

# Nikon D3300

From Snapshots to Great Shots



Learn the best ways  
to compose your  
pictures!

Get great detail  
in your subjects!

**Rob Sylvan**

**Nikon D3300:**  
**From**  
**Snapshots to**  
**Great Shots**

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# Nikon D3300: From Snapshots to Great Shots

Rob Sylvan



Peachpit  
Press

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Rob Sylvan

### **Peachpit Press**

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## Dedication

For Paloma. I love you.

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# Contents

## **INTRODUCTION** **XI**

## **CHAPTER 1: THE D3300 TOP TEN LIST** **1**

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

Poring Over the Camera	2
Poring Over the Camera	4
1. Charge Your Battery	5
2. Adjust Your Auto Off Timer Setting	6
3. Set Your JPEG Image Quality	7
4. Turn Off the Auto ISO Setting	9
5. Set Your Focus Point and Mode	11
6. Set the Correct White Balance	12
7. Set Your Color Space	15
8. Know How to Override Autofocus	17
9. Review Your Shots	18
10. Hold Your Camera for Proper Shooting	23
Chapter 1 Assignments	25

## **CHAPTER 2: FIRST THINGS FIRST** **27**

### **A Few Things to Know and Do Before You Begin Taking Pictures**

Poring Over the Picture	28
Choosing the Right Memory Card	30
Formatting Your Memory Card	30
Updating the D3300's Firmware	32
Cleaning the Sensor	33
Using the Right Format: RAW vs. JPEG	35
Lenses and Focal Lengths	38
What Is Exposure?	42
Motion and Depth of Field	45
Chapter 2 Assignments	47

## **CHAPTER 3: THE AUTO MODES** **49**

### **Get Shooting with the Automatic Camera Modes**

Poring Over the Picture	50
Auto Mode	52
Portrait Mode	53
Landscape Mode	54
Child Mode	55
Sports Mode	56
Close Up Mode	57
Night Portrait Mode	58
Flash Off Mode	59
Effects Modes	60
Guide Mode	65
Why You May Never Want to Use the Auto Modes Again	66
Chapter 3 Assignments	68

## **CHAPTER 4: THE PROFESSIONAL MODES** **71**

### **Taking Your Photography to the Next Level**

Poring Over the Picture	72
P: Program Mode	74
S: Shutter Priority Mode	77
A: Aperture Priority Mode	81
M: Manual Mode	86
How I Shoot: A Closer Look at the Camera Settings I Use	89
Chapter 4 Assignments	92

## **CHAPTER 5: MOVING TARGET** **95**

### **The Tricks to Shooting Subjects in Motion**

Poring Over the Picture	96
Stop Right There!	98
Using Shutter Priority (S) Mode to Stop Motion	101
Using Aperture Priority (A) Mode to Isolate Your Subject	104
Using Auto ISO the Right Way	105
Keep Them in Focus with Continuous-Servo Focus and AF Focus Point Selection	107
Stop and Go with 3D-Tracking AF	109
Manual Focus for Anticipated Action	109
Keeping Up with the Continuous Shooting Mode	111

A Sense of Motion	112
Tips for Shooting Action	114
Chapter 5 Assignments	117
<b>CHAPTER 6: SAY CHEESE!</b>	<b>119</b>
<b>Settings and Features to Make Great Portraits</b>	
Poring Over the Picture	120
Using Automatic Portrait Mode	122
Using Aperture Priority Mode	122
Metering Modes for Portraits	124
Using the AE-L (Auto Exposure Lock) Feature	126
Focusing: The Eyes Have It	127
Classic Black and White Portraits	129
The Portrait Picture Control for Better Skin Tones	131
Detect Faces with Live View	131
Use Fill Flash for Reducing Shadows	132
Portraits on the Move	135
Tips for Shooting Better Portraits	136
Chapter 6 Assignments	143
<b>CHAPTER 7: LANDSCAPE PHOTOGRAPHY</b>	<b>145</b>
<b>Tips, Tools, and Techniques to Get the Most Out of Your Landscape Photography</b>	
Poring Over the Picture	146
Sharp and In Focus: Using Tripods	148
Selecting the Proper ISO	150
Selecting a White Balance	152
Using the Landscape Picture Control	154
Taming Bright Skies with Exposure Compensation	156
Shooting Beautiful Black and White Landscapes	158
The Golden Light	160
Where to Focus	162
Easier Focusing	164
Making Water Fluid	165
Directing the Viewer: A Word About Composition	168
Advanced Techniques to Explore	171
Chapter 7 Assignments	179

## **CHAPTER 8: MOOD LIGHTING** **181**

### **Shooting When the Lights Get Low**

Poring Over the Picture	182
Raising the ISO: The Simple Solution	184
Using Very High ISOs	186
Stabilizing the Situation	187
Focusing in Low Light	188
Shooting Long Exposures	191
Using the Built-in Flash	193
Compensating for the Flash Exposure	196
Reducing Red-Eye	198
Rear Curtain Sync	200
Flash and Glass	202
A Few Words About External Flash	203
Chapter 8 Assignments	204

## **CHAPTER 9: CREATIVE COMPOSITIONS** **207**

### **Improve Your Pictures with Sound Compositional Elements**

Poring Over the Picture	208
Depth of Field	210
Angles	212
Point of View	213
Patterns	214
Color	214
Contrast	216
Leading Lines	218
Splitting the Frame	218
Frames within Frames	220
Chapter 9 Assignments	221

## **CHAPTER 10: D3300 VIDEO: BEYOND THE BASICS** **223**

### **Video and the D3300**

It's All About the Lenses	228
Using Accessories	229
Getting a Shallow Depth of Field	231
Giving a Different Look to Your Videos	232
Tips for Better Video	233
Watching and Editing Your Video	235

Expanding Your Knowledge	236
Chapter 10 Assignments	237
<b>CHAPTER 11: ADVANCED TECHNIQUES</b>	<b>239</b>
Impress Your Family and Friends	
Poring Over the Picture	240
Spot Metering for More Exposure Control	242
Metering for Sunrise or Sunset	244
Manual Mode	245
Avoiding Lens Flare	248
Using the Sun Creatively	249
Macro Photography	250
Active D-Lighting	251
Customizing Your White Balance	253
Conclusion	255
Chapter 11 Assignments	256
<b>INDEX</b>	<b>257</b>
<b>BONUS CHAPTER 12: ACCESSORIZE</b>	<b>BONUS-1</b>

# 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](http://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 • 1/80 sec. •  
f/2.5 • 50mm lens


# 4

## The Professional Modes

### **Taking Your Photography to the Next Level**


If you talk to professional photographers, you will find that the majority of them use a few selective modes that offer the greatest amount of control over their photography. To anyone who has been involved with photography for any period of time, these modes are known as the backbones of photography. They allow you to influence two of the most important factors in taking great photographs: aperture and shutter speed. To access these modes, you simply turn the Mode dial to one of the letter-designated modes and begin shooting. But wouldn't it be nice to know exactly what those modes control and how to make them do our bidding? Well, if you really want to take that next step in controlling your photography, it is essential that you understand not only how to control these modes but why you are controlling them. So let's move that Mode dial to the first of our professional modes: Program mode.

## Poring Over the Picture



The color from the foliage is nicely reflected in the water.

I love the mix of moving water and long exposures. The key is having something solid in the scene to provide contrast against the movement of the water, and these river stones were perfect. I used the Bulb setting in Manual mode, which we'll cover in Chapter 11, to get the extremely long exposure duration.



The wide depth of field keeps detail  
in focus deeper into the scene.

The longer the exposure, the more  
smooth the water will appear.

