1

Getting the Lay of the Land

In This Chapter

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

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

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

Looking at Lenses

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

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

Choosing a lens

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

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

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

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

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

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

  You can loosely categorize lenses by focal length as follows:

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

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

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

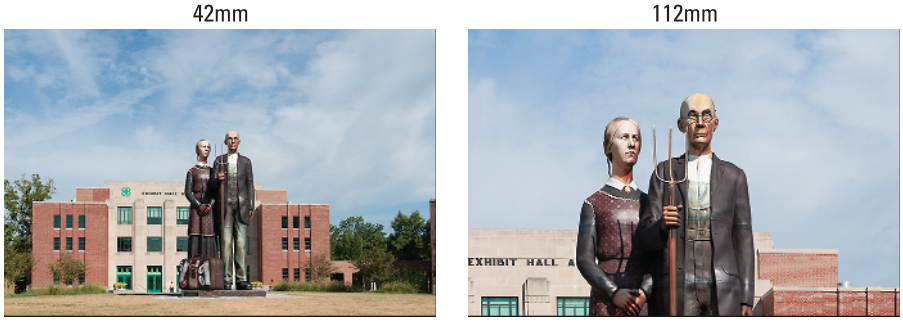


Figure 1-1: I used a focal length of 42mm to capture the first image and then zoomed to a focal length of 112mm to capture the second one.

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

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

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

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

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

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

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

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

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

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

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

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

Attaching and removing lenses

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

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

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

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

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

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

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

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

To detach a lens, take these steps:

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

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

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

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

Changing the focusing method (auto or manual)

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

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

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

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

Zooming in and out

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

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

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

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

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

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

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

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

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

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

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

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

Enabling automatic distortion correction

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

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

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

Adjusting the Viewfinder Focus

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

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

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

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

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

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

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

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

Ordering from Camera Menus

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

Table 1-1 D7100 Menus

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

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

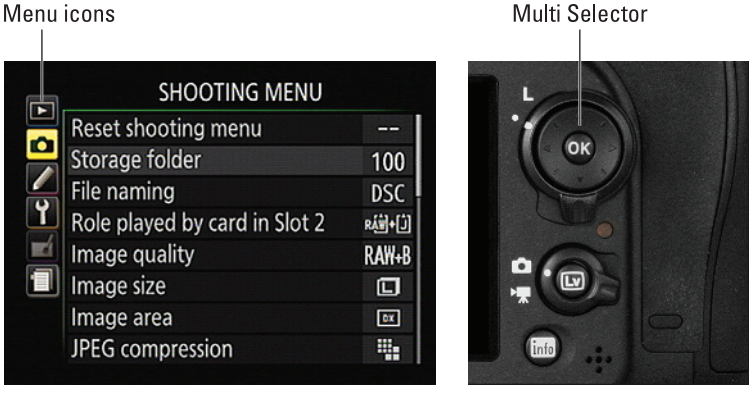


Figure 1-8: Use the Multi Selector to navigate menus.

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

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

Here's a bit more detail about menus:

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

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

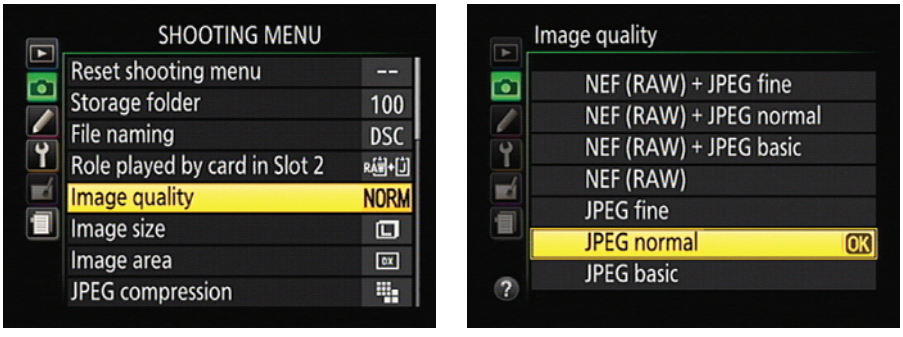


Figure 1-9: Select the option you prefer and press OK to return to the active menu.

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

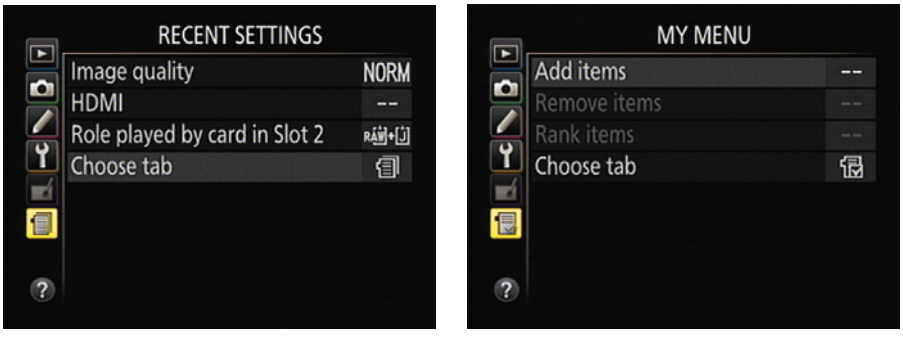


Figure 1-10: The Recent Settings menu offers quick access to the last 20 menu options you selected; the My Menu screen lets you design a custom menu.

