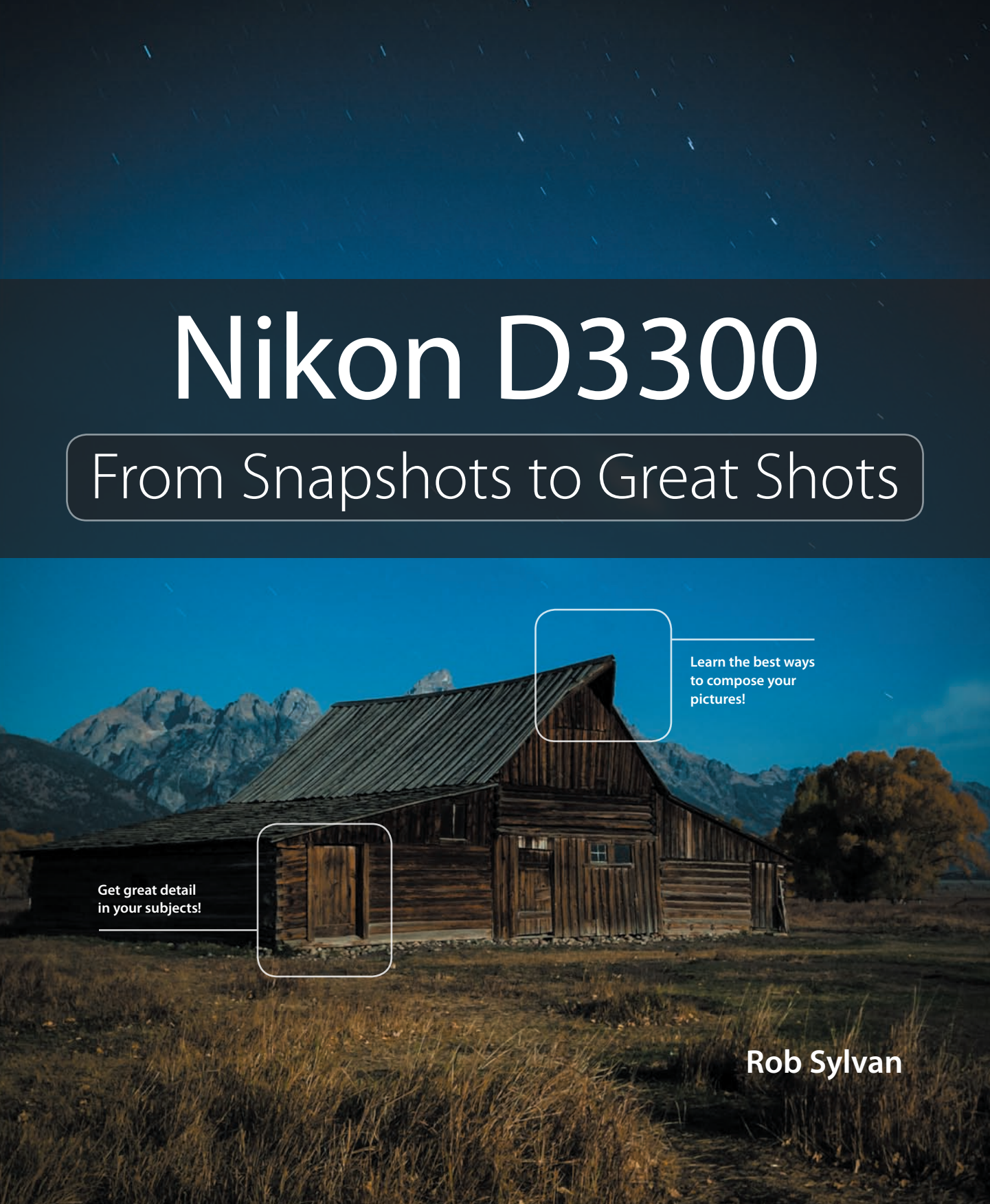
Nikon D3300

From Snapshots to Great Shots



Rob Sylvan

Nikon D3300: From Snapshots to Great Shots

This page intentionally left blank

Nikon D3300: From Snapshots to Great Shots

Rob Sylvan

Peachpit Press

Nikon D3300: From Snapshots to Great Shots
Rob Sylvan

Peachpit Press
www.peachpit.com

To report errors, please send a note to errata@peachpit.com

Peachpit Press is a division of Pearson Education

Senior Editor: Susan Rimerman
Senior Production Editor: Lisa Brazieal
Copyeditor: Suki Gear
Proofreader: Bethany Stough
Composition: WolfsonDesign
Indexer: James Minkin
Cover Image: Rob Sylvan
Cover Design: Aren Straiger
Interior Design: Mimi Heft

