Exploring the Nikon D40/D40x

CHAPTER 1

In This Chapter

If you found the Quick Tour of your Nikon D40/D40x enlightening, you're probably ready to dive into a deeper exploration of the features of your camera, so you can master all the functions of the various buttons, dials, wheels, switches, and levers that dot the surface. There are a lot of them, but having so many dedicated controls helps you work faster. You can access the most-used functions of the D40/D40x by pressing a button and turning a command dial.

You can adjust other features through the D40/D40x's LCD display and quick-access menu interface. However, this chapter deals only with the physical controls on the camera body itself. I explain how to use the basic features, such as metering and autofocus, in Chapter 2. In Chapter 3, I provide a complete set-up guide with an explanation of the camera's thicket of menus.

Once you've taken the time to learn the functions of the D40/D40x's controls, the camera is definitely much faster to use. Unlike the official manual that comes with the D40 and D40x, this field guide provides individual full-color photographs of the camera from various views so you can quickly identify a control or component you want to locate. You should find this approach much friendlier than the original manual's tiny black-and-white line drawings, each bristling with numbered callouts that you must cross-reference against a lengthy list with two or three dozen labels.

Up Front

Figure 1.1 shows the Nikon D40/D40x from the front view. To hold your camera steady and keep all the major controls at your fingertips, wrap your right hand around the handgrip and place your left hand underneath, supporting the underside of the lens with your thumb and index finger on the zoom ring.

By using this grip, you can reach the shutter release button with the index finger of your right hand and quickly turn the camera on or off with the same finger. While you keep the camera steady with your left hand (especially helpful under dim illumination for slower shutter speeds), your fingers are free to manipulate controls on that side of the D40/D40x, including the zoom ring, the focus ring (if you're adjusting focus manually), the electronic flash flip-up button, and the Function (Fn) button, which serves as a short-cut to features you specify (see Chapter 3). I explain all these controls later in this chapter. Here you see two views of the front of the camera, from left and right angles (as seen from the photographer's position).

- **Autofocus assist illuminator/self-timer lamp/red-eye reduction lamp.** This front-mounted white LED serves three different functions. When available illumination is dim, the lamp can flash to provide enough light to increase the contrast so the automatic focus mechanism can function. (You can disable this feature when it might prove obtrusive or distracting.) In self-timer mode, the lamp blinks during the delay period, serving as a countdown to the actual exposure. When you're using flash, the front panel lamp can issue a burst of light just before the exposure, which can help contract the pupils in your subjects' eyes and reduce the red-eye effect.

1.1 A front view of the Nikon D40/D40x

1.2 The right front side of the Nikon D40/D40x

- **Shutter release.** Partially depress this button to lock exposure and focus settings. Press the button all the way down to take the picture. Tapping the shutter release when the camera has turned off the auto exposure and autofocus mechanisms to conserve battery power reactivates both. When a review image appears on the LCD, tapping this button removes the image from the display and reactivates the auto exposure and autofocus mechanisms.
- **Infrared receiver.** This dark red window receives an infrared signal from the optional ML-L3 remote control. Note that the receiver's position on the front panel of the D40/D40x means that you can't easily use it when standing behind the camera. You need to move to one side, stand in front of the camera, or reach over the camera to activate it.
- **On-Off switch.** Rotate this switch one notch to turn the camera on.
- **Memory card door.** Slide this door towards the back of the camera to reveal the camera's Secure Digital (SD) memory card.

- **Handgrip.** The handgrip serves as a comfortable handle for the D40/D40x that you can clasp with your fingers to support the camera. It also serves as the storage receptacle for the camera's battery.

The right side of the D40/D40x has a complement of controls, as you can see in figure 1.3. These include

- **Flash mode button.** Press this button to pop up the built-in electronic flash (see figure 1.4). Hold down the button while rotating the command dial on the back of the camera to change flash modes, such as Auto Flash or Red-Eye Reduction mode (see Chapter 6 for a full explanation of options). Hold down the Flash Compensation button (located southeast of the shutter release) while holding down this button to add or subtract from the flash exposure to make your picture lighter or darker.
- **Function/Self-Timer button.** You can define the feature activated by this button (learn how in Chapter 3) so you can quickly access a feature of your choice, say, to change white balance or ISO sensitivity. The Fn button defaults to the self-timer function, but you can change it (as explained in Chapter 3) to another use.
- **Lens release button.** Hold down this button while rotating the lens to remove the lens from the camera.

1.3 The left front side of the Nikon D40/D40x.

1.4 Pressing the Flash mode button pops up the built-in electronic flash, ready for use.

Sides and Bottom

The sides and bottom of the D40/D40x have only a few controls, compartments, and connectors.

Left side

On the left side of the camera you can see a rubber cover that protects the D40/D40x's primary external connectors (see figure 1.5). Underneath the top cover is an AV plug you can use to link the D40/D40x to an external monitor for viewing pictures or menus. In the middle is a reset switch button that you can press to reset all settings in the camera (including the clock). At the bottom is a port that accepts a USB cable for transferring pictures directly from the camera to your computer and also allows you to control the camera's functions by using the Nikon Camera Control Pro software (see figure 1.6).

1.5 Two connector ports and a reset button hide beneath this rubber cover.

1.6 Your USB and video devices plug into these connectors.

Cross-Reference *For more instructions on connecting to a computer and transferring images, see Chapter 8.*

Right side

The right side of the camera has only a single door that slides back toward you and then swings open to reveal a slot for the Secure Digital (SD) memory card (see figure 1.7). Push down on the card to release the retaining catch, and it pops out for easy removal.

1.7 A memory card fits into the slot on the side of the camera.

Bottom

On the bottom of the Nikon D40/D40x, there is a tripod socket, and a flip-open door accepts a single EN-EL9 rechargeable lithium ion battery, as shown in figure 1.8. There is also a fold-down door to allow you to plug in the optional EH-5 AC adapter and EP-5 AC adapter connector.

