Canon[®] EOS 7D Mark II

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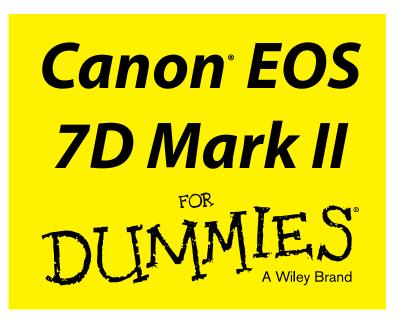
Learn to:

- Demystify camera controls and menus
- Take great pictures automatically or in manual mode
- Dial in exposure and fine-tune focus

IN FULL COLOR!

Doug Sahlin
Author of Canon EOS 6D For Dummies





by Doug Sahlin



Canon[®] EOS 7D Mark II For Dummies[®]

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Introduction

our Canon EOS 7D Mark II is the latest and greatest digital camera on the market — with a stunning 20.2-megapixel capture, Live View, high-definition video, and much more. But all this technology can be a bit daunting, especially if this is your first real digital single-lens reflex (SLR) camera. You no longer have modes like Portrait, Sport, Landscape, and so on. You've graduated to the big leagues. All you have to do is master the power you hold in your hands.

I've been using Canon digital SLRs since the EOS 10D, and I've learned a lot about the Canon brand of cameras since then. In addition to the EOS 7D Mark II I'm using to write this book, I also own an EOS 5D MKII and an EOS 7D, which has a lot of the features found on your EOS 7D Mark II. My goal is to show you how to become one with your camera. I don't get overly technical in this book, even though your camera is very technical. I also do my best to keep it lively. So if you want to master your EOS 7D Mark II, you have the right book in your hands.

About This Book

If you find the buttons and menus on your shiny new EOS 7D Mark II a tad intimidating, this book is for you. In the chapters of this book, I take you from novice point-and-shoot photographer to one who can utilize all the bells and whistles your camera offers. You'll find information about the camera menus and every button on your camera, as well as when to use them, and what settings to use for specific picture-taking situations. I also introduce you to a program you can use to edit your images to pixel perfection.

Foolish Assumptions

Ah, yes. *Assume*. When broken down to its lowest common denominator . . . Okay, I won't go there. But as an author, I have to make some assumptions about you, dear reader. First and foremost, you should now own, or have on order, a Canon EOS 7D Mark II. If you own one of those cute little point-and-shoot Canon cameras, good for you, but this book won't help you with

that camera. You should also have a computer on which to download your images, and preferably a program with which to edit your images. A basic knowledge of photography is also helpful. I know, you probably meet all assumptions. But my editor assumes I'll put all the pre-requisites in this section in this part of the book.

Conventions Used in This Book

To make life easier, this book has several conventions that are used to identify pertinent information — stuff you should know. So to help you navigate this book easily, I use a few style conventions:

- Terms or words that you might be unfamiliar with in the context of photography, I have italicized and I also define these.
- Numbered steps that you need to follow and characters you need to type are set in **bold**.
- Margin art is used to identify camera buttons. When you see one of these icons, it shows you what button to push or dial to rotate.
- ✓ The Canon EOS 7D Mark II menu has pretty little icons for each tab, of which there are many. Each tab has multiple menus. You'll find a table with tab names and menus in Chapter 2.

The Long and Winding Road Ahead

I divide this book into three parts, with each devoted to a specific aspect of your camera. The chapters flow logically from one subject to the next, to take you from shooting in Full Auto mode to becoming a seasoned photographer who knows which mode to choose and which settings to use for taking pictures of specific subjects. You can read the book from cover to cover — or, if you need quick information about a specific topic, peruse the Table of Contents or Index until you find the desired topic. Most of the sections in this book don't require reading additional material.

The following sections offer a brief overview of each part of the book.

