1

Getting Up and Running

Shooting for the first time with a camera as sophisticated as the Nikon D5300 can produce 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 D5300. The first section walks you through initial camera setup; following that, you can get an overview of camera controls, discover how to view and adjust camera settings, and get my take on some basic setup options. At the end of the chapter, I walk you step-by-step through taking your first pictures using Auto mode, which offers point-and-shoot simplicity until you're ready to step up to more advanced options.

Preparing the Camera for Initial Use

After unpacking your camera, you have to assemble a few parts. In addition to the camera body and the supplied battery (be sure to charge it before the first use), you need a lens and a memory card. Later sections in this chapter provide details about working with lenses and memory cards, but here's what you need to know up front:

✔ **Lens:** You can mount a wide range of lenses on your D5300, but some aren't compatible with all camera features. For example, to enjoy autofocusing, you need an AF-S or AF-I lens. Your camera manual offers details about lens compatibility.

TECHNICAL STUFF

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.

If you don't yet own a lens, the website for this book offers a short buying guide. Go to `www.dummies.com/extras/nikon`.

✔ **SD (Secure Digital) memory card:** Your camera accepts only this type of card. 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 is assigned to cards with capacities 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 industry recently added a new 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 Class 10 or UHS 1 cards.

TIP

A faster card translates to smoother movie recording and playback and also can improve performance when you're shooting a burst of images using the camera's continuous capture feature.

With camera, lens, battery, and card within reach, take these steps:

1. **Turn the camera off.**

2. **Install the battery into the compartment on the bottom of the camera.**

3. **Attach a lens.**

   First, remove the caps that cover the front of the camera and the back of the lens. Then align the *mounting index* (white dot) on the lens with the one on the camera body, as shown in Figure 1-1. After placing the lens on the camera mount, rotate the lens toward the shutter-button side of the camera. You should feel a solid click as the lens locks into place.

Mounting index dots

Figure 1-1: Align the white dot on the lens with the one on the camera body.

4. **Insert a memory card.**

   Open the card-slot cover on the right side of the camera and orient the card as shown in Figure 1-2 (the label faces the back of the camera). Push the card gently into the slot and close the cover. The memory-card access light, labeled in the figure, illuminates briefly to let you know that the camera recognizes the card.

5. **Rotate the monitor to the desired viewing position.**

   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. Use your fingertip to gently lift the right side of the monitor up and away from the camera back. You can then rotate the monitor to move it into the traditional position on the camera back, as shown on the left in Figure 1-3, or swing the monitor out and away from the camera and adjust it to find the best viewing angle, as shown on the right.

Memory-card access light

Multi Selector and OK button

Figure 1-2: Insert the memory card with the label facing the back of the camera.

Figure 1-3: Here are just two of the possible monitor positions.

6. **Turn the camera on.**

    The chances are slim, but you may see a message on the monitor telling you to format the memory card. Continue with these setup steps and then skip to the section "Working with memory cards" to find out about formatting.

7. **Adjust the viewfinder to your eyesight.**

    Tucked behind the right side of the rubber eyepiece that surrounds the viewfinder is a *diopter adjustment* dial that enables you to adjust the viewfinder focus to accommodate your eyesight. I highlighted the dial in Figure 1-4.

    To take this step, remove the lens cap, look through the viewfinder, and press the shutter button halfway to display data at the bottom of the viewfinder. (In dim lighting, the flash may pop up; ignore it for now and close the unit after you adjust the viewfinder.) Now rotate the dial until the data appears sharpest. The markings in the center of the viewfinder, which relate to autofocusing, also become more or less sharp.

    Rotate dial to adjust viewfinder focus

    Figure 1-4: Rotate this dial to set the viewfinder focus for your eyesight.

8. **Set the camera language, time zone, date, and time.**

    When you power up the camera for the first time, the monitor displays a message asking you to select the menu language and set the time zone, date, and time. Navigate the screens and adjust the settings by using the Multi Selector and the OK button (refer to Figure 1-2):

    • Press the edge of the Multi Selector up and down to scroll the screen vertically; press right/left to travel horizontally.

    • After making your selections, press OK to finalize things.

    (The later section "Ordering from camera menus" provides more help with using menus.)

    The date/time information is included as *metadata* (hidden data) in the picture file. You can view metadata in some playback display modes (see Chapter 8) and in certain photo programs, including Nikon ViewNX 2 (refer to Chapter 9).

That's all there is to it — the camera is now ready to go. From here, my recommendation is that you keep reading this chapter to familiarize yourself with the main camera features and basic operation. But if you're anxious to take a picture right away, I won't think any less of you if you skip to the very last section of the chapter, which guides you through the process. Just promise that at some point, you'll read the pages in between, because they actually do contain important information.

Exploring Basic Camera Features

If you're new to dSLR photography, some aspects of using your camera, such as working with the lens, may be unfamiliar to you. But even if you're an old pro — check that, even if you're a *seasoned* pro — it pays to take some time before your first shoot with a new camera to get familiar with its controls. To that end, the upcoming pages provide a quick overview of the D5300's main features and also offer a primer on working with lenses and memory cards.

Exploring external camera controls

Scattered across your camera's exterior are numerous controls that you use to change picture-taking settings, review your photos, and perform various other operations. In later chapters, I discuss all your camera's functions in detail and provide the exact steps to follow to access them. This section provides just a basic "what's this thing do?" guide to each control. (Don't worry about memorizing the button names; throughout the book, I show pictures of buttons in the page margins to help you know exactly which one to press.)

Topside controls

Your virtual tour begins with the bird's-eye view shown in Figure 1-5. There are a number of features of note here:

- ✔ **On/Off switch and shutter button:** Okay, I'm pretty sure you've already figured out this combo button. But you may not be aware that you need to press the shutter button in two stages: Press and hold the button halfway and wait for the camera to initiate exposure metering and, if you're using autofocusing, to set the focusing distance. Then press the button the rest of the way to take the picture.

- ✔ **Exposure Compensation button:** This button activates Exposure Compensation, a feature that enables you to tweak exposure when working in the P (programmed autoexposure), A (aperture-priority autoexposure), or S (shutter-priority autoexposure) modes. (I cover this feature in Chapter 3.) Press the button while rotating the Command dial (in back of the camera; see Figure 1-6, in the next section) to set the amount of Exposure Compensation. In M (manual exposure) mode, press this button while rotating the Command dial to adjust the aperture setting.
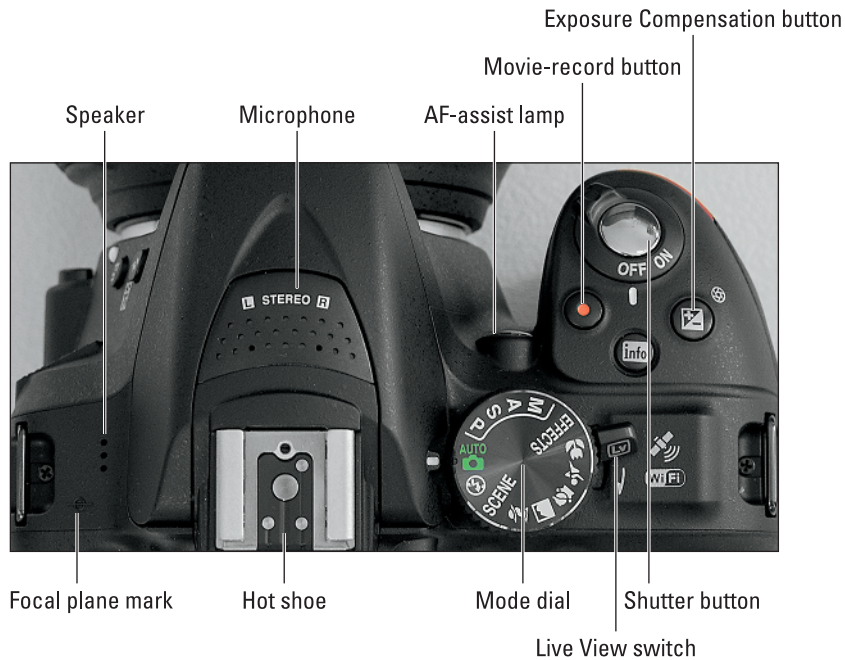
Exposure Compensation button