1.8 A compartment in the bottom of the D40/D40x accepts a rechargeable battery and an optional AC adapter.

On the Lens

The lenses you use with your Nikon D40/D40x each have their own set of controls. Figure 1.9 shows two lenses: the very basic 18-55mm f/3.5-5.6G ED II AF-S DX Zoom-Nikkor and the more upscale 18-200mm f/3.5-5.6G ED-IF AF-S VR DX Zoom-Nikkor vibration reduction lens. Not all lenses have all the possible controls.

1.9 The controls found on the 18-55mm kit lens (left) and 18-200mm vibration reduction lens (right).

In fact, I'm going to have to show you a mocked-up composite lens, shown in figure 1.10, to squeeze the extra features into a single example.

By comparing the three lenses shown in figures 1.9 and 1.10, you can see that the controls may be in different locations with different lenses and can differ in size and operation. The key components shown in figure 1.9 are

- **Lens hood bayonet mount.** You use this lens hood bayonet mount, shown on the 18–200mm zoom for lens-specific hoods, with lenses that don't use hoods that screw into the filter ring.
- **Filter thread.** Most lenses have a thread on the front that you can use to attach filters and other accessories.
- **Focus ring.** Rotate this ring to manually focus or fine-tune focus when you set the lens or camera body focus mode switch to M. In addition, if the lens has an autofocus/manual override position (M/A-M), you can adjust focus manually after the camera has focused automatically.
- **Automatic/Manual focus switch.** Changing from automatic to manual focus with the D40 or D40x is done either with an Auto/Manual focus switch on the lens, or by using a menu choice on the camera. There is no automatic/manual switch on the camera body itself. Some lenses have just a simple M-A (Manual/Automatic) switch (like the 18-55mm), while others have an M/A-M switch that indicates the lens can be focused automatically with manual adjustment (M/A) or manually (M) as indicated in 1.9.

You may notice that the 18-55mm kit lens has a much narrower focus ring than the 18-200mm lens, that the entire front element of the lens rotates during focus, and that the lens itself increases in length as you focus closer. More expensive lenses have non-rotating front elements and internal focus *so the lens doesn't change in length as it focuses on nearer subjects.*

- **Distance scale.** This scale (shown on the 18-200mm lens, but not the 18-55 kit lens) moves in unison with the lens's focus mechanism and shows approximately the distance at which the lens has been focused. It's a useful indicator for double-checking autofocus, and for roughly setting manual focus.
- **Zoom ring and focal length scale.** You rotate the zoom ring to change the zoom setting. The focal length scale markings show the focal length.
- **Mounting index.** Match this white dot with the dot on the camera body (located at roughly 2 o'clock when you're looking at the front of the camera) to properly mount the lens.
- **Vibration Reduction switches.** Vibration Reduction (VR) lenses have switches that you can use to turn the vibration reduction feature on or off, or to toggle between Normal and Active mode (which makes it possible to use VR even when panning the camera).

Figure 1.10 shows a single focal length, or *prime* lens; as I explained earlier, this particular photo is a composite of more than one lens to show several features at the same time. Figure 1.10 displays some features that are not available on either of the two lenses in figure 1.9, but which you might find on some other lenses. As you might expect, this non-zooming lens doesn't have a zoom ring or zoom scale. But it does include the following:

1.10 This macro lens is an example of a prime (non-zoom) lens.

- **Limit switch.** When you use lenses that have an extensive focus range, you can see that some have a special switch that limits the range the autofocus system uses, locking out either distant subjects (when you're shooting close-up photos) or extreme macro focus distances (when you're taking photos of non-macro subjects). The limit switch can speed up focusing considerably by reducing the amount of seeking that the lens does in looking for the correct focus point.
- **Aperture ring.** Nikon lenses with a G suffix in their name (such as the 18-55mm f/3.5-5.6G ED II AF-S DX Zoom-Nikkor kit lens and 18-200mm f/3.5-5.6 G ED-IF AF-S VR DX Zoom-Nikkor) lack a manual aperture ring; therefore, you can only use them with cameras that are able to set the f-stop electronically from the camera body (such as all recent Nikon film and digital cameras). Lenses that retain the aperture ring, such as the lens shown in figure 1.10, have a D suffix in their names.
- **Depth-of-field indicator.** Some lenses have markings that show the approximate range of sharpness on the distance scale. In this case, that range is indicated only for f/32.
- **Infrared focus adjustment.** Infrared illumination doesn't focus at the same point as visible light. You can use the dot that appears on a few lenses to change the focus point that the lens selects or to visually focus on to the appropriate point for infrared light.

- **Aperture lock.** If you want to use the D40/D40x's automatic exposure system with a D-series lens, you must set the aperture ring to the smallest f-stop (in this case f/32), and lock it in that position by using the aperture lock switch. You need to unlock the aperture only if you want to use the lens with an older camera that can't set the f-stop electronically, or you are using the lens with an accessory, like an extension ring, that doesn't allow coupling with the autoexposure system.

Most automatic extension rings retain full automatic exposure and focus capabilities, except when the effective maximum aperture of the lens is smaller than f/5.6. The D40/D40x needs at least that much light to operate.