ISO 200 • 120 sec. •  
f/11 • 35mm lens

## P: Program Mode



There is a reason that Program mode is only one click away from the automatic modes: With respect to apertures and shutter speeds, the camera is doing most of the thinking for you. So, if that is the case, why even bother with Program mode? First, let me say that I rarely use Program mode because it just doesn't give as much control over the image-making process as the other professional modes. There are occasions, however, when it comes in handy, like when I am shooting in widely changing lighting conditions and don't have the time to think through all of my options, or when I'm not very concerned with having ultimate control of the scene. Think of a picnic outdoors in a partial shade/sun environment. I want great-looking pictures, but I'm not looking for anything to hang in a museum. If that's the scenario, why choose Program over one of the scene modes? Because it gives me choices and control that none of the scene modes can deliver.

### Manual Callout

To see a comparison of all the different modes, check out the table on page 326 of the electronic Reference Manual.

### When to use Program (P) mode instead of the automatic scene modes

- When shooting in a casual environment where quick adjustments are needed
- When you want more control over the ISO
- When you want to make corrections to the white balance
- When you want to change shutter speeds or the aperture to achieve a specific result

Let's go back to our picnic scenario. As I said, the light is moving from deep shadow to bright sunlight, which means that the camera is trying to balance our three photo factors (ISO, aperture, and shutter speed) to make a good exposure. From Chapter 1, we know that Auto ISO is just not a consideration, so we have already turned that feature off (you did turn it off, didn't you?). Well, in Program mode, you can choose which ISO you would like the camera to base its exposure on. The lower the ISO number, the better the quality of our photographs, but the less light sensitive the camera becomes. It's a balancing act, with the main goal always being to keep the ISO as low as possible—too low an ISO, and we will get camera shake in our images from a long shutter speed; too high an ISO means we will have an unacceptable amount of digital noise. For our purposes, let's go ahead and select ISO 400 so we provide enough sensitivity for those shadows while allowing the camera to use shutter speeds that are fast enough to stop motion.

## Starting points for ISO selection

We discuss ISO quite often in this and other chapters, but it might be helpful if you know where your starting points should be for your ISO settings. The first thing you should always try to do is use the lowest possible ISO setting. That being said, here are good starting points for your ISO settings:

- **100:** Bright sunny day
- **200:** Hazy or outdoor shade on a sunny day
- **400:** Indoor lighting at night or cloudy conditions outside
- **800:** Late night, low-light conditions or sporting arenas at night

These are just suggestions, and your ISO selection will depend on a number of factors that will be discussed later in the book. You might have to push your ISO even higher as needed, but at least now you know where to start.

With the ISO selected, we can now make use of the other controls built into Program mode. By rotating the Command dial, we now have the ability to shift the program settings (Nikon calls this “flexible program”). Remember, your camera is using the internal meter to pick what it believes are suitable exposure values, but sometimes it doesn’t know what it’s looking at and how you want those values applied (**Figures 4.1 and 4.2**).



**Figure 4.1** This is my first shot, using Program mode.

ISO 100 • 1/1600 sec. • f/2 • 50mm lens



**Figure 4.2** I decreased the size of the aperture by rotating the Command dial to the left to get a greater depth of field, and the shutter speed slowed down to maintain the same exposure value.

ISO 100 • 1/80 sec. • f/9 • 50mm lens

With the program shift, you can influence what the shot will look like. Do you need faster shutter speeds in order to stop the action? Just turn the Command dial to the right. Do you want a smaller aperture so you get a greater depth of field? Then turn the dial to the left until you get the desired aperture. The camera shifts the shutter speed and aperture accordingly in order to get a proper exposure, and you will get the benefit of your choice as a result.

You will also notice that if you rotate the Command dial, a small star will appear above the letter P in the viewfinder and the rear display. This star is an indication that you modified the exposure from the one the camera chose. To go back to the default Program exposure, simply turn the dial until the star goes away, or switch to a different mode and then back to Program mode again.

Let's set up the camera for Program mode and see how we can make all of this come together.

## Setting up and shooting in Program mode

1. Turn your camera on, and then turn the Mode dial to align the P with the indicator line.
2. Select your ISO by pressing the **i** button on the lower-left portion of the back of the camera (if the camera's info screen is not visible, press the **i** button to turn it on, and then press it again).
3. Highlight the ISO option, and then select OK.
4. Use the Multi-selector to select the desired ISO setting, and then press OK to lock in the change.
5. Point the camera at your subject, and then activate the camera meter by depressing the shutter button halfway.
6. View the exposure information in the bottom of the viewfinder or by looking at the display panel on the back of the camera.
7. While the meter is activated, use your thumb to roll the Command dial left and right to see the changed exposure values.
8. Select the exposure that is right for you and start clicking. (Don't worry if you aren't sure what the right exposure is. We will start working on making the right choices for those great shots beginning with the next chapter.)





**Figure 4.3**

Even the fastest of subjects can be frozen with the right shutter speed.

ISO 299 • 1/500 sec. • f/4 • 70mm lens



**Figure 4.4**

Slowing down the shutter speed and following the motion conveys a sense of movement in the shot.

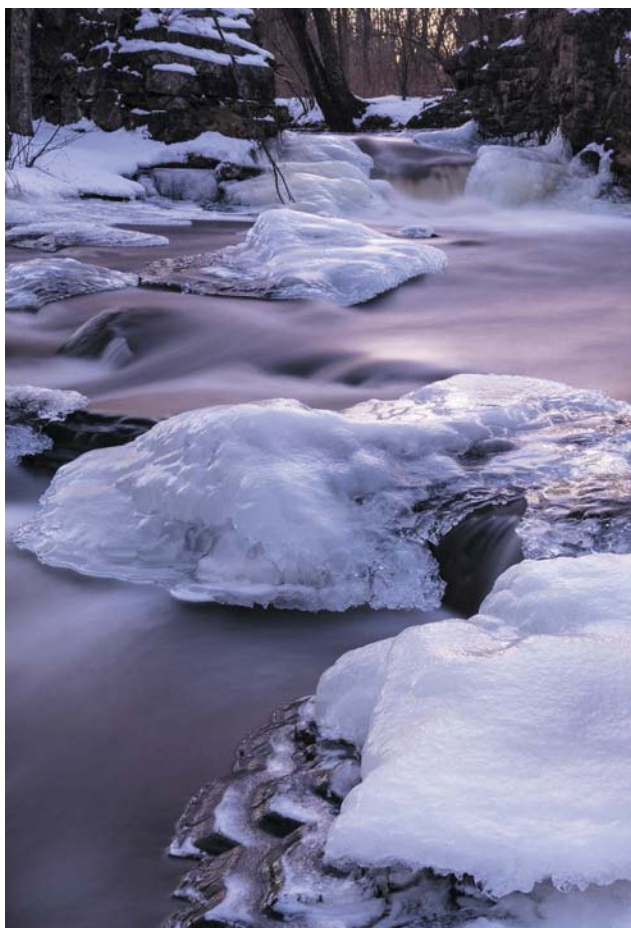
ISO 800 • 1/10 sec. • f/8 • 24mm lens





**Figure 4.5**  
In this low-lit night environment, a long exposure was needed to capture the scene.

ISO 1000 • 30 sec. •  
f/8 • 24mm lens



**Figure 4.6**  
Increasing the length of the exposure time gives moving water a misty look.

ISO 100 • 15 sec. • f/16 • 85mm lens

As you can see, the subject of your photo usually determines whether or not you will use Shutter Priority mode. It is important that you be able to visualize the result of using a particular shutter speed. The great thing about shooting with digital cameras is you get instant feedback by viewing your shot on the LCD screen. But what if your subject won't give you a do-over? Such is often the case when shooting sporting events. It's not like you can go ask the quarterback to throw that touchdown pass again because your last shot was blurry from a slow shutter speed. This is why it's important to know what those speeds represent in terms of their capabilities to stop the action and deliver a blur-free shot.