Movie-record button

Speaker Microphone AF-assist lamp

Focal plane mark Hot shoe Mode dial Shutter button

Live View switch

Figure 1-5: Rotate the Live View switch to shift from viewfinder to Live View photography.

✔ **Info button:** Press this button to display the Information screen on the camera monitor. The screen enables you to not only view current picture settings but also adjust some settings more quickly than by using the camera menus. (Look for details later in this chapter, in the section "Adjusting settings via the Information display control strip"). To turn off the screen, press the Info button again.

You also can display the screen by pressing the shutter button halfway and releasing it.

✔ **Live View switch:** As its name implies, this switch turns Live View on and off. In Live View mode, the scene in front of the lens appears on the monitor, and you can't see anything through the viewfinder. You then can compose a still photo using the monitor or begin recording a movie. The last section of this chapter introduces you to Live View photography; see Chapter 7 for help with movie making.

To the right of the switch, you see symbols representing the GPS (Global Satellite Positioning) and Wi-Fi features. These labels are decorative only; rotating the Live View switch doesn't have any impact on either feature. Instead, you control them both via the Setup menu. Chapter 11 details the GPS feature; Chapter 9, the Wi-Fi feature.

✔ **Movie-record button:** After shifting to Live View mode, press this button to start recording a movie. Press again to stop recording.

✔ **Mode dial:** With this dial, you set the camera to fully automatic, semiautomatic, or manual exposure mode. Setting the dial to Effects enables you to apply special effects as the image or movie is captured. Chapter 2 introduces you to each exposure mode.

✔ **AF-assist lamp:** When you use autofocusing, the camera may emit a beam of light from this lamp in dim lighting; the light helps the camera find its focus target. The lamp also lights when you use red-eye reduction flash and the Self-Timer shutter-release mode, both covered in Chapter 2.

✔ **Flash hot shoe:** A *hot shoe* is a connection for attaching an external flash head. When not in use, the contacts on the shoe are protected by a black cover; remove the cover to expose the contacts (refer to Figure 1-5) to attach the external flash.

✔ **Microphone:** The holes labeled *microphone* in the figure lead to the camera's internal microphone.

✔ **Speaker:** When you play a movie, the sound comes wafting out of these holes (refer to Figure 1-5).

✔ **Focal plane indicator:** When you need to know the exact distance between your subject and the camera, the focal plane mark (refer to Figure 1-5) is the key. The mark indicates the plane at which light coming through the lens is focused onto the camera's image sensor. Basing your measurement on this mark produces a more accurate camera-to-subject distance than using the end of the lens or another external point on the camera body as your reference point.

Back-of-the-body controls

On the back of the camera, shown in Figure 1-6, you find these features:

✔ **Infrared receiver:** Labeled in Figure 1-6, this is one of two receivers that picks up the infrared signal from the optional ML-L3 wireless remote control. The other receiver is on the front-right side of the camera, near the middle of the hand grip.

✔ **Menu button:** Press this button to access menus of camera options. See "Ordering from camera menus," later in this chapter, for details.

✔ **Viewfinder adjustment dial:** Rotate this dial to adjust the viewfinder focus to your eyesight; see the first section of this chapter for details.

✔ *i* **button:** Pressing this button activates the control strip at the bottom of the Information display, enabling quick access to certain picture settings. Use the Multi Selector to highlight an option and press OK to display a screen that offers the settings for that option. Press the *i* button again to exit the control strip.
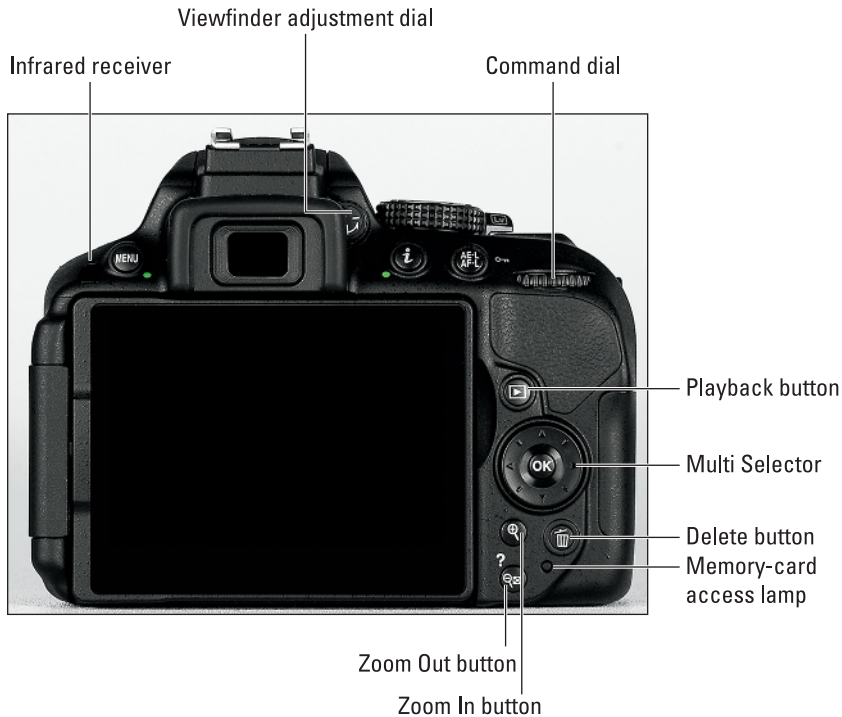
Viewfinder adjustment dial

Infrared receiver

Command dial

Playback button

Multi Selector

Delete button
Memory-card
access lamp

Zoom Out button

Zoom In button

Figure 1-6: Use the Multi Selector to navigate menus and access certain other camera options.

✔ **Command dial:** After you activate certain camera features, you rotate this dial to select a setting. For example, to choose a shutter speed when shooting in shutter-priority (S) mode, you rotate the Command dial.

✔ **AE-L/AF-L button:** Pressing this button initiates autoexposure lock (AE-L) and autofocus lock (AF-L). Chapter 3 explains autoexposure lock; Chapter 4 talks about autofocus lock.

In playback mode, pressing the button activates the Protect feature, which locks the picture file — hence the little key symbol that appears above the button — so that it isn't erased if you use the picture-delete functions. See Chapter 9 for details. (The picture *is* erased if you format the memory card, however.)

✔ **Multi Selector/OK button:** This dual-natured control plays a role in many camera functions. You press the outer edges of the Multi Selector left, right, up, or down to navigate camera menus and access certain other options. At the center of the control is the OK button, which you press to finalize a menu selection or another camera adjustment.

