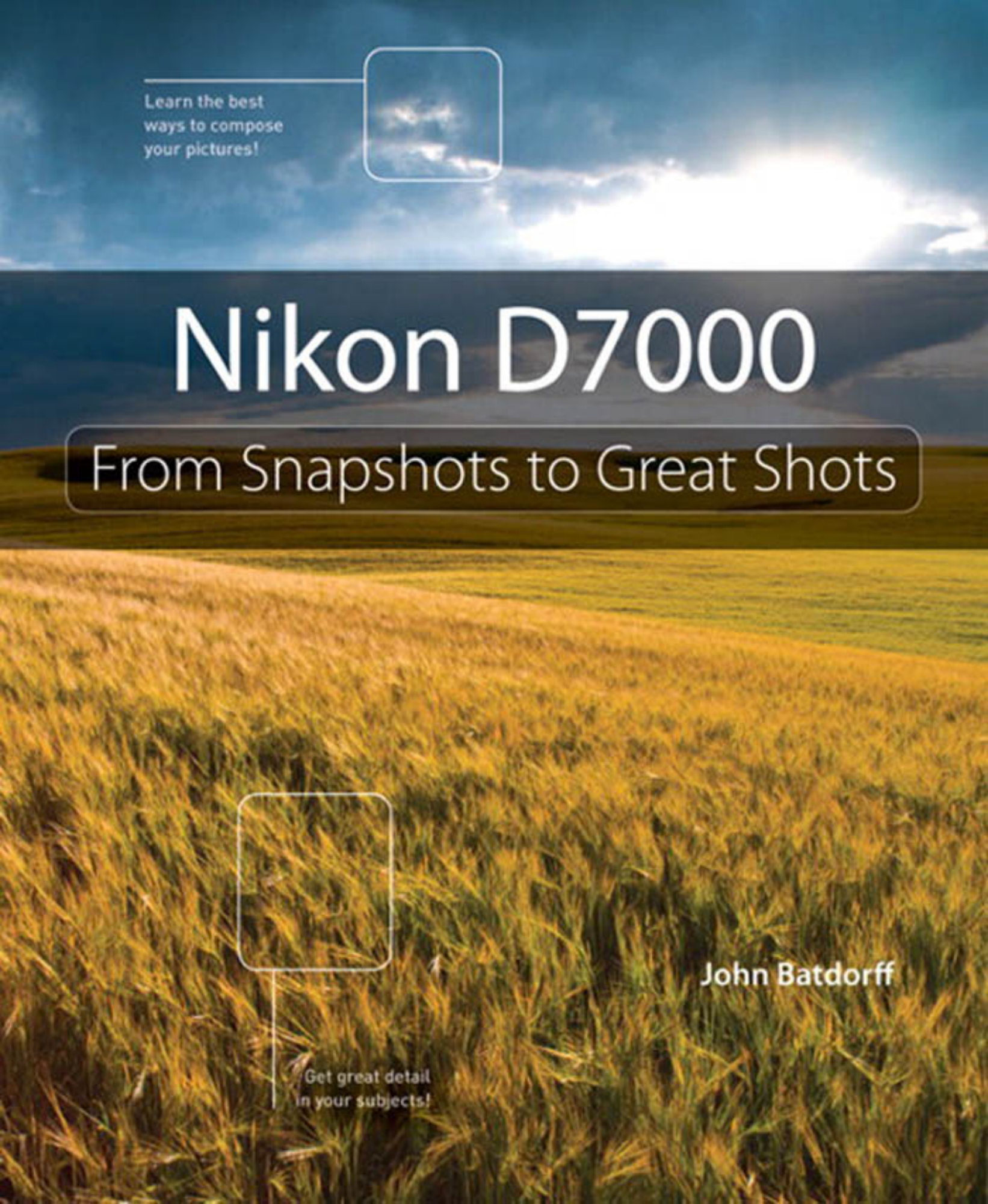
Learn the best ways to compose your pictures!
Nikon D7000
From Snapshots to Great Shots
John Batdorff
Get great detail in your subjects!

Nikon D7000: From Snapshots to Great Shots
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Introduction

Walk into any bookseller, go to the photography section, and you will see countless tomes on the subject of photography. Look a little further and you will locate the camera-specific ones. It is this unfilled divide between the camera-specific and the instructional photography books that inspired me to write this book. What I was seeing in the store was a lot of books that were tackling one area or the other, but not both. So, with that in mind, I set about to write this book on the Nikon D7000, not as a rehash of the owner's manual but as a resource to teach photographic concepts using the wonderful technology present in the D7000, with instructional photos and insights from my own work as a professional photographer. I have put together a short Q&A to help you get a better understanding of just what it is that you can expect from this book.

Q: IS EVERY CAMERA FEATURE GOING TO BE COVERED?