ISBN-13: 978-0-133-85442-8
ISBN-10: 0-133-85442-6

9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America

The camera used while writing this *From Snapshots to Great Shots* book was generously provided by B&H Photo.

www.bhphotovideo.com

Dedication

For Paloma. I love you.

Acknowledgments

My deepest thanks go to Jeff Revell, the author of a number of books in the From Snapshots to Great Shots series, and specifically the book on the D3100, which I had the honor and pleasure of updating for the D3200 and D3300. Jeff is a tremendous photographer and gifted teacher. Thank you for providing such a sound foundation upon which to build.

Any book that has reached the final stage of being published is actually the work of many hands (eyes, brains, and hearts too) behind the scenes. I owe everyone at Peachpit a great deal of gratitude, but specifically Susan Rimerman, Ted Waitt, Lisa Brazieal, Suki Gear, Bethany Stough, Sara Jane Todd, Scott Cowlin, and Nancy Aldrich-Ruenzel, who were instrumental in getting this book finished, looking so darn fantastic, and out into the world. Thank you all.

A special thanks to David Brommer and B&H Photo Video for help in securing the D3300 I used to write this book.

I am grateful for all that I have learned from my friends at the National Association of Photoshop Professionals, the Digital Photo Workshops, the fantastic instructors at Photoshop World, and countless numbers of fellow photographers. You all have taught and inspired me over the years.

I also want to thank my wife, Paloma, for being the love of my life and my number one supporter during this project; my son, Quinn, for assisting me on many shoots and being the model in many more; and my family, friends, and neighbors—Ea, Avery, Otis, Hayley, Mark, Adrienne, Emma, Julia, Paige, Kris, Max, Chris, Anna, Dan, Jayda, Maggie, Jaylin, Alden, Hayden—for being a part of the book in large and small ways.

I owe a deep debt of gratitude to Nikki McDonald, who took a chance on me a few years ago and invited me into the Peachpit family. This is all your fault. ☺

Contents

Introduction

The D3300 is a wonderful bit of camera technology and a very capable tool for creating photographs that you will be proud to show others. The intention of this book is not to be a rehash of the owner's manual that came with the camera, but rather to be a resource for learning how to improve your photography while using your D3300. I am very excited and honored to help you in that process, and to that end I have put together a short Q&A to help you get a better understanding of what you can expect from this book.

Q: Is every camera feature going to be covered?

A: Nope, just the ones I felt you need to know about in order to start taking great photos. Believe it or not, you already own a great resource that covers every feature of your camera: the owner's manual. Writing a book that just repeats this information would have been a waste of my time and your money. What I did want to write about was how to harness certain camera features to the benefit of your photography. As you read through the book, you will also see callouts that point you to specific pages in your owner's manual (either the small printed manual or the more complete PDF found on the disc that comes with the camera) that are related to the topic being discussed. For example, I discuss the use of the AE-L button, but there is more information available on this feature in the manual. I cover the function as it applies to our specific needs, but I also give you the page numbers in the manual so you can explore it even further.

Q: What about video?

A: While the focus of this book is on creating still photographs, I have devoted one chapter (Chapter 10) to helping you get started with the video functions of the D3300.

Q: So if I already own the manual, why do I need this book?

A: The manual does a pretty good job of telling you how to use a feature or turn it on in the menus, but it doesn't necessarily tell you *why* and *when* you should use it. If you really want to improve your photography, you need to know the whys and whens to put all of those great camera features to use at the right time. To that extent, the manual just isn't going to cut it. It is, however, a great resource on the camera's features, and it is for that reason I treat it like a companion to this book. You already own it, so why not get something of value from it?

Q: What can I expect to learn from this book?