REMEMBER

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

✔ **Playback button:** Press this button to switch the camera into picture review mode. Chapter 8 details playback features.

✔ **Delete button:** Sporting a trash can icon, the universal symbol for delete, this button enables you to erase pictures from your memory card. Chapter 9 explains the steps.

✔ **Zoom In button:** In playback mode, pressing this button magnifies the currently displayed image and also reduces the number of thumbnails displayed at a time. Note the plus sign in the middle of the magnifying glass — plus means enlarge.

✔ **Zoom Out button:** As you can probably deduce from the three symbols that mark this button, it has not one, but *three* primary functions:

   • *Display help screens:* The little question mark symbol above the button is a reminder that you can press this button to display helpful information about certain menu options. See the sidebar "Displaying Help screens," later in this chapter, for details.

   • *Display thumbnails during playback:* In playback mode, pressing the button enables you to display multiple image thumbnails on the screen; thus the little thumbnail grid on the button face.

   • *Reduce image magnification during playback:* If you magnify an image during playback, pressing the button reduces the magnification amount. The magnifying glass with the minus sign tips you off to this function.

Front-left features

The front-left side of the camera, shown in Figure 1-7, sports these features:

✔ **Flash button:** In the advanced exposure modes (P, S, A, and M), as well as in Food Scene mode, pressing this button raises the built-in flash. (In other modes, the camera decides whether the flash is needed.) By holding the button down and rotating the Command dial, you can adjust the Flash mode (fill flash, red-eye reduction, and so on). In advanced exposure modes, you also can adjust the flash power by pressing the button while simultaneously pressing the Exposure Compensation button and rotating the Command dial. The little plus/minus symbol that appears below the button — the same symbol that's on the Exposure Compensation button — is a reminder of the button's role in flash-power adjustment.

Check out Chapter 2 for details on flash options.

✔ **Function (Fn) button:** By default, this button gives you quick access to the ISO setting, which controls the camera's sensitivity to light. (Chapter 3 explains.) If you don't adjust that setting often, you can use the button to perform a variety of other operations. Chapter 11 shows you how to change the button's purpose. (*Note:* All instructions in this book assume that you haven't changed the function.)

✔ **Lens-release button:** Press this button to disengage the lens from the camera's lens mount so that you can remove the lens.

✔ **Release Mode button:** Press this button to display a screen where you can select the shutter-release mode. By default, the option is set to Single Frame, which results in one picture each time you press the shutter button. You can explore other options in Chapter 2.

Flash button

Function button

Lens-release button

Release Mode button

Figure 1-7: Press the Flash button to use the built-in flash in P, S, A, or M mode.

Hidden connections

Hidden under cover on the left side of the camera are the following connection ports, labeled in Figure 1-8:

✔ **Microphone jack:** If you're not happy with the audio quality provided by the internal microphone, you can plug in the optional ME-1 stereo microphone here.

✔ **USB and A/V port:** Through this port, you can connect your camera to your computer via USB connection for picture downloading. The same port enables you to connect the camera to a television via an A/V cable for picture playback. Nikon supplies the cables you need for both connections in the camera box; see Chapter 8 for information on television connections and Chapter 9 for help with downloading pictures.

✔ **Accessory terminal:** This terminal accepts the following accessories: Nikon MC-DC2 remote shutter-release cable; WR-1 and WR-R10 wireless remote controllers; and GP-1/GP-1A GPS units. I don't cover these optional accessories, but the manual that comes with each device can get you up and running.

Microphone jack

A/V and USB port

Accessory terminal

HDMI port

Figure 1-8: Open the cover on the side of the camera to reveal these connections.

WARNING!

You can't connect a wireless remote controller while the ME-1 stereo microphone is attached.

✔ **HDMI port:** You can use this port to connect your camera to a high-definition TV, but you need to buy an HDMI cable to do so. Look for a Type C mini-pin cable. Chapter 8 offers details on television playback.

If you turn the camera over, you find a tripod socket, which enables you to mount the camera on a tripod that uses a ¼-inch screw, plus the battery chamber.

Ordering from camera menus

REMEMBER

When you press the Menu button, you see a screen similar to the one shown on the left in Figure 1-9. The icons along the left side of the screen represent the available menus, each of which is loaded with shooting, playback, and customization settings; Table 1-1 offers an icon decoder ring. On the menu screens, the icon that's highlighted is the active menu; options on that menu automatically appear to the right. In the figure, the Shooting menu is active, for example.

Menu icons

Figure 1-9: Highlight a menu in the left column to display its contents.

Table 1-1	D5300 Menus	
Symbol	*Open This Menu . . .*	*To Access These Functions*
▶	Playback	Viewing, deleting, and protecting pictures
📷	Shooting	Basic photography settings
✏	Custom Setting	Advanced photography options and some basic camera operations
🔧	Setup	Additional basic camera operations
🖌	Retouch	Photo and movie editing options
📋 📋	My Menu/Recent Settings	Your custom menu or 20 most recently used menu options

To select menu options, use the Multi Selector and OK button, as follows:

✔ **To select a different 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.

✔ **To select and adjust a function on the current menu:** Again, use the Multi Selector to scroll up or down the list of options to highlight the feature you want to adjust and then press OK. Settings available for the selected item then appear. For example, if you select the Image Quality item from the Shooting menu (refer to the left side of 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.

In some cases, a right-pointing triangle appears next to a menu item. That's your cue to press the Multi Selector right to display a submenu.

Items that are dimmed aren't available in the current exposure mode. For access to all settings, set the Mode dial to P, S, A, or M.

✔ **To select items from the Custom Setting menu:** Displaying the Custom Setting menu takes you to a screen that contains six submenus that carry the labels A through F, as shown in Figure 1-10. Each submenu holds clusters of options related to a specific aspect of the camera's operation. Highlight a submenu and press OK to get to those options.

Figure 1-10: The Custom Setting menu contains six submenus of advanced options.

In the Nikon manual, instructions reference the Custom Setting menu items by a menu letter and number. For example, "Custom Setting a1" refers to the first option on the a (Autofocus) submenu. I try to be more specific, however, so I use the actual setting names. (Really, we all have enough numbers to remember, don't you think?)

After you jump to the first submenu, you can simply scroll up and down the list to view options from other submenus. You don't have to keep going back to the initial menu screen, selecting the submenu, pressing OK, and so on.

✓ **Create a custom menu or view your 20 most recently adjusted menu items:** The sixth menu is actually two menus that share an apartment: Recent Settings and My Menu, both shown in Figure 1-11. Each menu contains a Choose Tab option; select this option and press OK to shift between the two menus.
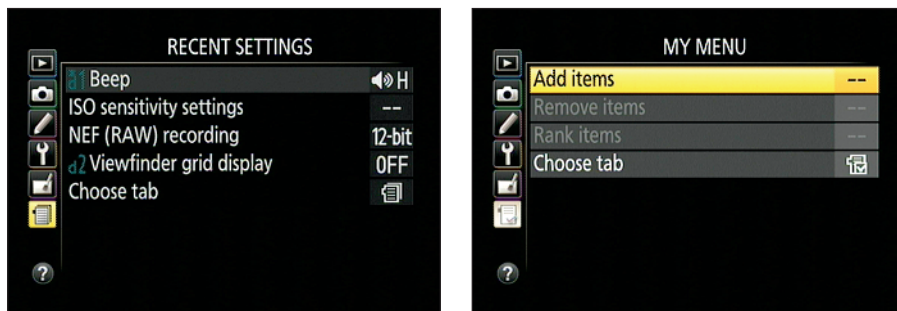

Figure 1-11: The Recent Settings menu offers quick access to the last 20 menu options you selected; the My Menu menu enables you to design a custom menu.

