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Julie Adair King

*Bestselling author of Digital Photography
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FOR
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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 D5100 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 D5100 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 D5100 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 to access internal options, 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, both 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 then 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 creative 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 features that, although not found on most “Top Ten Reasons I Bought My Nikon D5100” 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 three additional 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 of 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.
- ✓ **Camera firmware:** *Firmware* is the internal software that controls many of your camera's operations. The D5100 firmware consists of three parts, called A and B and L. At the time this book was written, both A and B were version 1.00, and L was version 1.003.

Occasionally, Nikon releases firmware updates, and it's a good idea to check out the Nikon website (www.nikon.com) periodically to find out whether any updates are available. (Chapter 1 tells you how to determine which firmware version your camera is running.) Firmware updates typically don't carry major feature changes — they're mostly used to solve technical glitches in existing features — but if you do download an update, be sure to read the accompanying description of what it accomplishes so that you can adapt my instructions as necessary.

eCheat Sheet

As a little added bonus, you can find an electronic version of the famous *For Dummies* Cheat Sheet at www.dummies.com/cheatsheet/nikond5100. The Cheat Sheet contains a quick-reference guide to all the buttons, dials, switches, and exposure modes on your D5100. Log on, 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!

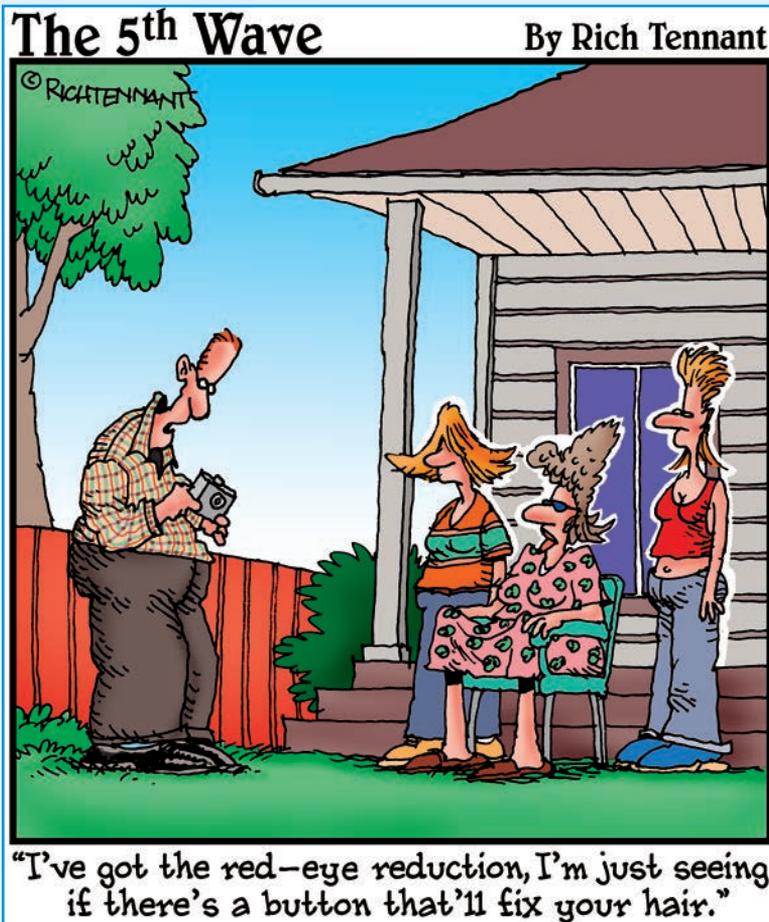
To wrap up this preamble, I want to stress that if you initially think that digital photography is too confusing or too technical for you, you're in very good company. *Everyone* finds this stuff a little mind-boggling at first. So take it slowly, experimenting with just one or two new camera settings 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 D5100 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



In this part . . .

Making sense of all the controls on your D5100 isn't something you can do in an afternoon — heck, in a week, or maybe even a month. But that doesn't mean that you can't take great pictures today. By using your camera's point-and-shoot automatic modes, you can capture terrific images with very little effort. All you do is compose the scene, and the camera takes care of almost everything else.