Part 1: Getting to Know Your Canon EOS 7D Mark 11

Part I contains five chapters that help you get up and running with your EOS 7D Mark II:

Chapter 1 introduces you to the camera and shows you how to do some basic tasks.

- Chapter 2 shows you how to take pictures using the Full Auto mode. I show you how to find your way through the maze of menus and much more.
- Chapter 3 shows you how to specify the image format. I show you how and when to choose JPEG and RAW format, discuss different sizes, and offer my recommendation for the ideal format.
- ✓ Chapter 4 shows you how to use the LCD monitor for a myriad of purposes. I show you how to review your images, use the histogram, and more.
- ✓ Chapter 5 shows you how to use Live View mode. I show you how to take pictures with Live View and change Live View autofocus modes. I also show you how to capture movies with Live View. So you're live in Chapter 5.

Part II: Going Beyond Point-and-Shoot Photography

In this part of the book, I cut to the chase and show you how to master the advanced features of your camera.

- Chapter 6 shows you how to use the creative shooting modes. In this chapter, I also show you how to modify camera exposure, bracket exposure, and use custom functions.
- Chapter 7 shows you how to use the advanced features of your camera. I show you how to set ISO, specify white balance mode, create a custom white balance, and much more. I also show you how to use your EOS 7D Mark II with Canon Speedlites.
- Chapter 8 shows you how to use your EOS 7D Mark II in specific shooting situations. I discuss sport photography, wildlife photography, land-scape photography, and more.

Part III: The Part of Tens

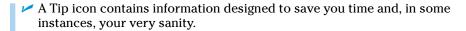
The book concludes with two top ten lists, written by yours truly, who happens to have a gap between his teeth like David Letterman, who happens to be famous for his top ten lists. The lists are grouped according to subject matter, and a splendid time is guaranteed for all. And tonight Mr. Kite is topping the bill.

- Chapter 9 shows you how to create a custom menu and register your favorite settings. I also show you how to add copyright information to the camera, edit movies in the camera, and much more.
- Chapter 10 shows you how to create a makeshift tripod, create abstract images, create HDR images and multiple exposures in camera, and more.

Icons and Other Delights

For Dummies books have icons that indicate important bits of information. You can hopscotch from icon to icon and discover a lot. But when in doubt, read the text associated with the icon. In this book, you find the following icons:







This icon warns you about something you should not do; something your fearless author has already done and decided it's not a good thing to do again.



When you see this icon, it's the equivalent of a virtual piece of string tied around your finger. This is information you want to commit to memory.



When you see this icon, it's for the geeks in the group who like to know all manner of technical stuff.

You'll also find icons in the margin that show you the controls and menu tabs on your camera.

Shoot Lots of Pictures and Enjoy!

Your EOS 7D Mark II is a digital photography powerhouse; use it and use it often. The old adage "practice makes perfect" really does apply. The only way to become a better photographer and master your equipment is to apply what you learn from what I show you, and shoot as many pictures as you can. While you're working your way through this book, keep your camera close at hand. When your significant other pokes his or her head into the room, grab your camera and start practicing your craft. Take one picture, then another, and another, and so on. With practice, you'll know your camera like the back of your hand. You'll also know which rules of photography and composition work for you — and you'll start to develop your own style. For that matter, you'll probably amaze yourself, too.

Part I Getting to Know Your Canon EOS 7D Mark II





In this part...

- Get to know the lay of the land and become familiar with the controls of your EOS 7D Mark II.
- Find out how to take great pictures automatically as well as how to specify image size and format.
- Understand how to get around in the somewhat enigmatic camera menu.
- Learn to master the camera's LCD monitor.
- ✓ Visit www.dummies.com for additional Dummies content online.