Here's what the two menus offer:

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

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

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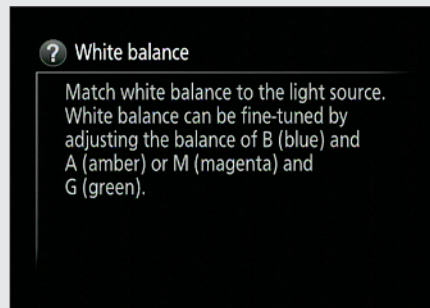
TIP

Displaying Help screens

If you see a small question mark in the lower-left corner of a menu, as shown in the left figure in this sidebar, press and hold the Zoom Out button — note the question-mark label above the button — to display information about the current menu option. For example, the right screen here shows the Help screen associated with the White Balance setting. To scroll the screen, keep the button depressed and press the Multi Selector up and down.

You may spot the question-mark symbol blinking in the lower-left corner of the Information display; in this case, the camera's alerting you to a potential shooting problem. Again, just press the Zoom Out button to see what solution the camera suggests. When the symbol isn't blinking, pressing the button displays a screen that explains the current exposure mode.

SHOOTING MENU	
Reset shooting menu	--
Storage folder	D5300
Image quality	FINE
Image size	▢
NEF (RAW) recording	12-bit
White balance	AUTO
Set Picture Control	▣SD
Manage Picture Control	--

(?) White balance

Match white balance to the light source. White balance can be fine-tuned by adjusting the balance of B (blue) and A (amber) or M (magenta) and G (green).

Help symbol

Viewing critical picture settings

Your D5300 gives you the following ways to monitor the most important picture-taking settings:

✔ **Information display:** The left screen in Figure 1-12 gives you a look at this display, which appears when you first turn on the camera and then disappears after a few seconds. To redisplay it, take any of these steps:

info

- *Press the Info button.* Press once to display the screen; press again to turn off the monitor.

- *Press the shutter button halfway and release it.* Pressing and holding the button halfway down turns off the screen and fires up the autofocusing and exposure metering systems. Because those two systems use battery power, you may want to avoid this technique when the battery is running low.

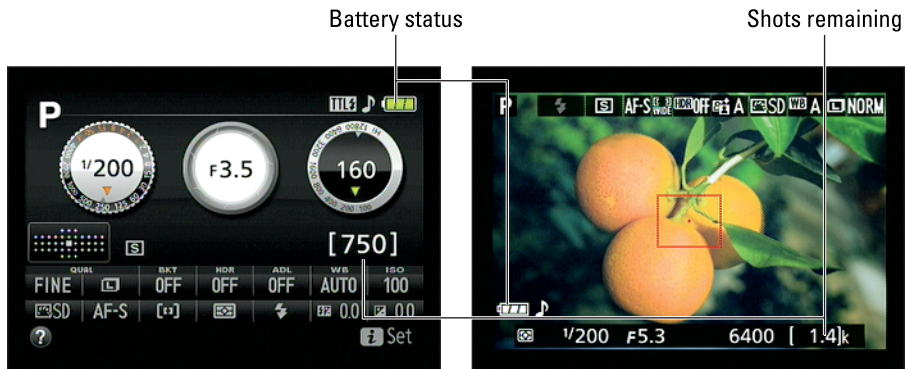Battery status   Shots remaining

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

In this book, I explain the display as it works by default. But you can modify its behavior via the Setup menu; look for details in Chapter 11.

Also note that this display is available for viewfinder shooting only; in Live View mode, where you compose pictures using the monitor, the shooting data appears atop the live preview (refer to the right side of Figure 1-12).

You can vary the type of data displayed on the Live View screen by pressing the Info button. In fact, you can choose from five different display styles; see the last section of this chapter for information about this issue and about Live View shooting in general. Figure 1-12 shows the default display style.

✔ **Viewfinder:** You also can view some settings at the bottom of the view-finder, as shown on the left in Figure 1-13. The information that appears depends on the exposure mode.
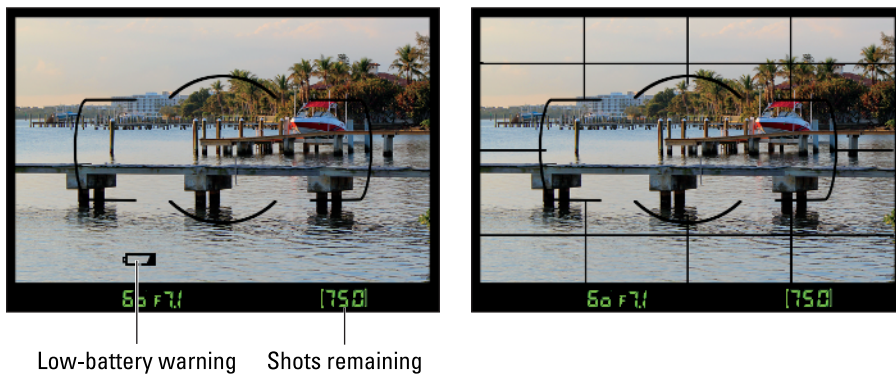
Low-battery warning   Shots remaining

Figure 1-13: Picture settings also appear at the bottom of the viewfinder (left); enable the grid for help with aligning objects in the frame (right).

TIP

You can display gridlines in the viewfinder, as shown on the right in the figure, by visiting the Shooting/Display section of the Custom Setting menu and turning on the Viewfinder Grid Display option. The gridlines help you ensure the alignment of objects in your photo — for example, to make sure that the horizon is level in a landscape.

If what you see in Figures 1-12 and 1-13 looks like a confusing mess, don't worry. Many settings relate to options that won't mean anything to you until you explore the advanced exposure modes (P, S, A, and M). But make note of the following bits of data that are helpful in any exposure mode:

✔ **Battery status indicator:** A full-battery icon (refer to Figure 1-12) shows that the battery is fully charged; if the icon appears empty, look for your battery charger.

TIP

Just for good measure, the camera also displays a low-battery symbol in the viewfinder (refer to the left image in Figure 1-13). If the symbol blinks, the camera won't take more pictures until you charge the battery.

✔ **Shots remaining:** Labeled in Figures 1-12 and 1-13, this value indicates how many more pictures you can store on the memory card. If the number exceeds 999, the initial *K* appears, to indicate that the value is in the thousands. For example, 1.0K means that you can store 1,000 more pictures (*K* is a universally accepted symbol indicating 1,000 units). The number is rounded down to the nearest hundred. So if the card has room for, say, 1,230 more pictures, the value reads 1.2K.

Adjusting settings via the Information display control strip

The Information display isn't just for checking current picture-taking settings; it also gives you quick access to some of the most critical of those settings. The key to this feature is the *i* button. Here's how it works:

1. **Press the *i* button.**

   During viewfinder photography, the Information display appears as shown in Figure 1-14. The top part of the display dims, and the two rows of settings at the bottom of the screen become accessible. The currently selected setting appears highlighted, and its name is displayed at the bottom of the screen. For example, in the left screen in Figure 1-14, the Image Quality option is selected.