This part shows you how to take best advantage of your camera's automatic features and also addresses some basic setup steps, such as adjusting the viewfinder to your eyesight and getting familiar with the camera menus, buttons, and other controls. In addition, chapters in this part explain how to obtain the very best picture quality, whether you shoot in an automatic or manual mode, and how to use your camera's Live View and movie-making features.



Getting the Lay of the Land

In This Chapter

- ▶ Familiarizing yourself with the monitor, viewfinder, and lens
 - ▶ Working with a memory card
 - ▶ Exploring external controls and menus
 - ▶ Using the Shooting Information, Quick Settings, and help screens
 - ▶ Customizing basic operations
 - ▶ Restoring the camera's default settings
-

I still remember the day that I bought my first single-lens reflex (SLR) camera. I was excited to finally move up from my one-button point-and-shoot camera, but I was a little anxious, too. My new pride and joy sported several unfamiliar buttons and dials, and the explanations in the camera manual clearly were written for someone with an engineering degree.

You may be feeling similarly insecure if your Nikon D5100 is your first SLR, and doubly so if it's both your first SLR and first digital camera. So to help you get a little more comfortable, this chapter introduces you to each external camera control, explains how to navigate menus, and covers a few other important basics, such as how to work with lenses, memory cards, and the D5100's cool articulating monitor.

Using the Articulating Monitor

When you first take the camera out of its box, the monitor is positioned with the screen facing inward, protecting it from scratches and smudges, as shown on the left in Figure 1-1. It's a good idea to place the monitor in this position when you're not using the camera. When you're ready to



start shooting or reviewing your photos, you can lock the monitor in the traditional position on the camera back, as shown on the right in Figure 1-1. Or for more flexibility, you can swing the monitor out and away from the camera body and then rotate it to find the best viewing angle, as shown in Figure 1-2.



Figure 1-1: Here you see just two of the possible monitor positions.

Because playing with the monitor is no doubt one of the first things you did after unpacking your new camera, I won't waste space walking you through the process of adjusting the screen. (If you need help, the camera manual shows you what to do.) But I do want to offer a few monitor-related tips:

- ✔ **Don't force things.** Although the monitor assembly is sturdy, treat it with respect as you adjust the screen position. The monitor twists only in certain directions, and it's easy to forget which way it's supposed to move. So if you feel resistance, don't force things — you could break the monitor. Instead, rely on that feeling of resistance to remind you to turn the screen the other way.
- ✔ **Watch the crunch factor.** When positioning the monitor back into the camera (whether face in or face out), take care that nothing gets in the way. Use a lens brush or soft cloth to clean the monitor housing on the camera back so there's nothing in the way that could damage the monitor.



Figure 1-2: You can angle the monitor to get the best view of things.

- ✔ **Clean smart.** It's virtually impossible to keep nose prints and fingerprints off the monitor — well, it is for me, anyway. When you get the urge to clean the screen, use only the special cloths and cleaning solutions made for this purpose. (You can find them in any camera store.) Don't use paper products, such as paper towels, because they can contain wood fibers that can scratch the LCD surface.

One other housekeeping warning: Never use a can of compressed air to blow dust off the camera — the air is cold and can crack the monitor.

- ✔ **Live View photography has some drawbacks.** The *Live View* feature enables you to compose your photos using the monitor rather than the viewfinder. Live View may feel more comfortable than using the viewfinder if you're stepping up to the D5100 from a point-and-shoot camera that didn't have a viewfinder. But the monitor is one of the biggest drains on battery power, and autofocus in Live View mode is slower than when you use the viewfinder. For these reasons and a few others you can explore in Chapter 4, I stick with the viewfinder for most regular photography and reserve Live View for movie recording. (You can't use the viewfinder when shooting movies.)