Exploring the Canon EOS 7D Mark II

In This Chapter

- ▶ Getting familiar with camera controls
- ▶ Understanding the LCD panel
- Decoding and adjusting the viewfinder
- Attaching and removing lenses
- ▶ Using zoom and image stabilization lenses
- Changing basic camera settings
- Using memory cards
- Charging your battery
- Cleaning your sensor

he Canon EOS 7D Mark II, which evolved from the Canon EOS 7D that was introduced in late 2009. has all the latest bells and whistles Canon has to offer. It's a technological marvel that enables you to take great pictures and capture high-definition (HD) video. The camera has a new processor and an advanced, highly customizable 65-point autofocus system that gives you the ability to capture great images in low light and at a blindingly fast speed of up to 10 frames per second, which is ideal for action photography. You can also create HDR (high dynamic range) images and use the new interval timer to create time-lapse movies. And this camera features a viewfinder that shows you 100 percent of what the lens captures: What you see is what you get. A dual-axis level (the equivalent of a spirit level in a tripod) lets you capture pictures with horizon lines that are level. In addition, the camera has built-in GPS, which, when enabled, pinpoints the location

where each image was captured and includes GPS data with the image metadata. The camera also has a built-in flash system that can be used wirelessly to control external Canon Speedlites.

Getting familiar with all this new technology can seem daunting even to a seasoned photographer. I was impressed, albeit a tad flummoxed, when I saw the first reviews for the all-singing, all-dancing EOS 7D Mark II. Even though I'm a seasoned Canon digital single-lens reflex (SLR) user — my first digital SLR was the EOS 10D — I still had a bit of a learning curve when I first had the camera in hand, chomping at the bit to create some pictures. But it's my job to get down to brass tacks with new technology and show you how to master it. The fact that you're reading this probably means that you want to know how to use all the bells and whistles Canon has built into the EOS 7D Mark II. In this chapter, I familiarize you with the controls, the camera lens, the camera settings, the battery, and the memory cards you use to capture images with the camera.

Getting to Know the Controls

If you're a longtime Canon user, you know that you can do an awful lot with the camera by using external controls, which saves you from poking around inside pesky menus. The camera controls are easy to reach and give you access to many powerful features. Although you may think it seems like a daunting task to know which button does what, after you use the camera for a while, you'll automatically know which control gives you your desired result and then reach for it instinctively, without taking your eye from the viewfinder. But first, you need to know what each control does. I explain the controls you find on the outside of the camera in the upcoming sections.

Exploring the top of your camera

The top of the camera, shown in Figure 1-1, is where you find the controls you use most when taking pictures. The top of the camera is where you change settings like ISO (International Organization for Standards) and shutter speed, choose a shooting mode, and press the shutter button to take a picture. You can do lots of other things from the top of the camera, which in my humble opinion, is the most important real estate on the camera, with the possible exception of the lens. I suggest you get to know the controls on the top of your camera intimately, like the back of your hand. Many photographers, including me, make it a point to memorize where the controls are and access them without taking an eye off the viewfinder. Here's what you find on the top of the camera:

- ✓ **Shutter button:** This button prefocuses the camera and takes a picture. (I discuss this button in greater detail in Chapter 2.)
- Multi-Function button: This button changes the function of a multipurpose button, and is used extensively when specifying which autofocus

- point or zone is used to achieve focus. I show you how and when to use this button when related to a specific task.
- ✓ **Main dial:** This dial changes a setting when you rotate it after pressing a button. For example, after you press the ISO speed button, you rotate this dial to change the ISO speed setting. I show you how to use this dial as it relates to a specific task.
- ✓ LCD Panel Illumination button: Press this button when you're in dim or dark conditions and you need to shed a little light on the LCD panel.
- ✓ ISO Speed Setting/Flash Exposure Compensation button: This button sets the ISO speed setting or the flash exposure compensation. (See Chapter 7 for more on the ISO speed setting and flash exposure compensation.)
- ✓ **Drive/AF button:** This button sets the autofocus mode. You can choose from three autofocus modes. You also use this button to change the drive mode from single shot to continuous shooting to auto-timer. (I give you the skinny on autofocus modes in Chapter 6.)



ISO Speed Setting/Flash Exposure Compensation button

Figure 1-1: Get to know these controls like the back of your hand.

