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- Get creative — master exposure, focus, color, and depth of field to create unique, artistic images
- Focus in — harness the power of the autofocus system to achieve sharp focus on your subjects
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- Advice on setting flash and picture quality modes
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- The controls that manage aperture, shutter speed, and ISO
- Tips for manipulating focus and color in your photos
- How to shoot people, places, and close-ups
- Filters and features that create unique photo effects

Julie Adair King has been writing about digital cameras and photography for more than a decade. She is the author of several books on various Nikon and Canon cameras as well as Digital Photography For Dummies, and she teaches beginning digital photographers at the Palm Beach Photographic Centre.
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Julie Adair King is the author of many books about digital photography and imaging, including the best-selling Digital Photography For Dummies. Her most recent titles include a series of For Dummies guides to popular digital SLR cameras, including the Canon EOS Rebel T2i/550D, T1i/500D, XSi/450D, XS/1000D, and XTi/400D, and Nikon D5000, D3000, D300s, D90, D60, and D40/ D40x. Other works include Digital Photography Before & After Makeovers, Digital Photo Projects For Dummies, Julie King’s Everyday Photoshop For Photographers, Julie King’s Everyday Photoshop Elements, and Shoot Like a Pro!: Digital Photography Techniques. When not writing, King teaches digital photography at such locations as the Palm Beach Photographic Centre. A graduate of Purdue University, she resides in Indianapolis, Indiana.
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**Index** ........................................................................ 349
Once upon a time, making the move from a point-and-shoot digital camera to an SLR model required boatloads of cash and the willingness to cart around a bulky, heavy piece of equipment. All that changed a few years ago when Nikon introduced the D40, a digital SLR that offered a compact size and an equally compact price.

With the D3100, Nikon proves once again that you don’t have to give an arm and a leg — or strain your back and neck — to enjoy dSLR photography. Yet despite its diminutive size, the D3100 doesn’t skimp on power or performance, offering a great set of features to help you take your photography to the next level.

In fact, the D3100 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 911 and never heading out for the open road.

Therein lies the point of Nikon D3100 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 guides you through the process of downloading pictures to your computer, preparing photos for printing, and sharing images online.

✓ **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 features found on the camera’s Retouch menu, including tools that enable you to crop your photo, adjust color and exposure, and make other picture adjustments right in the camera. Chapter 11 wraps up the book by detailing some camera features that, while not found on most “Top Ten Reasons I Bought My Nikon D3100” 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:
Introduction

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 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 D3100 firmware consists of parts called A, B, and L. At the time this book was written, both A and B were version 1.00, and L was version 1.002.

  Occasionally, Nikon releases firmware updates, and it’s a good idea to check out the Nikon Web site (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.
As a little added bonus, you can find an electronic version of the famous *For Dummies* Cheat Sheet at www.dummies.com/cheatsheet/nikond3100. The Cheat Sheet contains a quick-reference guide to all the buttons, dials, switches, and exposure modes on your D3100. Log on, print it, 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 D3100 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

The 5th Wave

By Rich Tennant

Wait! Wait! Let me get my camera. The looks on their faces will be priceless.
In this part . . .

Making sense of all the controls on your D3100 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
▶ Attaching and using an SLR lens
▶ Adjusting the viewfinder to your eyesight
▶ Working with memory cards
▶ Exploring the camera controls
▶ Selecting from menus
▶ Using the Shooting Information, Quick Settings, and help screens
▶ Customizing basic operations
▶ Restoring default settings

I still remember the day that I bought my first single-lens reflex (SLR) film 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. And then there was the whole business of attaching the lens to the camera, an entirely new task for me. I saved up my pennies a long time for that camera — what if my inexperience caused me to damage the thing before I even shot my first pictures?

You may be feeling similarly insecure if your Nikon D3100 is your first SLR, although some of the buttons on the camera back may look familiar if you’ve previously used a digital point-and-shoot camera. If your D3100 is both your first SLR and first digital camera, you may be doubly intimidated.
Part I: Fast Track to Super Snaps

Trust me, though, that your camera isn’t nearly as complicated as its exterior makes it appear. With a little practice and the help of this chapter, which introduces you to each external control, you can become as comfortable with your camera’s buttons and dials as you are with the ones on your car’s dashboard. This chapter also guides you through the process of mounting and using an SLR lens, working with memory cards, navigating your camera’s menus, and customizing basic camera operations.