On Top

The top panel of the D40/D40x has a cluster of controls. They include

- **Mode dial.** You turn this knurled wheel to change among the DVP/Scene modes and Auto, Auto (Flash Off), Program, Shutter Priority, Aperture Priority, and Manual modes.
- **Focal plane indicator.** A few very specialized types of close-up photography require knowing precisely the plane of the camera's sensor, and the indicator, which may be hard to see, shows that plane (but not the actual location of the sensor itself).
- **Accessory shoe.** You can attach an external electronic flash — also known as a Speedlight, such as the Nikon SB-400, SB-600, or SB-800— to this slide-in accessory shoe (normally covered with a piece of protective plastic), which includes multiple electrical contacts that enable two-way communication between your D40/D40x and a dedicated Speedlight (designed to work directly with compatible cameras). The communication can include exposure, distance, zoom setting, and color temperature information. You can attach other accessories as well, including radio control devices, levels, and add-on viewfinders (useful when shooting blind because an infrared filter on your lens is blocking visible light).
- **Shooting Information/Reset (#1) .** Press this button, marked with an Info indicator, to show the current shooting information status on the LCD. Hold down this button and the Settings/Zoom In button on the back of the camera (which has a matching green dot) to activate a reset of the camera's settings to factory default values.
- **Exposure Compensation/ Aperture.** Hold down this button while in Program, Shutter Priority, or Aperture Priority exposure modes and spin the command dial to add or subtract exposure from the basic setting that the auto exposure system calculates. Holding down this button in Manual mode changes the aperture. Hold down the Flash multi-button at the same time to change flash exposure compensation. Hold

1.11 Key components on the top panel of the D40/D40x

down the Aperture button when in Manual exposure mode to adjust aperture with the command dial. (When the button is not pressed, the command dial adjusts shutter speed in Manual mode.)

- **On/Off switch.** Rotate this switch one notch clockwise to turn the D40/D40x on; turn it in the reverse direction to shut it off.
- **Shutter release.** Partially depress this button to lock exposure and focus settings. Press it all the way down to take the picture. Tapping the shutter release when the camera has turned off the auto exposure and autofocus mechanisms reactivates both. When the LCD displays a review image, tapping this button removes the image from the display and reactivates the auto exposure and autofocus mechanisms.

On the Back

The back panel of the Nikon D40 and D40x contains an array of controls, many of which do double duty. Figure 1.12 shows the back of the D40/D40x and the control center.

Upper half

The upper half of the back panel (shown in figure 1.13) has one button, a slider, and a dial. Here's what they do:

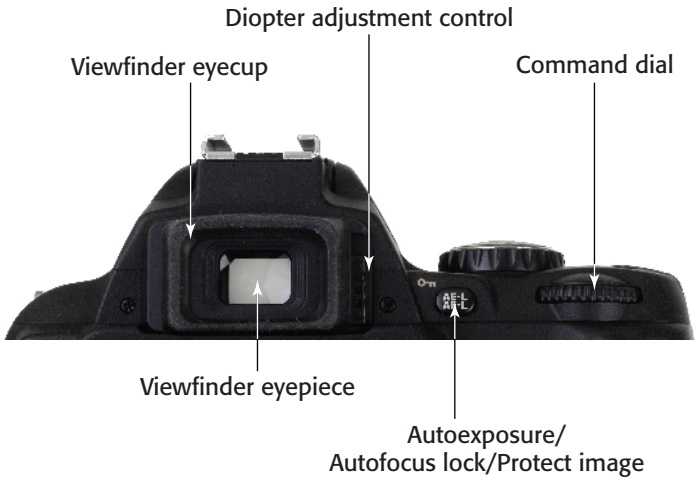
- **Viewfinder eyepiece and eyecup.** Peer through the viewfinder window to frame your image. The rubber eyecup shields the viewfinder from extraneous light, much like a lens hood, which is helpful because light entering the viewfinder from the rear can affect the exposure meter. The eyecup is removable and you can replace it with a cap to block that extra light when you use the camera on a tripod.
- **Diopter adjustment control.** Move this sliding control up or down to adjust the viewfinder's diopter correction for your eyesight if you wear glasses and would like to use the viewfinder without them, or need additional correction when using the viewfinder with your glasses.
- **Auto exposure/Autofocus lock/Protect image.** This button locks exposure, focus, or both, until you release the button or press the button again. A menu option, described in Chapter 3, enables you to specify the behavior of this button. In Playback mode, this button marks an image to protect it from accidental erasure.
- **Command dial.** Spin this dial to change settings, such as shutter speed, according to what control button you're pressed at the same time.

Lower half

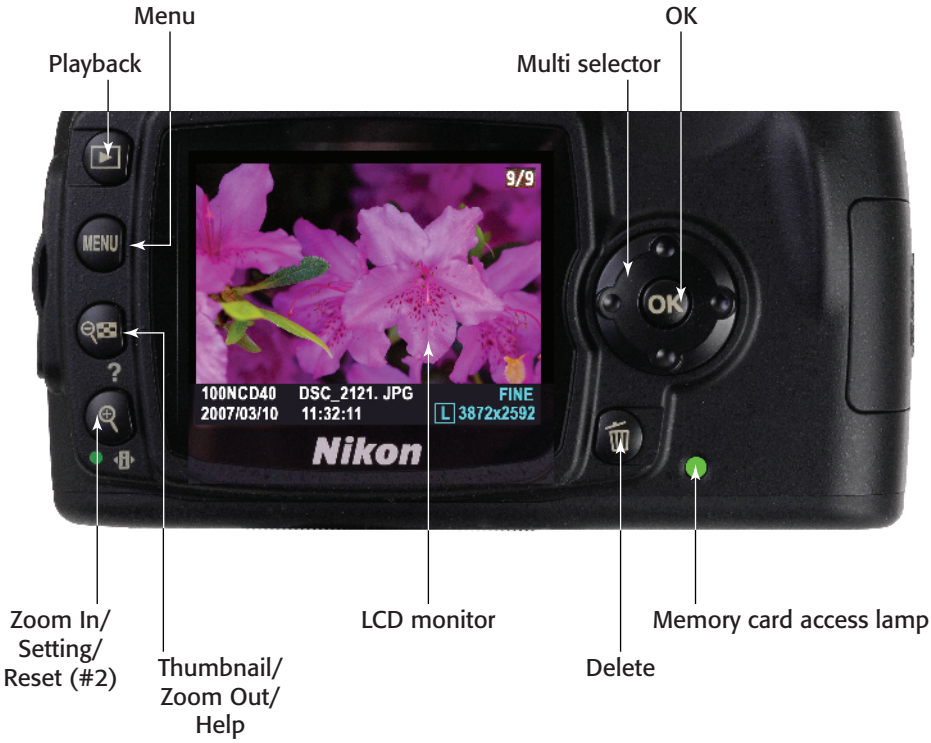
The most-used buttons on the D40/D40x are located on the lower half of the camera. Most of them have more than one function, depending on the D40/D40x's current mode. If you're shooting pictures, a button may have one function, but when you're reviewing images you've already taken, the button may have another. The buttons on the left side of the camera include

