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by Julie Adair King

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Introduction

Nikon. The name has been associated with top-flight photography equipment for generations. And the introduction of the D7100 has only enriched Nikon's well-deserved reputation, offering all the control a die-hard photography enthusiast could want while at the same time providing easy-to-use, point-and-shoot features for the beginner.

In fact, the D7100 offers so *many* features that sorting them all out can be more than a little confusing, especially if you're new to digital photography, SLR photography, or both. For starters, you may not even be sure what SLR means or how it affects your picture-taking, let alone have a clue as to all the other techie terms you encounter in your camera manual — *resolution, aperture, white balance,* and so on. And if you're like many people, you may be so overwhelmed by all the controls on your camera that you haven't yet ventured beyond fully automatic picture-taking mode. Which is a shame because it's sort of like buying a Porsche and never actually taking it on the road.

Therein lies the point of *Nikon D7100 For Dummies.* Through this book, you can discover not just what each bell and whistle on your camera does, but also when, where, why, and how to put it to best use. Unlike many photography books, this one doesn't require any previous knowledge of photography or digital imaging to make sense of things, either. In classic *For Dummies* style, everything is explained in easy-to-understand language, with lots of illustrations to help clear up any confusion.

In short, what you have in your hands is the paperback version of an in-depth photography workshop tailored specifically to your Nikon picture-taking powerhouse.

A Quick Look at What's Ahead

This book is organized into four parts, each devoted to a different aspect of using your camera. Although chapters flow in a sequence that's designed to take you from absolute beginner to experienced user, I've also tried to make each chapter as self-standing as possible so that you can explore the topics that interest you in any order you please.

Here's a brief preview of what you can find in each part of the book:

- **Part I: Fast Track to Super Snaps:** Part I contains four chapters to help you get up and running. Chapter 1 offers a tour of the external controls on your camera, shows you how to navigate camera menus, and walks you through initial camera setup. Chapter 2 explains basic picture-taking options, such as shutter-release mode and Image Quality settings, and Chapter 3 shows you how to use the camera's fully automatic exposure

modes. Chapter 4 explains the ins and outs of using Live View, the feature that lets you compose pictures on the monitor, and also covers movie recording.

- **Part II: Working with Picture Files:** This part offers two chapters dedicated to after-the-shot topics. Chapter 5 explains how to review your pictures on the camera monitor, delete unwanted images, and protect your favorites from accidental erasure. Chapter 6 offers a look at some photo software options — including Nikon ViewNX 2, which ships free with your camera — and guides you through the process of downloading pictures to your computer and preparing them for printing and online sharing.
- **Part III: Taking Creative Control:** Chapters in this part help you unleash the full power of your camera by moving into the advanced shooting modes (P, S, A, and M). Chapter 7 covers the critical topic of exposure, and Chapter 8 explains how to manipulate focus and color. Chapter 9 summarizes all the techniques explained in earlier chapters, providing a quick-reference guide to the camera settings and shooting strategies that produce the best results for portraits, action shots, landscape scenes, and close-ups.
- **Part IV: The Part of Tens:** In famous *For Dummies* tradition, the book concludes with two "top ten" lists containing additional bits of information and advice. Chapter 10 covers the photo-editing and effects tools found on the camera's Retouch menu and also shows you how to use the Effects exposure mode to add special effects to movies and photos as you record them. Chapter 11 wraps up the book by detailing some camera customization features that, although not found on most "Top Ten Reasons I Bought My Nikon D7100" lists, are nonetheless interesting, useful on occasion, or a bit of both.

Icons and Other Stuff to Note

If this isn't your first *For Dummies* book, you may be familiar with the large, round icons that decorate its margins. If not, here's your very own icon-decoder ring:

A Tip icon flags information that will save you time, effort, money, or some other valuable resource, including your sanity. Tips also point out techniques that help you get the best results from specific camera features.

When you see this icon, look alive. It indicates a potential danger zone that can result in much wailing and teeth-gnashing if ignored. In other words, this is stuff that you really don't want to learn the hard way.

Lots of information in this book is of a technical nature — digital photography is a technical animal, after all. But if I present a detail that is useful mainly for impressing your technology-geek friends, I mark it with this icon.

I apply this icon either to introduce information that is especially worth storing in your brain's long-term memory or to remind you of a fact that may have been displaced from that memory by some other pressing fact.

Additionally, I need to point out these extra details that will help you use this book:

- **Other margin art:** Replicas of some of your camera's buttons and onscreen symbols also appear in the margins next to some paragraphs. I include these to provide a quick reminder of the appearance of the button or feature being discussed.
- **Software menu commands:** In sections that cover software, a series of words connected by an arrow indicates commands that you choose from the program menus. For example, if a step tells you to "Choose File➪Convert Files," click the File menu to unfurl it and then click the Convert Files command on the menu.
- **Online updates:** Occasionally, Wiley's technology books are updated. If this book has technical updates, they'll be posted at `www.dummies.com/go/nikond7100updates`.

eCheat Sheet

As a little added bonus, you can find an electronic version of the famous *For Dummies* eCheat Sheet at `www.dummies.com/cheatsheet/nikond7100`. The eCheat Sheet contains a quick-reference guide to all the buttons, dials, switches, and exposure modes on your camera. Print it out, and tuck it in your camera bag for times when you don't want to carry this book with you.

Practice, Be Patient, and Have Fun!