REMEMBER

   For expediency's sake, I refer to this part of the Information display as the *control strip*.

   In Live View mode, the control strip appears in the middle of the live preview.

2. **Use the Multi Selector to highlight the setting you want to change.**

Figure 1-14: Press the *i* button to activate the control strip (left); highlight the option you want to adjust and press OK to display the available settings (right).

3. **Press OK.**

   A screen displays the available settings for the option (refer to the right side of Figure 1-14).

4. **Use the Multi Selector to highlight the desired option, and press OK.**

   You're returned to the control strip. You can then adjust another setting, if needed.

5. **To exit the control strip, press the *i* button again.**

   Or just give the shutter button a quick half-press and release it. The Information display returns to its normal appearance.

Familiarizing yourself with the lens

Because I don't know which lens you're using, I can't give you full instructions on its operation. But the following basics apply to most Nikon AF-S lenses as well as to certain other lenses that support autofocusing — you should explore the lens manual for specifics, of course:

✔ **Focusing:** First, set the lens to automatic or manual focusing by moving the focus-method switch on the lens. For example, Figure 1-15 shows the switch as it appears on the popular Nikon 18–105mm AF-S lens, which sports the same controls as the 18–140mm lens that's available as a bundle with the D5300. On both lenses, move the switch to the A position for autofocusing and to M for manual focusing.

   • *Autofocusing:* Press and hold the shutter button halfway. See the last section of this chapter for details on autofocusing in the Auto exposure mode; visit Chapter 4 for details on controlling the autofocusing system.

   • *Manual focusing:* Rotate the focusing ring on the lens barrel. The position of the focusing ring varies depending on the lens; I labeled the one found on the 18–105mm lens in Figure 1-15. Chapter 4 has additional tips on manual focusing, too.

Focal-length indicator

Zoom ring   Focusing ring

Auto/Manual focus switch   Lens-release button

Vibration Reduction switch

Figure 1-15: Here are a few features that may be found on your lens.

✔ **Zooming:** If you bought a zoom lens, it has a movable *zoom ring*. The location of the zoom ring on my 18–105mm lens is shown in Figure 1-15. To zoom in or out, rotate the ring.

You can determine the current focal length of the lens by looking at the number that's aligned with the white dot labeled *focal-length indicator* in Figure 1-15. (If you're new to the term *focal length,* the sidebar "Focal length and the crop factor," elsewhere in this chapter, explains the subject.)

✔ **Enabling Vibration Reduction:** Many Nikon lenses offer *Vibration Reduction,* which compensates for small amounts of camera shake that can occur when you handhold the camera. Camera movement during the exposure can produce blurry images, so turning on Vibration Reduction can help you get sharper handheld shots. When you use a tripod, however, turn the feature off so that the camera doesn't try to compensate for movement that isn't occurring. Turn Vibration Reduction on or off by using the VR switch (refer to Figure 1-15). The available settings vary depending on the lens, so again, see the lens manual for details.

TIP

Focal length and the crop factor

The angle of view that a lens can capture is determined by its *focal length,* or in the case of a zoom lens, the range of focal lengths it offers. Focal length is measured in millimeters.

According to photography tradition, a focal length of 50mm is described as a "normal" lens. Most point-and-shoot cameras feature this focal length, which is a medium-range lens that works well for the type of snapshots that users of those kinds of cameras are likely to shoot.

A lens with a focal length under 35mm is characterized as a *wide-angle* lens because at that focal length, the camera has a wide angle of view, making it good for landscape photography. A short focal length also has the effect of making objects seem smaller and farther away. At the other end of the spectrum, a lens with a focal length longer than 80mm is considered a *telephoto* lens and is often referred to as a *long lens.* With a long lens, the angle of view narrows and faraway subjects appear closer and larger, which is ideal for wildlife and sports photographers.

Note, however, that the focal lengths stated here and elsewhere in the book are *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 the D5300, the available frame area is reduced, as if you took a picture on a camera that uses 35mm film negatives and cropped it.

This *crop factor* varies depending on the camera, which is why the photo industry adopted the 35mm-equivalent measuring stick as a standard. With the D5300, the crop factor is roughly 1.5. In the figure here, the red line indicates the image area that results from the 1.5 crop factor.

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. Just multiply the lens focal length by 1.5 to determine the actual angle of view. Not sure which focal length to choose? 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 focal-length lenses capture the same scene.

TIP

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.

✔ **Removing a lens:** After turning the camera off, press the lens-release button (refer to Figure 1-15), and turn the lens toward that button 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 cap, too.

WARNING!

Always 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.

Working with memory cards

As the medium that stores your picture files, the memory card is a critical component of your camera. See the steps at the start of this chapter for help installing a card; follow these tips for buying and maintaining cards:

✔ **Formatting a card:** The first time you use a new memory card or insert a card that's been used in other devices, you need to *format* it to prepare it to record your pictures. You also need to format the card if you see the blinking letters *FOR* in the viewfinder or if the monitor displays a message requesting formatting.

WARNING!

Formatting erases everything on your memory card. So before you format a card, be sure that you've copied any data on it to your computer. After doing so, get the formatting job done by selecting Format Memory Card from the Setup menu.

✔ **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, and then let go. The card pops halfway out of the slot, enabling you to grab it by the tail and remove it.

REMEMBER

If you turn on the camera when no card is installed, the symbol [-E-] appears in the lower-right corner of the viewfinder, and the image area of the viewfinder displays a blinking memory card symbol. A message on the monitor also nudges you to insert a memory card. If you have a card in the camera and you get these messages, try taking out the card and reinserting it.

✔ **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. If you insert a locked card into the camera, a message on the monitor alerts you, and the symbol [d blinks in the viewfinder.

Lock switch   Don't touch!

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

You can protect individual images from accidental erasure by using the camera's Protect feature, which I cover in Chapter 9. Note, though, that formatting the card *does* erase even protected pictures; the safety feature prevents erasure only when you use the camera's Delete function.

✔ **Using Eye-Fi memory cards:** Your camera works with *Eye-Fi memory cards,* which are special cards that enable you to transmit your files wirelessly to your computer and other devices. That's a cool feature, but, unfortunately, the cards themselves are more expensive than regular cards and require some configuring that I don't have room to cover in this book. For more details, visit `www.eye.fi`.

If you do use Eye-Fi cards, enable and disable wireless transmission via the Eye-Fi Upload option on the Setup menu. When no Eye-Fi card is installed in the camera, this menu option disappears.

Of course, for transferring files to a smartphone or tablet, you can instead use the camera's built-in Wi-Fi feature. Chapter 9 shows you how. This feature doesn't permit transferring files to a computer, however.
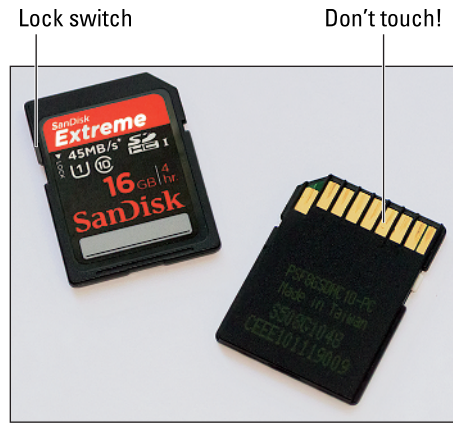
Taking a Few Final Setup Steps

Your camera offers scads of options for customizing its performance. Later chapters explain settings related to actual picture-taking, such as those that affect flash behavior and autofocusing, and Chapter 11 talks about some options that are better left at their default settings until you're fully familiar with your camera. That leaves just the handful of options covered in the next two sections that I recommend you consider at the get-go.