Here's what the two menus offer:

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

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

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

Decoding the Displays

Your D7100 gives you three ways to monitor picture settings:

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

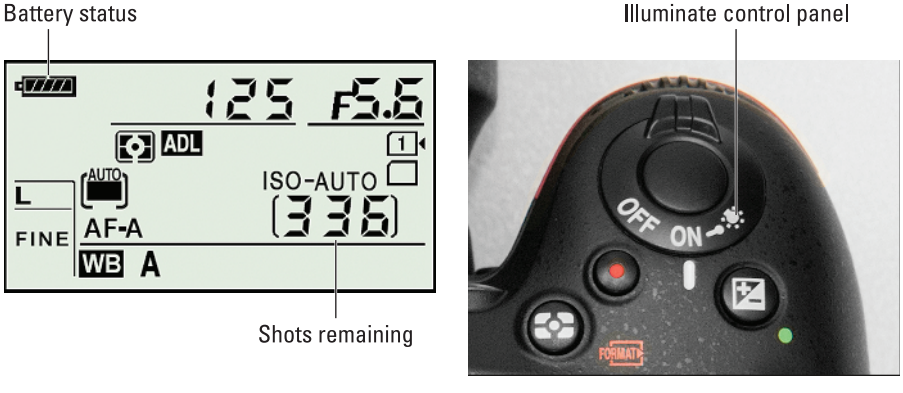


Figure 1-11: Rotate the On/Off switch to the light bulb position to illuminate the Control panel.

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

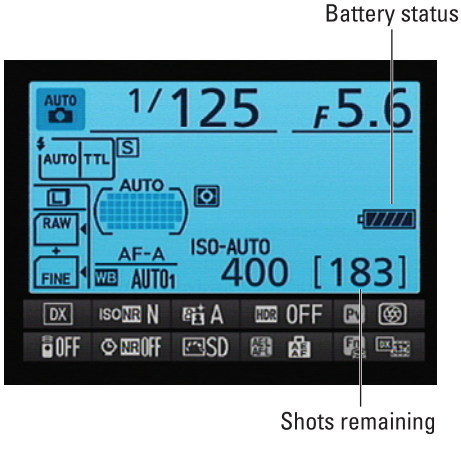


Figure 1-12: Press the Info button to view picture-taking settings on the monitor.

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

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

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

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

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

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

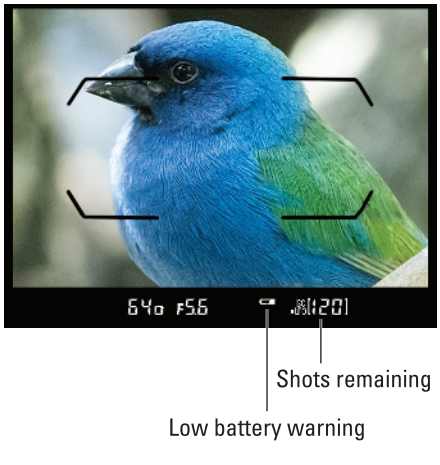


Figure 1-14: You also can view some camera settings at the bottom of the viewfinder.

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

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

Working with Memory Cards

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

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

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

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

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

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

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

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

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

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

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

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

Using two cards at the same time

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

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

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

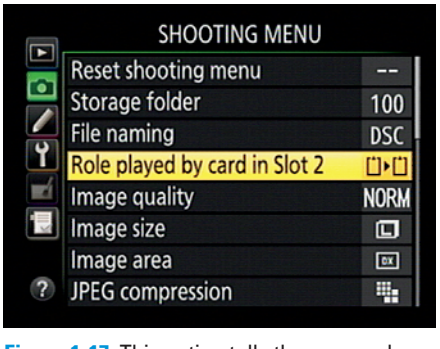


Figure 1-17: This option tells the camera how to use the card in Slot 2.

A few other critical points about using two cards:

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

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

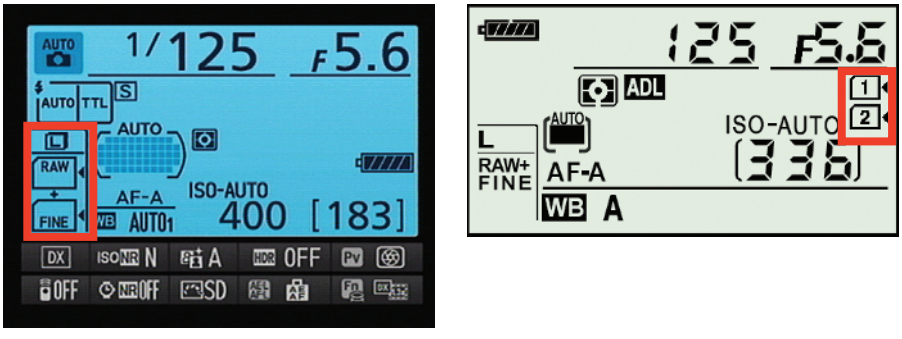


Figure 1-18: These symbols represent your memory cards.

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

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

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

Formatting cards

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

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

You can format a card in two ways:

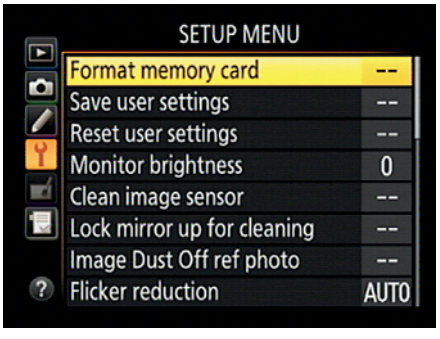


Figure 1-19: Formatting removes all data from the memory card.

- **Choose the Format Memory Card command from the Setup menu, as shown in Figure 1-19.** When you select the command, you're asked to select which card you want to format. After taking that step, you see a screen where you confirm your decision to format the card. Highlight Yes and press OK to go forward.
- **Simultaneously press and hold the Metering Mode and Delete buttons.** See the red Format labels next to the buttons? They're reminders that you use these buttons to quickly format a memory card. Hold the buttons down for about two seconds, until you see the letters *For* blink in the Control panel.

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

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

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

Exploring External Camera Controls

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

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

Topside controls

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

Figure 1-20: Press and hold the Mode dial unlock button before rotating the dial.