To wrap up this preamble, I want to stress that if you initially think that digital photography is too confusing or too technical for you, you're in very good company. *Everyone* finds this stuff a little mind-boggling at first. So take it slowly, experimenting with just one or two new camera settings or techniques at first. Then, each time you go on a photo outing, make it a point to add one or two more shooting skills to your repertoire.

I know that it's hard to believe when you're just starting out, but it really won't be long before everything starts to come together. With some time, patience, and practice, you'll soon wield your camera like a pro, dialing in the necessary settings to capture your creative vision almost instinctively.

So without further ado, I invite you to grab your camera, a cup of whatever it is you prefer to sip while you read, and start exploring the rest of this book. Your D7100 is the perfect partner for your photographic journey, and I thank you for allowing me, through this book, to serve as your tour guide.

Part I

Fast Track to Super Snaps

web extras

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In this part . . .

- Get familiar with the basics of using your camera, from attaching lenses to using the Information display and Control panel.
- Find out how to select the shutter-release mode, exposure mode, picture resolution, file type (JPEG or Raw), and image area.
- Discover tips for getting good results in the automatic exposure modes.
- Start taking creative control by stepping up to Scene modes.
- Switch to Live View mode to compose pictures by using the monitor.
- Record, play, and trim digital movies.

1

Getting the Lay of the Land

In This Chapter

- Attaching and using an SLR lens
- Adjusting the viewfinder to your eyesight
- Selecting from menus
- Figuring out the displays
- Working with memory cards
- Getting acquainted with your camera
- Customizing basic operations

If you're like me, shooting for the first time with a camera as sophisticated as the Nikon D7100 produces a blend of excitement and anxiety. On one hand, you can't wait to start using your new equipment, but on the other, you're a little intimidated by all its buttons, dials, and menu options.

Well, fear not: This chapter provides the information you need to start getting comfortable with your D7100. Along with an introduction to the camera's external controls, I offer details about working with lenses and memory cards, viewing and adjusting camera settings, and choosing basic camera setup options.

Looking at Lenses

One of the biggest differences between a digital point-and-shoot camera and a dSLR *(digital single-lens reflex)* camera is the lens. With a dSLR, you can change lenses to suit different photographic needs, going from an extreme close-up lens to a super-long telephoto, for example. In addition, a dSLR lens has a focusing ring that gives you the option of focusing manually instead of relying on the camera's autofocus mechanism.

I don't have room in this book to go into detail about the science of lenses, nor do I think that an in-depth knowledge of the subject is terribly important to your photographic success. But the next few sections offer advice that may help when you're shopping for lenses, figuring out whether the lenses you inherited from Uncle Ted or found on eBay will work with your D7100, and taking the steps involved in actually mounting and using a lens.

Choosing a lens

To decide which lens is the best partner for your camera, start by considering these factors:

- **Lens compatibility:** You can mount a wide range of lenses on your D7100, but some lenses aren't fully compatible with all camera features. For example, with some lenses, you can't take advantage of autofocusing and must focus manually.

  Your camera manual lists all the lens types that can be mounted on the camera and explains what features are supported with each type. For maximum compatibility, look for these types: Type D or G AF Nikkor, AF-S Nikkor, or AF-I Nikkor. (The latter is an older, expensive professional lens that is no longer sold but might be available on the resale market.)

  All the aforementioned lens types (as well as some others) offer CPU (central processing unit) technology, which allows the lens to talk to the camera. This feature is critical to getting maximum performance from the autofocusing system, exposure metering system, and so on. That's not to say that you can't use a non-CPU lens; you just lose access to some camera features.

  Information in this book assumes that you're using a CPU lens that supports all the camera's functions. If your lens doesn't meet that criteria, check the camera manual for specifics on what features are unavailable or need to be implemented differently.

- **Focal length and the crop factor:** The focal length of a lens, stated in millimeters, determines the angle of view that the camera can capture and the spatial relationship of objects in the frame. Focal length also affects *depth of field,* or the distance over which focus appears acceptably sharp.

  You can loosely categorize lenses by focal length as follows:

  - *Wide-angle:* Lenses with short focal lengths — generally, anything under 35mm — are known as *wide-angle lenses.* A wide-angle lens has the visual effect of pushing the subject away from you and making it appear smaller. As a result, you can fit more of the scene into the frame without moving back. Additionally, a wide-angle lens has a large depth of field, which means that both the subject and background objects appear sharp. These characteristics make wide-angle lenses ideal for landscape photography.

- *Telephoto:* Lenses with focal lengths longer than about 70mm are *telephoto* lenses. These lenses create the illusion of bringing the subject closer to you, increase the subject's size in the frame, and produce a short depth of field so that the subject is sharply focused but distant objects are blurry. Telephoto lenses are great for capturing wildlife and other subjects that don't permit up-close shooting.
- *Normal:* A focal length in the neighborhood of 35mm to 70mm is considered "normal" — that is, somewhere between a wide-angle and telephoto. This focal length produces the angle of view and depth of field that are appropriate for the kinds of snapshots that most people take.

Figure 1-1 offers an illustration of the difference that focal length makes, showing the same scene captured at 42mm (left image) and 112mm (right image). Of course, the illustration shows just two of countless possibilities, and the question of which focal length best captures a scene depends on your creative goals.

Figure 1-1: I used a focal length of 42mm to capture the first image and then zoomed to a focal length of 112mm to capture the second one.