Cruising the Setup menu

The following options live on the Setup menu, which is the one marked with the little wrench icon. The menu, which appears in Figure 1-17, is a three-page affair (only Page 1 is visible in the figure); use the Multi Selector to scroll the pages up and down and access these settings:
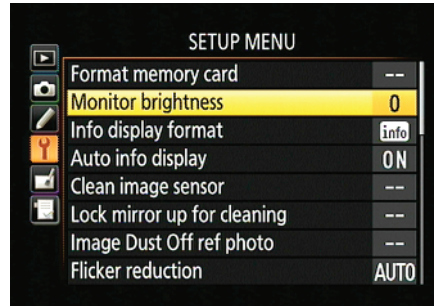

SETUP MENU	
Format memory card	--
Monitor brightness	0
Info display format	info
Auto info display	ON
Clean image sensor	--
Lock mirror up for cleaning	--
Image Dust Off ref photo	--
Flicker reduction	AUTO

Figure 1-17: Visit the Setup menu to customize the camera's basic operation.

✔ **Monitor Brightness:** This option enables you to make the display brighter or darker. But if you take this step, what you see on the monitor may not be an accurate rendition of the picture exposure. I recommend that you keep the brightness at the default setting (0).

✔ **Location Data:** This option controls the built-in GPS feature, which tags your photos with data that indicates where you were when you took the picture. The feature is turned off by default; to enable it, see Chapter 11 for details.

✔ **Wi-Fi:** Select this option to enable the built-in Wi-Fi transmitter, which enables you to connect the camera to a smartphone or tablet. See Chapter 9 for information about this feature.

To save battery power, keep the Wi-Fi feature turned off, as it is by default, until you're ready to connect the camera to your smart device.

✔ **Conformity Marking:** I bring this one up just so that you know you can ignore it: When you select the option, you see logos indicating that the camera conforms with certain camera-industry standards. I know you'll sleep better at night with that information.

✔ **Firmware Version:** Select this option and press OK to view which version of the camera *firmware,* or internal software, your camera runs. You see the firmware items C and L. At the time this book was written, C was version 1.00; L was 2.00.

Keeping your camera firmware up to date is important, so visit the Nikon website (www.nikon.com) regularly to find out whether your camera sports the latest version. You can find detailed instructions at the site on how to download and install any firmware updates.

Custom Setting options

Check the status of these Custom Setting menu options before you shoot your first pictures:

- ✔ **Beep:** By default, your camera beeps after certain operations, such as after it sets focus when you shoot in autofocus mode. If you need the camera to hush up, open the Custom Setting menu, select the Shooting/Display submenu, and then turn off the Beep option. You can also adjust the volume of the beep through the same menu option. On the Information display, a little musical note icon appears near the top-right corner of the screen when the beep is enabled. Turn off the beep, and the icon appears in a circle with a slash through it.

- ✔ **File Number Sequence:** This option, found on the Shooting/Display submenu and highlighted in Figure 1-18, controls how the camera names your picture files. When the option is set to Off, as it is by default, the camera restarts file numbering at 0001 every time you format the memory card or insert a new memory card. Numbering is also restarted if a new image-storage folder is created. (Chapter 11 explains folders.)

WARNING!

This setup can cause problems over time, creating a scenario where you wind up with multiple images that have the same filename — not on the current memory card, but when you download images to your computer. So set the option to On (refer to Figure 1-18). Note that when you get to picture number 9999, file numbering is still reset to 0001, however. The camera automatically creates a new folder to hold your next 9,999 images.

Figure 1-18: Danger, Will Robinson! Change the File Number Sequence option to On to avoid winding up with multiple pictures that have the same filename.

As for the Reset option, it enables you to assign the first file number (which ends in 0001) to the next picture you shoot. Then the camera behaves as if you selected the On setting.

Should you be a really, *really* prolific shooter and snap enough pictures to reach image 9999 in folder 999, the camera will refuse to take another photo until you choose that Reset option and either format the memory card or insert a brand-new one.
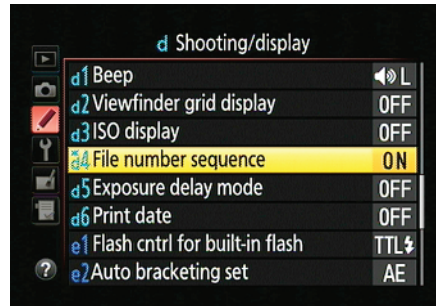
✔ **Print Date:** Using this option, you can imprint on the photo the shooting date, the date and time, or the number of days between the day you took the picture and another date that you specify. This feature works only with pictures that you shoot in the JPEG file format; see the Chapter 2 section related to the Image Quality setting for details about file formats.

The default Print Date setting, Off, is the way to go; you don't need to permanently mar your photos to find out when you took them. Every picture file includes a hidden vat of text data, or *metadata,* that records the shooting date and time as well as all the camera settings you used — f-stop, shutter speed, and lots more. You can view this data during playback and, after downloading, in the free software provided with your camera as well as in many photo programs.

✔ **Slot Empty Release Lock:** This cryptically named feature, found on the Controls section of the Custom Setting menu, determines whether the camera lets you take a picture when no memory card is installed in the camera. If you set it to Enable Release, the camera no longer warns you if a memory card isn't installed. You can take a temporary picture, which appears in the monitor with the word *Demo* but isn't recorded anywhere. The feature is provided mainly for use in camera stores, enabling salespeople to demonstrate the camera without having to keep a memory card installed. I can think of no good reason why anyone else would change the setting from the default, Release Locked.

Restoring Default Settings

Should you ever want to return your camera to its original, out-of-the-box state, the camera manual contains a complete list of most of the default settings. Look on the pages that introduce each of the menus.

You can also partially restore default settings by taking these steps:

✔ **Reset all Shooting Menu options:** Open the Shooting menu, choose Reset Shooting Menu, and press OK. Note that resetting the menu does not affect the Storage Folder option, which is a concern only if you create custom folders, as outlined in Chapter 11.

✔ **Reset all Custom Setting Menu options:** Choose Reset Custom Settings at the top of the Custom Setting menu.

Resetting the Custom Setting menu restores the File Number Sequence option to its default, Off, which is most definitely Not a Good Thing. If you restore the menu defaults, be *sure* that you revisit that option and return it to the On setting. See the preceding section for details.

✔ **Restore critical picture-taking settings *without* affecting all options on the Custom Setting menu:** Use the two-button reset method: Press and hold the Menu button and the *i* button simultaneously for longer than 2 seconds. (The little green dots near these two buttons are a reminder of this function.) See the camera manual for a list of exactly which settings are restored.

One last tip with regard to Custom Setting menu defaults: When you choose a setting other than the default, an asterisk appears above the number of the menu item.

Shooting Your First Pictures in Auto Mode

Your camera is loaded with features for the advanced photographer, enabling you to exert precise control over options such as f-stop, shutter speed, ISO, flash power, and much more. But you don't have to wait until you master those topics to take great pictures, because your camera also offers point-and-shoot simplicity through its Auto exposure mode.