- **Playback.** Press this button once to display the most recent photo taken. Press it again, or tap the shutter release button, to remove the image from the screen and exit Playback mode.
- **Menu.** Press this button to access the five levels of the Nikon D40/D40x's menus.
- **Thumbnail/Zoom Out/Help.** In Playback mode, when viewing a full-screen image, press the button once to change to a four-thumbnail display, and again to view nine thumbnails. To return to full-screen mode, press OK. When an image is zoomed in, press this button to zoom back out. When a menu is displayed, pressing this button activates a help screen. The Help button is a great aid when you're faced with a menu and don't know what to do next. When pressed, it brings up a brief text screen that tells you exactly what a menu or selection will do.

1.12 The back panel of the D40/D40x



1.13 Key components on the upper half of the back panel of the D40/D40x



1.14 Key components on the lower half of the back panel of the D40/D40x

From time to time the Question Mark icon on the shooting information screen will flash. Press the Help button to receive some advice on how to fix the problem (such as "Subject is too dark").

- **Zoom In/Setting/Reset (#2).** In Playback mode, press this button repeatedly to zoom in several magnifications. (Use the Multi selector to move the zoomed area around in the frame.) When in a shooting mode, press this button to switch the LCD menu to setting change mode. Press this button while you hold down the Setting button on top of the camera to reset the D40 or D40x to the default settings.

In the center and right side of the lower half of the Nikon D40/D40x are the LCD monitor and several more key components:

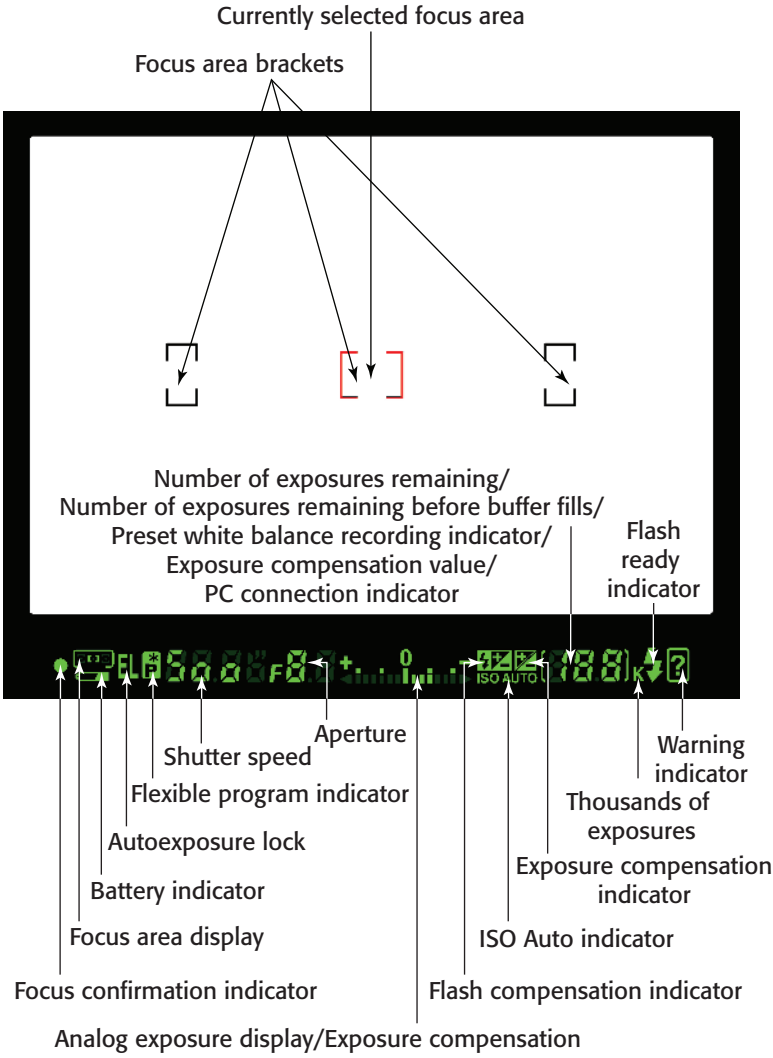
- **LCD monitor.** This color LCD shows your images for review, shows the menus as you navigate through them, and has the current shooting status and settings.
- **Multi selector.** Press this four-way cursor button to navigate through menus, scroll through images as you review them, and change the amount of information about each image that appears on the LCD screen during picture review.

- **OK.** Use this button to accept setting and menu selections or to confirm choices.
- **Delete.** When an image appears on the LCD display, press the Delete button if you'd like to discard the image. A prompt shows up on the screen inviting you to press the Delete button again to erase the file, or the Playback button to cancel the operation.
- **Memory card access lamp.** This LED blinks when an image is being written to the SD memory card, and when the camera is turned on or off.