- **Control panel:** You can view many picture-taking settings on this LCD panel. See the earlier section "Decoding the Displays" for more info.
- **On/Off switch and shutter button:** Okay, I'm pretty sure you already figured out this combo button. Just remember that you can illuminate the Control panel by rotating the On/Off switch past the On position to the little light bulb icon. Moving the switch to that position also activates the exposure meters. After you release the switch, the panel backlight and meters remain active for about six seconds or until you take a picture. You can also turn off the panel light by rotating the switch to the light bulb position again.
- **Exposure Compensation button:** When working in the three semi-automatic exposure modes (P, S, and A), you can apply an exposure-adjustment feature called Exposure Compensation by pressing this button while rotating the Main command dial (the one on the back of the camera; see upcoming Figure 1-21). Chapter 7 details this feature.
- **Metering Mode button:** Press this button while rotating the Main command dial to select an exposure *metering mode,* which determines what part of the frame the camera considers when calculating exposure. Look to Chapter 7 for information on this feature, too.

- **Movie-record button:** After setting the camera to movie mode, you press this button to start and stop recording. (You engage movie mode by setting the Live View switch shown in Figure 1-21 to the movie camera icon and then pressing the LV button.)
- **Mode dial:** With this dial, you set the camera to a fully automatic, semi-automatic, or manual exposure mode. You also can set up and select two of your own modes, U1 and U2 (*U* for *user*). Chapter 3 details the fully automatic modes (Auto, Auto Flash Off, and the Scene modes); Chapter 7 explains semi-automatic and manual modes (P, S, A, and M); and Chapter 10 discusses Effects mode. Chapter 11 shows you how to create your two custom modes.

  Before you can rotate the dial, you must press and hold the mode dial unlock button in the center of the dial, labeled in Figure 1-20.
- **Release mode dial:** You use this dial, set directly under the Mode dial, to switch from normal shooting, where you take one picture with each press of the shutter button, to one of the camera's other Release modes, including Self-Timer mode. A letter representing the selected mode appears at the bottom of the dial. For example, in Figure 1-20, the S (Single Frame) mode is selected. See Chapter 2 for a look at all your options.

  To rotate the dial, you must press and hold the Release mode dial unlock button labeled in Figure 1-20.
- **Microphone:** The holes labeled Microphone in Figure 1-20 lead to the camera's built-in microphone.
- **Flash hot shoe:** A *hot shoe* is a connection for attaching an external flash head. The contacts on the shoe are covered by a little black insert when the camera ships from the factory, as shown in Figure 1-20. Keep the cover in place to protect the contacts until you want to attach a flash.
- **Focal plane indicator:** Should you need to know the exact distance between your subject and the camera, the focal plane indicator labeled in Figure 1-20 is key. This mark indicates the plane at which light coming through the lens is focused onto the image sensor. Basing your measurement on this mark produces a more accurate camera-to-subject distance than using the end of the lens or some other external point on the camera body as your reference point.

Back-of-the-body controls

The back side of the camera, shown in Figure 1-21, sports the following smorgasbord of controls:

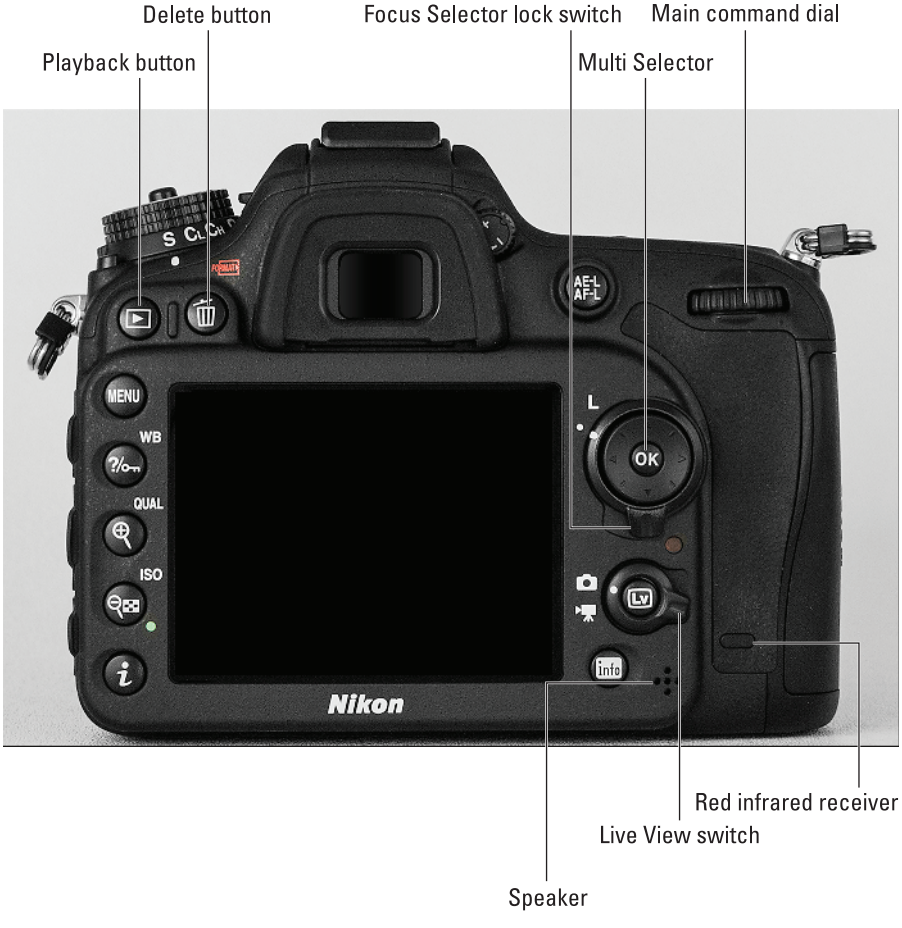


Figure 1-21: Here's a look at the backside controls.