First, let's examine just how much control you have over the shutter speeds. The D3300 has a shutter speed range from 1/4000 of a second to as long as 30 seconds. With that much latitude, you should have enough control to capture almost any subject. The other thing to think about is that Shutter Priority mode is considered a "semiautomatic" mode. This means that you are taking control over one aspect of the total exposure while the camera handles the other. In this instance, you are controlling the shutter speed and the camera is controlling the aperture. This is important, because there will be times when you want to use a particular shutter speed but your lens won't be able to accommodate your request.

For example, you might encounter this problem when shooting in low-light situations: If you are shooting a fast-moving subject that will blur at a shutter speed slower than 1/125 of a second, but your lens's largest aperture is f/3.5, you might find that your aperture display in the viewfinder and the rear LCD panel starts to blink, and you see "Subject is too dark" displayed on the LCD. This is your warning that there won't be enough light available for the shot—due to the limitations of the lens—so your picture will be underexposed.

Another case where you might run into this issue is when you are shooting moving water. To get that look of silky, flowing water, it's usually necessary to use a shutter speed of at least 1/15 of a second. If your waterfall is in full sunlight, you may get a message that reads "Subject is too bright" because the lens you are using only stops down to f/22 at its smallest opening. In this instance, your camera is warning you that you will be overexposing your image. There are workarounds for these problems, which we will discuss later (see Chapter 7), but it is important to know that there can be limitations when using Shutter Priority mode.

## Setting up and shooting in Shutter Priority mode

1. Turn your camera on, and then turn the Mode dial to align the S with the indicator line.
2. Select your ISO by pressing the **i** button on the lower-left portion of the back of the camera (if the camera's info screen is not visible, press the **i** button to turn it on, and then press it again).
3. Highlight the ISO option, and then press OK.
4. Use the Multi-selector to select the desired ISO setting, and then press OK to lock in the change.
5. Point the camera at your subject, and then activate the camera meter by depressing the shutter button halfway.
6. View the exposure information in the bottom area of the viewfinder or by looking at the rear LCD panel.
7. While the meter is activated, use your thumb to roll the Command dial left and right to see the changed exposure values. Roll the dial to the right for faster shutter speeds and to the left for slower speeds.



## A: Aperture Priority Mode



You wouldn't know it from its name, but Aperture Priority mode is one of the most useful and popular of all the professional modes. The mode is one of my personal favorites, and I believe that it will quickly become one of yours as well. Aperture Priority mode is deemed a semiautomatic mode because it allows you to control one factor of exposure while the camera adjusts for the other.

Why, you may ask, is this one of my favorite modes? It's because the aperture of your lens dictates depth of field. Depth of field, along with composition, is a major factor in how you direct attention to what is important in your image. It is the controlling factor of how much area in your image is in focus. If you want to isolate a subject from the background, such as when shooting a portrait, you can use a large aperture to keep the focus on your subject and make both the foreground and background blurry. If you want to keep the entire scene sharply focused, such as with a landscape scene, then using a small aperture will render the greatest depth of field possible.

## When to use Aperture Priority (A) mode

- When shooting portraits or wildlife (Figure 4.7)
- When shooting most landscape photography (Figure 4.8)
- When shooting macro, or close-up, photography (Figure 4.9)
- When shooting architectural photography, which often benefits from a large depth of field (Figure 4.10)

**Figure 4.7**

A large aperture created a very blurry background so all the emphasis was left on the subject.

ISO 400 • 1/250 sec. •  
f/2 • 50mm lens



**Figure 4.8**

The smaller aperture setting brings sharpness to near and far objects.

ISO 100 • 1/60 sec. •  
f/11 • 16mm lens





**Figure 4.9** A small aperture was used to capture all the detail on the heads of the bees as they emerged from the hive.

ISO 4000 • 1/320 sec. • f/8 • 400mm lens



**Figure 4.10** I typically like to use smaller apertures for architectural shots, to keep everything in focus.

ISO 100 • 1/200 sec. • f/11 • 50mm lens

### F-stops and aperture

As discussed earlier, the numeric value of your lens aperture is described as an *f-stop*. The *f-stop* is one of those old photography terms that, technically speaking, relates to the focal length of the lens (e.g., 200mm) divided by the effective aperture diameter. These measurements are defined as “stops” and work incrementally with your shutter speed to determine proper exposure. Older camera lenses used one-stop increments to assist in exposure adjustments, such as 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, and 22. Each stop represents about half the amount of light entering the lens iris as the larger stop before it. Today, most lenses don’t have *f-stop* markings since all adjustments to this setting are performed via the camera’s electronics. The stops are also now typically divided into 1/3-stop increments to allow much finer adjustments to exposures, as well as to match the incremental values of your camera’s ISO settings, which are also adjusted in 1/3-stop increments.

So we have established that Aperture Priority (A) mode is highly useful in controlling the depth of field in your image. But it's also pivotal in determining the limits of available light that you can shoot in. Different lenses have different maximum apertures. The larger the maximum aperture, the less light you need in order to achieve an acceptably exposed image. You will recall that, when in Shutter Priority mode, there is a limit at which you can handhold your camera without introducing movement or hand shake, which causes blurriness in the final picture. If your lens has a larger aperture, you can let in more light all at once, which means you can use faster shutter speeds. This is why lenses with large maximum apertures, such as f/1.4, are called "fast" lenses.

On the other hand, bright scenes require the use of a small aperture (such as f/16 or f/22), especially if you want to use a slower shutter speed (**Figure 4.11**). That small opening reduces the amount of incoming light, and this reduction of light requires that the shutter stay open longer.

### Setting up and shooting in Aperture Priority mode

1. Turn your camera on, and then turn the Mode dial to align the A with the indicator line.
2. Select your ISO by pressing the **i** button on the lower-left portion of the back of the camera (if the camera's info screen is not visible, press the **i** button to turn it on, and then press it again).
3. Highlight the ISO option, and then select OK.
4. Use the Multi-selector to select the desired ISO setting, and then press OK to lock in the change.
5. Point the camera at your subject, and then activate the camera meter by depressing the shutter button halfway.
6. View the exposure information in the bottom area of the viewfinder or by looking at the rear display panel.
7. While the meter is activated, use your thumb to roll the Command dial left and right to see the changed exposure values. Roll the dial to the right for a smaller aperture (higher f-stop number) and to the left for a larger aperture (smaller f-stop number).



#### Zoom lenses and maximum apertures

Some zoom lenses (like the 18–55mm kit lens) have a variable maximum aperture. This means that the largest opening will change depending on the zoom setting. In the example of the 18–55mm zoom, the lens has a maximum aperture of f/3.5 at 18mm and only f/5.6 when the lens is zoomed out to 55mm.



**Figure 4.11**  
A small aperture  
created the need  
for a long shutter  
speed, which helped  
add fluidity to the  
flowing water.

ISO 800 • 1/4 sec. •  
f/22 • 60mm lens

## M: Manual Mode



Once upon a time, long before digital cameras and program modes, there was Manual mode. In those days it wasn't called "manual mode" because there were no other modes—it was just photography. In fact, many photographers cut their teeth on completely manual cameras. Let's face it—if you want to learn the effects of aperture and shutter speed on your photography, there is no better way to learn than by setting those adjustments yourself. However, today, with the advancement of camera technology, many new photographers never give this mode a second thought. That's truly a shame, as not only is it an excellent way to learn your photography basics, but it's also an essential tool to have in your photographic bag of tricks.