Viewfinder Display

The D40/D40x offers a great deal of information in the viewfinder. Not all of these indicators are visible at once. Here's a list of each of them, and the information they provide:

- **Currently selected focus area.** Shows the active focus zone.
- **Focus area brackets.** Displays the available focus zones.
- **Focus confirmation indicator.** Illuminates when an image is focused correctly.
- **Focus area display.** Shows the current focus area selection mode.
- **Auto exposure lock.** Indicates that exposure has been locked.
- **Battery indicator.** Displays the current power level of the battery.
- **Flexible program indicator.** Shows that you've adjusted the camera's calculated exposure to a different combination of shutter speed and aperture.
- **Shutter speed.** Displays the selected shutter speed.
- **Aperture.** Displays the selected lens opening.
- **Analog exposure display/Exposure compensation.** Shows the amount of over- or underexposure and exposure compensation (when the Exposure compensation indicator is visible).
- **Exposure compensation indicator.** Appears when you dial in exposure compensation.
- **Flash compensation indicator.** Appears when flash exposure compensation has been specified.
- **ISO Auto indicator.** Shows that ISO is being set automatically.
- **Number of exposures remaining/Other functions.** Also shows number of shots remaining before the buffer is filled, white balance present status, exposure compensation values, and the PC/USB connection status.
- **Flash ready indicator.** Shows when you can use electronic flash for the next shot.
- **Thousands of exposures.** Appears when the remaining exposures exceed 1,000.
- **Warning indicator.** Illuminates when an error condition exists.



1.15 Viewfinder readouts and indicators

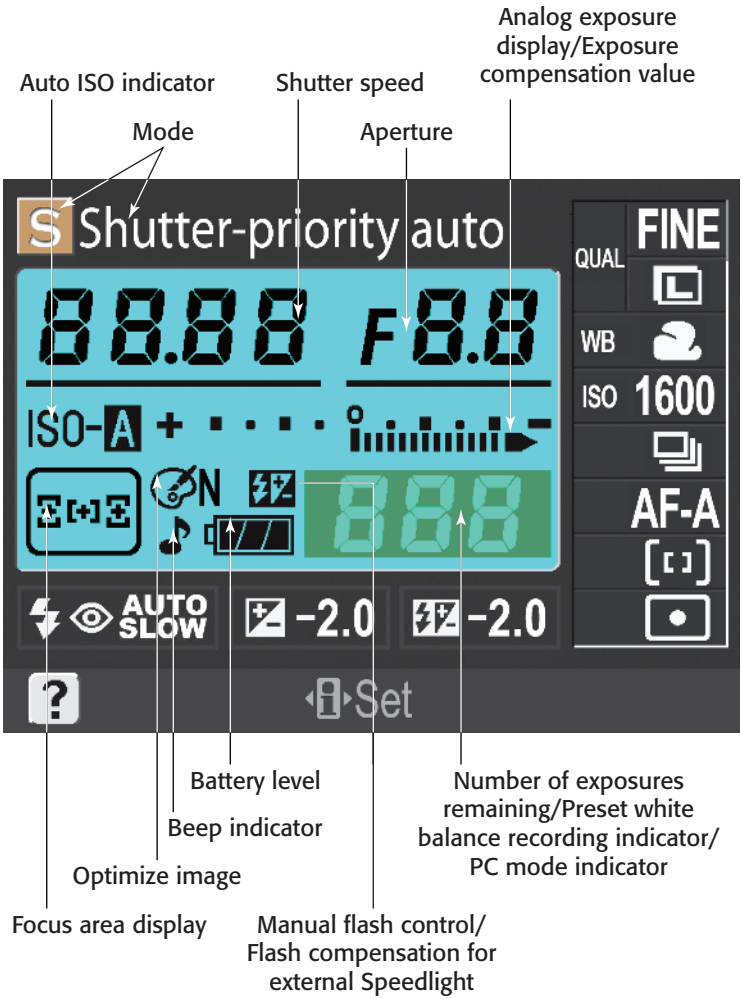
LCD Display

The color LCD display shows a broad range of current status information, including the shooting information displayed by a monochrome LCD on the top panel of other Nikon digital single lens reflex (dSLR) cameras. This shooting information display can appear in one of three different formats, which differ both in appearance and the information the formats show.

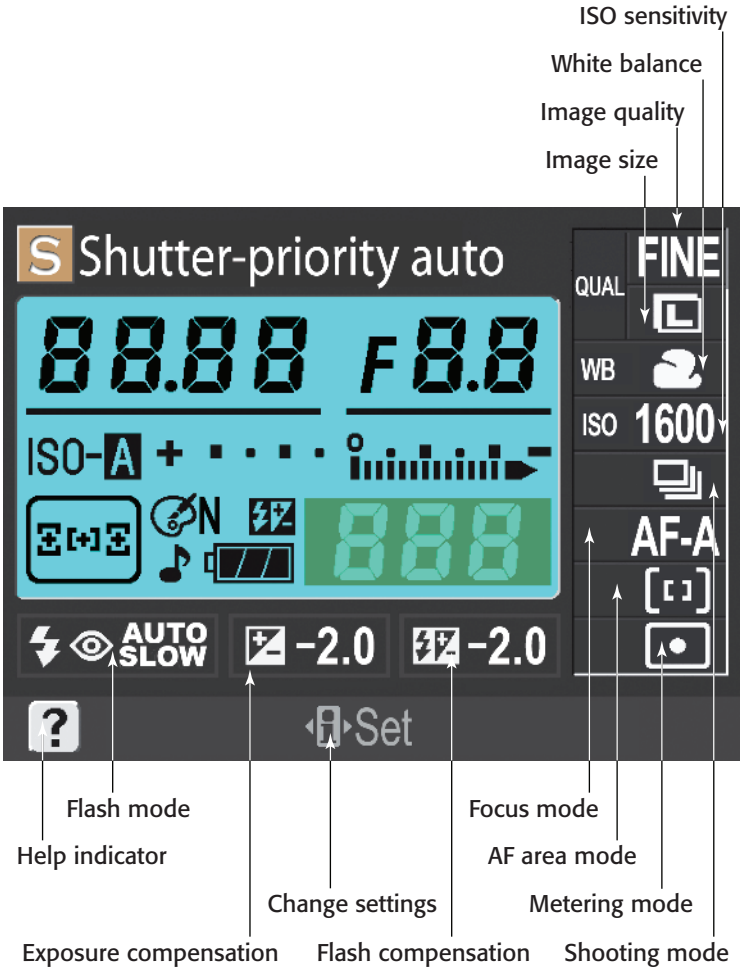
The formats for the shooting information display are Classic, a text and icon-based

format; Graphics, which uses a mixture of text, graphics, and icons; and Wallpaper, which uses a photograph you select as a background, and doesn't include shutter speed and aperture information. All illustrations in this book use the Classic format for the shooting information display, which provides the maximum amount of information with the best readability. If you'd prefer to use one of the other shooting information displays, I show you how to do that in Chapter 3.