A: Hopefully, you will learn how to take great photographs. My goal—and the reason the book is laid out the way it is—is to guide you through the basics of photography as they relate to different situations and scenarios. By using the features of your D3300 and this book, you will learn about aperture, shutter speed, ISO, lens selection, depth of field,

and many other photographic concepts. You will also find plenty of full-page photos that include captions, shooting data, and callouts so you can see how all of the photography fundamentals come together to make great images. All the while, you will be learning how your camera works and how to apply its functions and features to your photography.

Q: What are the assignments all about?

A: At the end of most of the chapters, you will find shooting assignments, where I give you some suggestions as to how you can apply the lessons of the chapter to help reinforce everything you just learned. Let's face it—using the camera is much more fun than reading about it, so the assignments are a way of taking a little break after each chapter and having some fun.

Q: Should I read the book straight through, or can I skip around from chapter to chapter?

A: Here's the easy answer: yes and no. No, because the first four chapters give you the basic information you need to know about your camera. These are the building blocks for using the camera. After that, yes, you can move around the book as you see fit because the remaining chapters are written to stand on their own as guides to specific types of photography or shooting situations. So you can bounce from portraits to shooting landscapes and then maybe to a little action photography. It's all about your needs and how you want to address them. Or you can read the book straight through. The choice is up to you.

Q: Is there anything else I should know before getting started?

A: In order to keep the book short and focused, I had to be selective about what I included in each chapter. The problem is that there is a little more information that might come in handy after you've gone through all the chapters. So as an added value for you, I have written a bonus chapter: Chapter 12, called "Accessorize." It is full of information on accessories that will assist you in making better photographs. You will find my recommendations for things like filters, tripods, and much more. To access the bonus chapter, just log in or join Peachpit.com (it's free), then enter the book's ISBN (9780133-854428) on this page: www.peachpit.com/store/register.aspx. After you register the book, a link to the bonus chapter will be listed on your Account page under Registered Products. Note: If you purchased an electronic version of this book, you're set—Chapter 12 is already included in it.

Q: Is that it?

A: One last thought before you dive into the first chapter. My goal in writing this book has been to give you a resource you can turn to for creating great photographs with your Nikon D3300. Take some time to learn the basics, and then put them to use. Photography, like most things, takes time to master and requires practice. I have been a photographer for many years and I'm still learning. Always remember that it's not the camera that makes beautiful photographs—it's the person using it. Have fun, make mistakes, and then learn from them. In no time, I'm sure you will transition from a person who takes snapshots to a photographer who makes great shots.

ISO 100 • 1/400 sec. • f/6.3 • 22mm lens

1

The D3300 Top Ten List

Ten Tips to Make Your Shooting More Productive Right Out of the Box

Whenever I get a new camera, I am always anxious to jump right in and start cranking off exposures. What I really should be doing is sitting down with my instruction manual to learn how to use all of the camera features, but what fun is that? After all, we all know instruction manuals are for propping up the short leg on the family room table, right?

Of course, this behavior always leads me to frustration in the end—there are always issues that would have been easily addressed had I known about them before I started shooting. Maybe if I had a Top Ten list of things to know, I could be more productive without having to spend countless hours with the manual. So this is where we begin.

Camera Front

A Infrared Receiver
B Red-Eye Reduction/Focus Assist Lamp
C Microphone
D Lens Mounting Mark
E Lens Release Button

Camera Back

A Information Edit
B Thumbnail/Playback Zoom Out
C Playback Zoom In
D Menu Button
E Image Playback Button
F Infrared Receiver
G Mode Dial
H AutoExposure/AutoFocus Lock Button
I Command Dial
J Live View
K OK Button
L Multi-selector
M Delete Image Button
N Release Mode/Self Timer/Remote
O LCD/Information Screen

Camera Top

A Flash Mode/Flash Compensation
B Function Button
C Movie-Record Button
D On/Off Switch
E Shutter Release Button
F Exposure Compensation/Aperture Adjustment
G Info Button
H Speaker
I Mode Dial
J Flash Hot Shoe

The following list will get you up and running without suffering many of the "gotchas" that come from not being at least somewhat familiar with your new camera. So let's take a look at the top ten things you should know before you start taking pictures with your Nikon D3300.

1. Charge Your Battery

I know this will be one of the hardest things for you to do because you really want to start shooting, but a little patience will pay off later.