A: Nope, just the ones I think 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. (I know, we all hate reading manuals—we want to grab our new camera and start shooting. But if you look at your manual more closely you'll realize it can actually help you.) Writing a book that just rephrases this information would have been a waste of your time and money. What I did want to write about was how to harness certain camera features to benefit your photography. As you read through this book, you will also see references to specific pages in your owner's manual that are related to the topic being discussed. For example, in Chapter 6 the AE-L button is discussed, but there is more information available on this feature in the manual. I cover the function that applies to our specific needs and give you the page numbers in the manual to explore this function further.

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 the 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 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: My hope is that 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 D7000 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 large full-page photos that include shooting data and comments from me so you can see how all of the photography fundamentals come together to make great images. Meanwhile, you will be learning how your camera works and how to apply its functions and features to your photography.

Q: DO I REALLY NEED TO DO THE ASSIGNMENTS?

A: In the shooting assignments at the end of the chapters, I give you some suggestions on how you can apply the lessons of the chapter to help reinforce everything you just learned. Can I make you do them? No, but 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, having some fun, and trying out your new chops.

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 that you need to know about your camera. These are the building blocks of using the D7000. After that, yes, you can move around the book as you see fit, because the following 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 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 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 that will help you create great photographs with your Nikon D7000. Learning the basics is vital, but playing with them is what makes the photographer. Photography, like most things, takes time to master and requires practice. It has been a part of my life since my first Kodak 110 when I was seven years old, and I am still learning. Always remember, it's not the camera but the person using it who makes beautiful photographs. Have fun, make mistakes, and then learn from them. In no time, I'm sure you will transition from someone who takes nice snapshots to a photographer who makes great shots.

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4

ISO 100
1/125 sec.
f/9
35mm lens

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 the backbones of the art. 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

I love wandering the streets of Chicago in the late evening when the crowds die down and you feel as though you're the city's sole inhabitant. I took this image on one of my many strolls through the city. It was a cold winter evening, and the face in the fountain made it feel as though Big Brother was watching. I knew immediately that I wanted to create a strong black-and-white image. The lighting was tricky, given that it was very dark out and I was photographing a bright image. I needed the correct exposure to avoid blowing out the face. I took several test shots (that's a fancy way of saying garbage shots) and finally landed on this image.

Killer tip—If you're not sure what settings to use, then consider placing your camera in Auto mode and referencing the settings the camera wants to use. This is a great way to create a baseline to start from.

Manual mode was a must here since I needed control over the speed as well as the aperture.

ISO 1000
1/80 sec.
f/3.5
16mm lens

PORING OVER THE PICTURE

I had my tripod but no cable release, so I used the Exposure Delay mode to engage the shutter and minimize camera shake.

I framed this image trying to balance the pillars to the left and the skyline straight ahead, with the couple to the right.

ISO 100
1/50 sec.
f/10
80mm lens

This might end up being known as the Chicago chapter. I live in Chicago during the winter and in Montana in the summer. I tend to love extremes, and Chicago is a wonderful city for a midwestern guy like me. Everyone knows the famous Chicago skyline, and if you're ever visiting I strongly recommend wandering about the lakeshore as the sun sets. I was out taking photos with a friend when I noticed couples gathering to enjoy the beautiful spring evening and the same gorgeous scene I was seeking out. I decided to pause, setup my tripod, and capture the moment.

I always recommend placing your mirror in lockup to avoid mirror shake so you get a super-sharp image.

Composition is a balancing act. The people add another element of interest to the image; be careful not to crop too much of the environment out of the frame. My rule is leave in enough information so that your photo tells a good story and crop out any distractions.

P: PROGRAM MODE

I think of Program mode as a good place to begin for those graduating from the automatic or scene modes (**Figure 4.1**). 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?

FIGURE 4.1
Use Program mode for flexible control and as a great place to start learning professional modes.

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 I don't have the time to think through all of my options, or 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 available settings for each mode, check out the table on pages 292–294 of your owner's manual.

WHEN TO USE PROGRAM (P) MODE INSTEAD OF THE AUTOMATIC SCENE MODES

It's graduation time and you're ready to move on to a more advanced mode but not quite ready to jump in with both feet. When does Program mode come in handy?

- When shooting in a casual environment where quick adjustments are needed
- When you want more control over the ISO
- If 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 generally not what we want except when in shooting in Auto mode, 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 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, and we will have an unacceptable amount of digital noise (**Figures 4.2** and **4.3**). For now, let's go ahead and select ISO 400 so that we provide enough sensitivity for those shadows while allowing the camera to use shutter speeds that are fast enough to stop motion.

FIGURE 4.2
Look closely and you'll notice the image is grainy or has small pixels. That's digital noise. Now, look at the same image taken at a lower 100 ISO.

FIGURE 4.3
Notice the detail in the black plastic and how little noise is in the image.