I have divided the screen into two figures. Figure 1.16 shows the information clustered around the center status area. Figure 1.17 shows the remaining information indicators and readouts on the shooting information display.



1.16 LCD readouts and indicators, part one



1.17 LCD readouts, continued

- **Shutter speed.** Displays current shutter speed setting.
- **Aperture.** Displays current f-stop.
- **Beep indicator.** Displays whether a beep sounds during certain camera functions, such as during a self-timer operation or when focus is achieved.
- **Focus area display.** Displays current focus area selection mode.
- **Number of exposures remaining/Other functions.** Displays the number of exposures left on the memory card, preset white balance recording, and the PC/USB connection mode.
- **Mode.** Indicates the current exposure mode.

- **Analog exposure display/ Exposure compensation value.** Displays the current exposure display and amount of exposure compensation being used.
- **Optimize image.** Displays the current optimize image setting.
- **Flash.** Displays when you control the flash manually or use an external flash unit.
- **Auto ISO indicator.** Indicates that the camera sets the ISO sensitivity automatically.
- **Battery level.** Displays power remaining in the D40 or D40x's battery.
- **Image quality.** Displays if the camera saves image files in JPEG Fine, JPEG Norm (Normal), or JPEG Basic; or in RAW format or RAW+JPEG Basic.
- **Image size.** Indicates the current resolution, either 10.2 megapixels (L), 5.6 megapixels (M), or 2.5 megapixels (S), for the D40x; or 6.0 megapixels (L), 3.3 megapixels (M), or 1.5 megapixels (S) for the D40.
- **White balance.** Displays whether the camera sets white balance automatically to one of the built-in settings, or to a manually preset value.
- **ISO sensitivity.** Indicates the current ISO setting.
- **Shooting mode.** Displays whether single shot, self-timer, continuous shot, or remote control shooting modes are active.
- **Focus mode.** Displays whether the camera uses AF-A, AF-S, or AF-C autofocus mode.
- **AF area mode.** Displays the method that selects the focus area.
- **Metering mode.** Indicates whether matrix, center-weighted, or spot metering is active.
- **Flash mode.** Displays the current flash setting.
- **Exposure compensation.** Indicates the exposure compensation that the camera is applying, and the amount, such as -2.0.
- **Flash compensation.** Indicates the flash exposure compensation that the camera is using, and shows the amount, such as -2.0.
- **Change settings.** Activates when you switch to settings change mode.
- **Help indicator.** Accesses a help screen.

Viewing and Playing Back Images

The D40 and D40x's Playback mode lets you review your images, delete the ones you don't want to keep, or jump to the Retouch menu to create a tweaked copy of images.

Follow these steps to review your images:

1. **Press the Playback button to produce the most recently taken photo on the back panel LCD.**
2. **Rotate the command dial to the right or left to switch to earlier or later photos on the memory card.**

3. **Use the Thumbnail/Zoom Out button to cycle among single-picture displays, or tiled views that show four or nine reduced size thumbnails at one time.** When viewing four or nine thumbnails, you use the Up and Down keys to navigate among the available images. Press OK to view a selected image on the LCD in full size.

4. **In single-picture display, pressing right or left on the multi selector also moves to the next or previous image.** Pressing up or down changes the type of information about the current image that appears on the screen. Your options include

   - **File Information.** Displays the image, the filename, frame number, size, quality, folder name, and so on.
   - **Shooting Data 1.** Provides you with a screen with more information, including the information in the basic File Information page, plus the camera name, date, time, metering and exposure methods, shutter speed, aperture, lens focal length, flash information, and any Exposure Value (EV) adjustment you made.
   - **Shooting Data 2.** Includes the File Information basics, plus other data such as the ISO setting, white balance, sharpening, color mode, hue, and saturation.
   - **Highlights.** The brightest areas of an image will have a flashing border if they are overexposed so you can easily see any portions that might lack detail because of excessive exposure.
   - **Histogram.** Displays a luminance (brightness) histogram graph that displays the relationship between the dark and light tones in the image.

5. **Press the Zoom In/Setting button to enlarge the viewed image on the screen.** Press it multiple times to increase the amount of zoom. Press the Zoom Out button to reduce magnification.