The next two sections walk you through the process of taking a picture in Auto mode using autofocusing and the default picture settings. (Before taking these steps, you may want to visit the preceding section and follow the instructions there for returning the camera to its default state.) The first section explains normal, through-the-viewfinder shooting; the second section shows you how to take a picture in Live View mode.

Viewfinder photography in Auto mode

When you use the viewfinder to frame photos, follow these steps to take a picture:

1. **Set the Mode dial to Auto, as shown in Figure 1-19.**

2. **Set the lens focusing method to auto.**

   As outlined earlier, you make this shift using a switch on the side of the lens. On the lens featured in this book, as well as with the 18–140 mm kit lens, set the switch to A.
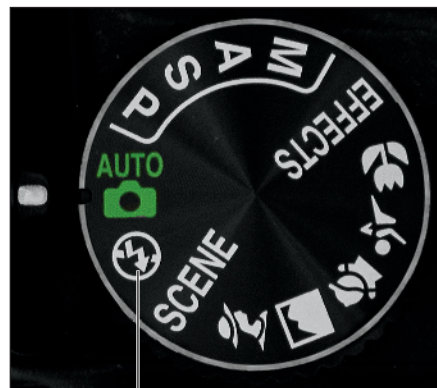
Auto Flash Off

Figure 1-19: Set the Mode dial to Auto for point-and-shoot simplicity.

3. **Looking through the viewfinder, frame your subject so that it appears within the autofocus brackets, labeled in Figure 1-20.**

4. **Press and hold the shutter button halfway down.**

   At this point, the following occurs:

   - *Exposure metering begins.* The autoexposure meter analyzes the light and selects the initial exposure settings. The camera continues monitoring the light up to the time you take the picture, however, and may adjust the exposure settings if lighting conditions change.

Autofocus brackets

Figure 1-20: Frame your subject so that it's within the area surrounded by the autofocus brackets.

   - *The built-in flash pops up if the camera thinks additional light is needed.* If you're in a situation where flash is prohibited, return to Step 1 and change the Mode dial setting from Auto to Auto Flash Off (refer to Figure 1-19). This shooting mode does the same thing as Auto but disables flash.

   - *The autofocus system begins to do its thing.* In dim light, the AF-assist lamp may shoot out a beam of light to help the camera measure the distance between your subject and the lens so that it can better establish focus.

5. **Check the focus indicators in the viewfinder.**

   When the camera has established focus, one or more of the focus points turns red for a split second. The red focus points represent the areas of the frame used to set the focusing distance. (Typically, the camera focuses on the object closest to you.) Then a single black focus point appears, as shown in Figure 1-21. At the bottom of the viewfinder, the focus indicator, labeled in the figure, lights to give you further notice that focus has been achieved.

   If the subject isn't moving, autofocus remains locked as long as you hold the shutter button
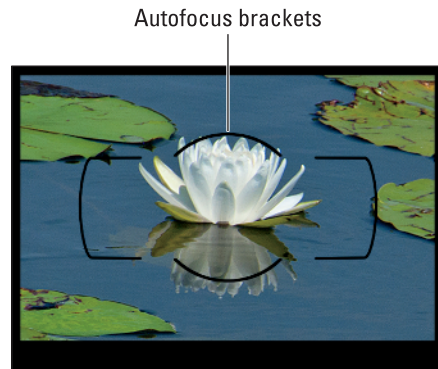
Selected focus point
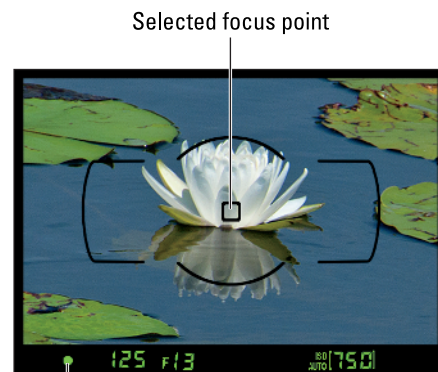

Focus indicator light

Figure 1-21: The green light indicates that the camera locked focus on the object under the focus point.

halfway down. But if the camera detects subject motion, it adjusts focus up to the time you press the button fully to record the picture. As your subject moves, keep it within the autofocus brackets to ensure correct focusing.

6. **Press the shutter button the rest of the way to record the image.**

TIP

If the camera refuses to take the picture, don't panic: This error is likely related to autofocusing. By default, the camera insists on achieving focus before it releases the shutter to take a picture. You can press the shutter button all day, and the camera just ignores you if it can't set focus.

Try backing away from your subject a little — you may be exceeding the minimum focusing distance of the lens. If that doesn't work, the subject just may not be conducive to autofocusing. Highly reflective objects, scenes with very little contrast, and subjects behind fences are some of the troublemakers. The easiest solution? Switch to manual focusing and set focus yourself.

WARNING!

While the camera sends the image data to the memory card, the memory card access lamp lights. Don't turn off the camera or remove the memory card while the lamp is lit or else you may damage both camera and card.

When the recording process is finished, the picture appears briefly on the camera monitor. If the picture doesn't appear or you want to take a longer look at the image, see Chapter 8, which covers picture playback.

Live View photography in Auto mode

Most aspects of shooting in Live View are the same as for viewfinder photography. Autofocusing, however, works quite differently. Here are the steps to take a picture in the Auto Exposure mode using the default settings:

Live View switch

1. **Set the Mode dial to Auto, as shown in Figure 1-22.**

2. **To engage Live View, rotate the Live View switch (refer to Figure 1-22).**

The viewfinder goes dark, and the scene in front of the lens appears on the monitor, along with some shooting data, as shown in Figure 1-23. The figures show the default Live View display; see the tips at the end of this step list for other display options.
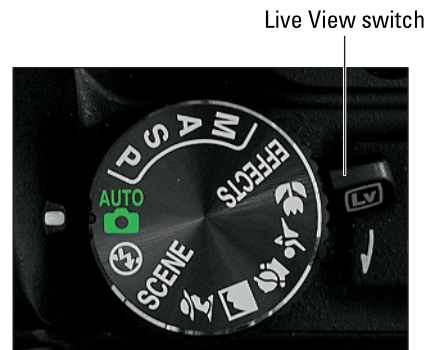
Figure 1-22: Rotate the Live View switch once to enter Live View mode; rotate a second time to return to viewfinder shooting.

Exposure mode symbol
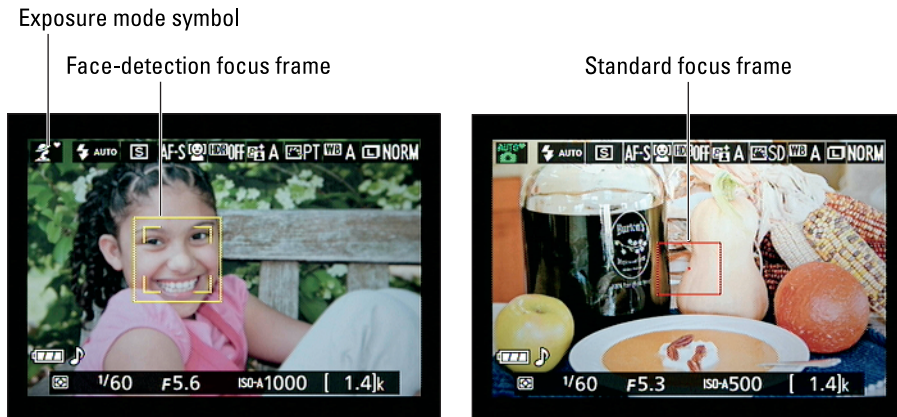
Face-detection focus frame — Standard focus frame

Figure 1-23: For portraits, a focus box appears automatically over the subject's face (left); otherwise, you see a focus box in the center of the screen (right).