- **Main command dial:** After you activate certain camera features, you rotate this dial, labeled in Figure 1-21, to select a setting. For example, to choose a White Balance setting, you press the WB button as you rotate the Main command dial.

- **AE-L/AF-L button:** When taking pictures in some automatic modes, you can lock focus and exposure settings by holding down this button. Chapter 7 explains.

  If you don't use the button's normal function often, you can assign another job to it. Instructions in this book assume that you stick with the default button function, but if you want to explore your options, see Chapter 11.

- **Multi Selector/OK button:** This dual-natured control, labeled in Figure 1-21, 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 other camera adjustment.
- **Focus Selector Lock switch:** Just beneath the Multi Selector, this switch relates to the camera's autofocusing system. When the switch is set to the position shown in Figure 1-21, you can use the Multi Selector to tell the camera to base focus on a specific focusing point. Setting the switch to the L position locks in the selected point. See Chapter 8 for details.
- **Live View switch:** *Live View,* detailed in Chapter 4, is the feature that enables you to use the monitor to compose your shots for still photography. You also must use the monitor for composition when you record movies; the viewfinder is disabled for movie recording.

  Rotate the Live View switch, labeled in Figure 1-21, to the camera symbol to use Live View for still photography; move the switch to the movie-camera symbol for movie recording. Either way, press the LV button at the center of the switch to actually turn on Live View.

- **Info button:** Press this button to display the Information screen on the camera monitor. Press again to turn the display off. See the earlier section "Decoding the Displays" for details on the Information display.

- **Playback button:** Press this button to switch the camera into picture review mode. Chapter 5 details picture playback.

- **Delete button:** Sporting a trash can icon, the universal symbol for delete, this button enables you to erase pictures. Chapter 5 has specifics.

- **Menu button:** Press this button to access menus of camera options. See the earlier section "Ordering from Camera Menus," in this chapter, for help using menus.

- **WB/Help/Protect button:** This button serves several purposes:
  - *White Balance control:* For picture-taking purposes, the button's main function is to access white balance options, a topic you can explore in Chapter 8. Press the button while rotating the Main command dial to adjust the setting.
  - *Help:* When menus are displayed, you can press the button to display helpful information about certain menu options. See "Asking Your Camera for Help," later in this chapter, for details.
  - *Protect:* In playback mode, pressing the button locks the picture file — hence the little key symbol that appears on the button face — so that it isn't erased if you use the picture-delete functions. (The picture *is* erased if you format the memory card, however.) See Chapter 5 for details.

- **Qual (Quality)/Zoom In button:** In playback mode, pressing this button magnifies the image and also reduces the number of thumbnails displayed at a time. Note the plus sign in the middle of the magnifying glass — plus for zoom in.

  In picture-taking mode, pressing the button gives you fast access to the Image Quality and Image Size options, both of which you can explore in Chapter 2.

- **ISO/Zoom Out/Thumbnail button:** In picture-taking mode, pressing this button while rotating the Main command dial adjusts the ISO setting, which controls the camera's sensitivity to light. Chapter 7 has details.

  In playback mode, pressing the button enables you to display multiple image thumbnails on the screen and to reduce the magnification of the current photo.

- ***i* button:** When the Information display is visible, pressing this button activates the control strip of options at the bottom of the screen. You can then use the Multi Selector to highlight an option and press OK to display a menu screen the offers the available settings for that option. Press the ***i*** button again to return to the normal Information display.
- **Speaker:** When you play movies that contain sound, the sound comes wafting through these little holes.
- **Rear infrared receiver:** This sensor, labeled in Figure 1-21, picks up the signal from the optional ML-L3 wireless remote control. There's a second sensor on the front of the camera; see the next section for a look-see.

Front-left controls

On the front-left side of the camera body, shown in Figure 1-22, you find the following:

- **Flash/Flash Compensation:** Pressing this button pops up the camera's built-in flash (except in automatic shooting modes, in which the camera decides whether the flash is needed). By holding the button down and rotating the Main command dial, you can adjust the Flash mode (normal, red-eye reduction, and so on). In advanced exposure modes (P, S, A, and M), you also can adjust the flash power by pressing the button and rotating the Sub-command dial. (That's the dial on the front of the camera, labeled in Figure 1-23.)

- **BKT (Bracket) button:** Press this button to access settings related to automatic *bracketing,* a feature that simplifies the job of recording the same subject at various exposure, flash, and white balance settings. Chapter 7 details flash and exposure bracketing; Chapter 8 discusses white balancing.

- **Lens-release button:** Press this button to disengage the lens from the camera body so that you can remove the lens. See the first part of this chapter for help with mounting and removing lenses.
- **Focus-mode selector:** This switch sets the camera to manual or autofocusing. See the earlier section "Changing the focusing method (auto or manual)" for the short story; see Chapter 8 for complete focusing details.
- **AF-mode button:** Pressing this button accesses two options that control autofocusing. While holding the button, you rotate the Main command dial to adjust the Autofocus mode and rotate the Sub-command dial to adjust the AF-area mode. Again, Chapter 8 explains how these settings affect the camera's autofocusing behavior.
- **Front infrared receiver:** Here's the second of two receivers that can pull in the signal from the optional ML-L3 wireless remote control unit. Figure 1-21 shows you where to aim the remote transmitter if you're standing behind the camera.

Figure 1-22: The front-left side of the camera sports these features.

Front-right controls

Figure 1-23 offers a look at the front-right side of the camera, which houses the following controls:

- **Sub-command dial:** This dial is the counterpart to the Main command dial on the back of the camera. As with the Main dial, you rotate this one to select certain settings, usually in conjunction with pressing a camera button.

- **AF-assist lamp:** In dim lighting, a beam of light shoots out from this lamp to help the camera's autofocus system find its target. In general, leaving the AF-assist option enabled is a good idea, but if you're shooting at an event where the light may be distracting, you can disable it through the Built-In AF-Assist Illuminator option, found on the Autofocus section of the Custom Setting menu.

  The lamp also lights before the shutter is released in Self-Timer mode and before the flash fires in Red-Eye Reduction Flash mode. Chapter 2 offers more information about both of these features.

Figure 1-23: You can set the Function (Fn) and Depth-of-Field Preview buttons to perform a variety of operations.

- **Depth-of-Field Preview button:** By pressing this button, you can see how different aperture settings affect depth of field, or the distance over which focus appears sharp. Chapter 8 shows you how it works, and Chapter 11 explains how to assign a different function to the button if you don't care to preview depth of field.

  If you stick with the default setting and flash is enabled, pressing the button also causes the flash to emit a pulse of light to help you see how your subject will be illuminated. You can disable that feature via the Modeling Flash option, found in the Bracketing/Flash section of the Custom Setting menu.

- **Function (Fn) button:** By default, pressing this button while rotating either command dial switches the Image Area setting from the DX area mode, which captures your picture using the entire image sensor, to the 1.3 crop mode, which uses a smaller area at the center of the sensor. For details on this setting, see the first part of Chapter 2.

  As with the Depth-of-Field Preview button, you can change the operation that's accomplished by pressing the button. Again, see Chapter 11 for the scoop.

Hidden connections

Under the doors on the left side of the camera, you find the following connections, labeled in Figure 1-24.

- **Microphone jack:** If you're not happy with the quality provided by the internal microphone, you can plug in an external microphone here. The jack accepts a 3.5mm microphone plug.
- **USB port:** One way to download images to your computer is to connect the camera and computer via the USB cable provided in the camera box. The small end of the cable goes into this port. Chapter 6 explains the downloading process.

  You also use this port to connect the optional WU-1a wireless adapter, which permits wireless transfer of photos from the camera to a smart phone and certain tablet computers. Chapter 6 offers more information about this accessory.

Figure 1-24: Connection ports for various cables and accessories are found under the covers on the left side of the camera.

- **HDMI port:** You can connect the camera to a high-def (HDMI) television via this port, but you need to buy a Type C mini-pin HDMI cable to do so. Chapter 5 has details about connecting your camera to a TV.
- **Headphone jack:** To enable you to monitor movie audio, you can attach headphones via this port. Your headphones need a 3.5mm plug.
- **Accessory terminal:** Here's where you attach the optional Nikon GP-1 GPS (Global Positioning System) unit, the WR-1 and WR-R10 wireless remote controllers, and the MC-DC2 wired remote control. I don't cover these optional devices, so refer to the manuals that ship with them to find out more.

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" screw, plus the battery chamber. The other little rubber cover is related to the optional MB-D15 battery pack; you remove the cover when attaching the battery pack. Along the side of the battery cover, a little flap covers the connection through which you can

attach the optional AC power adapter; the camera manual provides specifics on running the camera on AC power.

Asking Your Camera for Help

Your camera offers a built-in help line — a great tool for times when you forget the purpose of a particular menu option.

If you see a question mark in the lower-left corner of a menu, as shown on the left in Figure 1-25, press and hold the WB button to display information about that option, as shown on the right. (The little question mark symbol on the button reminds you of this function.) If you need to scroll the screen to view all the help text, keep the button pressed and scroll by using the Multi Selector. Release the button to close the help screen.

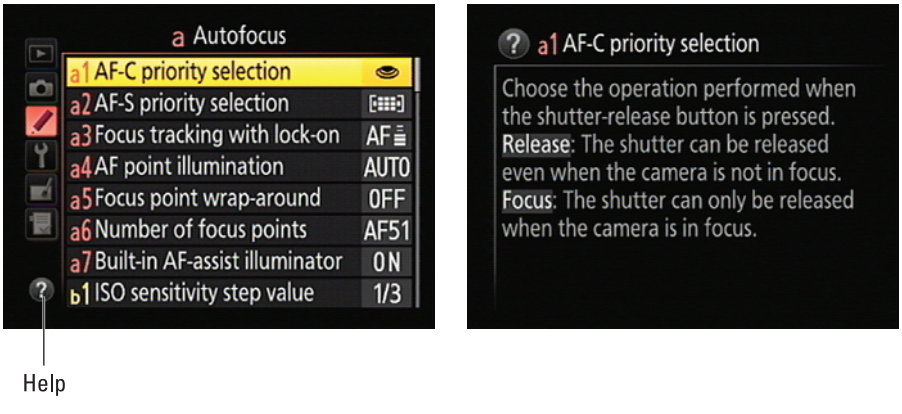


Figure 1-25: Press and hold the WB button to display onscreen help.

Reviewing Basic Setup Options

You can customize your camera in scads of ways, and I address all of them throughout later chapters. However, you should review a few settings before you take your first pictures; the rest of this chapter covers these basic setup options.

Cruising the Setup menu

Among the initial customization options to consider are the following settings, all found on the Setup menu. It's a three-page affair, with the first two pages shown in Figure 1-26. Press the Multi Selector up and down to scroll through the pages of options.

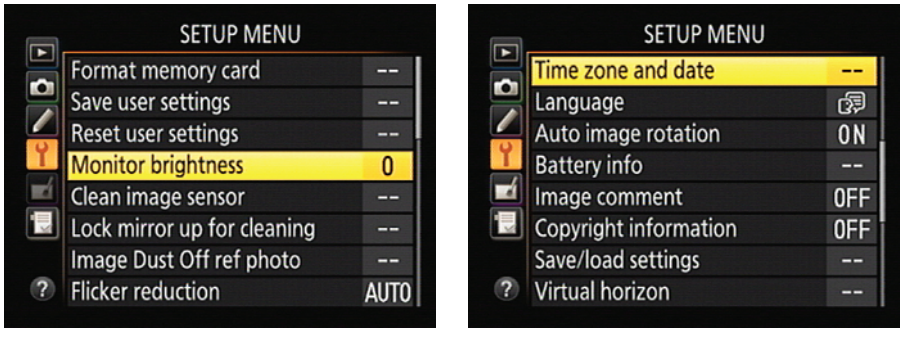


Figure 1-26: The Setup menu contains options that control basic camera operations.

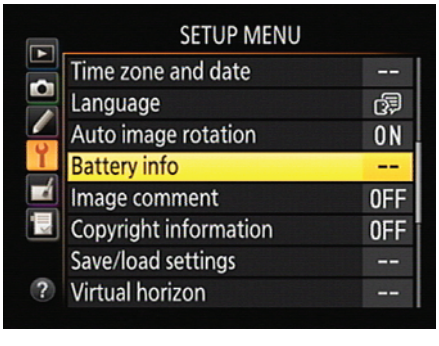
- **Monitor Brightness:** This option enables you to make the camera monitor brighter or darker. If you take this step, though, what you see on the display may not be an accurate rendition of your image. Crank up the monitor brightness, for example, and an underexposed photo may look just fine. So I recommend sticking with the default setting (0).
- **Clean Image Sensor:** Your D7100 has an internal cleaning system designed to keep a filter that's fitted onto the image sensor free of dust and dirt. By choosing the Clean Image Sensor command, you can perform a cleaning at any time. Just choose the command, press OK, select Clean Now, and press OK again. Set the camera on a flat surface when performing the cleaning for best results.

  You also can tell the camera to perform automatic cleaning every time you turn the camera on or off, only at startup, only at shutdown, or never; to do so, select Clean at Startup/Shutdown instead of Clean Now. Then press the Multi Selector right, highlight the cleaning option you prefer, and press OK.
- **Lock Mirror Up for Cleaning:** This feature is necessary when manually cleaning the camera image sensor (or technically, the aforementioned filter) — an operation that I don't recommend that you tackle yourself because you can easily damage the camera if you don't know what you're doing. If you *are* comfortable with the sensor-cleaning process, be sure that the camera battery is charged before you start; the menu option disappears when the battery is low.
- **Image Dust Off Ref Photo:** This feature enables you to record an image that serves as a point of reference for the automatic dust-removal filter available in Nikon Capture NX 2. I don't cover this accessory software, which must be purchased separately, in this book.
- **Time Zone and Date:** When you turn on your camera for the first time, it displays this option and asks you to set the current date and time. Keeping the date/time accurate is important because that information is recorded as part of the image file. In your photo browser, you can then

see when you shot an image and, equally handy, search for images by the date they were taken.

On a related note: If you see the message "Clock" blinking in the Information display and you already set the date and time, the internal battery that keeps the clock running is depleted. Simply charging the main camera battery and then putting that battery back in the camera sets the clock ticking again, but you need to reset the camera time and date.

- **Language:** This option determines the language of text on the camera monitor.
- **Battery Info:** Select this option to view detailed information about your battery, as shown in Figure 1-27. The Charge data shows you the current power remaining as a percentage value, and the No. of Shots value tells you how many times you've pressed and released the shutter button since the last time you charged the battery. The final readout, Battery Age, lets you know how much more life you can expect out of the battery before it can no longer be recharged. When the display moves toward the right end of the little meter, it's time to buy a new battery.



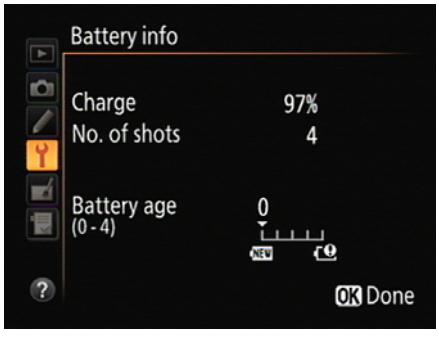


Figure 1-27: You can check the health of your battery via the Battery Info menu item.

The screen in Figure 1-27 shows the display as it appears when you use the regular camera battery. If you attach the optional battery pack, see its manual and the camera manual to find out how to interpret the data that's reported.

- **Save/Load Settings:** Through this feature, available only when you shoot in the P, S, A, or M exposure modes, you create a file that records the current major menu settings and store the file on your memory card. (The camera manual contains a list of settings that are stored.) If you later want to use all those settings again, you just load the file from the memory card. The camera stores your settings on the card in Slot 1, assigning the filename NCSETUPA. Don't change the filename, or you won't be able to reload the settings later.

- **Virtual Horizon:** Here's a cool aid for shooting pictures that requires your camera to be level with the horizon. When you select this option, as shown on the left in Figure 1-28, and then press OK, you see a screen with a built-in level, as shown on the right. When the camera is level to the horizon, the line through the middle of the display turns green, as shown in the figure. (If the entire display is gray, the camera is tilted too far forward or backward for the system to do its thing.) Unfortunately, the display shows only on the monitor and not in the viewfinder, so it's mostly of use setting up your camera on a tripod.

Figure 1-28: The Virtual Horizon display helps you make sure the camera is level.

During Live View shooting, you can enable a display option that superimposes the Virtual Horizon tool over the live image on the monitor. Just press the Info button to cycle through the various display modes until the virtual horizon graphic appears. Chapter 4 details Live View shooting.

Although you can't see the virtual horizon indicator in the viewfinder, you can set the Fn (Function) button or Depth-of-Field Preview button to display a roll-bar-type level indicator in the viewfinder. However, the buttons then no longer perform their default functions, which are to access the Image Area setting and preview depth of field. So leave the buttons alone for now — otherwise, my instructions through the rest of the book related to the two buttons won't work. If you want to try the roll-bar feature, Chapter 11 shows you how to assign the function to either button.

- **Non-CPU Lens Data:** A CPU lens is equipped with technology that enables it to transmit certain data about the lens to the camera. When you use a non-CPU lens, you lose access to certain D7100 features. (Your manual spells them out.) You can gain back a little of the lost functionality by registering your lens through this Setup menu option. You assign the lens a number — you can register up to nine lenses — and enter the maximum aperture and focal length of that lens.