STARTING POINTS FOR ISO SELECTION

Many years ago camera manufacturers were racing to create cameras with more megapixels. Today the digital race is all about higher ISO. Photographers want to be able to shoot in lower light conditions without the risk of digital noise. There is a lot of discussion concerning ISO 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. Your D7000 has a good working range of 100–6400. 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 sports arenas at night
- 1600: Very low light; possibly candlelight or events where no flash is allowed
- 3200-6400: Extreme low light (some digital noise will be present; however, less than ever before)

These are just suggestions; you'll have to adjust as necessary. Your ISO selection will depend on a number of factors that will be discussed later in the book.

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. Remember, your camera is using the internal meter to pick what it deems suitable exposure values, but sometimes it doesn't know what it's looking at and how you want those values applied (**Figures 4.4** and **4.5**). 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 that you get a narrow depth of field? Turn the dial to the left until you get the desired aperture. The camera shifts the shutter speed and aperture accordingly to get a proper exposure.

You will also notice that a small star will appear above the letter P in the viewfinder and the rear display if you rotate the Command dial. 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.

FIGURE 4.4

This image was shot using the Program mode. What's key here is how the speed of the shutter changes between the two images. In this image the shutter was faster because the image is lighter than the image in Figure 4.5. Since the image is lighter, the camera needs less time to expose the image, so the shutter opens and closes very quickly—in this case, 1/160 of a second quicker.

FIGURE 4.5

By zooming in on the bronze statue, our image now becomes darker than in Figure 4.4 because there is less of the bright blue sky. The camera needs more light to properly expose the image, so the shutter is left open longer.

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 Command dial to align the P with the indicator line.
2. Select your ISO by pressing and holding the ISO button on the back left of the camera while rotating the main Command dial with your thumb.
3. The ISO will appear on the top display. Choose your desired ISO, and release the ISO button on the left to lock in the change.
4. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
5. View the exposure information in the bottom of the viewfinder or by looking at the display panel on the back of the camera.
6. While the meter is activated, use your thumb to roll the Command dial left and right to see the changed exposure values.
7. Select the exposure that is right for you and start clicking. (Don't worry if you aren't sure what the right exposure is yet. We will work on making the right choices for those great shots beginning with the next chapter.)

S: SHUTTER PRIORITY MODE

S mode is what we photographers commonly refer to as Shutter Priority mode. Just as the name implies, it is the mode that prioritizes or places major emphasis on the shutter speed above all other camera settings (**Figure 4.6**).

Just as with Program mode, Shutter Priority mode gives us more freedom to control certain aspects of our photography. In this case, we are talking about shutter speed. The selected shutter speed determines just how long you expose your camera's sensor to light. The longer it remains open, the more time your sensor has to gather light.

FIGURE 4.6
Shutter Priority mode is great for freezing or showing motion. Use this mode when your shutter speed is of utmost importance.

The shutter speed also, to a large degree, determines how sharp your photographs are. Even though an image may appear sharply in focus, any movement by the subject or the camera while the shutter is open can blur the image. If you think about it, when you are trying to show motion, you want a slower shutter speed because it blurs the image.

A good rule of thumb for avoiding blurry images is to always use a shutter speed as fast as your focal length. For instance, if I'm out photographing my daughter with an 80mm lens, then I'll want to make sure my shutter speed is at least 1/120 of a second, taking into account that the camera is not full frame, so the actual focal length is greater than the focal length of the lens. Anything less than that might cause camera shake (even if you're equipped with biceps as big as Popeye's). The D7000 has a 1.5x magnification, so if your focal length is 100mm, you shouldn't shoot less than 1/150 of a second.

SHUTTER SPEEDS

A *slow* shutter speed refers to leaving the shutter open for a long period of time—like 1/30 of a second or less. A *fast* shutter speed means that the shutter is open for a very short period of time—like 1/250 of a second or more. The faster the shutter, the less information your sensor can gather, so you will get less detail in your image.

WHEN TO USE SHUTTER PRIORITY (S) MODE

- When working with fast-moving subjects where you want to freeze the action (**Figure 4.7**); much more on this is in Chapter 5
- When you want to emphasize movement in your subject with motion blur (**Figure 4.8**)
- When you want to use a long exposure to gather light over a long period of time (**Figure 4.9**); more on this is in Chapter 8
- When you want to create that smooth-looking water in a waterfall (**Figure 4.10**)

FIGURE 4.7

Whenever I'm planning on freezing motion I always make sure I'm shooting with a fast shutter speed. I knew the rodeo would be giving me lots of opportunity for that kind of action, so I set my speed to be very fast so that I could capture every movement of the horse and the rider.

ISO 400
1/200 sec.
f/4
280mm lens

FIGURE 4.8

If you're photographing a fast-moving subject and wish to convey a sense of motion, always use a slower shutter. In this image I wanted to blur the background while freezing the subject, so it required me to use a slower shutter while following or "panning" with subject in focus.

