Button once and you can immediately navigate through the settings along the bottom of the Information Display and then change those settings. Press the i Button a second time to “deactivate” the settings area along the bottom and simply view the Information Display screen. Or you can press the Info Button to first view the Information Display *then* press the i Button to navigate and change the settings along the bottom of the screen. Navigate the settings using the Multi Selector thumb pad, and press the OK Button to access the options for the selected setting. However, some settings of the Nikon D3300 can be controlled in multiple ways including using the buttons and controls on the camera body while reading the settings on the rear Monitor or in the Viewfinder, or by accessing the settings in the Menus after pressing the Menu Button, as will be noted for various functions throughout this guide. Explore the options and find the ways that work most quickly and intuitively for you.



Figure 4 - Information Display, i Button, and Menu Button, on the rear of the D3300.

Any time I capitalize something in the text it is a proper term that can be looked up in the *Nikon D3300 Reference Manual*. I will capitalize the names of actual buttons, controls, camera parts, and menu items, such as Exposure Compensation Button, Command Dial, Monitor, and Format Memory Card. Again, please review the camera body, the **Camera Controls** chapter of this guide, and display diagrams in your *D3300 Reference Manual* to familiarize yourself with the names of various parts, controls, and displays, as I will use these proper names in this text. Words that are capitalized and bold refer to chapters and sections within this guide, such as **Menu Settings**. Turn on the bookmarks or contents navigation panel in your PDF viewer, or access the Table of Contents of your e-book reader or reading app to quickly navigate to these different sections.

Many of the functions and controls of a dSLR such as the D3300 are closely inter-related, such as the shooting mode, exposure settings, and the metering mode. As a result of this I must sometimes refer to previous or upcoming sections of the text for further explanation of a related function. It is best to read through the entire text, in the order it is organized, before returning to specific sections for further study. It may take

multiple readings followed by experimentation to fully understand both the individual functions and the relationships between functions.



*Figure 5 - Whipple Hill, Lexington, Mass. - Shutter speed 1/1250, Aperture f/5.6, ISO 400.*

### **Example Images**

In the captions to the example photos throughout the text I include the camera settings that were used (see *Figure 5*). With digital photography there is no “correct” setting or “best” setting for any given situation. A dSLR gives you quick access to the basic and essential settings because they often need to be changed to adapt to the subject, the scene, the lighting, and perhaps most importantly your creative intentions. There is no “correct” aperture setting for any given image or scene, no “proper” shutter speed setting, and no “ideal” histogram. The choices you (or the camera) make depend on a number of variables and relationships as well as the photographer’s desires. Because the settings used for the sample images are based on many variables including the lighting and time of day, the motion of the subject, the lens and focal length used, as well as the overall situation being photographed with a combination of moving subjects, still subjects, and changing lighting, these settings should not be viewed as “proper” or “best” settings. In truth, they often more accurately reflect the reality of photography and adjusting (or failing to adjust) to fluid situations. For example, a slower shutter speed and a lower ISO setting (less potential digital noise) could have been used for the image in *Figure 5*, but because the sun was appearing and disappearing behind clouds the

## 2. CAMERA CONTROLS

Before setting up the Menu options and then starting to use the camera, it is helpful to become familiar with the names and functions of the controls of the D3300. Have a look at your camera and the images in this chapter, and I'll go over the controls on your camera that you will be learning about and using throughout this guide. Customizing the various buttons and controls will be further discussed in the **Menu Settings** chapter. These controls will also be discussed in more detail throughout this text, in conjunction with the functions they perform and control.



*Figure 8 - View of the top of the Nikon D3300.*

**Focal Plane Mark** - The symbol of the circle with the line through it, impressed in the surface on the left side of the top of the camera, indicates the focal plane (location of the sensor) from which the focus distance begins (see *Figure 8*). This can be used to measure focus distance in very precise macro or scientific photography.

On the right side of the top of the camera (see *Figures 8 and 9*) you will find, starting on the upper right of the body:

**Power Switch** - Located surrounding the Shutter Button, this switch is used to turn the camera on and off.

**Shutter-Release Button** - Located inside the Power Switch, this is what you press to take a photo or series of photos. Tapping it half-way will do a few things like wake up the camera from Standby if it hasn't been used in a few minutes or start the exposure metering. Pressing and holding it half-way will also perform functions like locking focus or starting focus tracking (depending on your Autofocus Mode and Menu Settings). I will often refer to this simply as the Shutter Button in the text.

**Movie-Record Button** - This small button with the central red dot will start and end movie recording when working in Live View, which is enabled by pressing the Live View (LV) Button on the rear of the camera.