- **GPS:** If you purchase the optional Nikon GPS unit, this item, found on page 3 of the Setup menu, holds settings related to its operation. This book doesn't cover this accessory, but the camera manual provides help to get you started.
- **Wireless Mobile Adapter:** This option relates to the Wu-1a mobile adapter, which enables you to send pictures over a wireless network to some smart phones and tablets. When the feature is turned on, the camera looks for a wireless signal that the unit can use for the transfer. Turn the option off in locations where wireless devices are prohibited. It's also a good idea to disable the feature when you're not using the Wu-1a device, because the signal locator uses battery power.
- **Network:** This function provides options related to the optional UT-1 communication unit, which enables you to transfer files to a computer via an Ethernet network connection, or, when used together with the WT-5 wireless transmitter, via a wireless network. These devices also enable you to control the camera from your computer, but only if you invest in the optional Nikon Camera Control Pro 2 software (about $180). I don't cover these devices or the software in this book, but the camera and device manuals spell out what you need to know to take advantage of these features. The option is disabled on the menu if the devices aren't plugged into the camera.
- **Eye-Fi Upload:** Your camera can work with some Eye-Fi memory cards, which are equipped with technology that enables you to send your pictures over a wireless network to your computer. If you put one of the cards in the camera, this option appears on the Setup menu and contains settings for making the transfer and for disabling the wireless signal in situations where wireless devices are not allowed. When no Eye-Fi card is installed, the option doesn't appear.

  For the whole story on Eye-Fi, including help with setting up your wireless transfers, visit the company's website at `www.eye.fi`.
- **Firmware Version:** Select this option and press OK to view what version of the camera firmware, or internal software, your camera is running. You see two firmware items, C and L, which refer to firmware for different aspects of the camera operation. At the time this book was written, C was in Version 1.0, and the L was 1.008.

  Keeping your camera firmware up to date is important, so visit the support section of the Nikon website regularly to find out whether your camera sports the latest version. You can find detailed instructions on how to download and install any firmware updates on the site.

Browsing the Custom Setting menu

Displaying the Custom Setting menu, whose icon is a little pencil, takes you to the left screen shown in Figure 1-29. Here you can access submenus that carry the labels A through G. 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, as shown on the right.

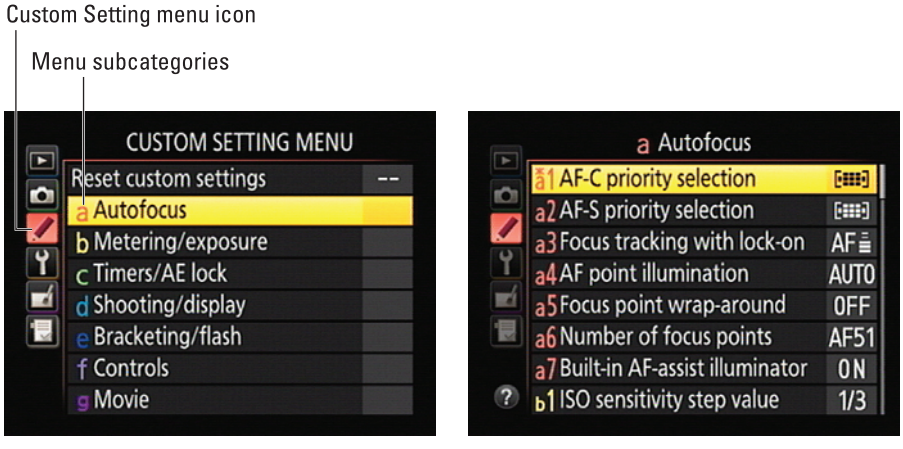


Figure 1-29: Select a submenu and press OK to access the available options.

A few important points about the Custom Setting menu:

- 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 first screen in Figure 1-29, selecting the submenu, pressing OK, and so on.
- Items that are dimmed in the menu are off-limits in the current exposure mode (Auto, Scene, P, M, and so on). Many options are available only in the P, S, A, and M modes.
- An asterisk above a letter, as in the highlighted option on the right in Figure 1-29, indicates that you selected a setting other than the default.
- In the Nikon manual, instructions sometimes reference these settings by a menu letter and number. For example, "Custom Setting a1" refers to the first option on the Autofocus submenu. I try to be more specific in this book, however, so I use the actual setting names. (Really, everyone has enough numbers to remember, don't you think?)

With those clarifications out of the way, the following sections describe customization options related to basic camera operations.

Adjusting automatic shutdown timing

To save battery power, your camera automatically shuts off the exposure meter, viewfinder display, and monitor after a period of activity. You can specify how long you want the camera to wait before taking either step through the following options, both found on the Timers/AE Lock portion of the Custom Setting menu:

- **Standby Timer:** This setting, highlighted in Figure 1-30, controls the exposure meter and viewfinder display shutoff. The default is 6 seconds. You can raise the value as high as 30 minutes or, by choosing the No Limit option, disable the shutdown entirely.
- **Monitor Off Delay:** Through this option, you can specify the auto-off timing for picture playback, menu displays, the Information display, and the Live View display. Additionally, you can adjust the length of time the camera displays a picture immediately after you press the shutter button, known as the Image Review period. Because the monitor is one of the biggest drains on battery power, keep the shutoff delay times as short as you find practical.

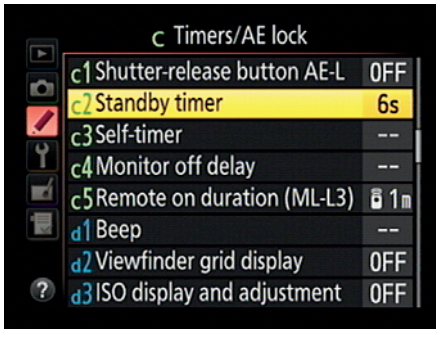


Figure 1-30: Use the Standby Timer option to adjust the auto shutdown timing of the meter and viewfinder display.