Note, however, that the focal lengths stated here and elsewhere in the book are so-called *35mm equivalent* focal lengths. Here's the deal: For reasons that aren't really important, when you put a standard lens on most digital cameras, including your D7100, the available frame area is reduced, as if you took a picture on a camera that uses 35mm film negatives and then cropped it.

This so-called *crop factor* varies depending on the camera, which is why the photo industry adopted the 35mm-equivalent measuring stick as a standard. With the D7100, the crop factor is 1.5. So the 18–105mm kit lens, for example, captures the approximate area you would get from a 27–158mm lens on a 35mm film camera. (Multiply the crop factor by the lens focal length to get the actual angle of view.) In Figure 1-2, the red line indicates the image area that results from the 1.5 crop

factor compared with the shot you would get from the same focal length lens mounted on a 35mm film camera.

When shopping for a lens, it's important to remember this crop factor to make sure that you get the focal length designed for the type of pictures you want to take.

Figure 1-2: The 1.5 crop factor produces the angle of view indicated by the red outline.

Not sure which focal length to choose? Here's a really cool online tool to help you understand the subject more: Point your web browser to `http://imaging.nikon.com`, click the link for Nikkor lenses, and then click the link for the Nikkor Lenses Simulator. Using this interactive tool, you can see exactly how different lenses capture the same scene.

- **Prime versus zoom lenses:** A *prime* lens is a single focal-length lens. With a zoom lens, you get a range of focal lengths in one unit. For example, the kit lens I feature in this book has a focal-length range of 18–105mm.

  Why select a lens that offers a single focal length when a zoom lens offers a range of focal lengths? In a word, quality. Because of some lens science I won't bore you with, you typically see some reduction in picture quality at certain points in the range of a zoom lens. On the flip side, a zoom lens is certainly more convenient than carting around a bag of prime lenses with different focal lengths. And you can get exceptional image quality from many zoom lenses, even with some *super zooms,* which offer a huge range of focal lengths.

- **Aperture range:** The *aperture* is an adjustable diaphragm in a lens. By adjusting the aperture size, you control the amount of light that enters through the lens and strikes the image sensor, thereby controlling exposure. The aperture setting also affects depth of field: A wide-open aperture produces a short depth of field, so the subject is sharply focused, but distant objects appear blurry; a narrow aperture produces a long depth of field so that both the subject and distant objects appear sharp.

  Chapters 7 and 8 cover these issues in detail. For the purposes of lens shopping, you need to know just a few things.

- *Every lens has a specific range of aperture settings.* Obviously, the larger that range, the more control you have over exposure and depth of field.
- *The larger the maximum aperture, the "faster" the lens.* Aperture settings are stated in *f-stops,* with a lower number meaning a larger aperture. For example, a setting of f/2 results in a more open aperture than f/4. And if you have one lens with a maximum aperture of f/2 and another with a maximum aperture of f/4, the f/2 lens is said to be *faster* because you can open the aperture wider, thereby allowing more light into the camera and permitting the image to be captured in less time. This not only benefits you in low-light situations but also when photographing action, which requires a fast shutter speed (short exposure time). So, all other things being equal, a faster lens is better.
- *With some zoom lenses, the maximum and minimum aperture change as you zoom the lens.* For example, when you zoom to a telephoto focal length, the maximum aperture generally gets smaller — that is, you can't open the aperture as much as you can at a wide-angle setting. You can buy lenses that maintain the same maximum and minimum aperture throughout the whole zoom lens, but you pay more for this feature.

After studying these issues and narrowing down your choices, finding the right lens in the category you want is just a matter of doing some homework. Study lens reviews in photography magazines and online photography sites to find the best performing lens in your price range.

Attaching and removing lenses

Whatever lens you choose, follow these steps to attach it to the camera body:

1. **Turn off the camera.**
2. **Remove the cap that covers the lens mount on the front of the camera.**
3. **Remove the cap that covers the back of the lens.**
4. **Hold the lens in front of the camera so that the mounting index on the lens aligns with the one on the camera.**

   The *mounting index* is a marker found on both the lens and the camera body to indicate how to align the two when mounting the lens. On the D7100, the mounting index is the white dot labeled in Figure 1-3.

   On the 18–105mm lens that's available in a bundle with the D7100 body, the lens mounting index is also a white dot, as shown in the figure. If you buy a different lens, your mounting index may look different, so check the lens instruction manual.

5. **Keeping the index markers aligned, position the lens on the camera's lens mount.**
6. **Turn the lens in a counterclockwise direction until the lens clicks into place.**

   To put it another way, turn the lens toward the side of the camera that sports the shutter button, as indicated by the arrow in Figure 1-3.
7. **On a CPU lens that has an aperture ring, set and lock the ring so the aperture is set at the highest f-stop number.**

   Check your lens manual to find out whether your lens sports an aperture ring and how to adjust it. (The lens featured in this book doesn't have an aperture ring.)

Figure 1-3: When attaching the lens, align the index dots as shown here.

To detach a lens, take these steps:

1. **Turn off the camera and locate the lens-release button, labeled in Figure 1-3.**
2. **Press the lens-release button while turning the lens clockwise (away from the shutter button) until the mounting index on the lens is aligned with the index on the camera body.**

   When the mounting indexes line up, the lens detaches from the mount.
3. **Place the rear protective cap onto the back of the lens.**

   If you aren't putting another lens on the camera, cover the lens mount with the protective cap that came with your camera, too.