ISO 250
1/25 sec.
f/9
38mm lens

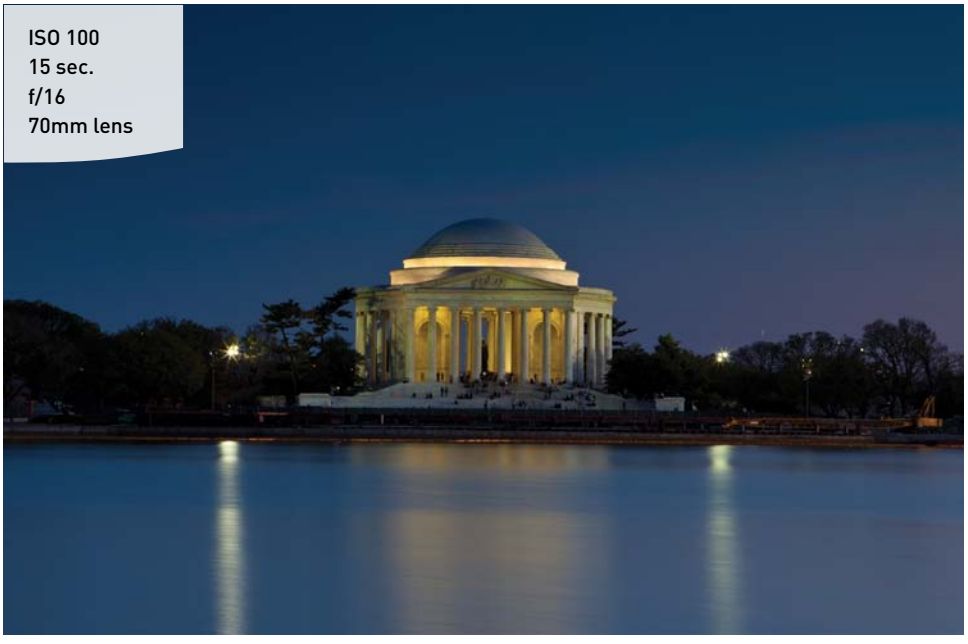


FIGURE 4.9
I took this very long exposure of the Jefferson Monument in D.C. using a tripod and a cable release. There's no way I could have held the camera steady for 15 seconds! A tripod is a must for these super-long exposures.

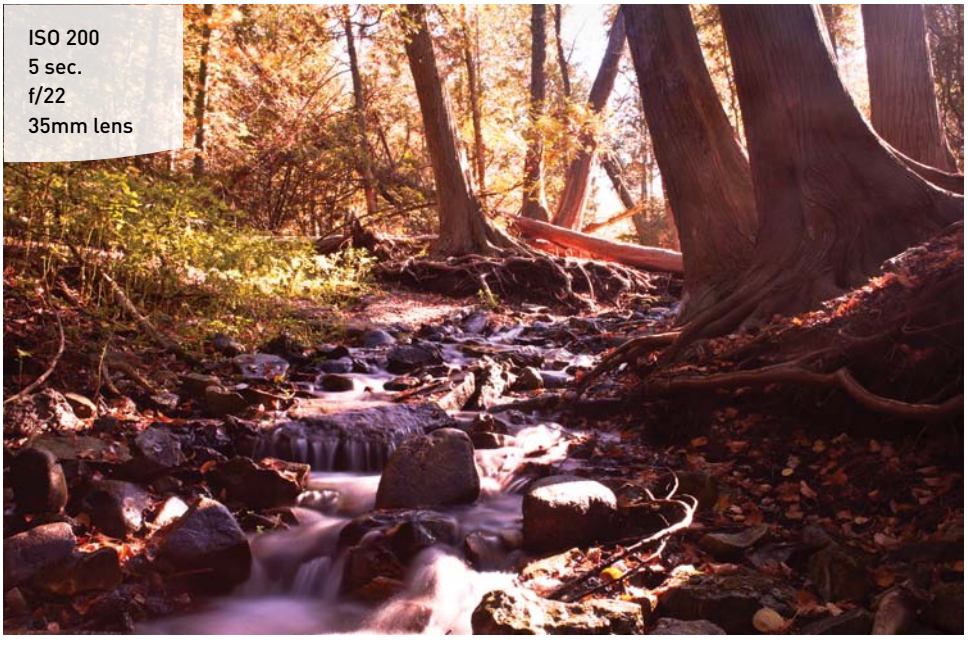


FIGURE 4.10
I used a cable release and tripod to photograph this small creek on Mackinac Island, Michigan. I was able to create a smooth look to the water by increasing the length of the exposure using Shutter Priority Mode.

