1

Getting the Lay of the Land

1 still remember the day that I bought my first SLR film camera. I was excited to finally move up from my one-button point-and-shoot camera, but I was a little anxious, too. My new pride and joy sported several unfamiliar buttons and dials, and the explanations in the camera manual clearly were written for someone with an engineering degree. And then there was the whole business of attaching the lens to the camera, an entirely new task for me. I saved up my pennies a long time for that camera — what if my inexperience caused me to damage the thing before I even shot my first pictures?

You may be feeling similarly insecure if your Nikon D90 is your first SLR, although some of the buttons on the camera back may look familiar if you've previously used a digital point-and-shoot camera. If your D90 is both your first SLR and first digital camera, you may be doubly intimidated.

Trust me, though, that your camera isn't nearly as complicated as its exterior makes it appear. With a little practice and the help of this chapter, which introduces you to each external control, you'll quickly become as

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comfortable with your camera's buttons and dials as you are with the ones on your car's dashboard. This chapter also guides you through the process of mounting and using an SLR lens, working with digital memory cards, navigating your camera's menus, and customizing basic camera operations.

Getting Comfortable with Your Lens

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

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

Attaching a lens

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

1. **Remove the cap that covers the lens mount on the front of the camera.**

2. **Remove the cap that covers the back of the lens.**

3. **Hold the lens in front of the camera so that the little white dot on the lens aligns with the matching dot on the camera body.**

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

   Note that the figure (and others in this chapter) shows you the D90 with its so-called "kit lens" — the 18–105mm Vibration Reduction (VR) zoom lens that Nikon sells as a unit with the body. If you buy a lens from a manufacturer other than Nikon, your dot may be red or some other color, so check the lens instruction manual.

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

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

Mounting index dots

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

5. **Turn the lens in a counter-clockwise direction until the lens clicks into place.**

    To put it another way, turn the lens toward the side of the camera that sports the shutter button, as indicated by the red arrow in the figure.

6. **On a lens that has an aperture ring, set and lock the ring so the aperture is set at the highest f-stop number.**

    Check your lens manual to find out whether your lens sports an aperture ring and how to adjust it. (The D90 kit lens doesn't.) To find out more about apertures and f-stops, see Chapter 5.

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

Removing a lens

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

1. **Locate the lens-release button, labeled in Figure 1-2.**

2. **Grip the rear collar of the lens.**

   In other words, hold on to the stationary part of the lens that's closest to the camera body and not the movable focusing ring or zoom ring, if your lens has one.

3. **Press the lens-release button while turning the lens clockwise until the mounting index on the lens is aligned with the index on the camera body.**

   The mounting indexes are the little guide dots labeled in Figure 1-1. When the dots line up, the lens should detach from the mount.

4. **Place the rear protective cap onto the back of the lens.**

Vibration Reduction switch

Lens-release button

Figure 1-2: Press the lens-release button to disengage the lens from the mount.

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

Using a VR (vibration reduction) lens

If you purchased the D90 camera kit — that is, the body-and-lens combination put together by Nikon — your lens offers a feature called *vibration reduction*. On Nikon lenses, this feature is indicated by the initials *VR* in the lens name.

Vibration reduction attempts to compensate for small amounts of camera shake that are common when photographers handhold their cameras and use a slow shutter speed, a lens with a long focal length, or both. That camera movement during the exposure can produce blurry images. Although vibration reduction can't work miracles, it does enable most people to capture sharper handheld shots in many situations than they otherwise could.

However, when you use a tripod, vibration reduction can have detrimental effects because the system may try to adjust for movement that isn't actually occurring. That's why your kit lens — and all Nikon VR lenses — have an On/Off switch, which is located on the side of the lens, as shown in Figure 1-2. Whether you should turn off the VR feature, though, depends on the specific lens, so

check the manual. For the 18–105 kit lens, Nikon does recommend setting the switch to the Off position for tripod shooting, assuming that the tripod is "locked down" so the camera is immovable.

If you use a non-Nikon lens, the vibration reduction feature 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, so be sure to check the lens manual for information.

Chapter 6 offers more tips on achieving blur-free photos, and it also explains focal length and its impact on your pictures. See Chapter 5 for an explanation of shutter speed.

Setting the focus mode (auto or manual)

Your camera can accept a variety of lenses, but only two types of lenses permit you to take advantage of autofocusing: AF lenses and AF-S lenses. (The 18–105mm kit lens falls into the AF-S category.)

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

For times when you attach a lens that doesn't support autofocusing or the autofocus system has trouble locking on your subject, you can focus manually by simply twisting a focusing ring on the lens barrel. The placement and appearance of the focusing ring depends on the lens; Figure 1-3 shows you the one on the kit lens.

Take these steps to try out manual focusing:

1. **Set the camera to manual focus mode.**

   The procedure depends on the type of lens, as follows:

   - *AF-S lenses:* Set the switch on the lens itself to M, as shown in Figure 1-3. Note that the figure shows the switch as it appears on the D90's kit lens; if you use a different lens, check the lens instruction manual if you have trouble finding the switch. (It may carry the label AF/MF instead of A/M.)

   - *AF lenses:* For this type of lens, two switches are involved. First, set the lens switch to M, as just described. Then look for the AF-M switch on the camera body — it's located just below the lens-release button, as labeled in Figure 1-3. Flip the switch to M for manual focusing.

   - *All other lenses:* Set the switch on the camera body to M.

2. **While looking through the viewfinder, twist the focusing ring to adjust focus.**

If you have trouble focusing, you may be too close to your subject; every lens has a minimum focusing distance. You may also need to adjust the viewfinder to accommodate your eyesight; see the next section for details.

TIP Some lenses, including the D90 kit lens, enable you to use autofocusing to set the initial focusing point and then fine-tune focus manually. Check your lens manual for information on how to use this option, if available. With the kit lens, you set the lens switch to the A position and then press the shutter button halfway to autofocus. Then you simply twist the focusing ring to adjust focus further, if needed.

Zooming in and out

If you bought a zoom lens, it has a movable zoom barrel. The location of the zoom barrel on the D90 kit lens is shown in Figure 1-3. To zoom in or out, just move that zoom barrel forward and backward.

The numbers on the zoom ring, by the way, represent *focal lengths.* I explain focal lengths in Chapter 6. In the meantime, just note that when the lens is mounted on the camera, the number that's aligned with the lens mounting index (the white dot) represents the current focal length. In Figure 1-3, for example, the focal length is 35mm.

Zoom barrel   Focusing ring   Auto/Manual focus switches

Figure 1-3: On the 18–105 kit lens, the manual-focusing ring is set near the back of the lens, as shown here.

Adjusting the Viewfinder Focus

Tucked behind the right side of the rubber eyepiece that surrounds the viewfinder is a tiny dial called a *diopter adjustment control.* With this control, labeled in Figure 1-4, you can adjust the focus of your viewfinder to accommodate your eyesight.
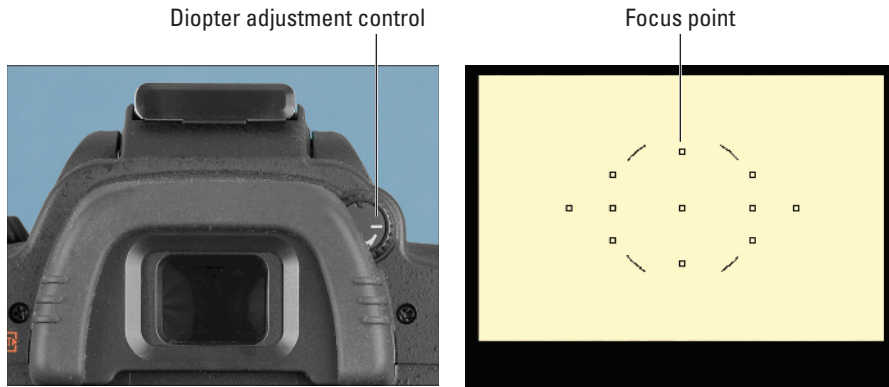
Diopter adjustment control   Focus point

Figure 1-4: Use the diopter adjustment control to set the viewfinder focus for your eyesight.

WARNING!

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

1. **Remove the lens cap from the front of the lens.**

2. **Look through the viewfinder and concentrate on the little black markings shown on the right side of Figure 1-4.**

   The little rectangles represent the camera's autofocusing points, which you can read more about in Chapters 2 and 6. The four curved lines represent the center-weighted metering area, which relates to an exposure option you can explore in Chapter 5.

3. **Rotate the diopter adjustment dial until the viewfinder markings appear to be in focus.**

WARNING!

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.

Working with Memory Cards

Instead of recording images on film, digital cameras store pictures on *memory cards.* Your D90 uses a specific type of memory card called an *SD card* (for *Secure Digital*), shown in Figures 1-5 and 1-7. You can also use the new, high-capacity Secure Digital cards, which are labeled SDHC, as well as Eye-Fi SD cards, which enable you to send pictures to your computer over a wireless network. (Because of space limitations, I don't cover Eye-Fi connectivity in this book; if you want more information about these cards, you can find it online at www.eye.fi.)

Memory card access light

Figure 1-5: Insert the card with the label facing the camera back.

Do you need high-speed memory cards?

Memory cards are categorized not just by their storage capacity, but also by their data-transfer speed. SD cards (the type used by your D90) fall into one of three *speed classes,* Class 2, Class 4, and Class 6, with the number indicating the minimum number of *megabytes* (units of computer data) that can be transferred per second. A Class 2 card, for example, has a minimum transfer speed of 2 megabytes, or MB, per second. Of course, with the speed increase comes a price increase.

Photographers who shoot action benefit most from high-speed cards — the faster data-transfer rate helps the camera record shots at its maximum speed. Users who shoot at the highest resolution or prefer the NEF (Raw) file format also gain from high-speed cards; both options increase file size and, thus, the time needed to store the picture on the card. (See Chapter 3 for details.) As for picture downloading, how long it takes for files to shuffle from card to computer depends not just on card speed, but also on the capabilities of your computer and, if you use a memory card reader to download files, on the speed of that device. (Chapter 8 covers the file-downloading process.)

Long story short, if you want to push your camera to its performance limits, a high-speed card is worth considering, assuming budget is no issue. Otherwise, even a Class 2 card should be more than adequate for most photographers.

Safeguarding your memory cards — and the images you store on them — requires just a few precautions:

✏ **Inserting a card:** First, be sure that the camera is turned off. Then put the card in the card slot with the label facing the back of the camera, as shown in Figure 1-5. Push the card into the slot until it clicks into place; the memory card access light (circled in Figure 1-5) blinks for a second to let you know the card is inserted properly.

✏ **Formatting a card:** The first time you use a new memory card or insert a card that has been used in other devices (such as an MP3 player), you should *format* it. Formatting ensures that the card is properly prepared to record your pictures.

Formatting erases *everything* on your memory card. So before formatting, be sure that you have copied any pictures or other data to your computer.

You can format a card in two ways:

- *Simultaneously press and hold the Delete and Metering Mode buttons.* See the little 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 on top of the camera, as shown in Figure 1-6. The other data visible is 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 — 290, in the figure.
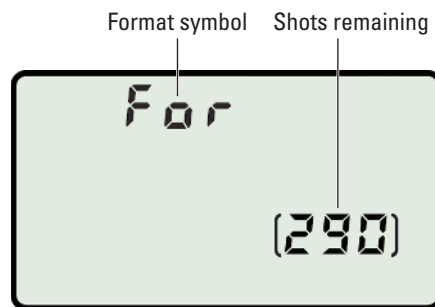
Format symbol   Shots remaining

Figure 1-6: To format a memory card, press the Delete and Metering Mode buttons until you see this message in the Control panel; then press both buttons again.

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. (See the upcoming section "Monitoring Shooting Settings" for more about the Control panel.)

- *Choose the Format command from the Setup menu.* The upcoming section "Ordering from Camera Menus" explains how to work with menus. When you select the command, you're asked to confirm your decision to format the card. Highlight Yes and press the OK button to go forward.

REMEMBER

If you insert a memory card and see the letters *For* in the Shots Remaining area of the Control panel, you must format the card before you can do anything else.

✔ **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 the camera off. Open the memory card door, as shown in Figure 1-5. Depress the memory card slightly until you hear a little click and then let go. The card should pop halfway out of the slot, enabling you to grab it by the tail and remove it.

REMEMBER

When no card is installed in the camera, the symbol [-E-] appears in the Control panel and viewfinder.

✔ **Handling cards:** Don't touch the gold contacts on the back of the card. (See the left card in Figure 1-7.) 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 left side of the card, labeled *lock switch* in Figure 1-7, 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.
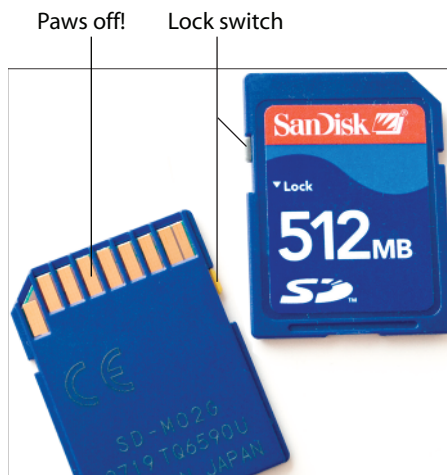
Paws off!   Lock switch

Figure 1-7: Avoid touching the gold contacts on the card.

TIP

You can protect individual images from accidental erasure by using the camera's Protect feature, which is covered in Chapter 4.

Exploring External Camera Controls

Scattered across your camera's exterior are a number of buttons, dials, and switches that you use to change picture-taking settings, review and edit 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 road map to the external controls plus a quick introduction to each.

REMEMBER

One note before you move on: Many of the buttons perform multiple functions and so have multiple "official" names. The WB (white balance) button, for example, is also known as the Help button and the Protect button. In the camera manual, Nikon's instructions refer to these multi-tasking buttons by the name that's relevant for the current function. I think that's a little confusing, so I always refer to each button by the first moniker you see in the lists here.

Topside controls

Your virtual tour begins with the bird's-eye view shown in Figure 1-8. There are a number of controls of note here:

Mode dial — Control panel — Metering Mode button — On/Off/Illuminate — Exposure Compensation button — Release Mode button — AF (Autofocus) Mode button

Figure 1-8: The tiny pictures on the Mode dial represent special automatic shooting modes.

- **Control panel:** On the D90, you can view basic camera settings on this topside LCD panel or on the main monitor. See the upcoming section "Monitoring Shooting Settings" for more info.

- **On/Off/Illuminate switch and shutter button:** Okay, I'm pretty sure you already figured this combo button out. But check out Chapter 2 to discover the proper shutter-button-pressing technique — you'd be surprised how many people mess up their pictures because they press that button incorrectly. And note that if you want to illuminate the Control panel, you just rotate the On/Off switch past the On position to the little light-bulb icon. Release the switch to return to shooting; the Control panel will dim to its normal state after a few seconds.

✔ **Metering Mode button:** Press this button to select an exposure *metering mode,* which determines what part of the frame the camera considers when calculating exposure. Chapter 5 has details.

The little red Format label above the button reminds you that you can press this button together with the Delete button — which also sports the label — to quickly format a memory card. See the earlier section "Working with Memory Cards" for details.

✔ **Exposure Compensation button:** This button activates a feature that enables you to tweak exposure when working in three of your camera's autoexposure modes: programmed autoexposure, aperture-priority autoexposure, and shutter-priority autoexposure, represented by the letters P, S, and A on the camera Mode dial. Chapter 5 explains.

✔ **Release Mode button:** With this button, you can switch from normal shooting, where you take one picture with each press of the shutter button, to one of the camera's other modes, including Self-Timer mode. See the end of Chapter 2 for a look at all your options.

✔ **AF Mode/Reset button:** Press this button to access the Autofocus mode setting, which affects your camera's autofocus performance. Check out Chapter 6 for an explanation of the available modes.

See the little green dot above this button and the Exposure Compensation button? The dots are a reminder that pressing these two buttons simultaneously for more than two seconds restores the most critical picture-taking options to their default settings. See "Restoring default settings," at the end of this chapter, for more on this topic.

✔ **Mode dial:** With this dial, labeled in Figure 1-8, you set the camera to fully automatic, semi-automatic, or manual photography mode. The little pictographs, or icons, represent the Nikon Digital Vari-Program modes, which are automatic settings geared to specific types of photos: action shots, portraits, landscapes, and so on. Chapter 2 details the Digital Vari-Program and Auto modes; Chapter 5 explains the four others (P, S, A, and M).

Back-of-the-body controls

Traveling over the top of the camera to its back side, shown in Figure 1-9, you encounter the following controls:

✔ **Main command dial:** After you activate certain camera features, you rotate this dial, labeled in Figure 1-9, to select a specific setting. For example, to choose a White Balance setting, you press the WB button as you rotate the main command dial. (Chapter 6 explains white balancing.)

AE-L
AF-L

☛ **AE-L/AF-L button:** When you're taking pictures in some automatic modes, you can lock in your focus and exposure settings by pressing and holding this button. Chapter 5 explains why you may want to do so.

You can adjust the performance of the button as it relates to locking focus and exposure, too. Instructions in this book assume that you stick with the default setting, but if you want to explore your options, see Chapter 11.

Lv

☛ **Lv (Live View) button:** You press this button as the first step in recording a movie or taking advantage of Live View shooting, in which you can use the monitor to compose your shots. Chapter 4 introduces you to both Live View features.

☛ **Multi Selector/OK button:** This dual-natured control, labeled in Figure 1-9, 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. See the next section for help with using the camera menus.

Multi Selector

Main command dial

Focus Lock switch

Figure 1-9: You use the Multi Selector to navigate menus and access certain other camera options.

✔ **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 1-9, 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 6 for details on all this focusing stuff.

✔ **Info button:** In addition to viewing current camera settings on the Control panel, you can press this button to display the Shooting Information screen on the camera monitor. The screen not only gives you an easier-on-the-eyes view of the camera settings but also enables you to adjust some settings more quickly than by using the camera menus. See the upcoming section "Monitoring Shooting Settings" for details.

✔ **Delete button:** Sporting a trash can icon, the universal symbol for delete, this button enables you to erase pictures from your memory card. Chapter 4 has specifics.

✔ **Playback button:** Press this button to switch the camera into picture review mode. Chapter 4 details the features available to you in this mode.

✔ **Menu button:** Press this button to access menus of camera options. See the next section for details on navigating 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 6.

  • *Help:* You also can press this 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 4 for details.

✔ **ISO/Playback Zoom Out/Thumbnail button:** In picture-taking mode, pressing this button accesses the ISO setting, which controls the camera's sensitivity to light. Chapter 5 has details.

In playback mode, pressing the button enables you display multiple image thumbnails on the screen and to reduce the magnification of the currently displayed photo. See Chapter 4 for a complete rundown of picture playback options.

QUAL

✔ **Qual (Quality)/Playback 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 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 3.

WARNING!

As for the monitor, I show it in this book without its protective plastic cover. But when the camera isn't in use, it's a good idea to keep the cover on to protect the screen from scratches and other damage.

Front-left buttons

On the front-left side of the camera body, shown in Figure 1-10, you find the following controls:

✔ **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 just below the shutter button.) See Chapter 5 for all things flash related.

Bracketing button

Flash button

Microphone

Auto/Manual focus switch

Lens-release button

Figure 1-10: Press the Flash button to pop up the built-in flash.

BKT

- ✔ **BKT (Bracket) button:** This button is key to enabling automatic *bracketing,* a feature that simplifies the job of recording the same subject at various exposure, flash, and white balance settings. Chapter 5 details flash and exposure bracketing; Chapter 6 discusses white balancing.

- ✔ **Lens-release button:** You press this button before removing the lens from your camera. See the first part of this chapter for help with mounting and removing lenses.

- ✔ **AF/M (autofocus/manual) switch:** This switch comes into play if you use certain types of lenses. See the earlier section "Setting the focus mode (auto or manual)" for the short story; see Chapter 6 for help with autofocus.

Make note, too, of the tiny microphone perched just above the D90 label. Be careful not to obscure the microphone with your finger when you're recording a movie, a subject you can explore in Chapter 4.

Front-right controls

Wrapping up the list of external controls, the front-right side of the camera offers the following features. Figure 1-11 shows this part of the camera without a lens attached to make this foursome easier to see.

- ✔ **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 another button.

- ✔ **AF-assist lamp:** In dim lighting, a beam of light shoots out from this little 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 doing a lot of shooting at a party, wedding, or some event where the light from the lamp may be distracting, you can disable it through an option on the Custom Setting menu. Chapter 6 explains this and other autofocus features.

- ✔ **Function button:** By default, this button locks the flash exposure value when pressed. (See Chapter 5 for details on this flash feature.) But if you don't use that feature often, you can use the button to perform one of nine other operations. Chapter 11 provides the details on changing the button's purpose. (*Note:* All instructions in this book assume that you haven't changed the function, however.)

- ✔ **Depth-of-Field Preview button:** By pressing this button, you can see how different aperture settings affect depth of field, or the zone of sharp focus in your image. Chapter 5 explains aperture settings and Chapter 6 delves into depth of field.

Sub-command dial   AF-assist lamp

Function button   Depth-of-Field Preview button

Figure 1-11: You can assign the Function button to perform any of 10 operations.

Ordering from Camera Menus

MENU You access many of your camera's features via internal 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		D90 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	Built-in photo retouching options
🗐 🗒	Recent Settings/ My Menu	Your 20 most recently used menu options or your custom-designed menu

After you press the Menu button, you see on the camera monitor a screen similar to the one shown in Figure 1-12. Along the left side of the screen, you see the icons shown in Table 1-1, each representing one of the available menus. The icon that is highlighted or appears in color is the active menu; options on that menu automatically appear to the right of the column of icons. In the figure, the Shooting menu is active, for example.

Menu icons

SHOOTING MENU

Set Picture Control	⬛SD
Manage Picture Control	--
Image quality	FINE
Image size	⬛
White balance	AUTO
ISO sensitivity settings	🖳
Active D-Lighting	🖻AUTO
Color space	Adobe

Figure 1-12: Highlight a menu in the left column to display its contents.

I explain all the important menu options elsewhere in the book; for now, just familiarize yourself with the process of navigating menus and selecting options therein. The Multi Selector, shown in Figure 1-9, is the key to the game. You press the edges of the Multi Selector to navigate up, down, left, and right through the menus.

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.

Here's a bit more detail about the process of navigating menus:

- ✒ **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, as shown on the left in Figure 1-13, and press OK, the available Image Quality options appear, as shown on the right in the figure. 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 arrowhead instead of the OK symbol next to an option. That's your cue to press the Multi Selector right to display a submenu or other list of options.
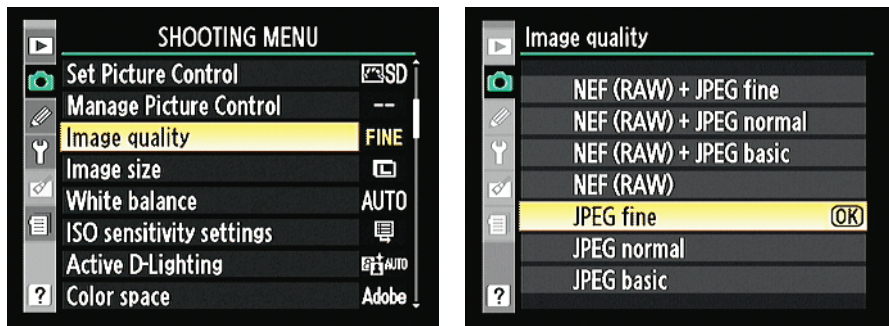

Figure 1-13: Select the option you prefer and press OK again to return to the active menu.

TIP

✔ **To quickly access your 20 most recent menu items or create a custom menu:** The sixth menu is actually two menus bundled into one. The Recent Settings menu, shown in Figure 1-14, provides a list of the 20 menu items you ordered most recently. So if you want to adjust those settings, you don't have to wade through all the other menus looking for them — just head to this menu instead.

Through the Choose Tab option at the bottom of the menu, you can switch to the My Menu screen. From there, you can create your own custom menu that contains your favorite options. Chapter 11 details the steps involved in making and using your menu. The My Menu screen also contains a Choose Tab option so that you can switch back to the Recent Settings menu at any time.

RECENT SETTINGS

ISO sensitivity settings	
NEF (RAW) processing	
D-Lighting	
d4 Viewfinder warning display	ON
d3 ISO display and adjustment	OFF
ä7 File number sequence	ON
Battery info	--
Choose tab	

Figure 1-14: The Recent Settings menu offers quick access to the last 20 menu options you selected.

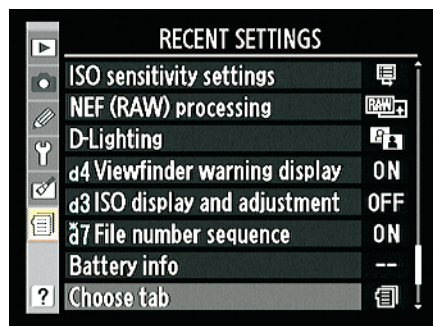The menu icon changes depending on which of these two functions is active; Table 1-1 shows both icons.

Monitoring Shooting Settings

Your D90 gives you the following three ways to monitor the most critical picture-taking settings.

✔ **Control panel:** The LCD panel on top of the camera offers an array of shooting data, as shown on the left in Figure 1-15. Remember that you can illuminate the panel temporarily by rotating the On/Off switch past the On position to the little light bulb marker, shown on the right in the figure, and then releasing the switch. (You also can turn on the illumination for a longer period of time; see the upcoming section "Customizing shooting and display options" for details.)

info

✔ **Shooting Info 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 to display the Shooting Information screen on the monitor.

As shown in Figure 1-16, this screen displays the current shooting settings at a size that's a little easier on the eyes. Depending on the ambient light, the display either shows black text on a light background, as shown here, or white on black. See the section "Customizing shooting and display options" for information on how to adjust the display if you prefer one color scheme over the other.
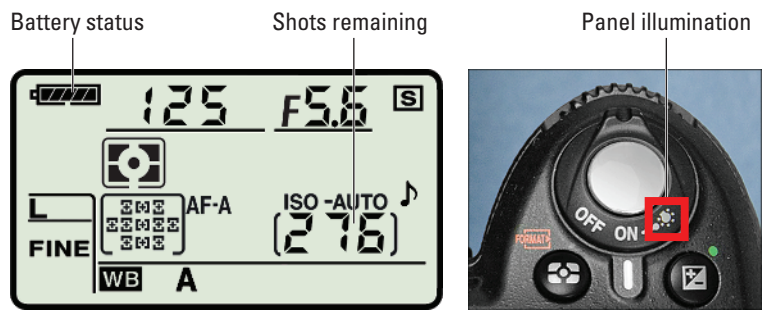
Battery status   Shots remaining   Panel illumination

Figure 1-15: Rotate the On/Off switch to the light bulb position to illuminate the Control panel.

Battery status   Shots remaining
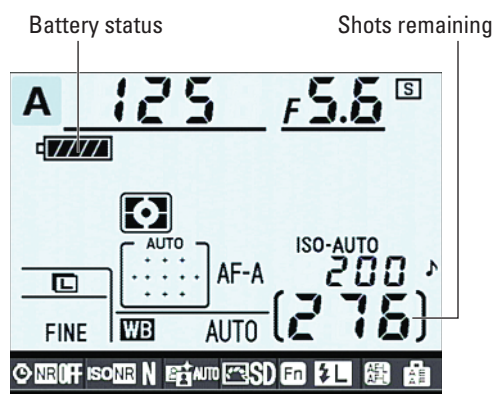
Figure 1-16: Press the Info button to view picture-taking settings on the monitor.

REMEMBER

By pressing the Info button again, you switch the display to Quick Settings mode. In this mode, you can access additional camera settings, represented by the icons at the bottom of the screen. Press the Multi Selector left or right to highlight the icon for the setting you want to adjust — a little label appears to tell you what each icon means, as shown in Figure 1-17. Press OK to jump directly to the menu where you can change the setting.

✔ **Viewfinder:** You can view some camera settings in the viewfinder as well. For example, the data in Figure 1-18 shows the current shutter speed, f-stop, ISO setting, and number of shots remaining. The exact viewfinder information that appears depends on what action you're currently undertaking.

Figure 1-17: Press the Info button twice to access more options via the Quick Settings display.

Figure 1-18: You also can view some camera information at the bottom of the viewfinder.

If what you see in Figures 1-15 through 1-18 looks like a big confusing mess, don't worry. Many of the settings relate to options that won't mean anything to you until you make your way through later chapters and explore the advanced exposure modes. But do make note of the following two key points of data that are helpful even when you shoot in the fully automatic modes:

✔ **Battery status indicator:** A full battery icon like the one in Figures 1-15 and 1-16 shows that the battery is fully charged; if the icon appears empty, go look for your battery charger.

✔ **Pictures remaining:** Labeled in Figures 1-15 and 1-16 and also visible in the viewfinder in Figure 1-18, this value (276, in the figures) indicates how many additional pictures you can store on the current memory card. If the number exceeds 999, the value is presented a little differently. The initial K appears above the value to indicate that the first value represents the picture count in thousands. For example, 1.0 K means that you can store 1,000 more pictures (*K* being a universally accepted symbol indicating 1,000 units). The number is then rounded down to the nearest hundred. So if the card has room for, say, 1,230 more pictures, the value reads as 1.2K.
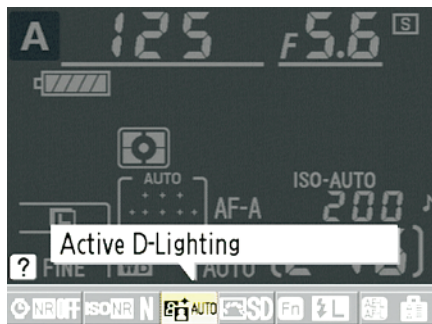
Asking Your Camera for Help

TIP

Programmed into your camera's internal software is a handy information help line — a great tool for times when you forget the purpose of a particular feature or would like a little picture-taking guidance. This digital 411 offers assistance in several ways:

WB
?/○┑

✔ If you see a small question mark in the lower-left corner of a menu, press and hold the WB button to display information about the current shooting mode or selected menu option. For example, Figure 1-19 shows the Help screen associated with the Picture Control setting. If you need to scroll the screen to view all the Help text, keep the button depressed and scroll by using the Multi Selector. Release the button to close the information screen.

? Set Picture Control

Choose how new photos will be processed according to the type of scene or your creative intent. Each Picture Control can be fine-tuned for more precise control over such settings as contrast and saturation.
Standard: Standard processing for a balanced effect.

Figure 1-19: Press and hold the WB button to display onscreen help.

✔ Little tip flags appear on the Shooting Information display when you access certain options. (Refer to Figure 1-17.) If you don't want to see the tips, you can turn them off via the Custom Setting menu, as explained later in this chapter.

Reviewing Basic Setup Options

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. The rest of this chapter details options related to initial camera setup, such as setting the date and time, adjusting monitor brightness, and the like.

Cruising the Setup menu

Start your camera customization by opening the Setup menu. It's the menu marked with the little wrench icon, as shown on the left in Figure 1-20. Scroll down the menu using the Multi Selector to display the second screen of the menu, shown on the right.

Figure 1-20: Visit the Setup menu to start customizing your camera.

Here's a quick rundown of each menu item:

✔ **Format Memory Card:** You can use this command to format your memory card, which wipes all data off the card and ensures that it's properly set up to record pictures. Or, for quicker results, you can use the two-button formatting process outlined in the earlier section, "Working with Memory Cards."

✔ **LCD Brightness:** This option enables you to make the camera monitor brighter or darker. If you take this step, keep in mind that what you see on the display may not be an accurate rendition of the actual exposure of your image. Crank up the monitor brightness, for example, and an underexposed photo may look just fine. So I recommend that you keep the brightness at the default setting (0). As an alternative, you can display the *histogram,* an exposure guide that I explain in Chapter 4, when reviewing your images.

✔ **Clean Image Sensor:** Your D90 is set up at the factory to perform an internal cleaning routine each time you turn the camera on or off. This cleaning system is designed to keep the image sensor — that's the part of the camera that actually captures the image — free of dust and dirt.

By choosing the Clean Image Sensor command, you can perform a cleaning at any time, however. Just choose the command, press OK, select Clean Now, and press OK again. You also can tell the camera to perform automatic cleaning 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 cleaning the camera interior — 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. And if you've used mirror lock-up on a film

camera to avoid camera shake when shooting long-exposure images, note that in this case, the lock-up feature is provided for cleaning purposes only. You can't take pictures on the D90 while the mirror lock-up is engaged.

✔ **Video Mode:** This option is related to viewing your images on a television, a topic I cover in Chapter 9. Select NTSC if you live in North America or other countries that adhere to the NTSC video standard; select PAL for playback in areas that follow that code of video conduct.

✔ **HDMI:** See Chapter 9 for information about this setting, which relates to options involved with connecting your camera to an HDMI device.

✔ **World Time:** When you turn on your camera for the very first time, it automatically 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.

Also, if you see the message "Clock" blinking in the Control panel, 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:** You're asked to specify a language along with the date and time when you fire up your camera for the first time. Your choice determines the language of text on the camera monitor. Screens in this book display the English language, but I find it entertaining on occasion to hand my camera to a friend after changing the language to, say, Swedish. I'm a real yokester, yah?

✔ **Image Comment:** See Chapter 11 to find out how to use this feature, which enables you to add text comments into a picture file. You then can read that information in Nikon ViewNX, the software that shipped with your camera. (The text doesn't actually appear on the image itself.)

✔ **Auto Image Rotation:** Keep this option set at the default setting (On) so that the image is automatically rotated to the correct orientation (horizontal or vertical) in playback mode. The orientation is recorded as part of the image file, too, so the auto-rotating also occurs when you browse your image thumbnails in ViewNX. *Note:* The rotation data may not be accurate for pictures that you take with the camera pointing directly up or down. See Chapter 4 for more about picture playback.

✔ **Image Dust Off Ref Photo:** This specialty 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.

✔ **Battery Info:** Select this option to view detailed information about your battery, as shown in Figure 1-21. The Bat Meter data shows you the current power remaining as a percentage value, and the Pic Meter 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 gets toward the right end

Figure 1-21: You can check the health of your battery via the Battery Info menu item.

of the little meter, marked with the number 4, it's time to buy a new battery.

✔ **GPS:** If you purchase the optional Nikon GPS tracking unit for your camera, this menu item holds settings related to its operation. This book doesn't cover this accessory, but the manual that comes with the unit explains everything you need to know about using it.

✔ **Eye-Fi upload:** Your camera can work with some Eye-Fi memory cards, which enable you to send your pictures over a wireless network to your computer. If you do put one of the cards in the camera, this menu option contains settings for making the transfer.

Unfortunately, Eye-Fi cards are significantly more expensive than regular cards — about $80 for a 2MB card. But if you do use the cards and you find yourself in a situation where wireless devices are not allowed, choose Disable from the Eye-Fi upload menu to shut off the signal. For the whole story on Eye-Fi, including help with setting up your wireless transfers, visit the company's Web site 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 three separate firmware items, A, B, and L. At the time this book was written, all three items were in version 1.0.0.

Keeping your camera firmware up-to-date is important, so visit the Nikon Web site (www.nikon.com) 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 screen shown in Figure 1-22. Here you can access six submenus that carry the labels A through F. Each of the submenus holds clusters of options related to a specific aspect of the camera's operation. Highlight a submenu and press OK to get to those actions, as shown in Figure 1-23.
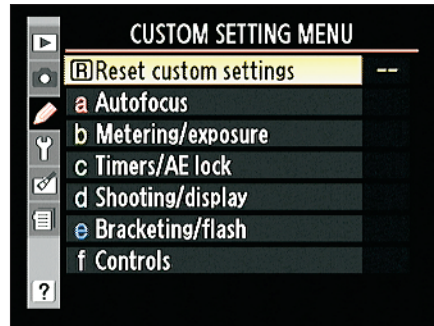

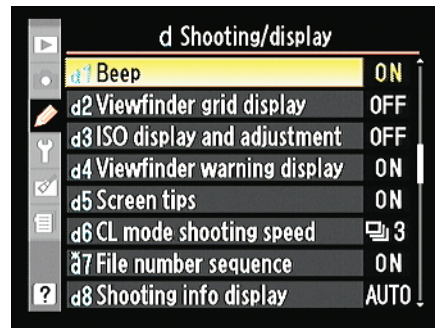**Figure 1-22:** The Custom Setting menu contains six submenus (A through F).

Figure 1-23: Highlight a submenu and press OK again to access the available settings.

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, we've all got enough numbers to remember, don't you think?)

With that clarification out of the way, the following sections describe only the customization options related to basic camera operations. Turn to the index for help locating information about other Custom Setting options.

Adjusting automatic monitor shutdown

To help save battery power, your camera automatically shuts off the monitor after a period of inactivity. You can specify how long you want the camera to wait before taking that step. Open the Custom Setting menu, choose Timers/AE Lock, and press OK. Then highlight Monitor Off Delay, as shown on the left in Figure 1-24, and press OK to display the second screen in the figure, where you can specify the auto-off timing for picture playback, menu displays, and the Shooting Information 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. Chapter 4 talks more about viewing your photos.
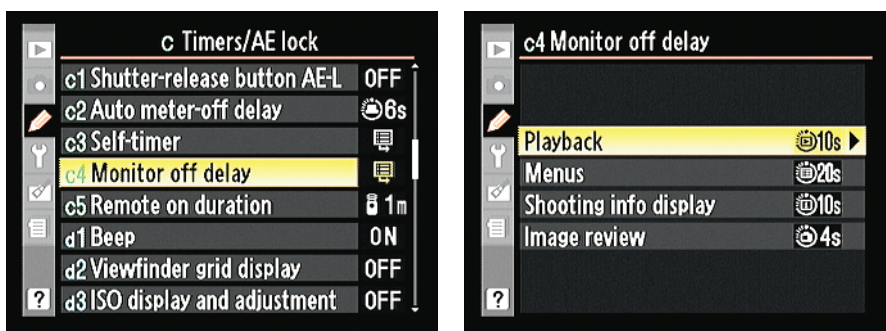

Figure 1-24: Visit the Timers/AE Lock submenu to adjust the timing of automatic monitor shut-off.

Customizing shooting and display options

Visit the Shooting/Display submenu (refer to Figure 1-23) to tweak various aspects of how the camera communicates with you, as well as to control a couple of basic shooting functions. Check out the following options:

- ✔ **Beep:** By default, your camera beeps at you after certain operations, such as after it sets focus when you shoot in autofocus mode. If you're doing top-secret surveillance work and need the camera to hush up, set this option to Off. On the Shooting Info and Control panel displays, a little musical note icon appears when the beep is enabled. Turn the beep off, and the icon appears in a circle with a slash through it.

- ✔ **Viewfinder grid display:** You can display tiny 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 — for example, to make sure that the horizon is level in a landscape.

✔ **ISO Display and Adjustment:** Normally, the frame count area of the Control panel and viewfinder indicate how many shots will fit in the remaining space on your memory card. But if you prefer, you can use this display space to instead show the current ISO setting. See Chapter 5 for the complete story on this option.

✔ **Viewfinder warning display:** You can ask the camera to display the following extra symbols in the viewfinder, as illustrated in Figure 1-25:

Low battery

Black-and-white | No memory card

Figure 1-25: You can display a low-battery warning in the viewfinder.

• *Black-and-white:* Turn this option on to display a B/W symbol when you enable the Monochrome (black-and-white) Picture Control. You can read about Picture Controls and other color options in Chapter 6.

• *Low battery:* If you turn on this option, a picture of a nearly empty battery appears when your camera battery is about to poop out.

• *No memory card:* This warning, when enabled, lets you know that you forgot to put a memory card in the camera. (You can also simply take a quick look at frames-remaining area of the viewfinder or Control panel; it displays the symbol [-E-] when the memory card slot is empty.)
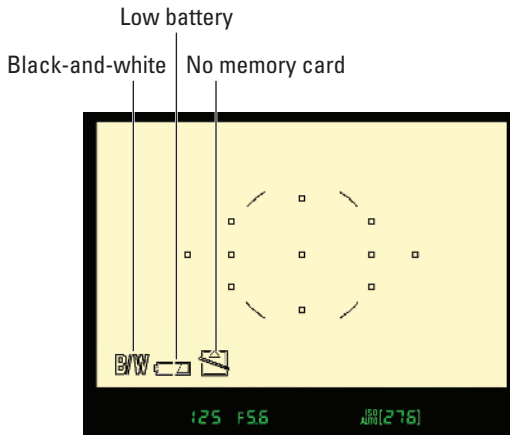
✔ **Screen Tips:** If you don't want to see the little help labels that appear when you select certain options in the Shooting Information display, turn this option off. For a look at what I'm talking about, revisit Figure 1-17.

✔ **File Number Sequence:** This option 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 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).

Needless to say, 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 set the option to On. 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 for your next 9999 images.

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.

✔ **Shooting 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 highlight Manual, as shown on the left in Figure 1-26. Press OK to display the screen shown on the right, and then select either Dark on Light (for dark lettering on a light background) or Light on Dark (for light lettering on a dark background). Press OK again to make the change. If you want to go back to the default setting, select Auto from the first screen (shown on the left in the figure).

In this book, I show the Shooting 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). See Chapter 5 for more about the exposure meters. Be aware that this option consumes more battery power than simply using the On/Off switch to light up the panel when you really need it.
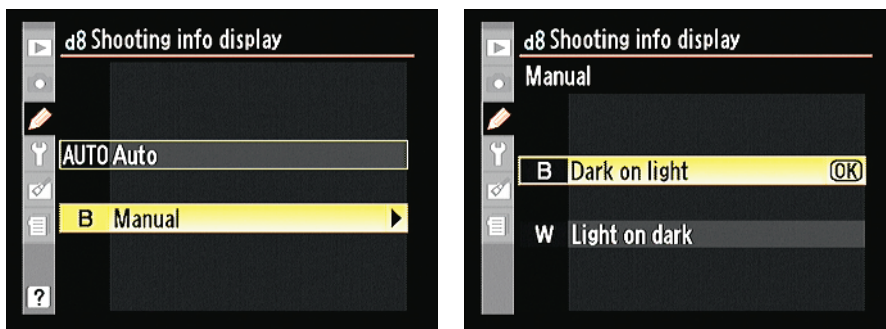

Figure 1-26: This book uses the Dark on Light option when showing the Shooting Information display.

✔ **Exposure Delay Mode:** If you turn this option on, the camera waits to record your picture until about one second after you press and release the shutter button. What's the point? Well, a tiny mirror inside the camera moves every time you press the shutter button to take a picture. For shots that require a long exposure time, there is a slight chance that the vibration caused by that mirror movement will blur the picture. So by delaying the actual image capture a little, the odds of that mirror-related blur are lessened. For normal shooting, leave this one at its default setting, Off. And check out Chapter 2 for information on using the camera's self-timer function as an alternative option when you want to delay the shutter release.

✔ **Flash warning:** When you shoot in the advanced exposure modes (P, S, A, and M), the camera displays a blinking flash symbol (a little lightning bolt) in the viewfinder if it thinks you need to use the flash. If this warning annoys you, set this option to Off.

✔ **MB-D80 Battery Type:** You don't need to worry about this control unless you buy the optional MB-D80 battery adapter that enables you to power your camera with AA batteries. If you go that route, select this option to specify which type of AAs you're using. And be sure to read the manual for a list of what AA batteries are acceptable, as well as some other details about using them.

Preventing shooting without a memory card

If you explore the Controls submenu of the Custom Setting menu, you find an option called No Memory Card. Keep this one set at the default (Release Locked), which disables the shutter button when no memory card is in the camera. If you set it to Enable Release, 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.)

The other options on this menu enable you to change the function of various buttons as well as the command and sub-command dials. Chapter 11 provides details, but while you're working with this book, leave all these options at their default settings so that things operate as I describe.

Restoring default settings

You can quickly reset all the Custom Setting menu options to their original, factory default settings by choosing the Reset command at the top of the menu. (Refer to Figure 1-22). Press OK to display a confirmation screen that asks whether you really want to go forward with the reset; highlight Yes and press OK again.

To restore critical picture-taking settings *without* affecting options on the Custom Setting menu, you can instead use the so-called *two-button reset* method: Press and hold the Exposure Compensation button and the AF button simultaneously for longer than two seconds. (The little green dots near the buttons are a reminder of this function.)

One fly in the ointment to remember — and it's a pretty big, ugly, hairy fly: After you restore the camera defaults, be sure that you also revisit the File Number Sequence option on the Shooting/Display submenu of the Custom Settings menu. The default setting, Off, is Not a Good Thing; turn the option On to avoid file-number confusion. See the earlier section "Customizing shooting and display options" for details. (You don't have to take this step if you use the two-button reset method of restoring defaults.)