When you first open your camera and slide the battery into the battery slot, you will be pleased to find there is probably juice in the battery and you can start shooting right away. What you should really be doing is getting out the battery charger and giving the power cell a full charge. Not only will this give you more time to shoot, it will start the battery off on the right foot. No matter what claims the manufacturers make about battery life and charging memory, I always find I get better life and performance when I charge my batteries fully and then use them right down to the point where they have nothing left to give. To check your battery's level, insert it into the camera, turn on the camera, and look for the battery indicator in the upper-right section of the information screen (**Figure 1.1**).

Figure 1.1 **The LCD screen shows how much charge is left on your battery.**

Keeping a backup battery

If I were to suggest just one accessory you should buy for your camera, it would probably be a second battery. Nothing is worse than being out in the field and having your camera die. Keeping a fully charged battery in your bag will always give you the confidence that you can keep on shooting without fail. Not only is this a great strategy to extend your shooting time, but alternating between batteries will help lengthen their lives. No matter what the manufacturers say, batteries do have a life, and using them half as much will only lengthen their usefulness.

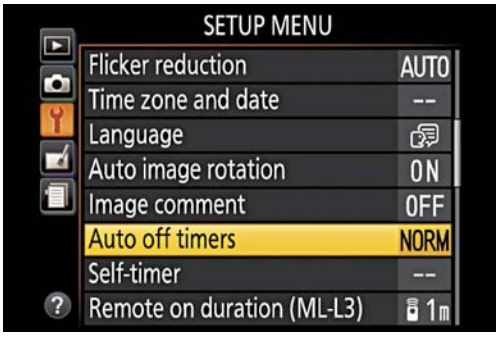
2. Adjust Your Auto Off Timer Setting

One of the things that really bugged me when I first began shooting with the D3300 was the short duration the playback and menu screens stayed on while I was working with the camera. This can be very frustrating when you are trying to learn about the camera and its features, and you have to keep pressing the Menu or Info button to bring the screen back to life. This is also the case when reviewing images on the screen after taking a picture. I don't know about you, but four seconds seems like a very short time when you are trying to assess whether or not you got your shot. The answer to this problem is to increase the timer setting to a longer duration. The D3300 has four different settings for the auto off function: Short, Normal, Long, and Custom. To make things easy, I set my camera to the Long setting, which gives five minutes for playback/menus, 20 seconds for image review, and one minute for standby timer off. If you so choose, you can use the Custom setting to individually adjust each of these options.

Setting the auto off timers

1. Press the Menu button and navigate to the Setup Menu tab.
2. Select the Auto off timers item and press OK (**A**).
3. Highlight your choice of timer settings (my preference is Long) and press OK a final time to lock in your change (**B**).

A



B

3. Set Your JPEG Image Quality

Your new D3300 has a number of image-quality settings from which to choose, and you can adjust them according to your needs. Most people shoot with the JPEG option because it allows them to capture a large number of photos on their memory cards. The problem is that unless you understand what JPEG is, you might be degrading the quality of your images without realizing it.

The JPEG (Joint Photographic Experts Group) format has been around since about 1994 and was developed as a method of shrinking the size of digital images down to a smaller size for the purpose of reducing large file sizes while retaining the original image information. (Technically, JPEG isn't even a file format—it's a mathematical equation for reducing image file sizes—but to keep things simple, we'll just refer to it as a file format.) The problem with JPEG is that in order to reduce file size, it has to throw away some of the information. This is referred to as "lossy compression." This is important to understand because, while you can fit more images on your memory card by choosing a lower-quality JPEG setting, you will also be reducing the quality of your images. This effect becomes more apparent as you enlarge your pictures.

The JPEG file format also has one other characteristic: To apply the compression to the image before final storage on your memory card, the camera has to apply all of the image processing first. Image processing involves such factors as sharpening, color adjustment, contrast adjustment, noise reduction, and so on. Many photographers now prefer to use the RAW file format to get greater control over the image processing. We will take a closer look at this in Chapter 2, but for now let's just make sure we are using the best-quality JPEG possible.

The D3300 has nine settings for the JPEG format. There are three settings each for the Large, Medium, and Small image size settings. The three settings (Basic, Normal, and Fine) represent more or less image compression based on your choice. The Large, Medium, and Small settings determine the actual physical size of your image in pixels. Let's work with the highest-quality setting possible. After all, our goal is to make big, beautiful photographs, so why start the process with a lower-quality image?