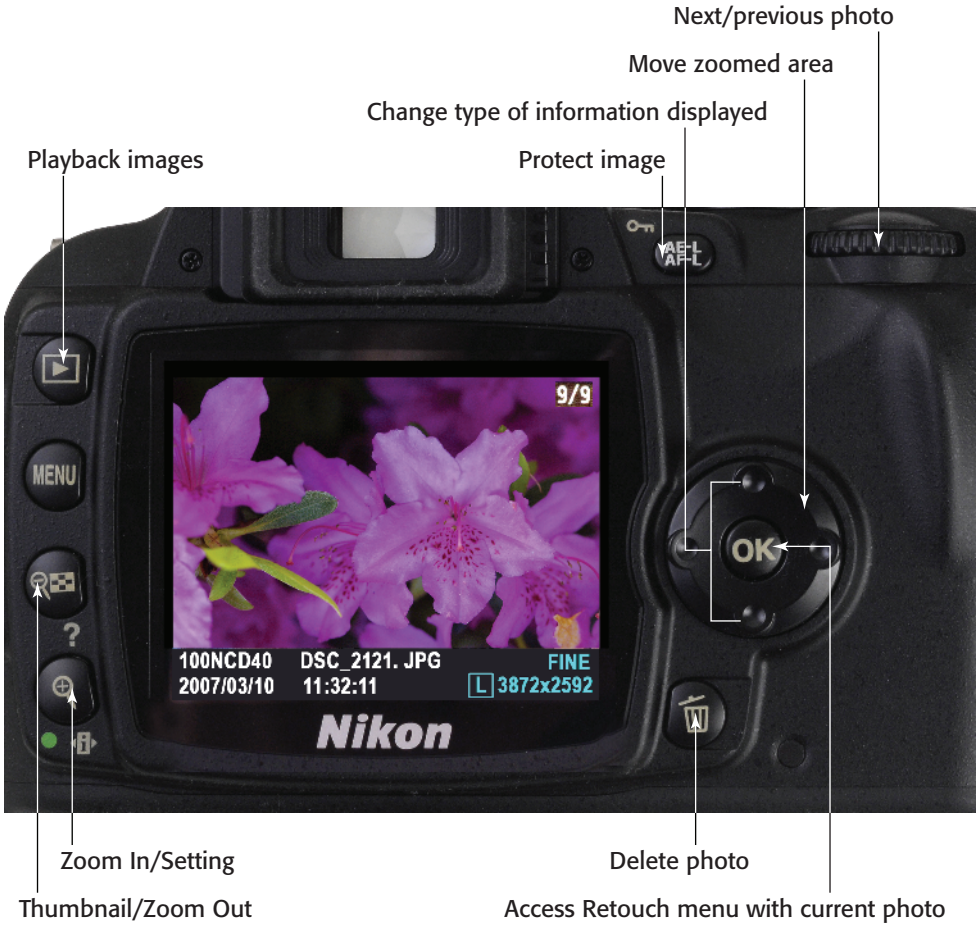
6. **While zooming, use the multi selector to move the zoomed area around within the enlarged view.**

7. **Press the Protect button to keep the selected image from accidental erasure.** You can still remove the photo if you reformat the card, however. Press the Protect key while viewing a marked image to remove the protection.

Do not reformat your memory card thinking that protected images won't be erased—they will be. All image are lost if the card is formatted.

8. **Press Delete to erase the selected image.** When prompted, press Delete a second time to confirm removal of the photo.

9. **Press OK while reviewing an image to jump to the Retouch menu.** You can learn how to use this menu's options in Chapter 2.



1.18 Review your photos using the color LCD

Activating the onboard flash

You can set the built-in electronic flash to pop up automatically when the D40/D40x detects low light levels while you're using Auto, Portrait, Child, Close-Up, or Night Portrait modes. You can manually pop up the flash by pressing the Flash button on the left side of the camera when in Programmed Auto, Shutter Priority, Aperture Priority, or Manual modes. Once the flash is in place, you can choose from the options that follow by holding down the Flash button and spinning the command dial. Note that not all flash options are available in every shooting mode.

You can find a detailed explanation of which options are available in each mode in Chapter 6.

If you're using Programmed Auto or Aperture Priority modes, you can choose

1.19 Moving the zoomed area

- **Front Curtain Sync (default/no indicator).** The flash fires as soon as the shutter opens. The Nikon D40 sets the shutter speed between 1/60 and 1/500 second (1/60 to 1/200 second with the D40x).
- **Red-Eye Reduction.** This flash mode triggers the front-panel lamp (also used for focus assist) one second prior to exposure to reduce red-eye effect.
- **Slow Sync.** This option uses slow shutter speeds (as long as 30 seconds) to add background illumination to the flash exposure. Not available with Shutter Priority or Manual modes.
- **Slow Sync + Red-Eye Reduction.** This option adds red-eye reduction to Slow Sync mode.
- **Curtain + Slow Sync.** This option delays flash when using longer shutter speeds until just before the shutter closes, to add background illumination to the flash exposure. Not available with Shutter Priority or Manual modes.

If you're using Shutter Priority or Manual modes, you can choose

- **Front Curtain Sync (default/no indicator).** The flash fires as soon as the shutter opens. Set the shutter speed of your choice (generally up to 1/500 or 1/200 second for the D40 and D40x, respectively).
- **Red-Eye Reduction.** This option triggers the front-panel lamp (also used for focus assist) one second prior to exposure to reduce the red-eye effect.

- **Rear Curtain Sync.** The camera delays the flash until just before the shutter closes. This puts any ghost images from the ambient light caused by moving objects behind the flash image.

If you're using Auto, Portrait, or Close-Up modes, hold down the Flash button and spin the command dial to switch among

- **Auto Front Curtain Sync.** This option is similar to Front Curtain Sync, but the flash pops up automatically.
- **Auto + Red-Eye Reduction.** This option is the same as Auto Front Curtain Sync, with red-eye reduction.
- **Off.** The flash does not fire.

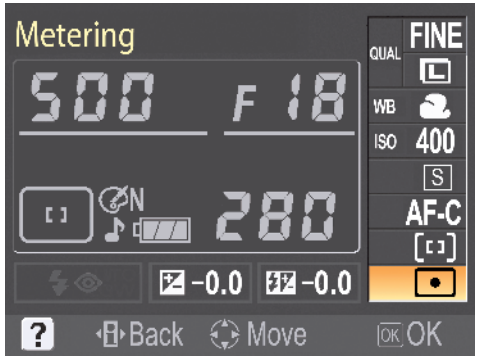
If you're using the Night Portrait mode, hold down the Flash button and spin the command dial to choose

- **Auto + Slow Sync.** This option is similar to Slow Sync, but the flash pops up automatically.
- **Auto + Slow Sync + Red-Eye Reduction.** This option is the same as Auto Slow Sync, but with red-eye reduction.
- **Off.** The flash does not fire.