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 previsualize the result of using a particular shutter speed. The great thing about shooting with digital cameras is that 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 your daughter to score another goal in her soccer game because your photograph 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 D7000 has a shutter speed range from 1/8000 of a second all the way down to 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 that 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 your aperture display in your viewfinder and the rear LCD panel will display the word "Lo." 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 situation is when you are shooting moving water. To get that look of smooth, 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 "Hi" 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, 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 and holding the ISO button on the back left of the camera while rotating the main Command dial with your thumb.
3. The ISO will appear on the top display. Choose your desired ISO, and release the ISO button on the left to lock in the change.
4. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
5. View the exposure information in the bottom area of the viewfinder or by looking at the rear LCD panel.
6. 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

Probably the mode most widely used by professional photographers, Aperture Priority is one of my personal favorites, and I believe that it will quickly become one of yours. Aperture Priority mode is also deemed a semiautomatic mode because it allows you to once again control one factor of exposure while the camera adjusts for the other (**Figure 4.11**).

FIGURE 4.11
Use Aperture Priority mode when you need to control depth of field. This is my favorite shooting mode.

Why 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 matters in your image. It is the controlling factor of how much area in your image is sharp. 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, as with a landscape scene, then using a small aperture will render the greatest amount of depth of field possible.

WHEN TO USE APERTURE PRIORITY (A) MODE

- When shooting portraits or wildlife (**Figure 4.12**)
- When shooting most landscape photography (**Figure 4.13**)
- When shooting macro, or close-up, photography (**Figure 4.14**)
- When shooting architectural photography, which often benefits from a large depth of field (**Figure 4.15**)

FIGURE 4.12
The lizard was very still so I was able to use a tripod and zoom in tightly. The large aperture helped create a smooth, blurry background also known as bokeh.

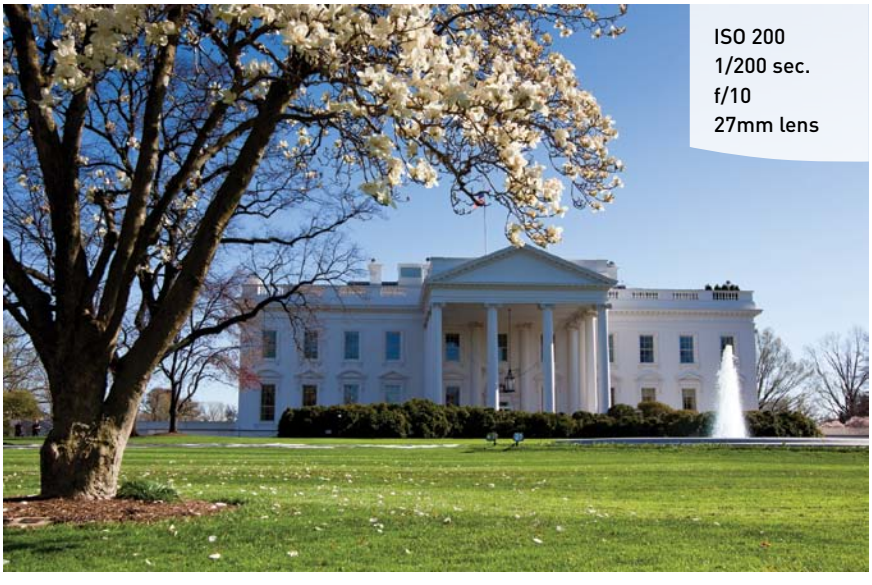


FIGURE 4.13
The smaller aperture setting brings sharpness to near and far objects.

FIGURE 4.14
Using a very small aperture on a clear blue day, I was able to create this sunburst. Typically f/16 or higher will do the trick! Give it a try. The key ingredient is a clear sky, since clouds will diffuse the sun.

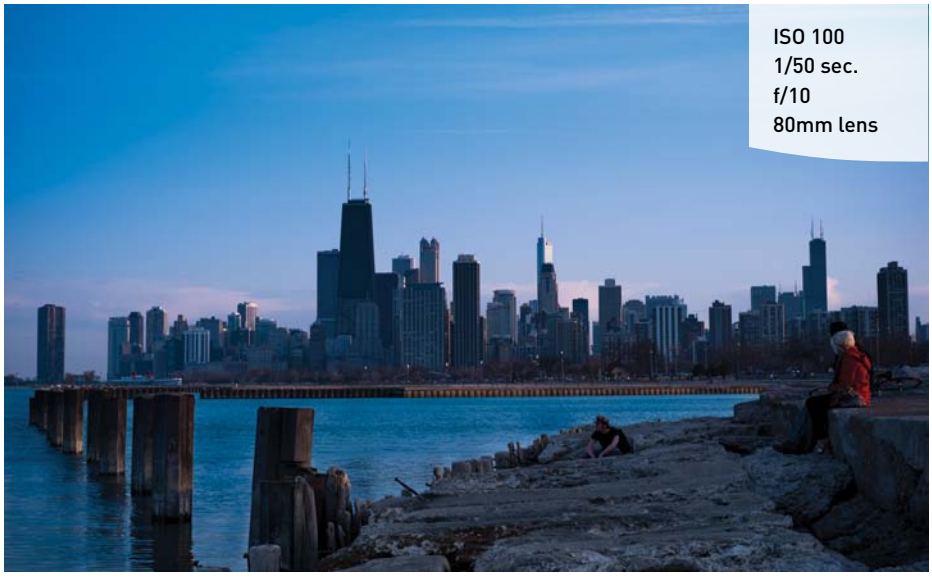


FIGURE 4.15
I wanted the foreground as well as the background in focus, so I used a wide-angle lens combined with a small aperture to maintain focus throughout the image. This is called a deep depth of field.

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, 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.

I strongly recommend knowing your lens's aperture rating. Every lens has a marking on it with a number; f/1.4, f/2.8, or f/5.6 are all very common maximum aperture sizes. This number simply means the largest aperture your lens supports is f/1.4, f/2.8, or f/5.6, respectively. The D7000 kit ships with a standard 18–105mm lens with an f/3.5–f/5.6 variable maximum aperture (see note below).

Knowing the limits of your lens aperture is crucial when using Aperture Priority. As a general rule, the lower the number on the lens, the "faster" it is (because it allows more light in to expose the image, thus reducing the amount of shutter time) and the sharper the image is. Typically, fast lenses are heavier and more expensive, but well worth the investment if you find yourself shooting in low light conditions. The larger the aperture is, the better the exposure without having to increase ISO and introduce digital noise.

See page 269 in your Nikon D7000 owner's manual to determine the maximum aperture of your lens.

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. 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 and holding the ISO button on the back left of the camera while rotating the main Command dial with your thumb.
3. The ISO will appear on the top display. Choose your desired ISO, and release the ISO button on the left to lock in the change.
4. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
5. View the exposure information in the bottom area of the viewfinder or by looking at the rear display panel.
6. 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 (lower f-stop number).

ZOOM LENSES AND MAXIMUM APERTURES

Some zoom lenses (like the 18–105mm 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 18–105mm 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 105mm.

M: MANUAL MODE

Manual mode is all about control. Keep in mind, this mode was not designed for those of us who want to go on autopilot and shoot to our heart's content. This mode was designed to allow the photographer to take complete control of shutter speed and aperture (**Figure 4.16**). The camera doesn't do any of the work for you.

When you have your camera set to Manual (M) mode, the camera meter will give you a reading of the scene you are photographing.

FIGURE 4.16
For ultimate control of shutter speed and aperture, use Manual mode.

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 that you use the other modes.

WHEN TO USE MANUAL (M) MODE

- When lighting and exposure get tricky (**Figure 4.17**)
- When your environment is fooling your light meter and you need to maintain a certain exposure setting (**Figure 4.18**)
- When shooting silhouetted subjects, which requires overriding the camera's meter readings (**Figure 4.19**)

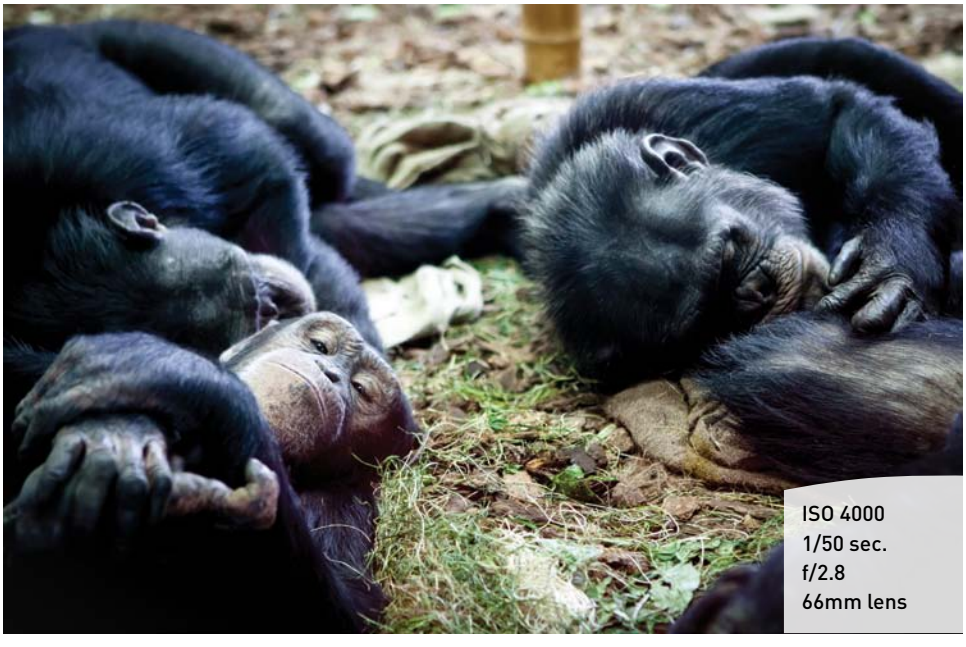


FIGURE 4.17
Shooting indoors can be tricky. The wonderful thing about your D7000 is that it has an incredible ISO range with relatively low digital noise. I took this image behind glass and wanted to avoid having my flash trigger because that would have left a nasty reflection. I decided to bump up my ISO and use a large aperture to get this shot.