Setting the image quality

1. Press the **i** button (at the bottom left on the back of the camera) to activate the cursor in the information screen.
2. Use the Multi-selector to select the Image quality setting and press OK (**A**).
3. When the option screen appears, use the Multi-selector to choose the Fine setting and press OK (**B**).
4. Now move the cursor to choose Image size, and press OK to get to the options (**C**).
5. Select the L option to use the largest image size available, and press OK once more (**D**).
6. Press the **i** button again to return to shooting mode.

A

B

C

D

As you will see when scrolling through the quality settings, the higher the quality, the fewer pictures you will be able to fit on your card. If you have an 8 GB memory card, the quality setting we have selected will allow you to shoot about 500 photographs before you fill up your card. Always try to choose quality over quantity. Your pictures will be the better for it.

Manual Callout

For a complete chart showing the image-quality settings with the number of possible shots for each setting, turn to page 362 in your reference manual. This is not the small printed user manual but the PDF version found on the Reference Manual CD.

4. Turn Off the Auto ISO Setting

The ISO setting in your camera allows you to choose the level of sensitivity of the camera sensor to light. The ability to change this sensitivity is one of the biggest advantages to using a digital camera. In the days of film cameras, you had to choose the ISO by film type. This meant that if you wanted to shoot in lower light, you had to replace the film in the camera with one that had a higher ISO. So not only did you have to carry different types of film, but you also had to remove one roll from the camera to replace it with another, even if you hadn't used up the current roll. Now all you have to do is go to your information screen and select the appropriate ISO.

Having this flexibility is a powerful option, but just as with the Quality setting, the ISO setting has a direct bearing on the quality of the final image. The higher the ISO, the more digital noise the image will contain. Since our goal is to produce high-quality photographs, it is important we get control over all of the camera controls and bend them to our will. When you turn your camera on for the first time, the ISO will be set to Auto. This means the camera is determining how much light is available and will choose what it believes is the correct ISO setting. Since you want to use the lowest ISO possible, you will need to turn this setting off and manually select the appropriate ISO.

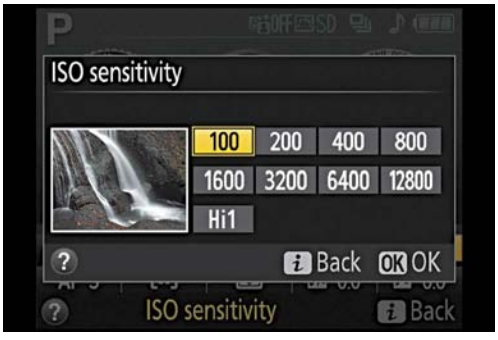
Which ISO you choose depends on your level of available or ambient light. For sunny days or very bright scenes, use a low ISO such as 100. As the level of light is reduced, raise the ISO level. Cloudy days or indoor scenes might require you to use ISO 400. Low-light scenes, such as when you are shooting at night, will mean you need to bump up that ISO to 1600 or higher. The thing to remember is to shoot with the lowest setting possible for maximum quality.

Setting the ISO

1. Press the **i** button on the back of the camera to activate the cursor in the information screen.
2. Use the Multi-selector to highlight the ISO sensitivity option and press OK (**A**).
3. In the option screen, select the appropriate ISO for the level of light you are shooting in, and press the OK button to lock in the change (**B**).

A

B



You should know the Auto ISO option is only enabled as a default when using one of the automatic scene modes. When using one of the professional modes (M, A, S, and P; we'll discuss these in Chapter 4), the Auto ISO feature will be automatically turned off. If you wish to use an automated ISO in one of these modes, you must configure it in the ISO sensitivity settings in the shooting menu (covered in Chapter 5). If you plan on shooting with the Auto or Flash Off modes, you cannot turn off the Auto ISO option at all.

Noise

Noise is the enemy of digital photography, but it has nothing to do with the loudness of your camera operation. It refers to the electronic artifacts that appear as speckles in your image. They generally appear in darker shadow areas and are a result of the camera trying to amplify the signal to produce visible information. The more the image needs to be amplified—e.g., raising the sensitivity through higher ISOs—the greater the amount of noise there will be.