Adjusting the Viewfinder to Your Eyesight

Tucked behind the right side of the rubber eyepiece that surrounds the viewfinder is a tiny dial that enables you to adjust the focus of your viewfinder to accommodate your eyesight. Figure 1-3 offers a close-up look at the dial, which is officially known as the *diopter adjustment control*.

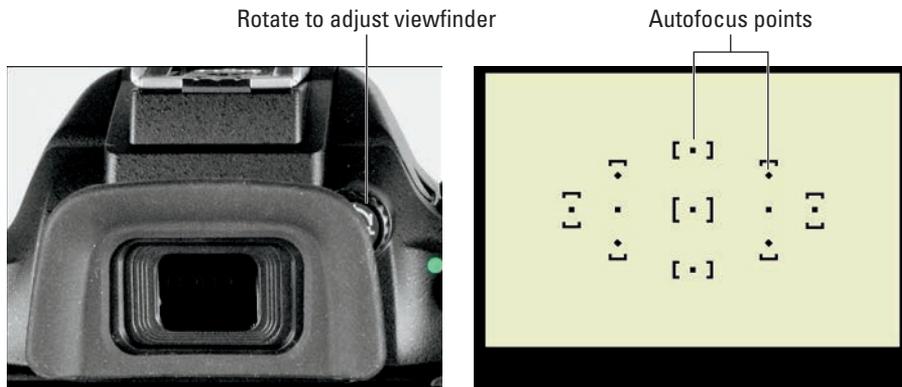


Figure 1-3: Use the diopter adjustment control to set the viewfinder focus for your eyesight.



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

1. **Remove the lens cap.**
2. **Look through the viewfinder and concentrate on the little black marks clustered around the center portion of the screen.**

The marks represent the camera's autofocus points; the right side of Figure 1-3 shows you what they look like.

3. **Rotate the dial until the viewfinder marks appear sharp.**

Don't worry about actually focusing the lens on your subject — just pay attention to the sharpness of the autofocus markings.



If you have a hard time making out the autofocus points, give the shutter button a half press and release it. You then see some exposure data at the bottom of the viewfinder display. Some people find it easier to reference that data rather than the autofocus points when adjusting the viewfinder focus.



The Nikon manual warns you not to poke yourself in the eye as you adjust the viewfinder focus. 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.

Looking at Lenses

One of the biggest differences between a point-and-shoot camera and an SLR camera is the lens. With an SLR, you can swap out lenses to suit different photographic needs, going from a *macro lens*, which enables you to shoot extreme close-ups, to a *telephoto lens*, which lets you photograph subjects from a distance, for example. In addition, an SLR lens has a movable focusing ring that lets you focus manually instead of relying on the camera's autofocus mechanism. The next few sections explain the basics of working with this critical part of your camera.

Attaching and removing lenses

You can mount a wide range of lenses on your D5100, but some lenses aren't fully compatible with all camera features. For example, to enjoy autofocus, you need an AF-S or AF-I lens. (If you bought the so-called “kit lens” — the 18–55mm zoom lens that Nikon offers as a bundle with the camera body — you own an AF-S lens.) Your camera manual offers more details about lens compatibility.



The *AF* in AF-S stands for *autofocus*, and the *S* stands for *silent wave*, a Nikon autofocus technology. AF-I lenses are older, professional-grade (expensive) lenses that are no longer made but may be available on the secondhand market.

Whatever lens you buy, follow these steps to mount it on the camera body:

1. **Turn off the camera and remove the cap that covers the lens mount on the front of the camera.**
2. **Remove the cap that covers the back of the lens.**
3. **Hold the lens in front of the camera so that the little white dot on the lens aligns with the matching dot on the camera body.**

Official photography lingo uses the term *mounting index* instead of *little white dot*. Either way, you can see the markings in question in Figure 1-4.

Figures in this book show the D5100 with its kit lens. If you buy a different lens, check your lens manual for complete operating instructions.

4. **Keeping the dots aligned, position the lens on the camera's lens mount.**

When you do so, grip the lens by its back collar, not the movable, forward end of the lens barrel.

5. **Turn the lens in a counter-clockwise 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 red arrow in the figure.