When you have your camera set to Manual (M) mode, the camera meter will give you a reading of the scene you are photographing. It's your job, though, to set both the f-stop (aperture) and the shutter speed to achieve a correct exposure. If you need a faster shutter speed, you will have to make the reciprocal change to your f-stop. Using any other mode, such as Shutter Priority or Aperture Priority, would mean that you just have to worry about one of these changes, but Manual mode means you have to do it all yourself. This can be a little challenging at first, but after a while you will have a complete understanding of how each change affects your exposure, which will, in turn, improve the way you use the other modes.

### When to use Manual (M) mode

- When learning how each exposure element interacts with the others (**Figure 4.12**)
- When your environment is fooling your light meter and you need to maintain a certain exposure setting (**Figure 4.13**)
- When shooting silhouetted subjects, which requires overriding the camera's meter readings (**Figure 4.14**)



**Figure 4.12**  
I set the camera to Manual so I could ensure the exposure for the lit signs was correct while also using the slowest possible shutter speed to blur the motion of the people.  
.....  
ISO 100 • 1/5 sec. •  
f/22 • 80mm lens



**Figure 4.13**  
Beaches and snow are always a challenge for light meters. Add to that the desire to have exact control of depth of field and shutter speed, and you have a perfect scenario for Manual mode.  
.....  
ISO 100 • 1/400 sec. •  
f/6.3 • 22mm lens

**Figure 4.14**

**I used Manual mode to push the person into silhouette.**

ISO 100 • 1/250 sec. •  
f/8 • 200mm lens



## Setting up and shooting in Manual mode

1. Turn your camera on, and then turn the Mode dial to align the M with the indicator line.
2. Select your ISO by pressing the **i** button on the lower-left portion of the back of the camera (if the camera's info screen is not visible, press the **i** button to turn it on, and then press it again).
3. Highlight the ISO option, and then select OK.
4. Use the Multi-selector to select the desired ISO setting, and then press OK to lock in the change.
5. Point the camera at your subject, and then activate the camera meter by depressing the shutter button halfway.
6. View the exposure information in the bottom area of the viewfinder or by looking at the display panel on the rear of the camera.
7. While the meter is activated, use your thumb to roll the Command dial left and right to change your shutter speed value until the exposure mark is lined up with the zero mark. The exposure information is displayed by a scale with marks that run from -2 to +2 stops. A "proper" exposure will line up with the arrow mark in the middle. As the indicator moves to the right, it is a sign that you will be underexposing (there is not enough light on the sensor to provide adequate exposure). Move the indicator to the left and you will be providing more exposure than the camera meter calls for; this is overexposure.

8. To set your exposure using the aperture, depress the shutter release button until the meter is activated. Then, while holding down the Exposure Compensation/Aperture button (located behind and to the right of the shutter release button), rotate the Command dial to change the aperture. Rotate right for a smaller aperture (large f-stop number) and left for a larger aperture (small f-stop number).

Remember that when you are using Manual mode, it is up to you to decide what is the most important thing to worry about. Do you need a fast shutter? Do you want narrow depth of field? You decide and then you take control. It's really one of the best ways to learn how each change affects your image.

## How I Shoot: A Closer Look at the Camera Settings I Use

The great thing about working with a DSLR camera is that I can always feel confident that some things will remain unchanged from camera to camera. For me, these are the Aperture Priority (A) and Shutter Priority (S) shooting modes. Regardless of the subject I am shooting—from landscape to portrait to macro—I am almost always going to be concerned with my depth of field. Whether it's isolating my subject with a large aperture (**Figure 4.15**) or trying to maximize the overall sharpness of a sweeping landscape, I always keep an eye on my aperture setting. If I do need to control the action, I use Shutter Priority. If I am trying to create a silky waterfall effect, I can depend on Shutter Priority mode to provide the long shutter speed that gets the desired result. Or perhaps I am shooting a baseball game—I definitely need fast shutter speeds that will freeze the fast-moving action.

While the other camera modes have their place, I think you will find that, like me and most other working pros, you will use the Aperture Priority and Shutter Priority modes for 90 percent of your shooting.

The other concern I have when I am setting up my camera is just how low I can keep my ISO. This is always a priority for me because a low ISO will deliver the cleanest image. I raise the ISO only as a last resort, because each increase in sensitivity is



**Figure 4.15** I wanted to blur the background as much as possible to reduce the clutter in the scene.

ISO 200 • 1/640 sec. • f/2 • 50mm lens

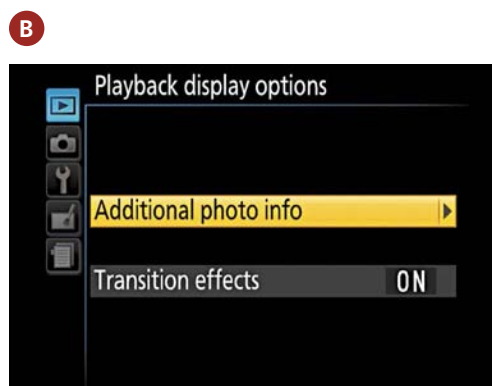
an opportunity for more digital noise to enter my image. To that end, I always have the Noise Reduction feature turned on (see Chapter 7).

To make quick changes while I shoot, I often use the Exposure Compensation feature (covered in Chapter 7) so I can make small over- and underexposure changes. This is different from changing the aperture or shutter; it is more like fooling the camera meter into thinking the scene is brighter or darker than it actually is. To get to this function quickly, I simply press the Exposure Compensation/Aperture button and dial in the desired amount of compensation. Truth be told, I usually have this set to  $-1/3$  so there is just a tiny bit of underexposure in my image. This usually leads to better color saturation. (Note: When shooting in Manual mode, the Exposure Compensation feature must be set by using the **i** button.)

One of the reasons I change my exposure is to make corrections when I see the “blinkies” in my rear LCD. Blinkies are the warning signal that part of my image has been overexposed to the point that I no longer have any detail in the highlights. When the Highlight Alert feature is turned on, the display will flash wherever the potential exists for overexposure. The black-and-white flashing will appear only in areas of your picture that are in danger of overexposure and that might suffer from a loss of detail.

## Setting up the Highlight Alert feature

1. Press the Menu button, and then use the Multi-selector to access the Playback Menu.
2. Once in the Playback Menu, move the Multi-selector to the Playback display options and press OK (A).
3. Select Additional photo info, and press the Multi-selector to the right (B).



4. Move the Multi-selector down to select the Highlights option, and then press the Multi-selector to the right to place a checkmark next to the word “Highlights” (C).
5. Repeat the process to include any of the other display options, and then press OK to lock in the changes and exit.

■

Once the highlight warning is turned on, I use it to check my images on the rear LCD after taking a shot. If I see an area that is blinking (Figure 4.16), I will usually set the Exposure Compensation feature to an underexposed setting like  $-1/3$  or  $-2/3$  stops and take another photo, checking the result on the screen. I repeat this process until the warning is gone.

Sometimes, such as when shooting into the sun, the warning will blink no matter how much you adjust the exposure, because there is just no detail in the highlights. Use your best judgment to determine if the warning is alerting you to an area where you want to retain highlight detail.

To see the highlight, or “blinkie,” warning, you will need to change your display mode. To do this, press the Image Review button on the back of the camera, and then press up or down on the Multi-selector until you see the word “Highlights” at the bottom of the display screen. This will now be your default display mode unless you change it or turn off the highlight warning.

As you work your way through the coming chapters, you will see other tips and tricks I use in my daily photography, but the most important tip I can give is that you should understand the features of your camera so you can leverage the technology in a knowledgeable way. This will result in better photographs.

C



**Figure 4.16** The blinking black areas in the highlights are a warning that part of the image is overexposed with the current camera settings.

## Chapter 4 Assignments

This will be more of a mental challenge than anything else, but you should put a lot of work into these lesson assignments because the information covered in this chapter will define how you work with your camera from this point on. Granted, there may be times when you just want to grab some quick pictures and will resort to the automatic scene modes, but to get serious with your photography, you will want to learn the professional modes inside and out.