Set your ISO on the fly

You can also change the ISO without taking your eye from the viewfinder. Although there is no dedicated ISO button on the D3300, you can still change this setting on the fly by setting the Function button to handle ISO sensitivity. Simply use the Setup Menu item called Buttons to change the assignment of the Function button to ISO. Then, while you are looking through the viewfinder, just press and hold the Function button while turning the Command dial. You will see the ISO value change in your viewfinder display.

5. Set Your Focus Point and Mode

The Nikon focusing system is well known for its speed and accuracy. The automatic focus modes give you a ton of flexibility in your shooting. There is, however, one small problem inherent with any focusing system. No matter how intelligent it is, the camera is looking at all of the subjects in the scene and determining which is closest to the camera. It then uses this information to determine where the proper focus point should be. It has no way of knowing what your main emphasis is, so it is using a "best guess" system. To eliminate this factor, you should set the camera to single-point focusing so you can ensure you are focusing on the most important feature in the scene.

The camera has 11 separate focus points from which to choose. They are arranged in a diamond pattern in the viewfinder, with ten points around the outside of the diamond and one in the center. To start things off, you should select the focus point in the middle. Once you have become more familiar with the focus system, you can experiment with the other points, as well as the automatic point selection.

You should also change the focus mode to AF-S so you can focus on your subject and then recompose your shot while holding that point of focus.

Setting the focus point and focus mode

1. To choose a single point of focus, wake the camera (if necessary) by lightly pressing the shutter release button.
2. Press the **i** button on the back of the camera to activate the cursor in the information screen.
3. Use the Multi-selector to highlight the AF-area mode and press OK (**A**).

A

4. Select Single-point AF and press OK (**B**).
5. With the cursor still active, move to the Focus mode option and press OK (**C**).
6. Select AF-S for single focus mode, and press the OK button to lock in your change (**D**).
7. Press the **i** button to return to the regular information screen.

B

C

D

The camera is now ready for single focusing. You will hear a chirp (unless you've turned off the Beep under the Setup Menu) when the camera has locked in and focused on the subject. To focus on your subject and then recompose your shot, just place the focus point in the viewfinder on your subject, depress the shutter release button halfway until the camera chirps, and without letting up on the shutter button, recompose your shot and then press the shutter button all the way down to make your exposure.

6. Set the Correct White Balance

Color-balance correction is the process of rendering accurate colors in your final image. Most people don't even notice that light has different color characteristics, because the human eye automatically adjusts to changes in color temperature—so quickly, in fact, that everything looks correct in a matter of milliseconds.

When color film ruled the world, photographers would select which film to use depending on what their light source was going to be. The most common film was balanced for daylight, but you could also buy film that was color balanced for tungsten light sources. Most other lighting situations had to be handled by using color filters over the lens. This process was necessary for the photographer's final image to show the correct color balance of a scene.

Your camera has the ability to perform this same process automatically, but you can also choose to override it and set it manually. Guess which method we are going to use? That's right, once again your photography should be all about maintaining control over everything that influences your final image.

Luckily, you don't need to have a deep understanding of color temperatures to control your camera's white balance. The choices are given to you in terms that are easy to relate to and that will make things pretty simple. Your white balance choices are:

- **Auto:** The default setting for your camera. It is also the setting used by all of the automatic scene modes (see Chapter 3).
- **Incandescent:** Used for any occasion where you are using regular household-type bulbs for your light source. Tungsten is a very warm light source and will result in a yellow/orange cast if you don't correct for it.
- **Fluorescent:** Used to get rid of the green-blue cast that can result from using regular fluorescent lights as your dominant light source. Some fluorescent lights are actually balanced for daylight, which would allow you to use the Daylight white balance setting.
- **Direct Sunlight:** Most often used for general daylight/sun-lit shooting.
- **Flash:** Used whenever you're using the built-in flash or a flash on the hot shoe. You should select this white balance to adjust for the slightly cooler light that comes from using a flash. (The hot shoe is the small bracket located on the top of your camera; it rests just above the eyepiece. This bracket is used for attaching a more powerful flash to the camera; see Chapter 8 and the online bonus chapter, "Accessorize.")
- **Cloudy:** The choice for overcast or very cloudy days. This and the Shade setting will eliminate the blue color cast from your images.
- **Shade:** Used when working in shaded areas that are still using sunlight as the dominant light source.
- **Pre:** Indicates you are using a customized white balance that is adjusted for a particular light source. This option can be adjusted using an existing photo you have taken or by taking a picture of something white or gray in the scene.