Always change lenses in a clean environment to reduce the risk of getting dust, dirt, and other contaminants inside the camera or lens. For added safety, point the camera slightly down when performing this maneuver to help prevent any flotsam in the air from being drawn into the camera by gravity.

Changing the focusing method (auto or manual)

Assuming that your lens supports autofocusing when mounted on the D7100, familiarize yourself with these two controls, which set the focusing method to manual or autofocusing:

- **Lens focus-mode switch:** Assuming that your lens offers autofocusing as well as manual focusing, it has a switch that you use to choose between the two options. On the 18–105mm kit lens shown in Figure 1-4, the switch has an M setting for Manual focus and an A setting for Autofocus. Other lenses may offer different switches, so check your lens instruction guide for specifics.
- **Focus-mode selector:** Also shown in Figure 1-4, this switch sets the camera itself to manual focusing (M) or autofocusing (AF).

Figure 1-4: Set the focus mode both on the camera body and the lens.

Chapter 8 details how to take best advantage of the camera's autofocusing system. Manual focusing is fairly simple: Just rotate the focus ring on the lens to bring your subject into focus. The placement and appearance of the focus ring depend on the lens; Figure 1-5 shows you the one on the 18–105mm kit lens.

Zooming in and out

If you bought a zoom lens, it has a movable zoom ring. The location of the zoom ring on the 18–105mm kit lens is shown in Figure 1-5. To zoom in or out, just rotate that ring.

The numbers at the edge of the zoom ring, by the way, represent focal lengths. The number that's aligned with the white bar at the edge of the zoom ring represents the current focal length. In Figure 1-5, for example, the focal length is 35mm.

Figure 1-5: On the 18–105mm kit lens, the manual-focusing ring is set near the back of the lens.

Getting shake-free shots with Vibration Reduction (VR) lenses

Some Nikon lenses offer *Vibration Reduction.* This feature, indicated by the initials VR in the lens name, attempts to compensate for small amounts of camera shake that are common when photographers handhold their cameras and use a slow shutter speed, a lens with a long focal length, or both. That camera movement during the exposure can produce blurry images. Although Vibration Reduction can't work miracles, it enables most people to capture sharper handheld shots in many situations than they otherwise could. On the 18–105mm lens featured in this book, you enable and disable Vibration Reduction via the VR switch, labeled in Figure 1-6.

Here's what you need to know about this feature:

- **For handheld shooting, turn on Vibration Reduction.** Vibration Reduction engages when you press the shutter button halfway and after you press the button all the way to take the picture. The image in the viewfinder may appear a little blurry right after you take the picture. That's normal and doesn't indicate a problem with your camera or focus.

- **With the 18–105mm kit lens, turn off Vibration Reduction when you mount the camera on a tripod.** When you use a tripod, Vibration Reduction can have detrimental effects because the system may try to adjust for movement that isn't occurring. This recommendation assumes that the tripod is "locked down" so that the camera is immovable.

  You don't need to disable Vibration Reduction when you want to create motion effects by panning the camera, however. (*Panning* means to move the camera horizontally or vertically as you take the shot, a technique that blurs the background while keeping the subject sharply focused, creating a heightened sense of motion.) The Vibration Reduction system is smart enough to ignore panning movement and compensate only for movement in other directions.

- **For other lenses, check the lens manual to find out whether your lens offers a similar feature.** On non-Nikon lenses, Vibration Reduction may go by another name: *image stabilization, optical stabilization, anti-shake, vibration compensation,* and so on. In some cases, the manufacturers may recommend that you leave the system turned on or select a special setting when you use a tripod or pan the camera.

Figure 1-6: Turn on Vibration Reduction for sharper handheld shots, but turn off the feature when you use a tripod.

Additionally, some lenses enable you to engage different types of stabilization (the settings may be called Active/Normal or something similar); again, refer to the lens manual for specifics.

Enabling automatic distortion correction

Pictures taken with wide-angle lenses often exhibit *barrel distortion,* which causes straight lines to bow outward. And telephoto lenses sometimes cause verticals to bow inward, creating *pincushion distortion.* The Auto Distortion Control feature on the Shooting menu attempts to correct both problems.

The option is turned off by default. Before enabling it, understand that some of the area you see in your viewfinder may not be visible in the final photo because the anti-distortion manipulation requires some cropping of the scene. Also note that the feature is unavailable for movies and works only with certain types of lenses. (See the camera manual for specifics.)

Because results depend on your lens, take test shots to decide whether the feature is right for your equipment. Keep in mind that you have the option of applying a similar correction after the shot, using the Distortion Control option on the Retouch menu.

Adjusting the Viewfinder Focus

Near the upper-right side of the viewfinder is a dial that enables you to adjust the viewfinder focus to accommodate your eyesight. Figure 1-7 offers a close-up look at the dial, which is officially known as the *diopter adjustment control.*

Figure 1-7: Rotate this dial to adjust the viewfinder focus to your eyesight.

If you don't take this step, scenes that appear out of focus through the viewfinder may actually be focused through the lens, and vice versa. Here's how to make the necessary adjustment:

1. **Remove the lens cap from the front of the lens.**
2. **Look through the viewfinder and press the shutter button halfway to display picture data at the bottom of the viewfinder.**

   In dim lighting, the built-in flash may pop up; ignore it for now and close the unit after you finish adjusting the viewfinder.