6. **On a 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 D5100 kit lens doesn't.) After locking the aperture on the lens, use the normal camera controls to adjust the f-stop setting. To find out more about apertures and f-stops, see Chapter 7.

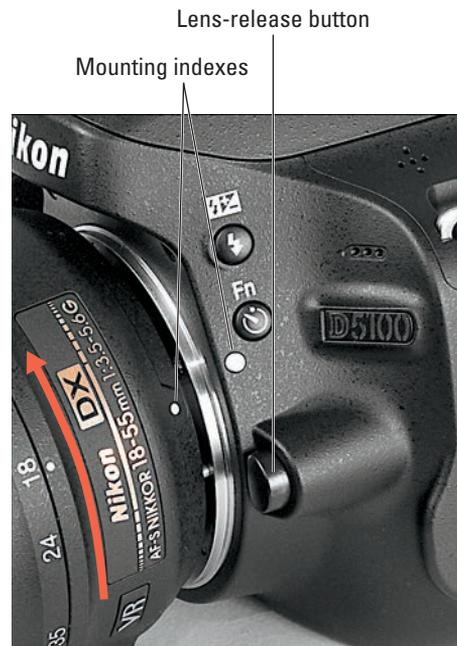


Figure 1-4: When attaching the lens, rotate it in the direction indicated by the arrow.



To remove a lens, press the lens-release button, labeled in Figure 1-4, and then turn the lens toward that button — that is, the opposite of what the arrow indicates in the figure — until it detaches from the lens mount. Put the rear protective cap onto the back of the lens and, if you aren't putting another lens on the camera, cover the lens mount with its protective cap, too.



Always attach or switch lenses in a clean environment to reduce the risk of getting dust, dirt, and other contaminants inside the camera or lens. Changing lenses on a sandy beach, for example, isn't a good idea. For added safety, point the camera body slightly down when performing this maneuver; doing so helps prevent any flotsam in the air from being drawn into the camera by gravity.

Choosing a focusing method (auto or manual)

To take advantage of the D5100's autofocus system, you must use an AF-S or AF-I lens. For times when you attach a lens that doesn't support autofocus or the autofocus system has trouble locking on your subject, you can focus manually. (If you've never used manual focus, don't be intimidated — there's really nothing to it.)

Set the focusing method via the A/M switch, labeled in Figure 1-5. Choose A for autofocus; M for manual focusing. Again, the figure features the kit lens; if you use a different lens, check the lens instruction guide for information on how to set the focusing method.

Chapter 8 offers complete details on focusing, but here are a few basics on focusing with the kit lens and others that use the same design:

✔ **To autofocus, press and hold the shutter button halfway.** Whether focus is locked at that point and which area of the frame is used to set the focusing distance depends on two options you can explore in Chapter 8: Focus mode and AF-Area mode. At the default settings, the camera typically focuses on the closest object and locks focus with your half-press of the shutter button. However, for moving subjects, focus may be adjusted up to the time you take the shot.

✔ **To focus manually, rotate the focusing ring on the lens barrel.** The location of the focusing ring varies from lens to lens; Figure 1-5 shows you where to find the ring on the kit lens.

Remember to set the lens switch to the M position before you rotate the focusing ring! Otherwise, you can damage the lens.

✔ **If you have trouble focusing, you may be too close to your subject.** Every lens has a minimum focusing distance, which you can find in your lens manual. For the kit lens, it's about 11".





Figure 1-5: Set the focusing method (auto or manual) via the A/M switch.

- ✔ **Some subjects make autofocus difficult.** Highly reflective objects, subjects behind fences, scenes that contain little contrast, and dim lighting are just some causes of autofocus problems. The easiest solution when you can't get the camera to target your subject is to focus manually.
- ✔ **Be sure to adjust the viewfinder to accommodate your eyesight.** Otherwise, you can't accurately gauge focus. The section “Adjusting the Viewfinder to Your Eyesight,” earlier in this chapter, provides help with this adjustment.



