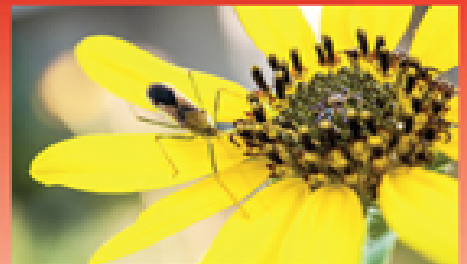
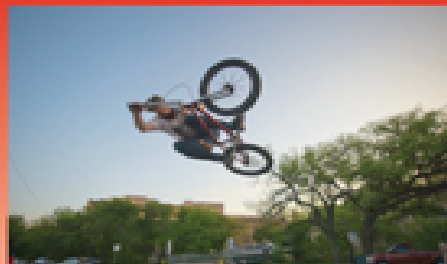


J. Dennis Thomas

Nikon®  
**D3300™**  
**Digital Field Guide**



**WILEY**

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## **Nikon® D3300™ Digital Field Guide**

Published by

**John Wiley & Sons, Inc.**

10475 Crosspoint Boulevard

Indianapolis, IN 46256

[www.wiley.com](http://www.wiley.com)

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Indianapolis, Indiana

Published simultaneously in Canada

ISBN: 978-1-118-14321-6

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

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Library of Congress Control Number: 2013936839

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When not out photographing or in front of his computer writing about photography, he can be found gracing the stages of the Live Music Capital of the World and popping up randomly in films and television shows.



*As always, to my girls Henrietta and Maddie...*

# Acknowledgments

I'd like to thank all of the people behind the scenes at Wiley that help make these books as good as they are. My name is on the front, but I couldn't do it without the Wiley team behind me. I'd specifically like to thank Cricket for being a kind and patient Project Editor and lending a helping hand whenever needed.

I'd also like to thank Precision Camera in Austin TX — owner Jerry Sullivan and staff members Sarah, Robert, Noel, and everyone else there.

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# Introduction

The D3300 is the culmination of many generations of Nikon cameras. One of the nicest things about the entry-level cameras these days is that they contain all of the technology that made Nikon's best cameras so successful. When the D3000 was announced it was a nice, if unremarkable, little camera that worked well for snap-shooters. Of course as technology marches on the upgrades eventually find their way from the professional cameras down to the junior models. By the time the D3200 was released it was a pretty good camera, but with the D3300, in a small package you get a camera that performs nearly as well, and in some respects even better, than the top of the line Nikon DX camera, the D7100.

If you take a look at the spec sheet of the D3200 as compared to the D3300, at first glance it doesn't look like much of an upgrade. But, the devil is in the details as they say. First, the D3300 has a lighter, more compact, yet sturdier body with a monocoque design borrowed from the D5300. Another thing that separates the D3300 from any other Nikon camera kit is the new collapsible lens that when closed down reduces the lenses size about 1/3, making it a great travel camera. The optical viewfinder magnification of the D3300 is also upped from 0.78x to 0.85x, which makes it easier on your eyes for composing. These are some the external changes, but the guts of the camera have a few upgrades that make much more of a difference.

One of the key differences of the D3300 from the D3200 is the removal of the Optical Low-Pass Filter (OLPF).

Removing this filter allows the camera to resolve more fine detail, making images appear sharper and more crisp. Another often overlooked, but very important part of the camera is the image processor. This controls how fast the data from the sensor can be processed. The D3300 has the EXPEED 4 processor, which is Nikon's newest processor and is used in the top-of-the-line D4s. The EXPEED 4 processor allows for a number of key changes that include an increase in continuous shooting speed up to 5 fps, the ability to shoot HD video at 60fps, and an increase of base ISO from 100-6400 to 100-12800. It also gives much cleaner images at higher ISO settings than either the D5300 or the D7100, both of which are already very good at high ISOs.

The D3300 also offers a new panorama mode, a special effects shooting mode, and an improved battery that allows you to shoot many more frames on single charge.

When it's all said and done, the D3300 can produce images with quality that rivals that of the D7100 (which costs about twice as much). The D3300 is an ideal camera for someone who wants professional image quality, but doesn't need all the extra features of a more expensive camera. Hiding in that small D3300 body is a feature-rich camera with all the oomph to capture beautiful, high-quality images.

## About the Digital Field Guide

The Nikon Digital Field Guide book series is intended to act as an adjunct to the manual that comes with your camera. While the manual gives you a great overview of the camera, a photographer didn't write it. The *Nikon D3300 Digital Field Guide* gives you all the information you need about the camera from a working photographer's perspective.