### Starting off with Program mode

Set your camera on Program mode and start shooting. Become familiar with the adjustments you can make to your exposure by turning the Command dial. Shoot in bright sun, deep shade, indoors—anywhere that you have different types and intensities of light. While you are shooting, make sure you keep an eye on your ISO and raise or lower it according to your environment.

### Learning to control time with Shutter Priority mode

Find some moving subjects and set your camera to S mode. Have someone ride a bike back and forth, or even just photograph cars as they go by. Start with a slow shutter speed of around 1/30 of a second, and then start shooting with faster and faster shutter speeds. Keep shooting until you can freeze the action. Now find something that isn't moving, like a flower, and work your way down from a fast shutter speed, like 1/500 of a second. Don't brace the camera on a steady surface. Just try to shoot as slowly as possible, down to about 1/4 of a second. The point is to see how well you can handhold your camera before you start introducing hand shake into the image, making it appear soft and somewhat unfocused.

### Controlling depth of field with Aperture Priority mode

The name of the game with Aperture Priority mode is depth of field. Set up three items in a line moving away from you. I would use chess pieces or something similar. Now focus on the middle item, and set your camera to the largest aperture that your lens allows (remember, large aperture means a small number, like f/3.5). Now, while still focusing on the middle subject, start shooting with ever-smaller apertures until you are at the smallest f-stop for your lens. If you have a zoom lens, try doing this exercise with the lens at the widest and then the most telephoto settings. Now move up to subjects that are farther away, like telephone poles, and shoot them in the same way. The idea is to get a feel for how each aperture setting affects your depth of field.

## Giving and taking with Manual mode

Manual mode is not going to require a lot of work, but you should pay close attention to your results. Go outside on a sunny day and, using the camera in Manual mode, set your ISO to 100, your shutter speed to 1/125 of a second, and your aperture to f/16. Now press your shutter release button to get a meter reading. You should be pretty close to that zero mark. If not, make small adjustments to one of your settings until it hits that mark. Now is where the fun begins. Start moving your shutter speed slower, to 1/60, and then set your aperture to f/22. Now go the other way. Set your aperture on f/8 and your shutter speed to 1/500.

Now review your images. If all went well, all the exposures should look the same. This is because you balanced the light with reciprocal changes to the aperture and shutter speed. Now go back to our original setting of 1/125 at f/16 and try just moving the shutter speed without changing the aperture. Make 1/3-stop changes (1/125 to 1/100 to 1/80 to 1/60), and then review your images to see what 1/3 stop of overexposure looks like. Then do the same thing going in the opposite way. It's hard to know if you want to over- or underexpose a scene until you have actually done it and seen the results.

With each of the assignments, make sure you keep track of your modes and exposures so you can compare them with the images. If you are using software to review your images, you should also be able to check the camera settings that are embedded within the images' metadata.

*Share your results with the book's Flickr group!*

*Join the group here: [flickr.com/groups/nikond3300\\_fromsnapshotstogreatshots](https://www.flickr.com/groups/nikond3300_fromsnapshotstogreatshots)*

# Index

3D-tracking AF mode, 109  
12- or 14-bit RAW images, 35  
18-55mm VR kit lens, 17  
1080p video quality, 225

## A

about this book, xii–xiii  
accessories, 229–230  
    bonus chapter on, xiii, 255  
    close-up photography, 229  
    LCD viewing aids, 230  
    polarizing and ND filters, 229  
    tripods and stabilizers, 229–230  
action photography, 95–117  
    3D-tracking mode for, 109  
    annotated example of, 96–97  
    assignments on shooting, 117  
    automatic mode for, 56–57  
    blurring motion in, 113–114  
    composing shots in, 114–116  
    continuous shooting mode for, 111–112  
    conveying motion in, 78, 112–114  
    depth of field in, 104–105  
    factors to consider for, 98–100  
    focus modes for, 107–110, 117  
    freezing motion in, 45, 77, 78, 98  
    ISO settings and, 102–103, 105–107  
    isolating subjects in, 104–105  
    panning motion in, 112–113  
    portraits as, 135  
    shutter speed and, 77, 78, 98, 101–102, 135  
    telephoto lenses and, 40, 41  
    tips for shooting, 114–116  
    *See also* motion  
Active D-Lighting feature, 67, 251–253  
Adams, Ansel, 158  
additive color, 16  
Adobe Photoshop, 236  
Adobe Premiere Elements, 236  
Adobe RGB color space, 15–16  
AE Lock feature, 126, 244  
AF-A focus mode, 66, 67  
AF-area mode, 11, 108, 128  
AF-assist illuminator, 190  
AF-C focus mode, 67, 107–108, 135  
AF-F focus mode, 224  
AF-S focus mode, 11, 12, 25, 67, 127–128  
alphabet shooting assignment, 221  
angles, compositions using, 212  
Aperture Priority (A) mode, 81–85  
    assignment on using, 92  
    close-up photography and, 82, 83, 250  
    flash sync speeds in, 195  
    HDR photography and, 176  
    isolating subjects using, 104–105  
    landscape photography and, 82, 162  
    photo examples using, 82–83  
    portrait photography and, 82, 122–123  
    setting up and shooting in, 84  
    situations for using, 82–84, 89  
    waterfall shots and, 165, 167  
aperture settings  
    depth of field and, 46, 81, 84, 89  
    exposure and, 42, 43–44  
    focusing attention using, 221  
    f-stops and, 83  
    landscape photography and, 82, 162  
    light levels and, 84  
    portrait photography and, 122–123

- aperture settings (*continued*)
  - prioritizing, 81–85
  - video recording and, 224
  - waterfall shots and, 165
  - zoom lenses and, 41, 84
- architectural photography, 82, 83
- audio recording, 227, 235
- Auto Cleaning feature, 33
- Auto Exposure Lock (AE-L) feature, 126, 244
- Auto ISO Sensitivity feature, 105–107
- Auto ISO setting, 9, 10, 105
- Auto mode, 52–53, 68
- Auto off timer setting, 6
- Auto white balance setting, 13
- autofocus system, 17, 164, 189
- Automatic Focus (AF) points, 108
- automatic modes, 14, 49–69
  - assignments on using, 68–69
  - Auto mode, 52–53
  - Child mode, 55
  - Close Up mode, 57
  - effects modes, 60–65
  - Flash Off mode, 59–60
  - Guide mode, 65
  - Landscape mode, 54
  - limitations of, 66–67
  - Night Portrait mode, 58, 195
  - Portrait mode, 53–54, 122
  - Program mode vs., 74
  - Sports mode, 56–57
  - See also* professional modes

## B

- backgrounds
  - blurring, 53, 122, 123
  - isolating subjects from, 46, 104–105
  - portrait, 122–123, 137
- backlit subjects, 124, 242
- back-of-camera features, 3
- backup battery, 5
- battery, charging, 5

- battery indicator, 5
- beach scenes, 242
- Beep setting, 12
- Black, Dave, 183
- black and white images
  - landscapes as, 158–160
  - portraits as, 129–130
- blinkies, 90–91, 156, 167
- blur
  - background, 53, 122, 123
  - motion, 45, 77, 78, 113–114
- bonus chapter, xiii, 255
- bracketing exposures, 176
- brightness, 21, 168
- buffer, camera, 112
- Bulb setting, 245–247, 256
- “bull’s eye” composition, 169
- burst mode, 111–112