Zooming in and out

If you bought a zoom lens, it has a movable zoom ring. The location of the zoom ring on the D5100 kit lens is shown in Figure 1-5. To zoom in or out, rotate the ring.

The numbers at the edge of the zoom ring, by the way, represent *focal lengths*. If that term is new to you, Chapter 8 explains it fully. In the meantime, just know that when the kit lens is mounted on the camera, the number that's aligned with the lens mounting index (the white dot) represents the current focal length. In Figure 1-5, for example, the focal length is 45mm. Some lenses use a different marking, so check your lens manual if you use a lens other than the kit lens.

Using a VR (Vibration Reduction) lens

The 18–55mm kit lens, as well as many other Nikon lenses, offers *Vibration Reduction*, indicated by the initials *VR* in the lens name. Vibration Reduction attempts to compensate for small amounts of camera shake that are common when photographers handhold their cameras and use a slow shutter speed (long exposure time), a lens with a long focal length (telephoto lens), 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.

Here's what you need to know about taking best advantage of this feature:

- ✓ **Enabling Vibration Reduction on the kit lens:** Turn Vibration Reduction on or off by using the VR switch, labeled in Figure 1-6.
- ✓ **For other lenses, check the lens manual to find out whether your lens offers a similar feature.** On non-Nikon lenses, it may go by another name: *image stabilization*, *optical stabilization*, *anti-shake*, *vibration compensation*, and so on.
- ✓ **Vibration Reduction is initiated when you depress the shutter button halfway.** If you pay close attention, the image in the viewfinder may appear to be a little blurry immediately after you take the picture. That's a normal result of the Vibration Reduction operation and doesn't indicate a problem with your camera or focus.
- ✓ **With the 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 actually occurring. This recommendation assumes that the tripod is "locked down" so that the camera is immovable.
- ✓ **With other lenses, check the instruction manuals for recommendations about tripod shooting.** 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 (move it horizontally or vertically as you take the picture). For the kit lens, however, you don't need to disable Vibration Reduction when panning.





Vibration Reduction switch

Figure 1-6: Turn off Vibration Reduction when you use a tripod.

Working with Memory Cards

Instead of recording images on film, digital cameras store pictures on *memory cards*. Your D5100 uses a specific type of memory card — an *SD card* (for *Secure Digital*).



Most SD cards sold today 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 is assigned to cards with capacities greater than 32GB.

The following list offers a primer in the care and feeding of your memory cards:

- ✓ **Inserting a card:** Turn off the camera and then put the card in the card slot with the label facing the back of the camera, as shown in Figure 1-7. Push the card into the slot until it clicks into place; the memory card access light (labeled in Figure 1-7) blinks for a second to let you know the card is inserted properly.



✓ **Formatting a card:** The first time you use a new memory card or insert a card that's been used in other devices (such as an MP3 player), you need to *format* it. Formatting ensures that the card is properly prepared to record your pictures. Here's what you need to know about this important house-keeping task:

- *Formatting erases everything on your memory card.* So before formatting, be sure that you have copied any pictures or other data to your computer.
- *Format the card by using the Format Memory Card option on the Setup menu.* (The upcoming section “Ordering from Camera Menus” explains how to use the menus, if you need help.) Some computer programs enable you to format cards as well, but it's not a good idea to go that route. Your camera is better equipped to optimally format cards.
- *The blinking letters For in the viewfinder mean that the card requires formatting.* On the monitor, the camera displays a less subtle message: “This card is not formatted. Format the card.” Either way, the camera won't let you take any pictures until you give in to its formatting demand.



Memory card access light

Figure 1-7: Insert the card with the label facing the camera back.

✓ **Removing a card:** After making sure that the memory 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.

If you turn on the camera when no card is installed, the symbol [-E-] blinks in the lower-right corner of the viewfinder. If the Shooting Information screen is displayed on the monitor, that screen also nudges you to insert a memory card. If you do have a card in the camera and you get these messages, try taking it out and reinserting it.



✓ **Handling cards:** Don't touch the gold contacts on the back of the card. (See the left card in Figure 1-8.) 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.