The goal of this guide is to help photographers — from novice to advanced amateur — grasp all of the features of their new camera. It includes tips learned from working with the camera in the field, as well as some basic information to help newer photographers get up to speed quickly.

This full-color guide walks you through setting up your camera, offers insight about which settings to use, and tells you why each setting is useful in particular situations. Full-color images demonstrate different photography concepts, and show you some of the things the D3300 is able to accomplish.

The *Nikon D3300 Digital Field Guide* will help you familiarize yourself with your camera more quickly, so that you can not only navigate and handle it better, but also more easily achieve your photographic vision.

# Chapter 1: Exploring the Nikon D3300

The 3000 series of cameras are the smallest dSLRs in the Nikon lineup. The D3300 body was redesigned using the monocoque structure, which first appeared in the D5300. The design allows the camera to be smaller and lighter than the D3200 while gaining a stronger structural integrity.

Because these cameras are much more compact than the Nikon professional series cameras, by necessity they have fewer buttons with which to change the myriad combinations of settings. That being said, the D3300 does have its fair share of buttons and dials, many of which have more than one function depending on the way the camera is programmed and which mode the camera is in. It's important to become familiar with the camera and all of its buttons and dials first, so that you can quickly change the necessary settings to adapt to your shooting environment.



**Knowing where the buttons are and what they do allows you to change your settings without taking your eye from the viewfinder so you don't miss a shot.**

## **Key Components of the D3300**

As I mentioned previously, the D3300 doesn't have the multitudes of buttons and dials that some of the other Nikon camera models do, so the few controls the camera does have are very important. Most of them perform numerous duties depending on the camera mode, so understanding how each control functions is key to controlling your camera quickly so that you don't miss a shot.

The following sections break the camera features down into segments and describe each control.

## The top of the camera

Most of the important buttons are on the top of the D3300. This makes it easier to find them, especially when you have your eye to the viewfinder. This is where you find the dial to change the shooting modes, as well as the all-important shutter-release button and the movie-record button.

The following list includes the controls and buttons on top of the camera:

- ▶ **Movie-record button.** When the camera is in Live View mode (**LV**), you press this button (which is labeled with a red dot) to start recording video. Press it a second time to stop recording.
- ▶ **Shutter-release button.** This is the most important button on the camera. It is a two-stage button: pressing it halfway activates the camera's autofocus and light meter; fully depressing it releases the shutter, and a photograph is taken. When the camera has been idle, and has "gone to sleep," lightly pressing the shutter-release button wakes it up. When the Auto Info display is set to On, half-pressing and holding it turns the Information display off, while releasing it turns the Information display on. When the image review is on, lightly pressing the shutter-release button turns off the LCD screen and prepares the camera for another shot.

**NOTE** The Auto Info display settings is in the Setup Menu (**Y**).

- ▶ **On/Off switch.** Located concentric to the shutter-release button, this switch turns the camera on and



off. Pull the switch to the right to turn the camera on and push it to the left to turn the camera off.



Image courtesy of Nikon, Inc.

### 1.1 The controls on top of the camera.

- ▶ **Exposure compensation (⊖)/Aperture (⊗) button.** Press this button while rotating the Command dial to modify the exposure set by the D3300 light meter when it is in the Programmed auto (P), Shutter-priority auto (S), or Aperture-priority auto (A) modes. Turning the Command dial to the right increases the exposure, while turning the dial to the left decreases the exposure. When the camera is set to Manual exposure

mode (M), you can press this button and rotate the Command dial to adjust the aperture settings.

- ▶ **Info button (i).** Press this button to display information on the LCD screen. The information display shows all of the exposure and camera setting options.
- ▶ **Speaker.** This small speaker allows you to hear the sound of the video playback. The fidelity isn't very good, but it gives you a close approximation of what you will hear during playback.
- ▶ **Mode dial.** This is an important dial. Rotating the Mode dial allows you to change your shooting mode quickly. You can choose one of the scene modes, the Special Effects mode, one of the semiautomatic modes, or Manual exposure mode, which lets you pick the exposure settings.

**CROSS REF** For a detailed description of all exposure modes, see Chapter [2](#).

- ▶ **Hot shoe.** This is where you attach an accessory flash to the camera body. The hot shoe has an electronic contact that tells the flash to fire when the shutter is released. A number of other electronic contacts allow the camera to communicate with the flash, enabling the automated features of a dedicated flash unit such as the SB-700.
- ▶ **Focal plane indicator.** This marks the plane where the front of the sensor lies. Nikon uses this as the mark of the closest focusing distance of a lens, and when measuring distances for manual flash calculations, this is where the measurement to the subject from the camera should start.