3. **Rotate the diopter adjustment dial until the viewfinder data appears sharpest to your eye.**

   As you rotate the dial, the bracket-like marks in the center of the viewfinder, which are related to autofocusing, also become more or less sharp.

The Nikon manual warns you not to poke yourself in the eye as you perform this maneuver. This warning seems so obvious that I laugh every time I read it — which makes me feel doubly stupid the next time I poke myself in the eye as I perform this maneuver.

Ordering from Camera Menus

You access many camera features via menus, which, conveniently enough, appear when you press the Menu button. Features are grouped into six main menus, described briefly in Table 1-1.

Table 1-1 D7100 Menus

Symbol	*Open This Menu*	*Access These Functions*
	Playback	Viewing, deleting, and protecting pictures
	Shooting	Basic photography settings
	Custom Setting	Advanced photography options and some basic camera options
	Setup	Additional basic camera options
	Retouch	Built-in photo retouching options
	My Menu/Recent Settings	Your custom menu or 20 most recently used menu options

After you press the Menu button, you see a screen similar to the one shown in Figure 1-8. The left side of the screen sports the icons shown in Table 1-1, each representing one of the available menus. The highlighted icon is the active menu; options on that menu automatically appear to the right. In the figure, the Shooting menu is active, for example.

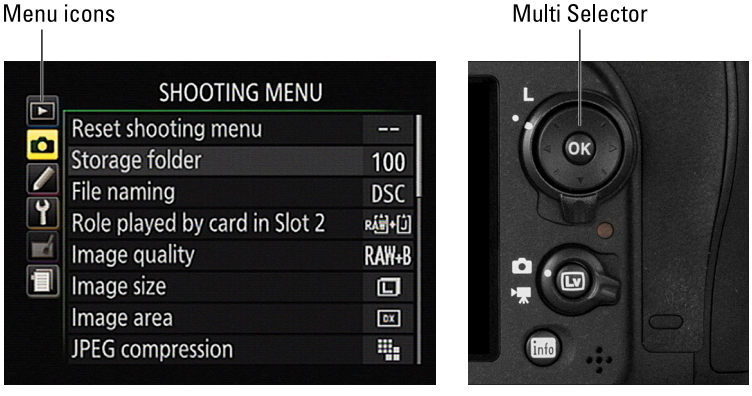

Figure 1-8: Use the Multi Selector to navigate menus.

The Multi Selector, labeled in the figure, is the key to the navigating menus. Press the edges of the Multi Selector to navigate up, down, left, and right through the menus.

In this book, the instruction "Press the Multi Selector left" means to press the left edge of the control. "Press the Multi Selector right" means to press the right edge, and so on.

Here's a bit more detail about menus:

- **Select a menu.** Press the Multi Selector left to jump to the column containing the menu icons. Then press up or down to highlight the menu you want to display. Finally, press right to jump over to the options on the menu.
- **Select and adjust a function on the current menu.** Use the Multi Selector to scroll up or down the list of options to highlight the feature you want to adjust and then press the OK button at the center of the Multi Selector. Settings available for the selected item then appear. For example, if you select Image Quality from the Shooting menu, as shown on the left in Figure 1-9, and press OK, the available Image Quality options appear, as shown on the right. Repeat the old up-and-down scroll routine until the choice you prefer is highlighted. Then press OK to return to the previous screen.

  In some cases, you may see a right-pointing triangle instead of OK next to an option. That's your cue to press the Multi Selector right to display a submenu or other list of options.

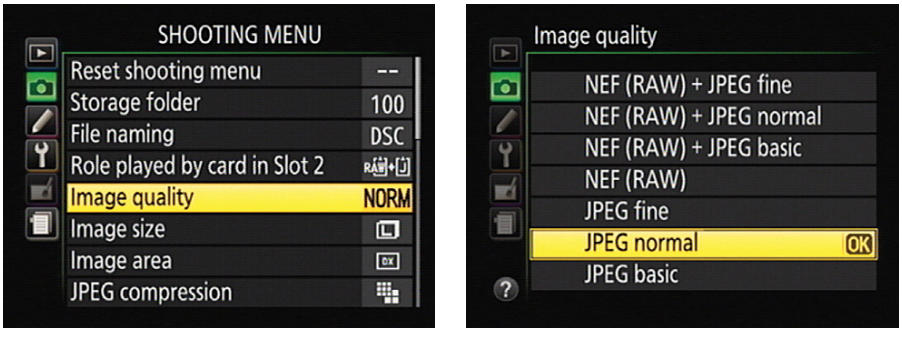

Figure 1-9: Select the option you prefer and press OK to return to the active menu.

Create a custom menu or view your 20 most recently adjusted menu items. The sixth menu is actually two menus bundled into one: Recent Settings and My Menu, both shown in Figure 1-10. The menu icon changes depending on which of these two functions is active; Table 1-1 shows both menus. Each menu contains a Choose Tab option; select this option and press OK to access the screen that lets you shift between the two menus.