FIGURE 4.18
Beaches and snow are always a challenge for light meters. Whenever I'm shooting something in snow I find myself switching over to manual mode. A good rule of thumb in snow is to bump your exposure up +1 or to +2 if it's really sunny. That should get you closer to the correct exposure.

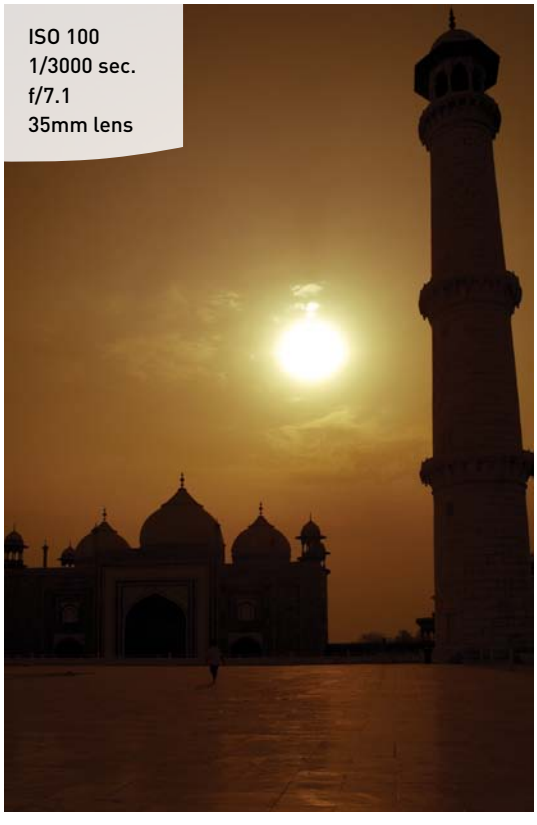


FIGURE 4.19
The camera's meter will do a great job most of the time, but when you want to get creative sometimes you need to use the Manual mode. Using Manual mode allowed me to silhouette the buildings while maintaining the warm glow of the sun.

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 and holding the ISO button on the back left of the camera while rotating the main Command dial with your thumb.
3. The ISO will appear on the top display. Choose your desired ISO, and release the ISO button on the left to lock in the change.
4. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
5. View the exposure information in the bottom area of the viewfinder or by looking at the display panel on the rear of the camera.
6. 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 left, 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 right and you will be providing more exposure than the camera meter calls for. This is overexposure.
7. 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).

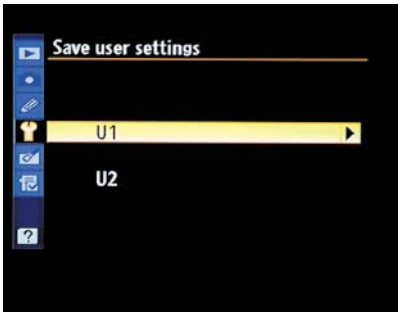
USER SETTINGS MODE—SAVING YOUR FAVORITE SETTINGS TO THE MODE DIAL

In 2010, Nikon introduced user settings to your D7000. This is a great feature if you're looking to have your favorite settings at the touch of a dial. These are located on the dial as U1 and U2. If you have a favorite group of settings that you find you are using often and want to have them close at hand, then these modes are handy for you.

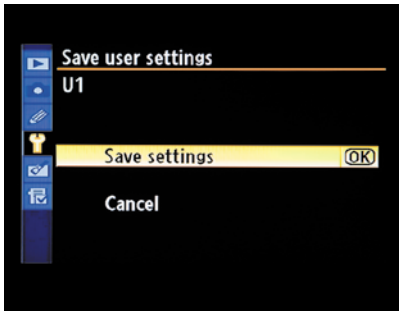
- First, set the camera to your favorite settings, under any of the semiautomatic modes or Manual mode, adjusting aperture, shutter speed, ISO, flash, focus point, metering, and/or bracketing.

- Go to the setup menu, and click on Save User Settings (**A**), (**B**).
- Highlight U1 or U2, then click OK to save your settings (**C**).
- When you want to use those settings again, just rotate the top dial to U1 or U2, and the camera will choose your saved settings so that you're ready to go (**D**).

A



B



C

D

For more on setting up user modes, see page 75 of your owner's manual.

HOW I SHOOT: MY FAVORITE CAMERA SETTINGS

I'm generally a landscape and travel photographer, but like many of you, I enjoy photographing everything. There's very little that doesn't interest me. I have found throughout the years that I primarily use the Aperture Priority mode. Why? Often when I'm traveling and photographing streetscapes I don't have time to worry about every single variable, and I've found focusing on aperture has given me the control I need for 75 percent of my photography. If I want an image to have a shallow depth of field, then I'll use a large aperture such as f/2.8, or if I'm shooting a landscape and I need a greater depth of field I'll use a smaller aperture such as f/16.