**Getting Comfortable with Your Lens**

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.

Of course, those added capabilities mean that you need a little information to take full advantage of your lens. To that end, the next several sections explain the process of attaching, removing, and using this critical part of your camera.

**Attaching a lens**

Your camera can autofocus only with a type of lens that carries the specification *AF-S*. (Well, technically speaking, the camera can autofocus with *AF-I* lenses also. But because those are high-end, very expensive lenses that are no longer made, this is the only mention of AF-I lenses in this book.) You can use other types of lenses, as long as they’re compatible with the camera’s lens mount, but you have to focus manually.

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

1. Turn the camera off 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 1-1.

Note that the figure (and others in this book) shows the D3100 with its so-called *kit lens* — the 18–55mm AF-S Vibration Reduction (VR) zoom lens that Nikon sells as a unit with the body. If you buy a lens from a manufacturer other than Nikon, your dot may be red or some other color, so check the lens instruction manual.

4. **Keeping the dots aligned,** position the lens on the camera’s lens mount, as shown in Figure 1-1.

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 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 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 D3100 kit lens doesn’t.) To find out more about apertures and f-stops, see Chapter 7.

Even though the D3100 is equipped with a dust reduction system, 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.
Part I: Fast Track to Super Snaps

Removing a lens

To detach a lens from the camera body, take these steps:

1. **Turn off the camera and then locate the lens-release button, labeled in Figure 1-1.**

2. **Press the lens-release button while turning the lens clockwise (toward the button) until the mounting index on the lens is aligned with the index on the camera body.**
   
   The mounting indexes are the little guide dots labeled in Figure 1-1. When the dots 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.

Setting the focus mode (auto or manual)

Again, the option to switch between autofocus and manual focusing depends on matching the D3100 with a fully compatible lens, as I explain in the earlier section, “Attaching a lens.” With the kit lens, as well as with other AF-S lenses, you can enjoy autofocus as well as manual focusing.

The AF stands for **autofocus**, as you may have guessed. The S stands for **silent wave**, a Nikon autofocus technology.

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 by twisting a focusing ring on the lens barrel. The placement and appearance of the focusing ring depend on the lens; Figure 1-2 shows you the one on the kit lens.

To focus manually with the kit lens, take these steps:

1. **Set the focus mode switch on the lens to the M (manual) position.**
   
   Figure 1-2 gives you a look at the switch.

2. **While looking through the viewfinder, twist the focusing ring to adjust focus.**
   
   If you have trouble focusing, you may be too close to your subject; every lens has a minimum focusing distance. You may also need to adjust the viewfinder to accommodate your eyesight; you can get help with the process a few paragraphs from here.
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Figure 1-2: On the 18–55mm kit lens, the manual-focusing ring is set near the front of the lens, as shown here.

If you use a lens other than the kit lens, check the lens instruction guide for details about focusing manually; your lens may or may not have a switch similar to the one on the kit lens. Also see the Chapter 8 section related to the Focus mode option on the Shooting menu, which should be set to MF for manual focusing. (With the kit lens and some other lenses, the camera automatically chooses the MF setting for you.)

By the way, even when you focus manually, the camera provides some feedback to help you determine whether focus is set correctly. Look in the Chapter 8 section that’s devoted to manual focusing for details.
Zooming in and out

If you bought a zoom lens, it has a movable zoom barrel. The location of the zoom barrel on the D3100 kit lens is shown in Figure 1-2. To zoom in or out, just rotate that zoom barrel.

The numbers on the zoom barrel, by the way, represent focal lengths. I explain focal lengths in Chapter 8. In the meantime, just note that when the 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 1-2, for example, the focal length is 35mm.

Using a VR (Vibration Reduction) lens

If you purchased the D3100 kit — the body-and-lens combination put together by Nikon — your lens offers Vibration Reduction. On Nikon lenses, this feature is 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, 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.

Here’s what you need to know about taking best advantage of this feature with your D3100:

✔ Turn Vibration Reduction on or off by using the VR switch, labeled in Figure 1-3. The switch is located on the lens, directly underneath the Auto/Manual focus switch.

✔ Vibration Reduction is initiated when you depress the shutter button halfway (which also initiates autofocus and exposure metering). If you pay close