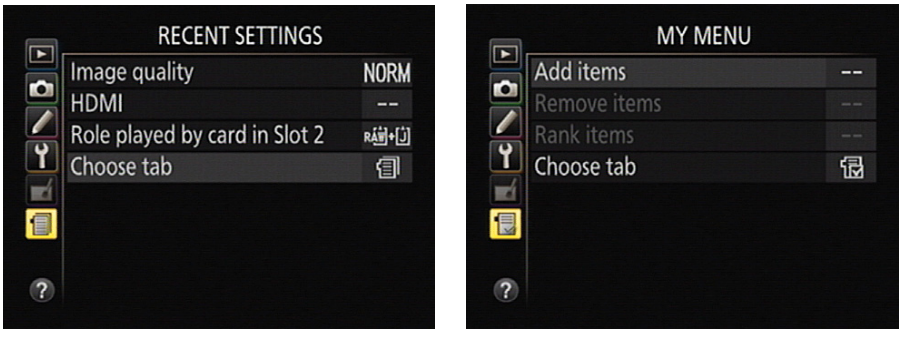

Figure 1-10: The Recent Settings menu offers quick access to the last 20 menu options you selected; the My Menu screen lets you design a custom menu.

Here's what the two menus offer:

- *Recent Settings:* This screen lists the 20 menu items you ordered most recently. If you want to adjust those settings, you don't have to wade through all the other menus looking for them — just head for the Recent Settings menu.

  To remove an item from the Recent Settings menu, highlight it and press the Delete button. Press again to confirm your decision.

- *My Menu:* Through this screen, you can create a custom menu that contains your favorite menu options. Chapter 11 details the steps.

Decoding the Displays

Your D7100 gives you three ways to monitor picture settings:

- **Control panel:** Figure 1-11 offers a look at this display, found on top of the camera. You can illuminate the panel temporarily by rotating the On/Off switch past the On position to the light bulb marker and then releasing the switch.

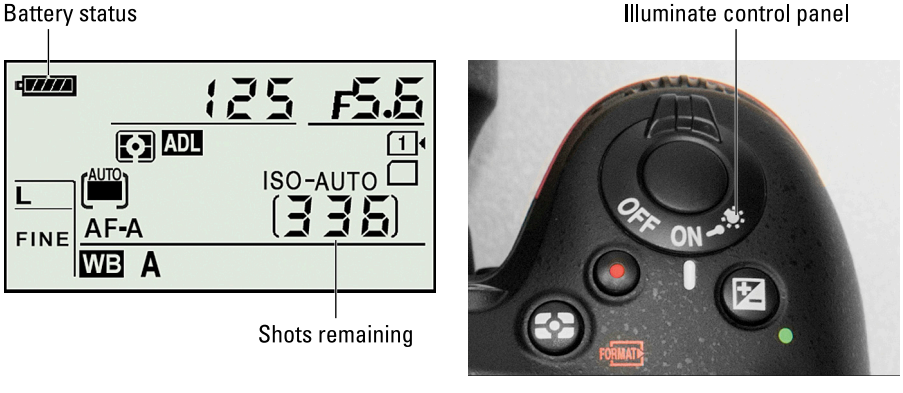

Figure 1-11: Rotate the On/Off switch to the light bulb position to illuminate the Control panel.

- **Information display:** If your eyesight is like mine, making out the tiny type on the Control panel can be difficult. Fortunately, you can press the Info button on the back of the camera to display the Information screen on the monitor. As shown in Figure 1-12, this screen displays the current shooting settings at a size that's easier on the eyes.

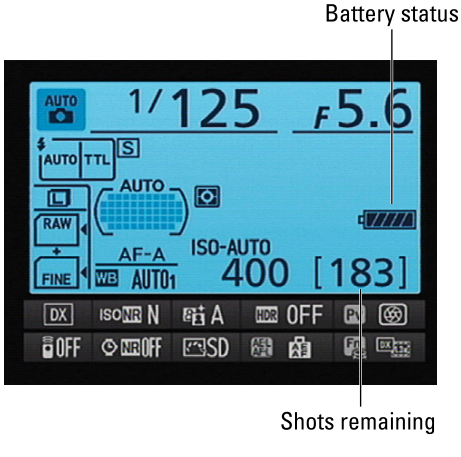

Figure 1-12: Press the Info button to view picture-taking settings on the monitor.

The Information screen has a hidden power, too: After the screen is displayed, you can press the ***i*** button to activate the control strip at the bottom of the screen, as shown on the left in Figure 1-13. You then can quickly adjust any of the settings on the two rows of the strip. Use the Multi Selector to highlight a setting — a

little *tooltip* (text label) appears to identify it — and then press OK. The camera then zips you directly to the menu containing the available settings, as shown on the right in the figure. Make your choice and press OK again to exit the menu. You can then adjust another setting or press the ***i*** button one more time to deactivate the control strip. Press the shutter button halfway to return to shooting mode.

Figure 1-13: Press the ***i*** button while the Information screen is displayed to gain quick access to the settings on the control strip at the bottom of the screen.

- **Viewfinder:** You can view some settings in the viewfinder as well, as shown in Figure 1-14.

Don't worry if you don't have any clue what all the symbols and numbers shown in Figures 1-11 through 1-14 mean — most of them relate to options explored in later chapters. But do note the following points of data now:

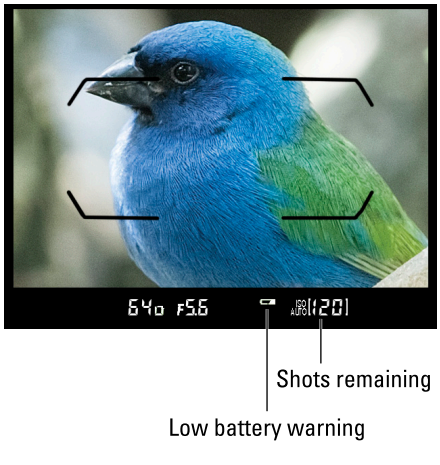

Figure 1-14: You also can view some camera settings at the bottom of the viewfinder.