Choosing Metering Modes

The D40 or D40x can use any of three different exposure metering methods when it is set to Program, Shutter Priority, Aperture Priority, or Manual mode. Select the mode by pressing the Info button, followed by the Setting button. Then scroll to the metering mode section of the LCD display, press OK, and choose the metering mode you want from among

- **Matrix.** The camera examines 420 segments in the frame and chooses the exposure according to that information. With Type G and D lenses the camera also incorporates distance range data.
- **Center-Weighted.** The camera collects exposure information over the entire frame, but when it makes the calculations, the camera emphasizes the center area of the viewfinder.
- **Spot.** The camera calculates exposure entirely from the area indicated by the active focus bracket. (In other words, you can spot-meter off-center subjects.)



1.20 Metering modes appear on the LCD.

Adjusting ISO Sensitivity

The D40/D40x can choose the sensitivity setting (ISO) for you automatically, or you can manually select an ISO setting. Press the Info button, followed by the Setting button. Then scroll to the ISO section of the LCD

display, press OK, and choose from the available settings (200, 400, 800, 1600, and H1) on the D40; the D40x also has ISO 100.

Setting White Balance

To more closely match the D40/D40x's color rendition to the color of the illumination used to expose an image, you can set the white balance. To use a value already programmed into the camera, just press the Info button, followed by the Setting button. Then scroll to the White Balance section of the LCD display, press OK, and choose from among Auto, incandescent, fluorescent, direct sunlight, flash, cloudy, shade, and preset.

You can also set the white balance by using the menu system, with additional options for fine-tuning or defining a preset value. You can learn how to use these options in Chapter 3.

Programmed Exposure Modes

The D40/D40x has six Digital Vari-Program modes (see figure 1.21) that make some of the setting decisions for you. You can choose any of these modes from the Mode dial. They include

- **Auto and Auto (Flash Off).** In these modes, the D40 or D40x takes care of most of the settings, according to the kind of shot you've framed in the viewfinder. For example, the camera knows how far away the subject is and the color of the light, and it can make some pretty good guesses about the kind of subject matter from exposure data and other information. After comparing your shot to the 30,000-picture database, the D40 or D40x decides on the best settings to use when you press the shutter release. For example, Auto is the mode to use when you hand your camera to the waiter and ask him to take a quick picture of your group. Don't use this mode if you want every picture in a series to be exposed exactly the same way. If you change shooting angles or reframe your image, the camera might match your shot with a different image in its database and produce a slightly different look. Use the Auto (Flash Off) mode when you want to suppress use of the built-in Speedlight.
- **Portrait.** Use this mode when taking a picture of a person or two posing relatively close to the camera. The D40/D40x automatically focuses on the nearest subject and uses a wider lens opening to blur the background. The camera's sharpening effects are not used, which creates a less-detailed picture with smoother skin tones. This exposure also tends to favor smooth tonal gradations that flatter your subjects. Flash (if used) reduces red-eye effects. Don't use this mode if your portrait subject is not the closest object to the camera.

1.21 Six Digital Vari-Program, or Scene, modes are available, plus Auto and Auto (Flash Off).

- **Landscape.** Even though many landscape pictures are taken of distant objects, the D40 and D40x are smart enough to know you might have important subject matter closer to the camera, too, and they use a nearest subject focus. This mode locks out the flash, because the Speedlight isn't much good for objects more than about 20 feet from the camera. At the same time, this mode increases sharpness and enriches colors to improve the appearance of foliage. Don't use this mode if you need to use flash as a fill-in to illuminate shadows in subjects who are relatively close to the camera and posing in front of vistas.
- **Child.** This mode optimizes your camera's settings for active, lively children and their colorful attire and playthings. You probably don't want to use this mode for older children or adults, who might not look their best with such vibrant colors and such high contrast.
- **Sports.** In this mode, the D40/D40x switches into AF-C (Continuous Autofocus) mode so it can better track moving subjects and keep them sharp. The camera also favors higher shutter speeds to freeze action, and disables the flash.
- **Close-Up.** If you're shooting flowers or other close-up subjects, use this mode, which concentrates the D40 and D40x's automatic focusing efforts on the center of the frame, where most close-up subjects are positioned.
- **Night Portrait.** This mode balances flash exposure with the background illumination by using front curtain slow synchronization to provide an evenly lit photo of both your main subjects in the foreground and the area behind them.

Semiautomatic and Manual Exposure Modes

The Nikon D40 and D40x have three semiautomatic modes that enable you to specify shutter speed, aperture, or combinations of the two. If an appropriate exposure cannot be set, HI or LO messages appear in the viewfinder, and Subject is too dark or Subject

is too light messages appear on the LCD. There is also a Manual mode that enables you to set shutter speed and aperture independently. You set these four modes (see figure 1.22) using the Mode dial:

- **Manual.** Select both the shutter speed and aperture by using the command dial (shutter speed) and command dial plus Exposure Compensation/Aperture button (f-stop). When you specify the exposure, the indicator in the exposure scale in the viewfinder and on the LCD display is centered between the + and – indicators.
- **Aperture Priority.** Use the command dial to choose the aperture, and the D40/D40x chooses the correct shutter speed for the right exposure.
- **Shutter Priority.** Turn the command dial to choose the shutter speed. The D40/ D40x selects an appropriate aperture to provide the correct exposure.
- **Programmed Auto.** The D40/D40x selects a shutter speed and aperture for you. You can override the camera's calculated exposure by holding down the EV button and rotating the command dial left (to add exposure) or right (to subtract exposure). If you feel the exposure is satisfactory, but you'd like to use a different shutter speed or f-stop, rotate the command dial to the right to select a higher shutter speed and larger aperture or to the left to change to a slower shutter speed and smaller aperture combination.

1.22 Manual, Aperture Priority, Shutter Priority, and Programmed Auto Exposure modes are also available.