## C

- camera shake, 24, 59, 148, 187–188, 204
- camera stabilizers, 230
- catchlight in eyes, 134
- Center-weighted metering mode, 124–125
- charging the battery, 5
- Child mode, 55
- children
  - action portraits of, 135
  - automatic mode for shooting, 55
  - shooting at their level, 141
- chirp sound, 12
- Cinema Strap, 230
- Clean now feature, 33, 34
- cleaning the sensor, 33–34, 47
- clipping, 21–22
- Close Up mode, 57, 68
- close-up photography, 250
  - accessories for, 229
  - annotated example of, 240–241
  - Aperture Priority mode for, 82, 83, 250

- assignment on shooting, 256
- automatic mode for, 57
- clouds in photos, 160
- Cloudy setting, 13, 152
- CMYK colors, 15
- color
  - additive vs. subtractive, 16
  - contrast added through, 216
  - correcting balance of, 12–13
  - eyes drawn to, 168
  - RGB vs. CMYK, 15
  - warm vs. cool, 15, 160
- color composition, 214–215
- Color Sketch effect, 62
- color space settings, 15–17
- color temperature, 15, 160
- color theory, 16
- Command dial, 75, 76
- composition, 207–221
  - action photo, 114–116
  - angles and, 212
  - annotated example of, 208–209
  - assignments on, 221
  - color and, 214–215
  - contrast and, 216–217
  - creating depth through, 170
  - depth of field and, 210–211
  - framing and, 218–220
  - landscape, 168–170
  - leading lines and, 218
  - patterns and, 214, 215
  - point of view and, 213
  - portrait, 136–142
  - reflections and, 210–211, 212
  - rule of thirds and, 169, 218
- compressed RAW format, 35
- compression, image, 7, 35
- continuous shooting mode, 111–112
- Continuous-servo (AF-C) mode, 107–108
- contrast, 216–217
- cool colors, 15, 160

*Creating DSLR Video: From Snapshots to Great Shots*, 236

- cropping
  - panoramas, 172
  - portraits, 137, 138

## D

- Daylight setting, 152
- default display mode, 18
- deleting images, 20
- depth, creating, 170
- depth of field
  - action photography and, 104–105
  - aperture settings and, 46, 81, 84, 89
  - close-up photography and, 250
  - composition and, 210–211
  - focal length related to, 179
  - focusing attention using, 221
  - landscape photography and, 162–163
  - portrait photography and, 122–123, 143
  - telephoto lenses and, 40
  - video recording and, 228, 231, 237
  - wide-angle lenses and, 38
- diffusing light, 250
- Digital Photo Workshops, 255
- Direct Sunlight setting, 13
- direction of travel, 98, 99
- display modes, 18–20
- display screen. *See* LCD display
- distance
  - flash range and, 194
  - hyper focal, 162–163, 179
  - subject-to-camera, 100
- distance compression, 40, 41
- distortion, 123
- D-Lighting function, 252–253
- drive modes, 111
- DSLR cameras, 23, 38, 228
- dual image formats, 37
- dynamic range, 35, 176
- Dynamic-area AF mode, 108

## E

- Easy Panorama effect, 65, 175
- editing video, 236
- effects modes, 60–65
  - assignment on using, 69
  - Color Sketch effect, 62
  - Easy Panorama effect, 65, 175
  - HDR Painting effect, 64–65
  - High Key effect, 64
  - Low Key effect, 64
  - Miniature effect, 62–63
  - Night Vision effect, 61
  - Photo Illustration effect, 62
  - Pop effect, 61
  - Selective Color effect, 63
  - Silhouette effect, 63
  - steps for selecting, 60
  - Super Vivid effect, 61
  - Toy Camera effect, 62
  - video recording and, 232
  - See also* scene modes
- environmental portraits, 123
- exposure, 42–44
  - bracketing, 176
  - calculating, 43–44
  - factors of, 42–43
  - histograms and, 21–22
  - long, 72–73, 77, 79, 191–193, 245–247
  - reciprocal settings for, 44
- Exposure Compensation feature, 90
  - automatic modes and, 66
  - flash compensation and, 196–198
  - HDR photography and, 176
  - highlight warning and, 156
  - i button for adjusting, 158
  - landscape photography and, 156–158, 167
  - portrait photography and, 124
  - shooting modes and, 158
  - waterfall shots and, 167
- exposure triangle, 42, 43
- exposure value (EV), 42

external flash, 203

eyes

- catchlight in, 134
- focusing on, 127
- red-eye reduction, 198–200

## F

- Face Priority mode, 131–132
- “fake” panoramas, 171–172
- fast lenses, 84
- fast shutter speed, 77
- file formats. *See* image formats
- fill flash, 132–134
- Fill Flash setting, 201
- filters
  - Monochrome picture control, 130, 158–160
  - polarizing and neutral density, 167, 229
- fireworks, 245, 246
- firmware updates, 32–33, 47
- flash
  - built-in, 193–196
  - disabling, 59–60, 190–191
  - external, 203
  - fill, 132–134
  - hot shoe bracket, 13
  - manual power mode, 195–196
  - range/distance of, 194
  - Rear Curtain Sync mode, 200–202
  - red-eye reduction, 198–200
  - reflections from, 202–203
  - shutter speed and, 193, 195
- Flash Exposure Compensation feature, 67, 134, 196–197
- Flash Off mode, 59–60, 190–191
- flash synchronization
  - Rear Curtain Sync mode, 200–202
  - shutter speed and, 193, 195
- Flash white balance setting, 13
- Flickr group for book, 25
- flower photography, 240–241, 250

- fluid pan head, 229–230
- Fluorescent setting, 13, 153
- focal lengths
  - depth of field and, 179
  - overview of lenses and, 38–42
  - shutter speed related to, 100
- focus modes, 67
  - 3D-tracking, 109
  - AF-A, 66, 67
  - AF-area, 108, 128
  - AF-C, 67, 107–108, 135
  - AF-S, 11, 12, 67, 127–128
  - manual, 17, 109–110, 164–165, 189, 233
- focus points, 11–12, 108
- focusing
  - for action photography, 107–110
  - for landscape photography, 162–165
  - for low-light photography, 188–191
  - for portraits, 127–129
  - for video recording, 224, 228, 233, 237
- focusing system, 11–12, 188–189
- formatting memory cards, 30–31, 47
- frames per second (FPS) setting, 225
- framing images
  - action photos, 114
  - composition guidelines for, 218–220
  - internal frames used for, 220
  - portraits, 136, 137, 138, 141
- freezing motion, 45, 77, 78, 98
- Front Curtain Sync mode, 201, 202
- front-of-camera features, 2
- f-stops, 42, 43, 44, 83
  - See also* aperture settings
- full-time-servo (AF-F) focus mode, 224
- Function (Fn) button, 11, 154

## G

- glass, shooting through, 202–203
- golden light, 160–161
- grid overlay, 169
- Guide mode, 65

## H

- hand portraits, 142
- handheld photography, 187–188, 204
- HDMI cable connection, 234, 235
- HDR Painting effect, 64–65
- High Capacity (SDHC) cards, 30
- high-definition video, 225
- high dynamic range (HDR) images, 176–178
- High Key effect, 64
- high-key photos, 64, 157
- Highlight Alert feature, 90–91, 156, 167
- highlights
  - overexposure warning for, 90–91, 156, 167
  - regaining detail in, 157
- Highlights display mode, 18, 20, 91
- histograms, 21–22
- holding your camera, 23–24, 25
- Hoodman accessories, 230
- horizon line, 169, 179, 218, 219
- hot shoe bracket, 13
- hyper focal distance (HFD), 162–163, 179

## I

- i button, 8, 158
- image formats
  - dual, 37
  - exploring, 47
  - JPEG, 7–9, 35
  - RAW, 35–36
- image quality settings, 7–9
- image resolution, 36
- Image Review button, 91, 235
- iMovie application, 236
- Incandescent setting, 13
- information screen, 5, 8
- interlaced video, 226
- ISO sensitivity settings, 105–107
- ISO settings
  - action photos and, 102–103, 105–107
  - Auto option, 9, 10, 105
  - changing on the fly, 11, 103