- **Battery status indicator:** A full battery icon like the one in Figures 1-11 and 1-12 shows that the battery is fully charged. Bars disappear from the icon as the battery runs down. When the battery gets very low, the viewfinder displays a warning symbol, as shown in Figure 1-14. If the battery is beyond the point where you can take any more photos, the symbol flashes in the displays.

- **Shots remaining:** Labeled in Figures 1-11, 1-12, and 1-14, this value indicates how many additional pictures you can store on the current memory card (or cards if you put one in each of the camera's two card slots).

  When the shots-remaining number is greater than 999, the initial K appears next to the value to indicate that the first value represents the picture count in thousands. (*K* being a universally accepted symbol indicating 1,000 units.) The number is rounded down to the nearest hundred. So if the number of shots remaining is, say, 1,230 more pictures, the value reads as 1.2K.

Working with Memory Cards

Instead of recording images on film, digital cameras store pictures on memory cards. Your D7100 uses a specific type of memory card — an *SD card* (for *Secure Digital*).

To enable you to shoot oodles of pictures without having to swap out cards, the D7100 has two card slots. Open the cover on the right side of the camera, as shown in Figure 1-15, to reveal them. The top slot is Slot 1; the bottom slot is Slot 2.

The next section explains some details you need to know when you use two cards at a time, but first, here are some general guidelines about using SD cards:

Figure 1-15: Insert cards with the labels facing the back of the camera.

- **Understanding card specifications:** Most SD cards carry the designation SDHC (for *High Capacity*) or SDXC (for *eXtended Capacity*), depending on how many gigabytes (GB) of data they hold. SDHC cards hold from 4GB to 32GB of data; the SDXC moniker indicates a capacity greater than 32GB.

  Cards are also assigned a speed rating from 2 to 10, with a higher number indicating a faster data-transfer rate. The Powers That Be recently added a new category of speed rating — Ultra High Speed

(UHS). UHS cards also carry a number designation; at present, there is only one class of UHS card, UHS 1. These cards currently are the fastest the planet has to offer.

Of course, a faster card means a more expensive card. But to maximize your camera's performance, I recommend that you make the investment in Class 10 or UHS 1 cards. Especially for video recording, a faster card translates to smoother recording and playback. A faster card also can improve performance when you're shooting a burst of images using the camera's continuous capture feature.

- **Inserting a card:** Turn off the camera and then place the card in the slot with the label facing the back of the camera, as shown in Figure 1-15. Push in the card until it clicks into place; the card access light (labeled in the figure) blinks for a second to let you know the card is inserted properly.
- **Removing a card:** After making sure that the card access light is off, indicating that the camera has finished recording your most recent photo, turn off the camera. Open the memory card door, depress the memory card slightly until you hear a little click, and then let go. The card pops halfway out of the slot, enabling you to grab it by the tail and remove it.

When both memory card slots are empty, the symbol [-E-] appears in the shots remaining area of the viewfinder, Control panel, and Information screen. If you have a card in the camera and you get these messages, try taking the card out and reinserting it.

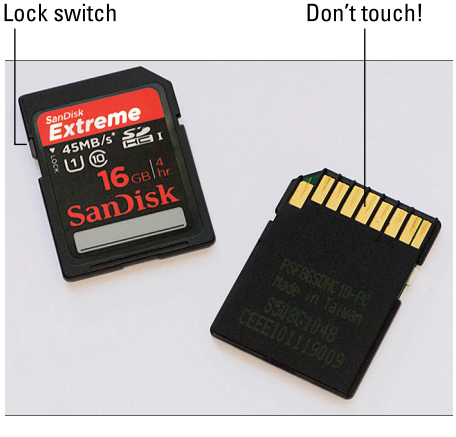

Figure 1-16: Avoid touching the gold contacts on the card.

- **Handling cards:** Don't touch the gold contacts on the back of the card. (See the right card in Figure 1-16.) When cards aren't in use, store them in the protective cases they came in or in a memory card wallet. Keep cards away from extreme heat and cold as well.
- **Locking cards:** The tiny switch on the side of the card, labeled "Lock switch" in Figure 1-16, enables you to lock your card, which prevents any data from being erased or recorded to the card. Press the switch toward the bottom of the card to lock the card contents; press it toward the top of the card to unlock the data.

Using two cards at the same time

When you install two memory cards, you can specify how you want the camera to use the card installed in Slot 2. You have three choices:

- **Overflow:** This setting is the default; the camera fills the card in Slot 1 (the top slot) and then switches to the second card.
- **Backup:** The camera records each picture to both cards. This option gives you some extra security — should one card fail, you have a backup on the other card.
- **Raw Slot 1 - JPEG Slot 2:** This setting relates to the Image Quality option, which Chapter 2 explains. If you select one of the Raw (NEF) + JPEG settings, Raw files go on the card in Slot 1 and the JPEG files go on the card in Slot 2.

Make your wishes known via the Role Played by Card in Slot 2 option on the Shooting menu, shown in Figure 1-17.

Figure 1-17: This option tells the camera how to use the card in Slot 2.