**Info Button** - This button is pressed to turn on the Information Display on the rear Monitor, so that you can view the various camera settings. Press the rear i Button to then "activate" the screen which will enable changing many of these settings with the use of the Multi Selector and OK Button. Or press this Info Button again to turn off the display on the Monitor.



Figure 9 - Detail of the top controls of the Nikon D3300.

**Exposure Compensation Button** - Pressing this button indicated by (+/-) and turning the Command Dial will adjust Exposure Compensation, which will be discussed in the **Exposure Part 2** chapter. When working in Manual (M) shooting mode, this button is

### 3.3 Shooting Menu

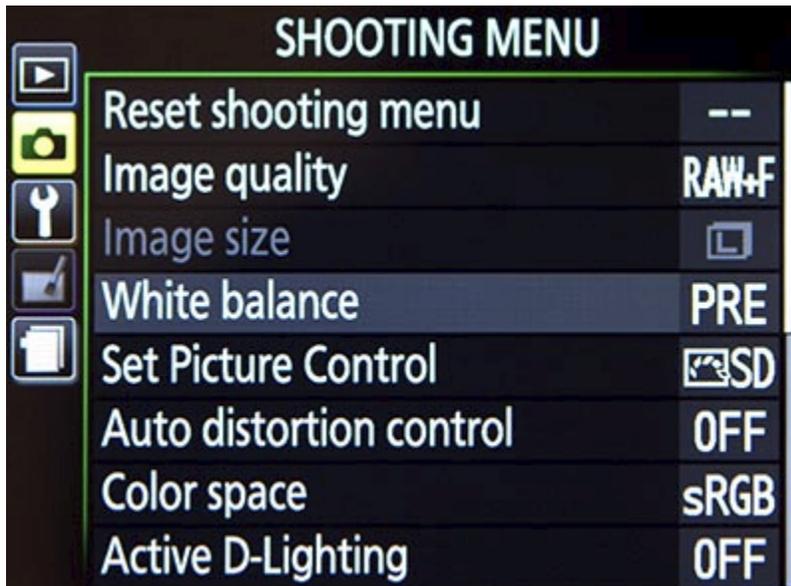


Figure 29 - Shooting Menu.

#### Reset Shooting Menu

No! *Don't touch!* This restores all these Shooting Menu options to their default. Do not select this once you have set up all these options as desired! However, if you find that your camera controls are suddenly acting oddly or in a new, unexpected manner or you simply wish to start over, you might resort to this option and reset these menu items.

#### Image Quality

You are putting a lot of effort into taking your images. You should make sure the files are saved in the best possible quality (see *Figure 30 - left*). I will discuss this in more detail, including JPEG vs. NEF (RAW) file formats, in the **JPEG vs. NEF (RAW)** section of the next chapter. Set to either the NEF (RAW) setting if you “shoot RAW” (capture images in the RAW file format) and plan to post-process all your images, or set for the highest quality JPEG setting (JPEG Fine) if you shoot JPEG, or select both combined if you need both types of files. NEF is the file extension used by Nikon for images in the RAW file format. I will sometimes use just the term “RAW” when discussing the “NEF (RAW)” format. The D3300 records a 12-bit RAW file. Remember that this *Image Quality* setting can also be quickly changed using the *i* Button and Information Display on the rear Monitor.



Figure 30 - Image Quality (left) and Image Size (right) menus to determine image file settings. Note that Image Size only applies to the JPEG file format.

### Image Size

This setting applies to JPEG files only, not NEF (RAW) files. Again, you are putting a lot of effort into taking your images, so set this to Large or L (see *Figure 30 - right*) - unless you have a specific reason to capture smaller-sized files (both in pixel dimension/ print size and image file size). For example, if you know you will only be using the images to upload to a social media site. But if you temporarily change this setting, please be sure to remember to set it back on Large for your subsequent images! The menu shows the pixel size and number of megapixels (M) of the resulting images. You can see the approximate print sizes for the L, M, and S settings on page 87 of the *D3300 Reference Manual*, and the approximate file size (MB) on page 362. This Image Size setting can also be changed using the Information Display on the rear Monitor.

When the camera is set on the *Easy Panorama* Special Effects mode, this menu item is then used to set the panorama image size. The *Normal Panorama* Setting will allow you to pan the camera for about 15 seconds, creating a 4800x1080-pixel size image (or 1632x4800 if panning vertically). The *Wide Panorama* setting will enable you to pan for about 30 seconds, and will create a 9600x1800-pixel size panorama (or 1632x9600 if panning vertically). As with Image Size for regular shooting, note that you can more quickly access and change this setting by pressing the *i* Button and accessing the Information Display (see *Figure 31*).



Figure 31 - Panorama Image Size - As with Image Size for regular shooting, you can quickly access and change this setting by pressing the *i* Button and accessing the Image Size item on the Information Display. This item is visible and accessible only when using the “Easy Panorama” Special Effects Mode.

### White Balance

White Balance is for ensuring that white objects are reproduced as white by the camera, under any lighting. You can typically leave the camera set on Auto White Balance and the D3300 does an excellent job of choosing the proper white balance settings, or you can instead select one of the settings that match the scene you are shooting. While the White Balance setting can be quickly selected via the *i* Button and Information Display on the rear Monitor, advanced users can do a little more white balance fine tuning through this menu. And you will need to access this menu to select a specific Fluorescent white balance such as *Warm-White* or *Cool-White* (see Figure 32), or to set a Preset Manual white balance, as will be explained in the White Balance section of this text.



Figure 32 - White Balance menu (left), and Fluorescent White Balance sub-menu (right) for selecting a specific fluorescent white balance setting.

From this menu you can also fine-tune your selected setting (such as *Incandescent* or *Flash*) along the green-magenta axis and/ or blue-amber axis. Fine-tuning a white

balance preset is accessed by selecting the desired White Balance setting then pressing right on the Multi Selector. This is an advanced feature that is not commonly needed, but can be used if you are working in very precise lighting situations and wish to eliminate color casts. It will also be explained in the **White Balance** section.

### Set Picture Control

Picture Controls are used to apply your desired settings of *Sharpening*, *Contrast*, *Brightness*, *Saturation*, and *Hue* to JPEG image files as they are captured, processed, and saved in the camera. You can choose one of the presets such as *Standard*, *Vivid*, *Landscape*, and even black and white *Monochrome*. Or modify one of the presets to your desired settings to create your own custom Picture Control (see *Figure 33*). The Picture Control setting should be set or customized to the user's preference for those capturing JPEGs and who do not wish to post-process their images - so that your images appear as you wish, straight from the camera. These Picture Control settings and customization options will be fully explained in the **Picture Control** section of this text.



Figure 33 - Picture Control menu (left), and modifying the Standard Picture Control to increase the amount of Saturation (right).

Picture Control settings are not necessarily needed if you “shoot in RAW” (capture images in the NEF (RAW) file format), because the selected Picture Control applies to JPEG files only. The Picture Control settings will be associated with the RAW file as metadata and may be “applied” as you view the image in processing software such as Nikon Capture or ViewNX 2, but the settings will not permanently affect the RAW file and (unlike with a JPEG image) they can be changed during processing without affecting the quality of the image.

Although please note that the Picture Control that you set affects the playback images and their Histograms that you see on the rear Monitor - even if you are shooting in only RAW. So, for example, if you were to set a Picture Control with high contrast, the captured images shown on the Monitor during playback will incorporate this setting (and their Histograms will reflect this setting) and thus will not look the same as the “unprocessed” exposures captured in the RAW files that you will later view on your

## 5. AUTOFOCUSING

### 5.1 Using Autofocus

One of the essential steps in taking a successful and sharp photo is controlling where the camera autofocuses. If you allow the camera to autofocus by automatically choosing its own Focus Point(s), such as in Auto shooting mode or when using *Auto-Area AF* autofocus area mode, it typically focuses on the closest object or person. This may or may not be what you wish to focus on, so you should select or at least narrow down where the camera focuses by controlling the autofocus Focus 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, or somewhere else on the body, or even a raised hand that is nearer to the camera than the face, to focus most sharply on. 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 the leaves closer to you.

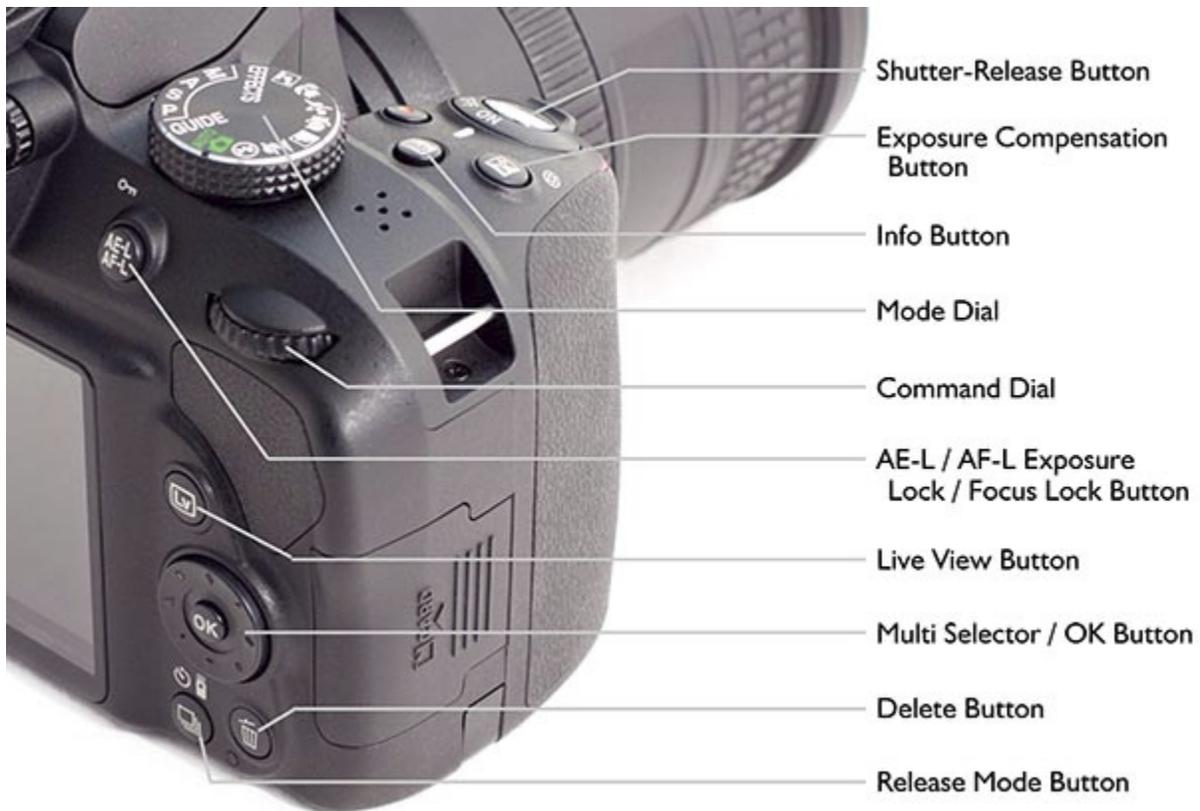


Figure 100 - Autofocus controls and other controls of the Nikon D3300.

The versatile autofocus system of the D3300 is an important part of what makes it a powerful camera. When working in one of the non-Auto shooting modes you can - and

should - take control of the autofocus system. The autofocus system is comprised of the autofocus related controls (see *Figure 100*), the Autofocus Modes (such as *Single-servo AF*, called AF-S), the autofocus Focus Points, and the AF-Area Modes (such as *Dynamic-Area AF*). You will select an Autofocus Mode generally based on whether the subject is still or moving (see *Figure 101*), and select an AF-Area Mode based on how large of an area you want the camera to look at to find or track your intended subject - ranging from a single point, to a wider Dynamic-Area, to all the available 11 AF points. You can set the Autofocus Modes and AF-Area Modes in a variety of combinations based on what and how you are shooting.



*Figure 101 - Selecting the Autofocus Mode using the *i* Button and Information Display. The autofocus “AF-Area Mode” is selected in a similar manner, using the icon just to the right of the “AF-S” icon that is currently highlighted in yellow on the image at left.*

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 (see *Figure 102*). 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 fence. And it sometimes fails to work well in highly contrasting or dim light, though the built in AF-Assist Illuminator lamp (which is enabled in the Shooting Menu) can assist in this situation. Note that the central AF point is a more accurate cross-type point which looks for contrast in both the horizontal and vertical direction, and thus you may wish to make use of this point in low light or other challenging autofocus situations. When photographing people, generally try to focus somewhere on the face, ideally on the eyes or eyebrows (or the nearest eye of an angled face), then recompose the framing of your image if necessary.



*Figure 102 - Gull in front of Motif No. 1, Rockport, Mass - Because autofocus works by looking for contrast, here I have selected a single AF Point and located it at the gull's eye (upper-right AF Point shown here in red). The actual area of the AF Point also covers the strong line of the bird's head against the darker background, to assist with quick, accurate autofocus. The area that the camera looks at to find autofocus will be approximately the size of the surrounding brackets seen in the Viewfinder. Shutter speed 1/320, Aperture f/8.0, ISO 100, Focal length 200mm.*

I will use the term “recompose” a few times throughout the text. By this I mean moving the camera after you have locked the focus and/ or exposure such as with a half-press of the Shutter Button or use of the AE-L/AF-L Button, but before you fully press the Shutter Button and take the picture (as will be further explained). This means that what you see in the Viewfinder changes from when you do those first actions to when you take the picture; you have re-composed the view you see in the Viewfinder (see *Figure 103*).