- ✓ White Balance/Metering Mode button: This button changes the white balance or metering mode. (See Chapter 6 for more on the metering mode and white balance.)
- ✓ LCD panel: This panel shows you all the current settings. I show you
 how to read the information in this panel in the section, "Deciphering
 the LCD Panel," later in this chapter.
- ✓ Hot shoe: Slide a compatible flash unit (a Canon flash unit is dubbed a Speedlite) that's compatible with the EOS 7D Mark II into this slot. The contacts in the hot shoe communicate between the camera and the flash unit. (I discuss flash photography in Chapter 7.)
- ✓ GPS antenna: The body of this camera is made of magnesium, which is wonderfully durable, but GPS signals have a hard time passing through it, which is why the wily engineers at Canon put the GPS antenna in a little bubble on top of the camera body. Looks kinda like a hood scope on a racing car. Way cool.
- ✓ Mode Dial Lock Release button: This welcome feature is a button that when pushed enables you to change from one shooting mode to another. When in the upright and locked position, it's not possible to accidentally change shooting modes in the heat of battle.
- ✓ **Mode dial:** You use this button to specify which shooting mode the camera uses to take the picture. (I show you how to use this dial to choose specific shooting modes in Chapter 6, and in Chapter 8, I show you how to choose optimal settings for specific picture-taking situations.)

Exploring the back of your camera

The back of the camera, shown in Figure 1-2, is also an important place. Here you find controls to power up your camera, access the camera menu, and much more. The following is what you find on the back of your EOS 7D Mark II:

- ✓ **AF Point Selection button:** This button enables you to change from multiple autofocus points to a single autofocus point (see Chapter 6).
- ✓ AE Lock button: This button enables you to lock exposure to a specific part of the frame (see Chapter 6).
- ✓ **AF-On button:** This button, in certain shooting modes, establishes focus (see Chapter 6).
- ✓ Live View/Movie Shooting switch: This switch enables you to shoot in Live View mode or to shoot movies, which I explain in detail in Chapter 5.
- ✓ **Start/Stop button:** Push this button to shoot in Live View mode. When you switch to movie shooting mode, this button starts and stops recording (see Chapter 5).

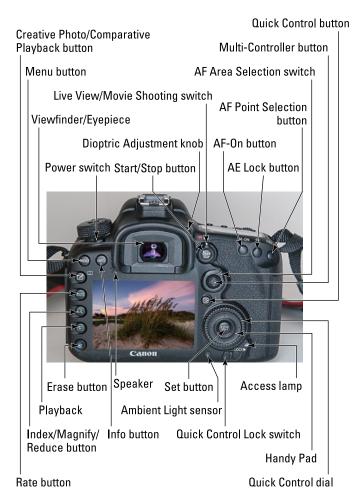


Figure 1-2: Buttons, buttons, and more buttons on the back of the camera.

- ✓ **Multi-Controller button:** Use this button for a myriad of tasks, such as changing the autofocus point, selecting an option when using the Quick Control menu instead of the camera menu, or switching from one camera menu to the next. (I explain this button in detail when it's associated with a specific task throughout this book.)
- ✓ AF Area Selection switch: This switch is used in conjunction with the AF Point Selection button to select the desired autofocus point or autofocus zone.