## The back of the camera

The back of the camera is where you find the buttons that mainly control playback and menu options, although a few buttons control some of the shooting functions. Most of the buttons have more than one function. Additionally, you use many of the buttons in conjunction with the Command dial or multi-selector. On the back of the camera, you also find several key features, including the all-important LCD screen and viewfinder.

The following are the elements on the back of the camera:

- ▶ **Rear infrared receiver.** This receiver picks up the infrared signal from the optional ML-L3 wireless remote.
- ▶ **Viewfinder.** This is what you look through to compose your photographs. Light coming through the lens is reflected from a series of five mirrors (called a *pentamirror*), enabling you to see exactly what you're shooting. The rubber eyepiece around the viewfinder gives you a soft place to rest your eye and blocks any extra light from entering the viewfinder as you compose and shoot your images.



Image courtesy of Nikon, Inc.

## 1.2 The controls on the back of the camera.

- ▶ **Diopter adjustment control.** Just to the right of the viewfinder (hidden behind the eyecup) is the diopter adjustment control. Use this control to adjust the viewfinder lens to suit your individual vision strength (not everyone's eyesight is the same). The best way to do this is to look at the viewfinder display and rotate the dial until the information in the viewfinder display is sharp.
- ▶ **AE-L/AF-L (📷)/Protect (🔒) button.** The Auto Exposure/Autofocus Lock (📷)/Protect (🔒) button locks

the Auto Exposure (AE) and Autofocus (AF). You can customize this button in the Setup menu (Y) under the Buttons option. The button can be set to provide AE/AF Lock (default), AE Lock only, AE Lock (hold), AF Lock only, or AF-ON. AE Lock (hold) locks the exposure when you press the shutter-release button once; the exposure remains locked until you press the button again or the shutter releases. AF-ON engages the AF in the same way that half-pressing the shutter-release button does. When the camera displays an image in Playback mode, press this button to lock the image and protect it from being deleted.

- ▶ **Live View button (L).** A quick press of the Live View button (L) puts the camera in Live View mode, so you can shoot stills or videos using the LCD monitor as a viewfinder.
- ▶ **Command dial.** You use this dial to change a variety of settings, depending on the button with which you are using it. By default, it changes the shutter speed when the camera is in Shutter-priority auto (S), Programmed auto (P), and Manual exposure (M) modes. When shooting in Aperture-priority auto mode (Av), it changes the aperture setting. It can also adjust exposure compensation and change the flash mode.
- ▶ **Playback button (R).** Press this button to activate playback. By default, it displays the most recently taken photograph. You can also view other pictures by pressing the multi-selector left (L) and right (R).
- ▶ **Menu button (M).** Press this button to access the D3300 menu options, including Playback (R), Shooting (P), Custom Setting (C), and Retouch (R). Use the multi-selector to choose the menu you want to view, and then press the OK button (OK) to enter the specific menu screen.

- ▶ **Zoom in button (🔍).** When reviewing your images or using the Live View option (📹), you can press the Zoom in button (🔍) to get a closer look at the details of your image. This is a handy feature for checking the sharpness and focus of your shot. When the camera is zoomed in, use the multi-selector to navigate around within the image. To view your other images at the same zoom ratio, you can rotate the Command dial. To return to full-frame playback, press the Thumbnail/Zoom out button (🖼️). You may have to press the Thumbnail/Zoom out button (🖼️) multiple times, depending on how much you zoomed in previously.
- ▶ **Thumbnail/Zoom out/Help button (🖼️) (?).** When reviewing images, press this button to switch from full-frame playback (that is, viewing the whole image) to viewing thumbnails. The thumbnail view displays 4, 9, or 72 images. You can also view images by calendar date. When you're viewing the menu options, press this button to display a help screen that explains the functions of that particular menu option. This button also zooms out of an image on which you have zoomed. If the Help icon (?) is flashing on the LCD, pressing this button brings up a dialog box that explains a little more about the selected menu item.
- ▶ **/ button (i).** Press this button once to bring up the information edit display on the LCD screen and use the multi-selector to adjust the camera settings. When in Playback mode, pressing this button brings up options for rating, entering the Retouch menu, or selecting and deselecting the image to send to a smart device (if the WU-1a is connected).
- ▶ **LCD monitor.** This is the most prominent feature on the back of the camera. This 3.2-inch, liquid crystal display (LCD) is a very bright, high-resolution screen