3. **Frame your subject in the monitor.**

4. **Check the position of the focusing frame; if necessary, recompose or adjust the frame so that it's over your subject.**

   The autofocus frame that appears depends on your subject:

   • *Portraits:* By default, the camera uses an autofocusing option called Face Priority AF-area mode. If it detects a face, it displays a yellow focus box over it (refer to the left side of Figure 1-23). In a group portrait, you may see several boxes: The one that includes the interior corner marks (refer to the figure) indicates the face that will be used to set the focusing distance. You can use the Multi Selector to move the box over a different face, which is then used to determine the focusing distance.

   • *Other subjects:* Anytime the camera can't detect a face, it switches to Wide Area AF-area mode, with the focus point indicated by a red box in the center of the screen (refer to the right side of Figure 1-23). Again, you can use the Multi Selector to move the focus box over your subject. Press OK to move the focus box quickly back to the center of the frame.

5. **Press the shutter button halfway to set focus and initiate exposure metering.**

   When focus is set, the focus box turns green and you hear a beep (assuming that you didn't disable it via the Custom Setting menu). In dim lighting, the built-in flash pops up.

   In Live View mode, the camera always locks focus when you press the shutter button halfway, even if the subject is moving. If you want the camera to track focus on a moving subject, you must shift from the default Focus mode option AF-S (for single-servo autofocus) to AF-F (full-time servo) mode. Chapter 4 explains the details.

TECHNICAL STUFF

What does [r 24] in the display mean?

When you look through the viewfinder, the initial value in brackets at the right end of the data display indicates the number of additional pictures that can fit on your memory card. For example, in the left image in this sidebar, the value shows that the card can hold 856 more images. The same value appears in the lower-right corner of the Live View display.

As soon as you press the shutter button halfway, which kicks the autofocus and exposure mechanisms into action, that value changes to show you how many pictures can fit in the

camera's *memory buffer,* which is a temporary storage tank where the camera stores picture data until it has time to record that data to the memory card. In the right image here, for example, the r 24 value tells you that the buffer can hold 24 pictures. This system exists so that you can take a continuous series of pictures without waiting between shots until each image is written to the card. When the buffer is full, you can't take another picture until the camera catches up with its recording work.

500F5.6   ISO AUTO|856| 500F5.6   ISO AUTO|r 24|
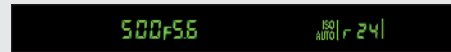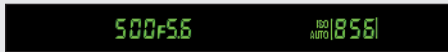
 6. **Press the shutter button all the way down to record the picture.**

    The photo appears briefly on the monitor, and then the live preview reappears.

TIP

After you press the shutter button halfway, the camera may shift automatically to one of four Scene modes that are designed to capture specific types of subjects. The exposure-mode symbol labeled in Figure 1-23 is your cue that this switch was made. For example, in the left screen in the figure, the camera shifted to Portrait mode, represented by the lady with a hat. The other three Scene modes that the camera may select are Landscape (mountain symbol); Close Up (flower symbol); and Night Portrait (head-and-shoulders with a star). If you see the word *Auto* with a heart, as on the right screen of the figure, the camera is sticking with ordinary Auto mode. If you prefer to select a Scene type directly, see the first section of Chapter 2.

WARNING!

To close out this chapter, here are a few important pointers to remember when you use Live View mode, whether you're shooting photos or movies:

info

 ✔ **Press the Info button to change the type of data that's displayed on the monitor.** You can choose from five displays:

   • *Show Photo Indicators:* Reveals extensive shooting data for still photography (refer to Figure 1-23). The display uses this mode by default. (I detail each value or symbol as I explain the relevant features later in the book.)

- *Show Movie Indicators:* Displays data related to movie recording, as shown on the first screen in Figure 1-24. The transparent gray bar that appears along the top and bottom of the screen shows how much of the vertical image area is excluded from the frame if you set the movie resolution to a setting that produces a 16:9 frame aspect ratio. (The only setting that doesn't produce this ratio is 640 x 424, which captures a 3:2 frame, the same as a still photo.) I discuss this option, along with other movie-recording topics, in Chapter 7.

Show Movie Indicators   Hide Indicators

Framing Grid   Show Basic Photo Indicators

16:9 Framing marks

Figure 1-24: Press the Info button to change the Live View display style.

- *Hide Indicators*: Displays only the markings shown in the upper-right corner in Figure 1-24.

  In this display mode, as well as in the two described next, you may see four tiny, horizontal markers near the corners of the display. They take the place of the shaded bars indicating the 16:9 frame area that appears in Show Movie Indicators mode. I labeled two of the markers in Figure 1-24.

- *Framing Grid:* Adds a grid and the 16:9 framing marks (refer to the lower-left corner of Figure 1-24).

- *Show Basic Photo Indicators:* Presents only the basic exposure settings plus the aforementioned movie frame-area markers, as shown in the lower-right corner in the figure.

✔ **Cover the viewfinder to prevent light from seeping into the camera and affecting exposure.** The camera ships with a cover designed for this purpose. Slide the rubber eyecup that surrounds the viewfinder up and out of the groove that holds it in place; then slide the cover down into the groove. (Orient the cover so that the Nikon label faces the viewfinder.)

✔ **The monitor turns off by default after ten minutes of inactivity.** When monitor shutdown is 30 seconds away, a countdown timer appears in the upper-left corner of the screen. You can adjust the shutdown timing via the Auto Off Timers option on the Custom Setting menu; Chapter 11 has details.

✔ **Using Live View for an extended period can harm your pictures and the camera.** In Live View mode, the camera's innards heat up more than usual, and that extra heat can create the proper electronic conditions for *noise,* a defect that gives your pictures a speckled look. Perhaps more importantly, the increased temperatures can damage the camera. For that reason, Live View is automatically disabled if the camera detects a critical heat level. In extremely warm environments, you may not be able to use Live View mode for long before the system shuts down.

When the camera is 30 seconds or fewer from shutting down, the countdown timer appears in order to let you know how many seconds remain for shooting. The warning doesn't appear during picture playback or when menus are active, however.

✔ **Aiming the lens at the sun or another bright light also can damage the camera.** Of course, you can cause problems by doing this even during viewfinder shooting, but the possibilities increase when you use Live View. You can harm not only the camera's internal components but also the monitor (not to mention your eyes).

✔ **Some lights may interfere with the Live View display.** The operating frequency of some types of lights, including fluorescent and mercury-vapor lamps, can create electronic interference that causes the monitor display to flicker or exhibit odd color banding. Changing the Flicker Reduction option on the Setup menu may resolve this issue. At the default setting, Auto, the camera gauges the light and chooses the right setting for you. But you also can choose from two specific frequencies: 50 Hz and 60 Hz. (In the United States and Canada, the standard frequency is 60 Hz; in Europe, it's 50 Hz.)