Figure 103 - *Recomposing the Framing of an Image - After autofocus and locking focus on the woman's face (left), I quickly move the camera to recompose the framing of the image to include the entire window, and then capture the image (right). Antigua, Guatemala - Shutter speed 1/160, Aperture f/5.6, ISO 400.*

Before getting into the autofocus system, I'll briefly explain how autofocus point selection works. You will manually select your desired autofocus point (also called Focus Point or AF point) using the Multi Selector as you look through the Viewfinder. You can use the center OK Button to select the center AF point. Make sure the focus mode switch on your lens is set for autofocus (A or M/A). If it ever seems that your camera or lens is not autofocus, be sure to check this switch on the lens. Set the Mode Dial to A (Aperture Priority), and use the *i* Button and Information Display screen to access and change the Focus Mode to *AF-S (Single-servo AF)* and the AF-Area Mode to *Single-point AF* (see Figure 104).



Figure 104 - *Selecting the Focus Mode (shown as AF-S) and the AF-Area Mode (shown as the Single-point AF icon) on the Information Display Screen. These two settings are*

*indicated by a superimposed yellow rectangle here. Press the *i* Button to “activate” the screen and then select these settings and choose the desired options.*

1. Tap the Shutter Button with a half-press to wake up the camera and start the exposure metering.
2. Looking through the Viewfinder, use the Multi Selector to select the Focus Point that is nearest to where you want to focus.
3. Place that point over your intended subject.
4. Press and hold the Shutter Button halfway down and see that point blink red. The Focus Indicator dot should light up in your Viewfinder. You have locked the focus.
5. Keeping the Shutter Button pressed halfway, recompose if necessary and take the shot by fully pressing the Shutter Button.

If the In-Focus Indicator dot in the Viewfinder does not light up and 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, or you may be too close to your subject for the lens to focus.

There are reasons to select among all the Focus Points and not just the center one all the time, which will be discussed. It may sound difficult to manually select a specific Focus Point each time, but it is actually very quickly done and will become instinctive. You may even start to choose your AF point as you approach a scene before even bringing your camera to your eye, by tapping the Shutter Button then using your thumb on the Multi Selector. For example, you can press the OK Button to select the center AF Point, then click right on the Multi Selector a few times so that when you bring the camera to your eye, the AF Point on the right side of the frame is already selected. But if you wish, until you get the hang of using the AF Points, you can start by always using the center point and recomposing before taking the shot.

### **5.2 Autofocus Modes**

The D3300 has three different Focus Modes to choose from, typically depending on if your subject is still, or if it is moving and you wish to track its movement and remain continuously focused on it. It also has four 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. I will first go over the Focus Modes. Select the Focus Mode using the *i* Button to access the Information Display screen, navigate to the desired setting, and press the OK button to view and select the desired option (see *Figure 105*). (Note that the following Focus Modes and AF-Area Modes apply to Viewfinder shooting and will differ for Live View and Movie shooting. **Live View and Movie Focusing** will be explained later in this chapter.)

### Single-Servo AF (AF-S)

Use this mode when your subject is stationary, or is still and not going to move, or if your subject is not going to move very much or very quickly, 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 locating the selected AF Point over the subject then half-pressing the Shutter Button, and then recomposing 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 two AF-Area Modes (to be described in the next section), either Single-Point AF where you select the Focus Point, or Auto-Area AF, where the camera selects the AF point(s) for you. I suggest you nearly always select your own desired Focus Point so that the camera autofocuses exactly where you want it to.



Figure 105 - Single-Servo AF Focus Mode - Select the Focus Mode icon on the Information Display screen (left), then select Single-Servo AF (AF-S) (right).

As noted above, lock focus on your subject by pressing the Shutter Button halfway. The active AF point will illuminate (blink), and the Focus Indicator light at the lower left in the Viewfinder will illuminate as well. 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. You can recompose the shot as you wish and then fully press the Shutter Button to take the photo. Again, if the Focus Indicator light does not light up and 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, though the AF-Assist Illuminator can help in low-light situations.

However, if you are photographing a subject that is approaching or receding from view 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) Autofocus Mode.

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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 D7100 Experience* and *Nikon D5300 Experience*. He has photographed for numerous organizations in the United States and in Latin America, been recognized by the *United Nations Development Programme* for his humanitarian photography, and been published in magazines and books including *Conde Nast Traveler*, *Sherman's Travel*, *South American Explorer*, and *Viva Travel Guides*. He also lectures and gives individual instruction on digital photography. Doug is a member of the National Press Photographers Association (NPPA).

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