ISO settings (*continued*)  
expanded settings, 186–187, 204  
explained, 9  
exposure and, 42, 43–44  
flash range and, 194  
landscape photos and, 150–152  
low-light photos and, 184–187  
noise and, 10, 56, 150–152, 186  
prioritizing, 74–75, 89  
sensitivity feature, 105–106  
starting points for, 75  
steps for selecting, 10

## J

JPEG file format  
color space and, 16  
explained, 7, 35  
quality settings, 7–9  
RAW+JPEG option, 37  
reasons for using, 35

## K

Kelvin temperature scale, 15  
kit lens, 17

## L

Landscape mode, 54, 68  
landscape photography, 145–179  
annotated examples of, 50–51, 146–147  
aperture settings and, 82  
assignments on shooting, 179  
automatic mode for, 54  
black and white, 158–160  
composition in, 168–170  
depth of field in, 162–163  
exposure compensation for, 156–158, 167  
focusing for, 162–165  
golden light in, 160–161

HDR images and, 176–178  
hyper focal distance in, 162–163, 179  
ISO settings for, 150–152  
lens filters for, 167  
manual focus mode for, 164–165  
noise reduction for, 152  
panoramas and, 171–175  
picture control for, 54, 154–156  
sunrise/sunset in, 160–161  
tripods used for, 148–149, 162, 165  
waterfall shots in, 165–167  
white balance settings for, 152–154

Landscape picture control, 54, 154–156

LCD display

accessories for, 230  
display modes for, 18–20  
reviewing photos in, 18–22, 25  
reviewing videos in, 235  
zooming in on, 101

leading lines, 218, 221

lens flare, 248

lens shade, 248

lenses, 38–42

exploring, 47  
how they work, 38  
normal, 40  
portrait, 54  
prime, 41  
telephoto, 40–41  
Vibration Reduction, 60, 149, 187–188  
video recording and, 228  
wide-angle, 38–39  
zoom, 41

light meters, 86, 87, 124

lighting

Active D-Lighting feature and, 67, 251–253  
aperture setting based on, 84  
red-eye reduction and, 199  
*See also* flash; low-light photography;  
sunlight

lightning storms, 245, 247

## lines

leading, in compositions, 218, 221

learning to see, 221

## Live View feature

autofocus modes, 131

Face Priority mode, 131–132

grid overlay, 169

video recording and, 224

white balance and, 153

## long exposures

Bulb setting for, 245–247

low-light photography and, 191–193, 205

moving water shots using, 72–73, 85

Noise Reduction feature for, 152, 191

Shutter Priority mode for, 77, 79

## lossless compression, 35

## lossy compression, 7

## Low Key effect, 64

## low-key photos, 64, 157

## low-light photography, 181–205

AF-assist illuminator for, 190

annotated example of, 182–183

assignments on shooting, 204–205

built-in flash for, 193–196

disabling the flash for, 59–60, 190–191

eliminating flash reflections in, 202–203

external flash for, 203

flash compensation for, 196–198

focusing for, 188–191

ISO settings for, 75, 184–187

long exposures for, 191–193, 245–247

Night Portrait mode for, 58

noise reduction for, 184–185, 191, 193

Rear Curtain Sync mode for, 200–202

red-eye reduction for, 198–200

self-timer used for, 188

Vibration Reduction lenses for, 187–188

## luminance, 21

## LV button, 132

# M

macro photography. *See* close-up photography

Maisel, Jay, 207

Manual flash mode, 195–196

manual focus mode, 17, 25

anticipated action and, 109–110, 117

low-light photography and, 189

recomposing shots using, 164–165

video recording and, 224, 233, 237

Manual (M) mode, 86–89, 245

assignment on using, 93

Bulb setting in, 245–247

exposure compensation in, 158

photo examples using, 87–88

setting up and shooting in, 88–89

situations for using, 86–88, 116, 245

Matrix metering mode, 66, 124, 242

megapixels (MP), 36

memory cards, 30–31

capacity of, 30

formatting, 30–31, 47

tips on choosing, 30

updating firmware from, 33

video recording and, 234

metering modes, 124–125, 143

Center-weighted, 124–125

Manual flash, 195–196

Matrix, 66, 124, 242

Spot, 124, 242–243

TTL, 195

microphones, 227, 235

Miniature effect, 62–63

mini-HDMI cable, 234, 235

mirror reflections, 212

Mode dial, 14

ModoSteady rig, 230

Monochrome picture control

landscape photography and, 158–160

portrait photography and, 129–130

Moose Falls photo, 146–147

## motion

- assignments on shooting, 117
- automatic mode for, 56–57
- blurring, 45, 77, 78, 113–114
- continuous shooting mode for, 111–112
- focus modes for, 107–110
- freezing, 45, 77, 78, 98
- panning, 112–113, 117
- shutter speed and, 45, 98, 101–102
- techniques for conveying, 78, 112–114
- tips for shooting, 114–116
- See also* action photography

Movie settings menu, 226, 227

- multiple-image panoramas, 173–175
  - overlapping shots for, 173, 174
  - sorting tip for, 173
  - steps for shooting, 175

## N

natural light, 143

neutral density filter, 167, 229

Night Portrait mode, 58, 69, 195

Night Vision effect, 61

### nighttime photography

- ISO settings for, 75
- Manual mode for, 245–247
- Night Portrait mode for, 58
- See also* low-light photography

### Nikon D3300 camera

- features illustration, 2–4
- firmware updates, 32–33
- Guide mode for using, 65
- memory cards approved for, 30
- properly holding, 23–24, 25
- sensor cleaning, 33–34

Nikon MC-DC2 remote cord, 247

Nikon ME-1 microphone, 235

Nikon ML-L3 wireless remote, 247

Nikon SB-700 Speedlight, 203

Nikon Service & Support page, 32

Nikon ViewNX 2 software, 36

## noise in images

- descriptions of, 10, 150
- file size related to, 185
- ISO settings and, 10, 56, 150–152, 186
- long exposures and, 152, 191
- Noise Reduction feature, 90, 152, 184–185, 191, 193, 204
- normal lenses, 40
- Nubble Lighthouse photo, 192

## O

online bonus chapter, xiii, 255

overexposure warning, 90–91, 156, 167

Overview display mode, 19, 20

## P

painting with light, 183, 245

panning, 112–113, 117, 234

panoramas, 171–175

- creating “fake,” 171–172
- Easy Panorama effect, 65, 175
- multiple-image, 173–175

### patterns

- compositions using, 214, 215
- learning to see, 221

Peachpit.com website, xiii

perspective, changing, 213

Photo Illustration effect, 62

Photoshop, Adobe, 236

photowalkpro.com website, 176

### picture controls, 66

- Landscape, 54, 154–156
- Monochrome, 129–130, 158–160
- Portrait, 53, 131, 143
- video recording and, 232

pixel resolution, 36

Playback button, 101

Playback display options, 18

Playback menu, 18, 90

point of view, 213

- polarizing filter, 167, 229
- Pop effect, 61
- pop-up flash, 193–196, 205
- Portland Head Lighthouse photo, 50–51
- Portrait mode, 53–54, 68, 122
- portrait orientation, 138
- Portrait picture control, 53, 131, 143
- portraits, 119–143
  - action shots as, 135
  - AE Lock feature for, 126
  - annotated example of, 120–121
  - Aperture Priority mode for, 82, 122–123
  - assignments on shooting, 143
  - automatic mode for, 53–54, 122
  - backgrounds for, 122–123, 137
  - black and white, 129–130
  - composition of, 136–142
  - depth of field in, 122–123, 143
  - environmental, 123
  - Face Priority mode for, 131–132
  - fill flash for, 132–134
  - focusing for, 127–129
  - framing, 136, 137, 138, 141
  - lenses used for, 54
  - metering modes for, 124–125, 143
  - nighttime, 58
  - picture control for, 53, 131, 143
  - tips for shooting, 136–142
- Pre white balance setting, 13, 253–254
- prefocusing cameras, 109–110
- prime lenses, 41
- professional modes, 14, 71–93
  - Aperture Priority mode, 81–85
  - assignments on using, 92–93
  - Manual mode, 86–89
  - Program mode, 74–76
  - Shutter Priority mode, 77–81
  - See also* automatic modes
- Program (P) mode, 74–76
  - assignment on using, 92
  - automatic scene modes vs., 74
  - flash sync speed in, 195