- ✓ **Quick Control button:** Press this button to display the Quick Control menu on the LCD monitor. (I show you how to use the Quick Control menu in Chapter 4.) It is also used in conjunction with the Menu button to quickly switch from one menu tab to another. (I show you how to use this button throughout this book as the need arises when selecting menu commands.)
- Quick Control dial: This dial selects a setting or highlights a menu item. This dial is used when performing various tasks, and I discuss it throughout this book as needed.
- ✓ Handy Pad: This convenient touch pad is used to change multiple settings when shooting movies in silent mode (see Chapter 5).
- ✓ **Set button:** Press this button to confirm a task, such as erasing an image from your card or setting a menu option. I show you how to use this button to perform a specific task throughout this book.
- Ambient Light sensor: Used to determine the brightness of the LCD monitor, unless you manually change the brightness. Be careful not to block this sensor when you choose the option to let the camera automatically determine LCD brightness based on the ambient lighting conditions (see Chapter 4).
- Quick Control Lock switch: This switch enables the Quick Control dial. Move the switch to the left to enable the Quick Control dial and to the right to lock the dial. Locking the Quick Control dial prevents you from accidentally changing a setting. You can use a menu command to modify which buttons are locked with this switch.
- Access lamp: Flashes when the camera writes data to the inserted memory card(s).
- ✓ Dioptric Adjustment knob: This control fine-tunes the viewfinder to your eyesight.
- ✓ **Viewfinder/Eyepiece:** Use the viewfinder to compose your pictures. Shooting information, battery status, and the amount of shots that can be stored on the memory card is displayed in the viewfinder. The eyepiece cushions your eye when you press it against the viewfinder and creates a seal that prevents ambient light from having an adverse effect on the exposure.
- ✓ **Speaker:** Plays audio when you play back movies.
- Power switch: Okay, this is a no-brainer. This switch powers the camera on and off.
- ✓ LCD monitor: Used to display images, movies, camera menus, and the Quick Control menu. (I tell you probably more than you ever wanted to know about the monitor in Chapter 4, and in Chapter 5, I show you how

- to use the monitor to compose pictures and movies while shooting in Live View mode.)
- ✓ **Info button:** Press this button to display shooting information on the LCD monitor. You can choose from many different information screens. (I inform you about the different screens in Chapter 4.) This button is also used in conjunction with certain menu commands, which I discuss throughout this book as the need arises.
- Menu button: Press this button to display the last used camera menu on the LCD monitor. (I introduce you to the camera menu in Chapter 2 and refer to the menu throughout this book.)
- Creative Photo/Comparative Playback button: This button is used to engage creative shooting modes such as HDR, or to select a picture style. You also use this button when reviewing images to display two images side by side. I discuss this button throughout this book as it relates to a specific task.
- Rate button: This button is used to rate images. This button can be modified through a menu command to protect images.
- ✓ Index/Magnify/Reduce button: When reviewing images, use this button in conjunction with the Main dial to view multiple thumbnails or to zoom out when viewing a single image (see Chapter 4).
- **▶ Playback:** Used to review images (see Chapter 4).
- **▶ Erase button:** This button deletes an image. (I show you how to delete images in Chapter 4.)

Exploring the front of your camera

The front of your camera (see Figure 1-3) has a couple controls you can use and other gizmos that the camera uses. Here you'll find a couple of buttons that you use every day and some that access features you rarely use. The following features are on the front of your camera:

- ✓ Remote control sensor: Senses the light from an RC-1, RC-5, or RC-6 remote (sold separately) to actuate the shutter.
- ✓ DC coupler cord hole: Plug the cord from the ACK-E6 power adapter (sold separately) into this hole to use the camera without a battery.
- ▶ Depth-of-Field Preview button: Press this button to preview the depth of field (the amount of the image in front of and behind your subject that's in apparent focus) at the current f-stop.
- Body cap (not shown): Use the body cap to protect the interior of the camera when a lens isn't attached.

- ✓ EF index mount (not shown): Align an EF lens with this mark when attaching it to the camera. (See the section, "Attaching a lens," later in this chapter for more information.)
- ✓ EF-S index mount (not shown): Align an EF-S lens with this mark when attaching it to the camera. (See the section, "Attaching a lens," later in this chapter for more information.) You can only use EF-S lenses with cameras equipped with an APS-C (Advanced Photo System Type-C) sensor like the one on your EOS 7D Mark II.
- ✓ **Flash button:** Press this button to pop up the built-in camera flash unit. (I show you how to use flash on your subjects in Chapter 7.)
- Lens-Release button: Press this button when releasing a lens from the camera. I show you how to attach and remove lenses in the section, "Working with Lenses" later in this chapter.
- ✓ Microphone: Records audio when recording movies.