Your camera has two different "zones" of shooting modes from which to choose. These are located on the Mode dial, and they are separated into automatic scene modes and what I refer to as the professional modes. All of the automatic modes, which are identifiable by small icons on the Mode dial, are automatic in nature and do not allow for much, if any, customization, which includes white balance. The professional modes, defined by the letter symbols M, A, S, and P, allow for much more control by the photographer (**Figure 1.2**).

Figure 1.2 **The camera's shooting modes are divided into the automatic scene modes and the professional modes.**

Setting the white balance

1. After turning on or waking the camera, select one of the professional shooting modes, such as P. (You can't select the white balance when using any of the automatic modes.)
2. Press the **i** button on the back of the camera to activate the cursor in the information screen.
3. Use the Multi-selector to highlight the White balance option and press OK (**A**).
4. Using the Multi-selector, select the appropriate white balance and press OK (**B**).
5. Press the **i** button to return to the regular information screen.

A

B

White balance and the temperature of color

Different white-balance settings in your camera correspond to a number—e.g., 5200K, 7000K, or 3200K. These numbers refer to the Kelvin temperature of the colors in the visible spectrum. The visible spectrum is the range of light the human eye can see (think of a rainbow or the color bands that come out of a spectrum). The visible spectrum of light has been placed into a scale called the Kelvin temperature scale, which identifies the thermodynamic temperature of a given color of light. Put simply, reds and yellows are "warm," and greens and blues are "cool." Even more confusing can be the actual temperature ratings. Warm temperatures are typically lower on the Kelvin scale, ranging from 3000 degrees to 5000 degrees, while cool temperatures run from 5500 degrees to around 10,000 degrees. Take a look at this list for an example of Kelvin temperature properties.

Kelvin temperature properties			
Flames	1700K–1900K	Daylight	5000K
Incandescent bulb	2800K–3300K	Camera flash	5500K
White fluorescent	4000K	Overcast sky	6000K
Moonlight	4000K	Open shade	7000K

The most important thing to remember here is how the color temperature of light affects the look of your images. If something is "warm," it will look reddish-yellow, and if something is "cool," it will have a bluish cast.

7. Set Your Color Space

The color space deals with how your images will ultimately be used. It is basically a set of instructions that tells your camera how to define the colors in your image and then output them to the device of your choice, be it your monitor or a printer. Your camera has a choice of two color spaces: sRGB and Adobe RGB.

The first choice, sRGB, was developed by Hewlett-Packard and Microsoft as a way of defining colors for the Internet. This space was created to deal with the way computer monitors actually display images using red, green, and blue (RGB) colors. Because there are no black pixels in your monitor, the color space uses a combination of these three colors to display all of the colors in your image.

In 1998, Adobe Systems developed a new color space, Adobe RGB, which was intended to encompass a wider range of colors than was obtainable using traditional cyan, magenta, yellow, and black colors (called CMYK) but doing so using the primary red, green, and blue colors. It uses a more widely defined palette of colors (or gamut) than the sRGB

space and, therefore, contains colors farther toward the more saturated end of the spectrum than sRGB does, which can be preferable when printing.

The color-space choice is applied only to the JPEG images produced by the camera. If you should choose to shoot RAW (discussed in Chapter 2), the color space is determined later when you are using software to process the photos. I typically use the Adobe RGB space when shooting JPEG because it has a wider gamut than sRGB, and it is always better to go from a wider color space to a narrower one when editing. That said, if you are shooting JPEG and sending photos straight to a printer or posting online without much (or any) editing, then sRGB is a fine choice.

A little color theory

The visible spectrum of light is based on a principle called *additive color* and is centered on three primary colors: red, green, and blue. When you add these colors together in equal parts, you get white light. By combining different amounts of them, you can achieve all the different colors of the visible spectrum. This is a completely different process than printing, where cyan, magenta, and yellow are combined to create various colors. This method is called *subtractive color* and has to do with the reflective properties of pigments or inks as they are combined.

Setting the color space

1. With the camera turned on, press the Menu button.
2. Using the Multi-selector, select the Shooting Menu, highlight the Color space option, and press OK (**A**).
3. Highlight your desired color space, and press the OK button once again (**B**).
4. Tap the shutter button to return to the regular information screen.

A

B