- photo examples using, 75
- setting up and shooting in, 76
- situations for using, 74–76
- progressive video, 226

## Q

- quality settings
  - JPEG format, 7–9
  - video recording, 225–226
- QuickTime Player, 236

## R

- RAW file format, 35–37
  - advice on shooting in, 36
  - color space and, 16
  - HDR images and, 176
  - RAW+JPEG option, 37
  - reasons for using, 35–36
- Rear Curtain Sync mode, 200–202, 205
- reciprocal exposures, 44
- Record button, 224
- recording video. *See* video recording
- Red-Eye Reduction feature, 198–200, 205
- reflections
  - catchlight, 134
  - eliminating flash on glass, 202–203
  - photographing, 210–211, 212
- Release Mode button, 112
- remote switch, 193, 247
- resolution
  - image, 36
  - video, 225
- Retouch Menu, 252
- reviewing photos, 18–22
  - assignment on, 25
  - display modes for, 18–20
  - histograms used for, 21–22
  - timer setting for, 6
  - zooming in for, 101

- reviewing recorded videos, 235–236
- RGB colors, 15
- RGB histogram display mode, 19
- rolling shutter, 234
- rule of thirds, 169, 218

## S

- scene modes, 52–60
  - Auto mode, 52–53
  - Child mode, 55
  - Close Up mode, 57
  - Flash Off mode, 59–60
  - Landscape mode, 54
  - Night Portrait mode, 58
  - Portrait mode, 53–54
  - Program mode vs., 74
  - Sports mode, 56–57
  - See also* effects modes
- screen display. *See* LCD display
- SD cards, 30–31, 33, 234
  - See also* memory cards
- Selective Color effect, 63
- self-timer, 188
- semiautomatic modes, 80, 81
- sensor cleaning, 33–34, 47
- Setup Menu, 6, 31, 32, 34, 154
- Shade setting, 13, 152
- shadows
  - Active D-Lighting for, 251
  - fill flash for reducing, 132–133
- shapes, shooting, 216, 221
- sharpening RAW images, 36
- sharpness of photos, 162, 168
- Shooting data display mode, 19
- Shooting Menu, 16, 105, 152, 156, 196, 226
- shooting modes
  - automatic modes, 49–69
  - comparison table of, 74
  - dial for selecting, 14, 49, 71
  - professional modes, 71–93
  - Shutter Priority (S) mode, 77–81
  - action photos and, 77, 78, 101–102, 135
  - assignment on using, 92
  - flash sync speeds in, 195
  - photo examples using, 78–79
  - setting up and shooting in, 81
  - situations for using, 77–80, 89
- shutter speed
  - action photography and, 77, 78, 98, 101–102, 135
  - exposure and, 42, 43–44
  - flash synchronization and, 193, 195
  - handheld photography and, 187–188, 204
  - lens limitations and, 80
  - motion and, 45, 98, 101–102
  - prioritizing, 77–81, 101–102
  - slow vs. fast, 77
  - tripod use and, 148
  - VR lenses and, 187–188
  - waterfall shots and, 165–167
- Silhouette effect, 63
- silhouetted subjects, 86, 88
- Single-frame mode, 111
- single-point focusing, 11–12, 25, 128
- skies
  - exposure compensation for, 156–157
  - landscape photos and, 155, 156–157
  - metering for sunrise/sunset, 244
- slow shutter speed, 77
- snowy owl photo, 28–29
- snowy scenes, 87, 242
- sound recording, 227, 235
- speed of subject, 98–99
- Speedlight flashes, 203
- Sports mode, 56–57, 68
- sports photography
  - automatic mode for, 56–57
  - telephoto lenses for, 40, 41
  - See also* action photography
- Spot metering mode, 124, 242–243, 256
- sRGB color space, 15, 16
- staging video shots, 233
- starburst effect, 249

- studio photography, 245
- subject-to-camera distance, 100
- subtractive color, 16
- sunlight
  - creative use of, 249
  - ISO settings and, 75
  - lens flare from, 248
  - portrait photography and, 138, 139, 143
  - white balance setting for, 13
- sunny 16 rule, 44
- sunrise/sunset photos
  - assignment on shooting, 256
  - golden light in, 160–161
  - metering for, 244
- Super Vivid effect, 61
- synchronization, flash, 193, 195, 200–202

## T

- tack sharp images, 162
- telephoto lenses, 40–41
- temperature warning, 233
- textures, 240–241
- timers
  - Auto off timer, 6
  - self-timer, 188
- tonal range, 21–22
- tonemapping process, 176
- top-of-camera features, 4
- Toy Camera effect, 62
- tripods
  - advice on choosing, 149
  - HDR photography and, 176
  - landscape photography and, 148–149, 162, 165
  - macro photography and, 250
  - stability considerations, 149
  - video recording and, 229–230
  - VR lenses and, 149
- TTL metering, 195
- TV connections, 234, 235

## U

- underexposed images, 22, 90
- updating the firmware, 32–33, 47
- user manual
  - AE-L button info, 126
  - effects modes info, 65
  - external flash info, 203
  - flash range/settings chart, 194
  - image quality settings chart, 9
  - Live View mode info, 131
  - Nikon memory cards list, 30
  - picture control settings info, 154
  - shooting modes comparison table, 74
  - video function info, 225

## V

- vanishing perspective lines, 218
- Versace, Vincent, 221
- Vibration Reduction (VR) lenses, 60, 149, 187–188
- video recording, 223–237
  - accessories for, 229–230
  - assignments on, 237
  - book recommendation, 236
  - depth of field for, 228, 231, 237
  - DSLR lenses for, 228
  - effects modes and, 232
  - focusing for, 224, 228, 233, 237
  - icons indicating, 224, 225
  - Live View mode for, 224
  - picture controls for, 232
  - quality settings, 225–226
  - reviewing/editing videos, 235–236
  - sound settings, 227, 235
  - starting/stopping, 224
  - tips for improving, 233–235
  - white balance settings, 232

## W

warm colors, 15, 160

water

- long exposures for, 72–73, 79, 85, 165–167

- shooting reflections on, 210–211

waterfall photography, 77, 80, 85, 146–147, 165–167

white balance settings, 12–15

- assignment on using, 25

- automatic modes and, 66

- choices available for, 13

- color temperature and, 15

- creating custom, 253–254

- Function button setup for, 154

- landscape photography and, 152–154

- Live View feature and, 153

- steps for selecting, 14

- video recording and, 232

wide-angle lenses, 38–39

- depth of field and, 38

- distortion caused by, 123

- environmental portraits and, 123

- tight spaces and, 38, 39

wildlife photography, 28–29, 82

Windows Live Movie Maker, 236

Windows Media Player, 236

wireless remote, 247

## Y

Yellowstone National Park, 146–147

Yosemite National Park, 249

## Z

Zoom In/Out buttons, 101

zoom lenses, 41, 84