Figure 1-3: The front of your camera is an ergonomic wonder.

Finding the perfect camera bag

Your EOS 7D Mark II is a marvelous camera that you are probably going to want to take almost everywhere with you. Plus, Canon has more lenses than the law allows as well as Speedlites for flash photography, the stuff you use to clean your camera, filters, and so on. A good camera bag is a must to cart around all of your gear. Here are some tips for finding the perfect one:

- Get a bag that's big enough for the gear you now own and any additional equipment you anticipate buying in the near future.
- Purchase a bag that's comfortable. Make sure you try the bag on for size in the camera store. Place your camera in the bag and put it over your shoulder. If the bag isn't comfortable, try a different bag. Nothing is worse than a chafed neck after a daylong photography adventure.
- Make sure the bag has enough pockets for your stuff. The bag should have a place where you can pack extra memory cards, spare batteries, and other accessories.
- Make sure the bag is sturdy enough to protect your gear.
- Make sure the bag is made so that you can get to your gear quickly. Nothing is worse than fumbling for a piece of equipment while your digital Kodak moment disappears.

- If you have a lot of gear, consider purchasing a hard-shell case that's big enough for all your equipment and a soft bag for day trips.
- Consider purchasing a customizable camera bag. These bags come with removable partitions that are held in place with Velcro.
- If it rains a lot where you live, purchase a water-resistant camera bag or one with a built-in rain cover. Heavy rain and digital camera gear is a recipe for disaster.
- I have one bag that has gobs of space for lots of equipment when I go on a hike in search of wildlife to photograph. The bag has outside pockets for water bottles and a place to park my tripod. I also have a bag that's big enough for two small lenses. I use this bag when I go on a photo walkabout in search of interesting things to photograph.

About the multi-function lock

The EOS 7D Mark II has lots of dials and buttons, and then more buttons and levers and switches, oh my. There are times when you don't want to inadvertently change a setting when shooting. All of the buttons on the body of this camera were discussed at the start of the chapter when I discussed the front, back, and top of the camera. Some of the buttons and sliders cannot be accidentally engaged, because you have to move a finger from the standard shooting position. The buttons that can be accessed easily are positioned so that you can quickly access them while shooting. However, there are times when you've got everything just the way you want it for the subject you're photographing and accidentally bumping a button and thereby changing a setting could have disastrous results, especially when you're

photographing something that will never be repeated. Fortunately, the engineers at Canon considered this eventuality and added the multi-function lock to the camera.

The multi-function lock switch is located below the Quick Control dial, and is used to lock and unlock the Quick Control dial. Slide the switch to the right to lock the Quick Control dial. Slide the switch to the left to release the lock and return functionality to the Quick Control dial.



You can also use the multi-function lock switch to lock the Main dial, the multi-controller, and the AF Area Selection lever by navigating to the Custom Function C.Fn3, and choosing the controls you want to lock with the multi-function lock under the Multi-Function Lock menu item. (For more information on Custom Functions, see Chapter 6.)

Deciphering the LCD Panel

The LCD panel on the top of the camera displays a lot of information, such as the shutter speed, aperture, ISO speed setting, white balance, metering mode, and more. Figure 1-4 shows all the possible options that can appear on the LCD panel. However, you'll never see this much information when you take a picture. I show you the type of information you can expect to see on the LCD panel during specific picture-taking scenarios I discuss throughout this book. Here's a road map for the information you'll find on the LCD panel:

- ✓ White Balance setting: Displays the current white balance setting. You view the panel when choosing a white balance option. The icon for every possible white balance option is shown in Figure 1-4. (I discuss how to set white balance in Chapter 7.)
- ✓ **Shutter Speed:** Displays the shutter speed, as metered by the camera or set by you that will be used to shoot the next picture. If you're taking pictures with Shutter Priority mode or Manual mode (see Chapter 6), you can use the LCD panel to set the shutter speed.
- ✓ **Aperture:** Displays the f-stop that will be used to take the next picture. You can use this information to change the aperture when shooting in Manual mode or Aperture Priority mode (see Chapter 6).
- ✓ **Shots Remaining/Self-Timer Countdown:** This spot on the panel does double duty. When you're using the Self-Timer, the time remaining until the picture is taken displays here. Otherwise, the display shows the number of shots remaining that you can fit on the memory card you insert in the camera to capture your images. (A *memory card* is the digital equivalent of reusable film. But you probably already knew that, right?)

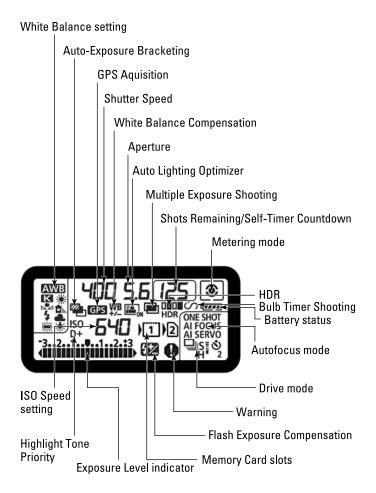


Figure 1-4: You find lots of useful information on the LCD panel.

- Metering mode: This icon displays the currently selected metering mode. I discuss metering modes in Chapter 6.
- ✓ **Auto-Exposure Bracketing:** This icon displays when you've enabled automatic exposure bracketing (see Chapter 6).
- ✓ **GPS Acquisition:** This icon flashes when a GPS signal is being acquired, and stops flashing when the signal has been acquired. (I discuss the EOS 7D Mark II's GPS feature later in this chapter.)
- ✓ White Balance Compensation: This icon displays when you bracket the white balance (see Chapter 6).

- Auto Lighting Optimizer: This icon displays when you enable the Auto Lighting Optimizer feature (see Chapter 7).
- ✓ **Multiple Exposure Shooting:** This icon displays when you use the Multiple Exposure feature (see Chapter 10).
- ✓ HDR: This icon displays when you use the HDR (high dynamic range) feature (see Chapter 10).
- **✓ Bulb Timer Shooting:** This icon displays when you use the Bulb Timer (see Chapter 7).
- Battery status: This icon displays the amount of charge remaining in the battery.
- ✓ Highlight Tone Priority: This icon displays when you enable the Highlight Tone Priority feature (see Chapter 7).
- ✓ ISO Speed setting: The currently selected ISO speed setting displays here. You can also use this information when setting the ISO speed (see Chapter 7).
- Memory Card slots: Shows which memory card slots you are using.
- Exposure Level indicator: This feature is used when setting exposure compensation. After setting exposure compensation, an icon appears on the indicator that shows how much you've increased or decreased exposure. It also displays icons to indicate when you've bracketed exposure. (See Chapter 6 for information about exposure compensation and auto exposure bracketing.)
- ✓ Flash Exposure Compensation: This icon displays when you've enabled Flash Exposure Compensation (see Chapter 7).
- Warning: This icon displays when you choose the monochrome (black and white) picture style, when you correct white balance, when one-touch image quality is used, when you set high ISO or multi-shot noise reduction, or when you use spot metering. This is your camera's way of telling you that a mode not suited for every type of photography has been selected. It is a gentle reminder to deselect the option after you've shot the pictures for which these modes were selected.
- ✓ **Autofocus mode:** Displays the currently selected autofocus mode (see Chapter 7).
- ✓ Drive mode: Displays the icon for the currently selected Drive mode and whether the camera captures one image when you press the shutter button or multiple images. It also shows when you're shooting in high speed mode or engaging the self-timer (see Chapter 6).

You see examples of different scenarios on the LCD panel throughout this book as I discuss various picture-taking situations.