However, sometimes Aperture Priority just doesn't work. Maybe the lighting is tricky or it's close but not quite right. In those cases I'll switch over to Manual mode. Almost

all of my landscape photography that I've shot during the golden hours was done in Manual mode because the light changes very quickly.

Each photographer has a different way of doing things. No one approach is necessarily better than the other. In the end, it's about creating your own system so that you're consistent. When you're consistent, you can measure results and then make changes accordingly.

When I first started out photographing in Aperture Priority, the biggest mistake I made was shooting with much too slow of a shutter speed. I would get blurry pictures and I would ask myself, "How did this happen? They looked super sharp when I took them." I would then look at the metadata (image information) and see that I shot the blurry image at 1/30 of a second, way too slow for hand-holding. So I learned my lesson and started shooting a little faster, and my results improved immensely.

Doing things consistently and measuring results is a great way to improve your photography. Don't ignore the metadata; it's very helpful in understanding why an image looks a certain way and learning how to change your setting the next time to make the image stronger.

While the other camera modes have their place, I think you will find that most professional photographers use the Aperture Priority and Shutter Priority modes for 90 percent of their shooting.

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

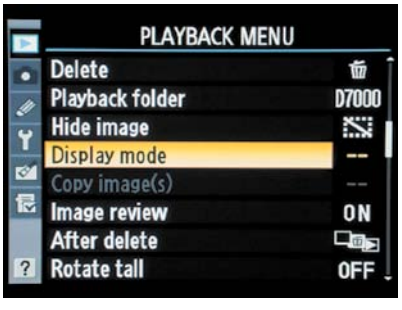
To make quick changes while I shoot, I often use the Exposure Compensation feature (covered in Chapter 7) so that I can make small over- and underexposure changes. This is different than changing the aperture or shutter; it is more like fooling the camera meter into thinking the scene is brighter or darker than it actually is. To get to this function quickly, I simply press the Exposure Compensation button, right next to the shutter button, then dial in the desired amount of compensation using the Command dial. If you can't get the exact exposure you want with aperture and speed alone, make little adjustments to the exposure compensation.

One of the reasons some people change their exposure is to make corrections when there are "blinkies" in the rear LCD. Blinkies are the warning signal that part of the image has been overexposed to the point that there is no longer 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 only appear in areas of your picture that are in danger of overexposure.

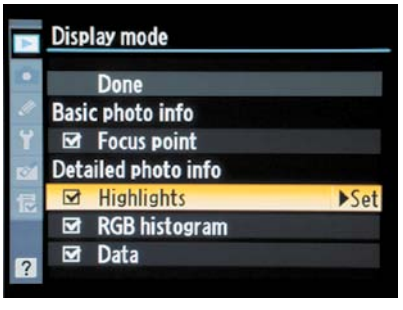
SETTING UP THE HIGHLIGHT ALERT FEATURE

A

1. Press the Menu button, then use the Multi-selector to access the Playback menu (**A**).
2. Once in the Playback menu, move the Multi-selector to the Display mode option and press OK (**B**).
3. Move the Multi-selector down to select the Highlights option, then press OK to place a check mark next to the word Highlight (**C**).
4. Now move back up to select Done, and press OK again to lock in your change.



B



C

Once the highlight warning is turned on, use it to check your images on the back of the LCD after taking a shot. If you see an area that is blinking, try setting exposure compensation to an underexposed setting like –1/3 or –2/3 stops and take another photo, checking the result on the screen. Don't make yourself crazy trying to get rid of every single blinking area. It is easy enough to add some black back into your photo later using post-editing software, and you don't want to underexpose the rest of the image because there is one blown-out highlight.

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 highlight. On the contrary, if you're shooting a white wedding dress and the entire dress is blinking, then you have no detail in the dress and the bride will not be happy. Use your best judgment to determine if the warning is alerting you to an area where you want to retain highlight detail. If you are not sure what the perfect exposure is and you have to get a good shot, try bracketing your exposure. We will talk more about this in later chapters.

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

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 that 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 that 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 then 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. Start with your shutter speed at something fast like 1/500 of a second and then work your way down. 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 hand-hold 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 at an equal distance from you, maybe 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). 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.

Here 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. 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 moving the shutter speed without changing the aperture. Just make 1/3-stop changes (1/125 to 1/100 to 1/80 to 1/60), and then review your images to see what a 1/3 stop of overexposure looks like. Then do the same thing going 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 that you keep track of your modes and exposures so that you can compare them with the image. If you are using software to review your images, you should also be able to check the camera settings that are embedded within the image's metadata.

Share your results with the book's Flickr group!

Join the group here: flickr.com/groups/nikond7000_fromsnapshotstogreatshots

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