Customizing shooting and display options

Head for the Shooting/Display section of the Custom Setting menu to tweak various aspects of how the camera communicates with you, as well as to control a couple of basic shooting functions. Later chapters discuss options related to picture-taking; the following affect the basic camera interface:

- **Beep:** Through this option, spotlighted in Figure 1-31, you can tell the camera to emit a beep to indicate that focus is achieved when you use certain autofocus settings. The beep also sounds when you use the Self-Timer Release mode or certain Remote-Control Release modes, if you try to take a picture when the memory card is locked, and when time-lapse photography ends.

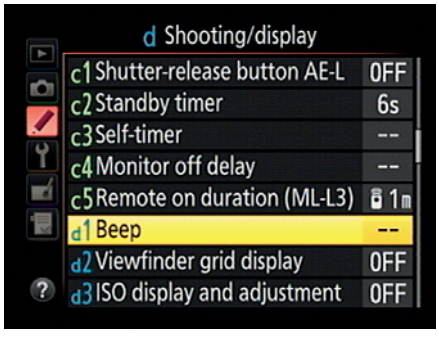


Figure 1-31: By default, the camera's beeper is disabled, enabling quieter shooting.

By default, the beep is disabled. If you want to hear the beep, choose the Beep option and then set the volume and pitch of the beep. On the Information and Control panel displays, a little musical note icon appears when the beep is enabled.

- **Viewfinder Grid Display:** You can display gridlines in the viewfinder by setting this option to On. The gridlines are a great help when you need to ensure the alignment of objects in your photo.
- **Screen Tips:** If you don't want to see the little help labels that appear when you adjust settings via the control strip in the Information display, turn this option to Off. For a look at a screen tip, see the left side of Figure 1-13, earlier in this chapter.
- **File Number Sequence:** This option controls how the camera names your picture files. If you set this option to Off, the camera restarts file numbering at 0001 every time you format your memory card or insert a new memory card. Numbering is also restarted if you create custom folders (an advanced option covered in Chapter 11), or if the current folder is full and the camera automatically creates a new folder.

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, I strongly encourage you to stick with the default setting, On. At this setting, file numbering continues from the previous number used or from the largest file number in the current folder. 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.

The Reset option tells the camera to look at the largest file number on the current card (or in the selected folder) and then assign the next highest number to your next picture. If the card or selected folder is empty, numbering starts at 0001. Then the camera behaves as if you selected the On setting.

Should you snap enough pictures to reach folder 999, and that folder contains either 9,999 pictures or a photo that has the file number 9999, 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.

- **Information Display:** Normally, the camera tries to make the data on the display easier to read by automatically shifting from black text on a light background to light text on a black background, depending on the ambient light. If you prefer one display style over the other, visit this menu item and change the setting from Auto to Manual. You can then select either Dark on Light (for dark lettering on a light background) or Light on Dark (for light lettering on a dark background).

In this book, I show the Information screen using the Dark on Light display because it reproduces better in print.

- **LCD Illumination:** This setting affects a backlight that can be turned on to illuminate the Control panel. When the option is set to Off, as it is by default, you can illuminate the panel briefly by rotating the On/Off switch past the On setting, to the little light bulb marking. The backlight turns off automatically a few seconds after you release the switch.

  If you instead set the LCD Illumination option to On, the backlight comes on automatically anytime the exposure meters are activated (which happens when you press the shutter button halfway). Obviously, this option consumes more battery power than simply using the On/Off switch to light up the panel when you really need it.

- **MB-D15 Battery Type and Battery Order:** You don't need to worry about these options unless you buy the optional MB-D15 battery adapter. If you use the battery pack, specify the type of battery you're using via the MB-D15 Battery Type menu option. Then use the Battery Order option to tell the camera whether you want it to draw power first from the battery pack or the regular camera battery when you have both installed. (See your camera manual for more details about using the battery pack.)

Shooting without a memory card (not!)

The Slot Empty Release Lock setting, found on the Controls section of the Custom Setting menu and shown in Figure 1-32, determines whether the shutter release is disabled when no memory card is in the camera. At the default setting, OK, 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 suggest that you change the setting to Release Locked. It's too easy to miss that *Demo* message and think you've recorded a picture when you really haven't.

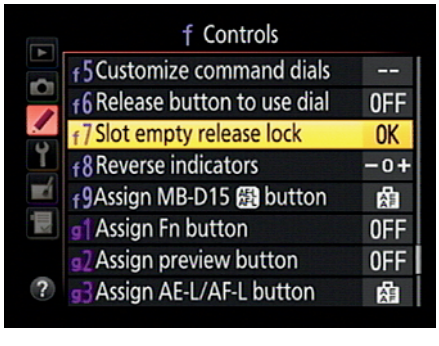


Figure 1-32: At this setting, you can take a temporary, demo-only photo when no memory card is installed.

Choosing a storage folder

By default, the camera creates an initial storage folder to hold your files; each folder can hold 999 images. When you exceed that limit, the camera creates a new folder for your next 999 shots. However, you can create a new folder at any time via the Storage Folder option on the Shooting menu; Chapter 11 tells you how. If you create your own folders, specify via the menu option which folder you want to use for your next pictures.

Restoring default settings

Should you want to return your camera to its original, out-of-the-box state, the camera manual contains a complete list of all the default settings.

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.
- **Reset all Custom Setting Menu options:** Choose the Reset Custom Settings option at the top of the Custom Setting menu.
- **Restore critical picture-taking settings *without* affecting options on the Custom Setting menu:** Use the two-button reset method: Press and hold the Exposure Compensation button and the ISO button simultaneously for longer than two seconds. (The little green dots near the buttons are a reminder of this function.) See the camera manual for a list of exactly what settings are restored.