A few other critical points about using two cards:

- **Monitoring card use in the Information display:** You can tell which secondary slot function is in force by looking at the Image Quality readout of the Information screen, highlighted on the left in Figure 1-18. The card symbols tell you what's going where. In the figure, the symbols show that the camera is set up to send Raw files to Slot 1 and the JPEG versions to Slot 2. (*Fine* represents one of three available settings for JPEG files.) If you see the same data for each card — for example, the word *Raw* appears in both cards — the Backup option is selected. And if the file type label appears in only one card, with the other card appearing empty, the Overflow option is selected.
- **Monitoring card use in the Control panel:** Symbols representing each card also appear in the Control panel, as shown on the right in Figure 1-18. If you set the slot function to Overflow, the number of the card currently in use appears (1 or 2). At the other settings, you see both a 1 and a 2, as in the figure, showing that both cards are in use.
- **Determining how many more shots you can take:** When you set the second card to the Backup or Raw/JPEG option, the shots remaining value is based on whichever card contains the least amount of free

space. When either card is out of space, you can't take any more pictures. For the Overflow option, the shots remaining value tells you how many pictures you can fit on the card in Slot 1 until you fill that card. Then it changes to indicate the space on the second card.

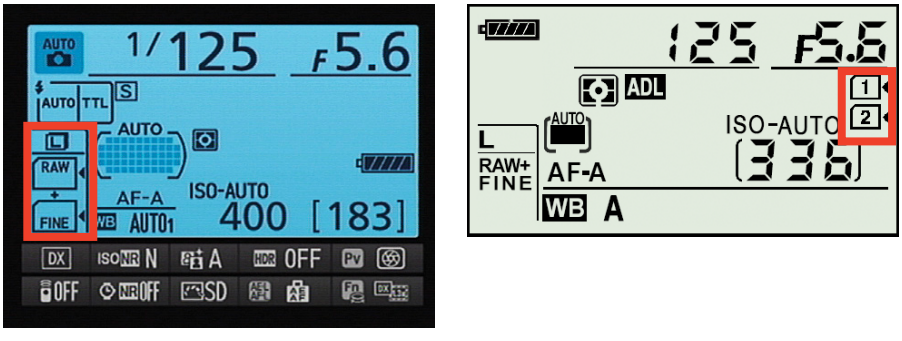

Figure 1-18: These symbols represent your memory cards.

TIP

- **Selecting a card to store movie files:** Movie recording throws a wrench in the card configuration system. No matter what setting you chose for the Role Played by Card in Slot 2 menu option, movie files always go on the card in Slot 1 by default. But if Card 2 has more space, you may want to send your movie files to it so that you can record a longer movie. (Choosing Overflow doesn't work because the camera can't put part of the file on one card and the rest on the other.)

  To change the movie-storage setup, select Movie Settings on the Shooting menu and press OK. Then set the Destination option to Card 2. See Chapter 4 for complete details about movie recording.

- **Copying pictures from one card to another:** You can take this step by choosing the Copy Image(s) option on the Playback menu. For details, see Chapter 6.

Formatting cards

The first time you use a new memory card or insert a card that's been used in other devices, *format* it to ensure that the card is properly prepared to record your pictures. Formatting after you download pictures to your computer is also a good idea. However, don't use your computer's file-management tools to format the card; the camera is better equipped to do the job.

WARNING!

Formatting erases everything on your memory card. So before formatting, copy any pictures or other data to your computer.

You can format a card in two ways:

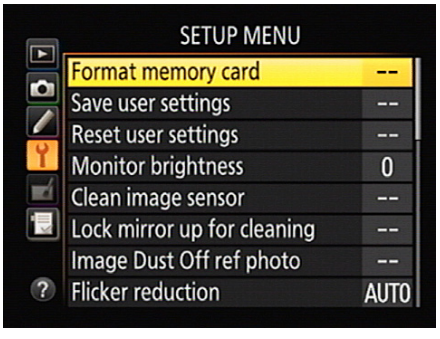

Figure 1-19: Formatting removes all data from the memory card.

- **Choose the Format Memory Card command from the Setup menu, as shown in Figure 1-19.** When you select the command, you're asked to select which card you want to format. After taking that step, you see a screen where you confirm your decision to format the card. Highlight Yes and press OK to go forward.

- **Simultaneously press and hold the Metering Mode and Delete buttons.** See the red Format labels next to the buttons? They're reminders that you use these buttons to quickly format a memory card. Hold the buttons down for about two seconds, until you see the letters *For* blink in the Control panel.

  After you press the buttons, the Control panel also displays the icon for the card that will be formatted if you go forward. If you have two cards installed in the camera, you can switch to the other card by rotating the Main command dial (back of the camera, upper-right corner). You also see the shots remaining value, which indicates how many pictures you can fit on the memory card at the current Image Quality and Image Size settings.

  While the display is blinking, press and release both buttons again. When formatting is complete, the *For* message disappears, and the Control panel display returns to normal.

If you insert a memory card and see the letters *For* blink in the Control panel or viewfinder, you must format the card before you can do anything else.

Exploring External Camera Controls

In later chapters, I detail all your camera's buttons, dials, and switches. For now, just cruise through the next several sections, which provide a basic road map to the external controls.

One note: Many buttons perform multiple functions and so have multiple "official" names. I think that's a little confusing, so I always refer to each button by the first moniker you see in the lists here. To avoid any confusion over which button I'm referencing, a picture of the button appears in the margin.

Topside controls

Your tour begins with the birds-eye view shown in Figure 1-20: