

Exploring the Nikon D80

CHAPTER

1

If you found your Quick Tour of your Nikon D80 interesting, you may want to explore the features of the camera in a little more detail, learning all the functions of the various buttons, dials, wheels, switches, and levers that dot its surface. There are a lot of them, but, as you see, having so many dedicated controls helps you work faster. You can access the most-used functions of the D80 by pressing a button and turning a main command dial that are both placed at your fingertips.

You can set features that send you to the menu system in a point-and-shoot camera directly with the D80. On the traditional easy-to-use vs. easy-to-learn scale, the D80 resides firmly at the easy-to-use end of the continuum. Menus may be easier to learn (because they are self-explanatory), but they slow you down once you become familiar with them. On the other hand, once you've taken the time to learn the functions of the D80's controls, it's definitely much faster to use.

I'm going to help you ease on up that learning curve in this chapter. Unlike the official manual that comes with the D80, which is impossibly dense and difficult to navigate, I provide 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.

Moreover, I'm going to explain what each control does within the roadmap, so you don't have to jump around the book to follow multiple cross references. This is a field guide, to be used when you're out taking pictures, rather than a "choose-your-own-adventure" book.

In This Chapter

Up front

Sides and bottom

On the lens

On top

On the back

Viewfinder display

LCD display

Viewing and playing back images

Activating the Onboard Flash

Choosing metering modes

Adjusting ISO sensitivity

Setting white balance

Programmed exposure modes

Semi-automatic and manual exposure modes

In this chapter, you can find a discussion of controls; in Chapter 2, I describe how to use the D80's basic features, such as metering and autofocus. Then, in Chapter 3, you can find a complete setup guide with an explanation of the camera's thicket of menus.

Up Front

Figure 1.1 shows the Nikon D80 from the front view vantage point of your subjects. 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 caressing the zoom ring.

By using this grip, you can reach the shutter release button with the index finger of your right hand, quickly turn the camera on or off with the same finger, and activate the top panel LCD's backlighting control (as I show you later). The middle finger of your left hand should be able to reach the Func button, which serves as a shortcut to features you specify (see Chapter 3) and the depth-of-field preview button.

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 D80, including the zoom ring, the focus ring (if you're adjusting focus manually), the electronic flash flip-up button, and several other controls. I explain all these controls later in this chapter, too.



1.1 A front view of the Nikon D80

I'm providing two views of the front of the camera, from left and right angles (as seen from the subject position). The easiest way to hold the D80 is by wrapping your fingers of your right hand around the handgrip, with your left hand providing support and usually activating most of the controls. However, there are a few controls within reach of your right hand's digits, as shown in figure 1.2. These controls and features include:

♦ **Autofocus assist/Self-timer/Red-eye reduction lamp:**

This front-mounted white LED serves three different functions.

When the 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 (if they're looking at the camera) and reduce the dreaded *red-eye* effect.



1.2 Nikon D80 left front side, viewed from the subject's position

- ♦ **Func 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 switch spot metering to zero exposure on a limited area, or to disable the flash when you don't want it to fire.
- ♦ **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 autoexposure and autofocus mechanisms reactivates both. When a review image is displayed on the back-panel color LCD, tapping this button removes the image from the display and reactivates the autoexposure and autofocus mechanisms.
- ♦ **On-Off switch:** Rotate this switch one notch to turn the camera on, and rotate it all the way to activate the top panel LCD backlight. The spring-loaded switch returns to the On position once the backlight is illuminated, and the light remains on for a few seconds.
- ♦ **Sub-command dial:** The sub-command dial is a secondary control dial that provides alternate or complementary functions to the main command dial located on the back of the D80. For example, in Manual exposure mode, the main command dial sets the shutter speed, while the sub-command dial adjusts the aperture.
- ♦ **The handgrip:** The handgrip serves as a comfortable handle for the D80 that you can clasp with your fingers to support the camera, and it serves as the storage receptacle for the camera's battery.

- ♦ **Depth-of-field preview button:** Press and hold this button to close the lens down to the aperture that will be used to take the picture (normally the lens aperture is kept wide open for bright, easy viewing, until the instant the picture is taken). This gives you a preview of the range of sharpness (depth of field). When you use the depth-of-field button, the view through the viewfinder dims, but you get a better idea of just how much of the image is in focus.

The other side of the D80 has its own complement of controls, as you can see in figure 1.3. These include:

- ♦ **Bracketing button:** Hold down this button and spin the main command dial to activate a bracketing sequence of either two or three shots. Rotate the sub-command dial while holding down this button to choose the size of the increment between bracketed shots, from 0.3 EV to 2.0 EV. The values selected appear on the top panel LCD. Learn more about bracketing in Chapter 4.
- ♦ **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). Spin the sub-command dial while holding down this button to add or subtract from the flash exposure to make your picture lighter or darker.



1.3 Nikon D80 right front side, viewed from the subject's position

- ♦ **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 D80 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.
- ♦ **Lens release button:** Hold down this button while rotating the lens to remove the lens from the camera.
- ♦ **Focus mode selector button:** The autofocus/manual switch (AF/M) on the camera body can be flipped to set either autofocus or manual focus. Some lenses have their own AF/M switches, or an M/A-M switch (which enables you to fine-tune automatic focus manually when in the M/A position).



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 D80 have only a few controls, compartments, and connectors. They include:

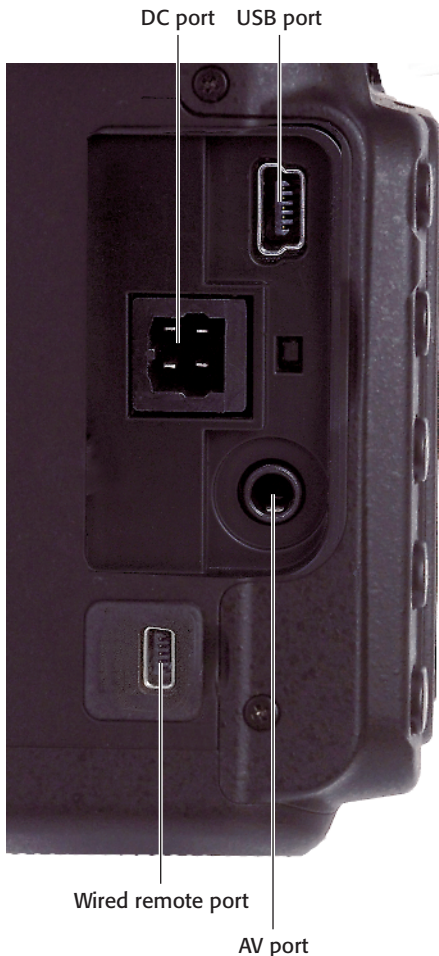
- ♦ **AC Power/AV Connector/USB Connector covers:** On the left side of the camera (as you hold the camera to shoot) you can see two rubber covers which protect the D80's primary external connectors (see figure 1.5). Underneath the top cover is a port that accepts a USB cable for transferring pictures directly from the camera to your computer (see Chapter 8 for instructions) and also lets you control the camera's functions using the Nikon Camera Control Pro software (see figure 1.6). In the middle is a DC power connector you can use for an optional AC/DC adapter that can operate the camera without batteries for studio photography or time-lapse sequences. Underneath the DC connector is an AV plug you can use to link the D80 to an external monitor for viewing



1.5 Four connector ports are hidden beneath a pair of rubber covers.

pictures or menus. Under the bottom rubber cover is a port you can use to connect the optional MC-DC1 wired remote control.

The right side of the camera (as you hold it to shoot) 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 will pop out for easy removal.



1.6 Your USB, DC power, AV, and remote control devices plug into these connectors.

On the bottom of the Nikon D80, there is a tripod socket, which is also used to secure the optional MB-D80 battery pack/grip vertical grip. The grip holds two EN-EL3e rechargeable batteries or a AA battery holder, and has its own AF-On button, shutter release, and main command and sub-command dials. A flip open door accepts a single EN-EL3e rechargeable lithium ion battery, as shown in figure 1.8.



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



1.8 A compartment in the bottom of the D80 accepts a rechargeable battery.

On the Lens

The lenses you use with your Nikon D80 each have their own set of controls. In figure 1.9 you can see two typical 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. As you can see, not all lenses have all the possible controls. In fact, I'm going to have to show you three different lenses to illustrate them all. Additional controls are shown in figure 1.10, using the 105mm f/2.8G ED-IF AF-S Micro-Nikkor as an example.

By comparing the three lenses, you can see that the controls may be in different locations

with different lenses, and can differ in size and operation, too. The key components shown in figure 1.9 are:

- ♦ **Lens hood alignment guide/bayonet:** Shown on the 18–200mm zoom, this lens hood bayonet mount (and its accompanying white dot used for alignment when fastening the hood) is used 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.



1.9 The controls found on the 18–55mm kit lens and 18–200mm vibration reduction lens

- ♦ **Focus ring:** Rotate this ring to manually focus or fine-tune focus when the lens or camera body focus mode switch is set to M. In addition, if the lens has an autofocus/manual over-ride position (A/M-M), you can adjust focus manually after the camera has focused automatically.

Note

You may notice that the inexpensive 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 nonrotating front elements and internal focus so the lens doesn't change in length as it focuses on nearer subjects.

- ♦ **Distance scale:** This is a scale (shown on the 18–200mm lens, but not the 18–55 kit lens) that 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/zoom scale:** The zoom ring is rotated to change the zoom setting. The zoom scale markings show the currently set focal length.
- ♦ **Alignment indicator:** 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, 105mm Nikkor macro lens used for close-up photography. This particular lens has some features not available on either of the two lenses shown in figure 1.9, but which you might find on some other lenses. As you might expect, this nonzooming lens doesn't have a zoom ring or zoom scale. But it does include:

- ♦ **Limit switch:** When using lenses that have an extensive focus range, you can see that some have a special switch that limits the range used by the autofocus system, locking out either distant subjects (when shooting close-up photos) or extreme macro focus distances (when you're taking photos of nonmacro 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 (like the 18–55mm kit lens and 18–200 VR lens) lack a manual aperture ring, and so can only be used with cameras (like all recent Nikon film and digital cameras) that are able to set the f-stop electronically from the camera body. Lenses that retain the aperture ring, like the macro lens shown, have a D suffix in their names.
- ♦ **Aperture lock:** If you want to use the D80'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 using the aperture lock switch. You need to unlock the aperture only if you



1.10 This macro lens is an example of a prime (nonzoom) lens.

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 D80 needs at least f/5.6's worth of light to operate.)

On Top

The top panel of the D80 has its own cluster of controls. They include:

- ♦ **Mode dial:** This knurled wheel is turned to change among the DVP/Scene modes and Auto, 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; this indicator, which may be hard to see, shows that plane (but not the actual location of the sensor itself).

- ♦ **Accessory shoe:** Attach an external electronic flash, such as the Nikon SB-400, SB-600, or SB-800 to this slide-in accessory shoe, which includes multiple electrical contacts that enable two-way communication

between your D80 and a dedicated speedlight (designed to work directly with compatible cameras). The “conversations” 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).



1.11 Key components on the top panel of the D80

- ♦ **Monochrome LCD control panel:** This LCD supplies data including the status of the camera, its battery, the number of pictures remaining, and various settings that have been made.

- ♦ **Autofocus mode/Reset #2:** Hold down this button and spin the main command dial to switch among AF-A, AF-C, and AF-S modes, as described in the Quick Tour. Hold down this button and the Metering mode button at the same time to activate a reset of the camera's settings to factory default values.

- ♦ **Single-Continuous/Self-timer/Remote control mode button:** Hold down this button while rotating the main command dial to change the "drive" mode of the camera. As you turn the dial, the settings cycle among single shot mode to continuous shooting, self-timer, remote control with a two-second delay, or immediate response activation.

- ♦ **Exposure compensation/Reset #1 button:** Hold down this button while spinning the main command dial to add or subtract exposure from the basic setting calculated by the D80's autoexposure system. Hold down at the same time as the Autofocus mode button to reset the camera's settings to factory default values. This button and the AF button have matching green dots next to them to signify that they should be pressed simultaneously to reset the camera.

- ♦ **On/Off/Backlight switch:** Rotate this switch one notch clockwise to turn the D80 on; turn in the reverse direction to shut it off. Momentarily rotate the spring-loaded switch all

the way clockwise to illuminate the top panel LCD backlight.

- ♦ **Shutter release button:** 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 autoexposure and autofocus mechanisms reactivates both. When a review image is displayed on the back-panel color LCD, tapping this button removes the image from the display and reactivates the autoexposure and autofocus mechanisms.

- ♦ **Metering mode/Format #1 button:** Press this button while spinning the main command dial on the back of the camera to change from matrix to center-weighted or spot metering modes (explained later in this chapter). You can also use the button to reformat the D80's digital memory card if you hold it down simultaneously with the Format #2 (the Trash) button on the back panel. Both buttons have matching red Format symbols to indicate that they should be pressed simultaneously to perform a format operation.

On the Back

The back panel of the Nikon D80 is really Control Central, with an even dozen controls, most of which serve double duty with multiple functions. These direct controls are the key to this camera's ease of use. You can press a button and rotate a dial to change settings like image quality, ISO sensitivity, or white balance, as well as many other options without the need to visit Menuland. Figure 1.12 shows the back of the D80 and its control center.

Upper half

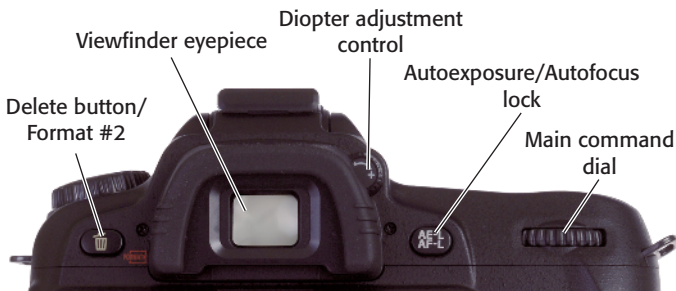
The upper half of the back panel (shown in figure 1.13) has three buttons and two dials. Here's what they do:

- ♦ **Delete button/Format #2:** When the LCD displays an image, 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. You

can also hold down this button while simultaneously holding down the Metering mode button to activate a format of the memory card. There's no confirmation; if you hold down the pair of buttons for more than a few seconds, the control panel display disappears except for a *For* message that flashes on the the top panel LCD indicating that you should press the buttons again to start the format automatically.



1.12 Key components on the back panel of the D80



1.13 Key components on the upper half of the back panel of the D80

- ♦ **Viewfinder eyepiece/eyecup:** Peer through the viewfinder window to frame your image (when the lens cap is off!). 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 using the camera on a tripod. You can also replace it with the DK-21M magnifying eyepiece (which comes with its own rubber eyecup).
- ♦ **Diopter adjustment control:** Rotate this dial 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.
- ♦ **Autoexposure/Autofocus lock:** This button locks exposure, focus, or both, until you release the button or press it again. A menu option, described in Chapter 3, enables you to specify the behavior of this button.
- ♦ **Main command dial:** Spin this dial to change settings such as shutter speed, bracketing, or shooting mode, depending on what control button you're pressed at the same time.

Lower half

The most-used buttons on the D80 are located at the left side of the lower half of the camera. Most of them have more than one function, depending on the D80's current mode. If you're shooting pictures, a button may have one function, but when you're

reviewing images you've already taken, it may have another. The buttons on the left side of the camera include:

- ♦ **Playback button:** Press once to display the most recent photo taken. Press again, or tap the shutter release button, to remove the image from the screen and exit Playback mode.
- ♦ **Menu button:** Press to access the five levels of the Nikon D80's menus.
- ♦ **Help/Protect/White Balance button:** When any menu item is highlighted (including the main menu headings), press this key to view a brief Help screen with explanations of the functions of the selected item. In Playback mode, press it to protect the current image from accidental erasure. In any shooting mode, hold and spin the main command dial to change the white balance preset; the setting you choose appears on the top panel LCD. Hold the button and spin the sub-command dial to dial in small amounts of correction, from +1 to +3 to make the white balance more bluish, or from -1 to -3 to make the white balance warmer.
- ♦ **Thumbnail/Zoom out/ISO button:** In Playback mode, when viewing a full-screen image, press the button once to change to a four thumbnail display, and again to switch to nine thumbnails. To return to full screen mode, press the OK button. When an image is zoomed in, press this button to zoom back out. In any shooting mode, hold this button and spin the main command dial to change ISO.

Help/Protect/White balance button

Menu button

Playback button

LCD viewing monitor

Focus selector lock

Multiselector



Playback zoom/Image quality/size button

OK button

Memory card
access lamp

Thumbnail/Zoom out/ISO button

1.14 Key components on the lower half of the back panel of the D80.

- ♦ **Playback zoom/Image quality/Image size button:** In Playback mode, press this button repeatedly to zoom in several magnifications. Use the Multiselector to move the zoomed area around in the frame. Press and spin the main command dial or sub-command dial to change the image quality or picture size, respectively.

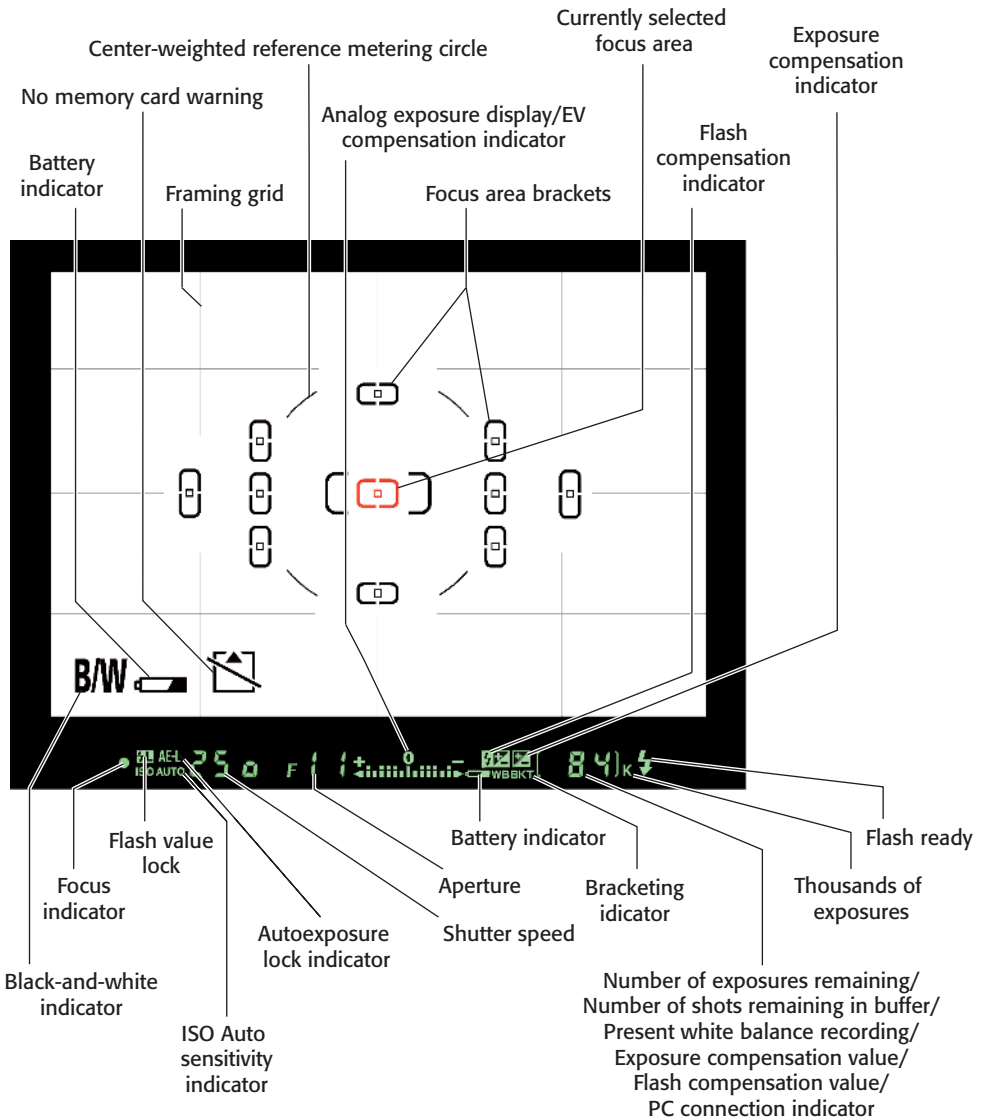
In the center and right side of the lower half of the Nikon D80 are the LCD monitor and several more key components:

- ♦ **LCD viewing monitor:** The color LCD displays your images for review and shows the menus as you navigate through them.
- ♦ **Multiselector:** Press this four-way cursor button to navigate through menus, to scroll through images as you review them, and to change the amount of information about each image that is displayed on the screen during picture review.
- ♦ **Focus selector lock:** Slide this lever down to enable manually selecting the focus zone. Slide it up to prevent manual focus area selection.
- ♦ **OK button:** This button serves as an Enter key to accept setting and menu selections or to confirm choices.
- ♦ **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 D80 offers a great deal of information in the viewfinder. Not all of these indicators are visible at once (thank goodness!). Here's a list of each of them, and the information they provide:

- ♦ **Framing grid:** Turn this set of reference lines on as an aid for aligning images in the viewfinder.
- ♦ **Center-weighted metering reference circle:** Shows the 8mm circle that's the default area used for center-weighted meter readings.
- ♦ **No memory card warning:** Appears when the camera is turned on, but no memory card has been inserted.
- ♦ **Battery indicator:** Appears when the D80's battery power level is low.
- ♦ **Black-and-white indicator:** Shows that the D80 is in black-and-white shooting mode.
- ♦ **Flash value lock:** Indicates that the flash setting has been locked in.
- ♦ **Focus indicator:** Illuminates when an image is focused correctly.
- ♦ **ISO Auto sensitivity indicator:** Shows that ISO is being set automatically.
- ♦ **Autoexposure lock indicator:** Shows that exposure has been locked.
- ♦ **Shutter speed:** Displays the selected shutter speed.
- ♦ **Aperture:** Displays the selected lens opening.
- ♦ **Analog exposure display/EV compensation indicator:** Shows the amount of over or under exposure and exposure compensation (when the exposure compensation indicator is visible).
- ♦ **Battery indicator:** Current power level of the battery.
- ♦ **Bracketing indicator:** Shows whether white balance or exposure bracketing (or both) have been activated.
- ♦ **Number of exposures remaining/Other functions:** Also shows number of shots remaining before the buffer is filled, white balance present status, exposure or flash compensation values, and the PC/USB connection status.
- ♦ **Flash ready:** Shows when electronic flash is recharged for the next shot.
- ♦ **Thousands of exposures:** Appears when the remaining exposures exceeds 1,000.
- ♦ **Exposure compensation indicator:** Appears when exposure compensation has been dialed in.
- ♦ **Flash compensation indicator:** Appears when flash exposure compensation has been specified.
- ♦ **Currently selected focus area:** Shows the active focus zone.
- ♦ **Focus area brackets:** Displays the available focus zones.

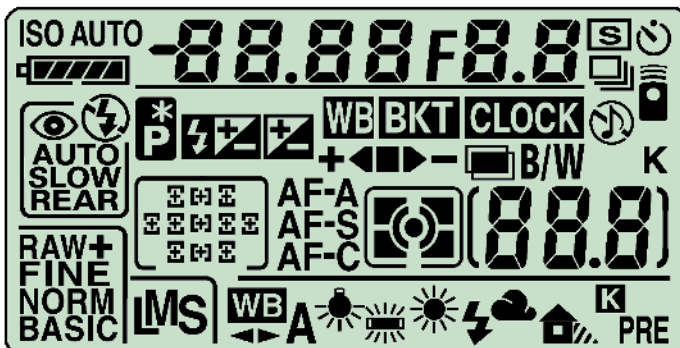


1.15 Viewfinder readouts and indicators

LCD Display

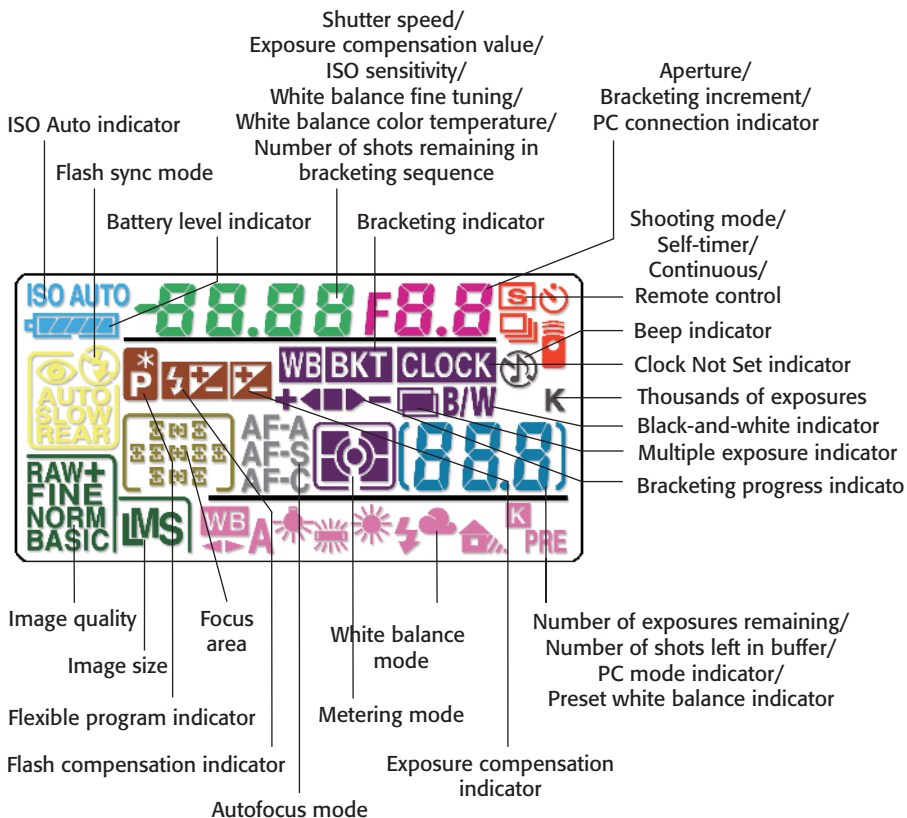
The top-panel monochrome LCD display (see figure 1.16) shows a broad range of current status information. This display is a bit much to bite off in one chunk, so I color code the items that logically belong together (more or less) to make it easier to interpret the display.

- ♦ **ISO Auto indicator:** Indicates that ISO sensitivity is being set automatically by the camera.
- ♦ **Battery level indicator:** Shows power remaining in the D80's battery.
- ♦ **Flash sync mode:** Shows the current flash synchronization setting.
- ♦ **Focus area:** Displays the focus area zones in use.
- ♦ **Image quality:** Shows if image files are being saved in JPEG Fine, JPEG Norm (Normal), or JPEG Basic; in RAW format, or RAW+JPEG Fine, Normal, or Basic.
- ♦ **Image size:** Indicates current resolution being used, either 10.2 megapixels (L), 5.6 megapixels (M), or 2.5 megapixels (S).
- ♦ **Flexible program indicator:** Shows that Program mode is in use, and that you can change shutter speed/f-stop combinations to other equivalent exposures by rotating the main command dial.
- ♦ **Flash compensation indicator:** Indicates that flash exposure compensation is being used. The amount of compensation (for example +0.7) is shown in the shutter speed readout area immediately above this indicator.
- ♦ **Exposure compensation indicator:** Indicates that exposure compensation is being applied. The amount of compensation (for example +0.7) is shown in the shutter speed readout area immediately above this indicator.
- ♦ **Autofocus mode:** Shows whether AF-A, AF-S, or AF-C autofocus mode is in use.
- ♦ **Metering mode:** Indicates the current exposure metering mode.
- ♦ **White balance mode:** Shows whether white balance is being set automatically, to one of the built-in settings, or to a manually preset value.



1.16 Monochrome control panel LCD readouts and indicators

- ♦ **Number of exposures remaining/Other functions:** Shows the number of exposures left on the memory card, the number of shots remaining until the buffer fills, the PC/USB connection mode, and the preset white balance recording.
- ♦ **Bracketing progress indicator:** Shows the progress of an ongoing bracketing operation.
- ♦ **Multiple exposure indicator:** Appears when the D80 is set to make multiple exposures.
- ♦ **Black-and-white indicator:** Shows that the camera is set to take black-and-white photos.
- ♦ **Thousands of exposures:** Appears when the number of remaining exposures exceeds 1,000.
- ♦ **Beep indicator:** Shows whether a beep will sound during certain camera functions, such as during a self-timer operation, or when single autofocus is achieved.
- ♦ **Shooting mode:** Shows whether single shot, self-timer, continuous shot, or remote control shooting modes are active.
- ♦ **Clock Not Set indicator:** Shows that the date/time should be set.
- ♦ **Bracketing indicator:** When bracketing is being used, this indicator appears.

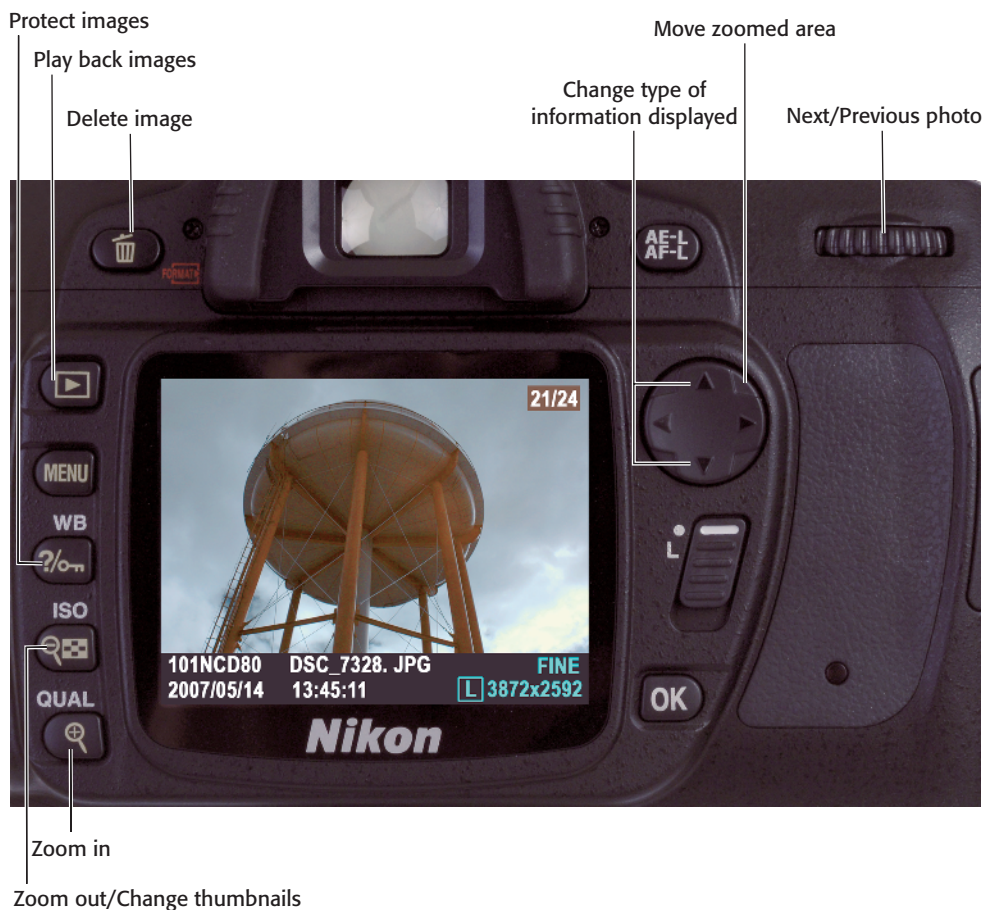


1.17 Color-coded control panel LCD readouts

- ♦ **Aperture/Other functions:** Shows current f-stop, plus bracketing increment, and PC/USB connection.
- ♦ **Shutter speed/Other functions:** Displays current shutter speed setting; exposure compensation value; ISO sensitivity; white balance fine tuning/color temperature; and number of shots remaining in bracketing sequence.

Viewing and Playing Back Images

The D80's Playback mode lets you review your images, trash the ones you don't want to keep, or jump to the Retouch menu to create a tweaked copy of images that could use improvement.



1.18 Review your photos using the color LCD.

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 main command dial to the right or left to switch to earlier or later photos on the memory card.**

3. **Use the Thumbnail button to cycle through single-picture display, 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, the Left and Right keys on the multi-selector also move to the next or previous image.** The Up/Down keys or the sub-command dial change the type of information about the current image displayed on the screen. Your options include:

- **File Information:** Shows the image, its filename, frame number, size, quality, folder name, and so on.
- **Shooting Data 1:** Gives you a screen with more information, including the info 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 EV adjustment you've made.
- **Shooting Data 2:** Includes the File Information basics, plus the ISO setting, white balance,

sharpening, color mode, hue, saturation, and some other data.

- **Highlights:** The brightest areas of an image are represented with a flashing border so you can easily see any portions that might lack detail because of overexposure.

- **Histogram:** Shows a luminance (brightness) histogram graph that displays the relationship between the dark and light tones in the image, and red/green/blue histograms that display the same information for each of the three color channels in the image.

5. **Press the Playback Zoom button to enlarge the viewed image on the screen. Press multiple times to increase the amount of zoom.**

Press the Zoom Out button to reduce magnification.

6. **While zooming, use the multi-selector's cursor keys to move the zoomed area around within the enlarged view.**

7. **Press the Protect key to keep the selected image from accidental erasure.** The photo can still be removed if the card is reformatted, however. Press the Protect key while viewing a marked image to remove the protection.

8. **Press the Delete button 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.)



1.19 Moving the zoomed area

Activating the Onboard Flash

You can set the built-in electronic flash to pop up automatically when the D80 detects low light levels suitable for flash photography. Or, you can manually pop up the flash by pressing the Flash button on the left side of the camera. Once the flash is in place, you can choose from the options that follow by holding down the Flash button and spinning the main 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 or Aperture Priority modes, you can choose:

- **Front Curtain Sync (default/no indicator):** The flash fires as soon as the shutter opens. The Nikon D80 sets the shutter speed between 1/60 and 1/200 second.

- **Red Eye Reduction:** Triggers the front-panel lamp (also used for focus assist) one second prior to exposure to reduce red-eye effect.
- **Slow Sync:** 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:** Adds red-eye reduction to slow sync mode.
- **Curtain + Slow Sync:** Also delays flash until just before the shutter closes, but adds long shutter speeds 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 1/200 second.)
 - **Red Eye Reduction:** 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 flash is delayed until just before the shutter closes. This puts any ghost images from the ambient light caused by moving objects to appear "behind" the flash image.
- ♦ If you're using Auto, Portrait, or Close-Up modes, hold down the Flash button and spin the main command dial to switch among:
 - **Auto Front Curtain Sync:** Similar to Front Curtain Sync, but the flash pops up automatically.
 - **Auto + Red-Eye:** Same as Auto Front Curtain Sync, with Red Eye reduction.
 - **Off:** Flash does not fire.
- ♦ If you're using the Night Portrait mode, hold down the Flash button and spin the main command dial to choose.
 - **Auto + Slow Sync:** Similar to Slow Sync, but the flash pops up automatically.
 - **Auto + Slow Sync + Red Eye:** Same as Auto Slow Sync, but with Red Eye reduction.
 - **Off:** Flash does not fire.

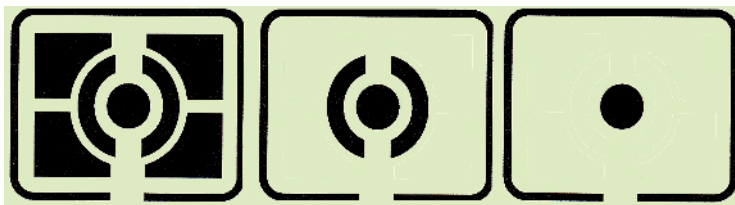


1.20 Flash options shown on the control panel LCD include red-eye correction, flash on/off, auto flash, slow sync, and rear sync.

Choosing Metering Modes

The D80 can use any of three different exposure metering methods when set to Programmed, Shutter Priority, Aperture Priority, or Manual mode. Select the mode by holding down the Metering Mode button and spinning the main command dial until one of these modes appears in the monochrome LCD:

- ♦ **Matrix:** The camera examines 420 segments in the frame and chooses the exposure based on that information. With Type G and D lenses it also incorporates distance range data.
- ♦ **Center-Weighted:** The camera collects exposure information over the entire frame, but when making its calculations emphasizes the 8mm center circle shown in the viewfinder (unless you've



1.21 Metering modes appear on the control panel LCD.

redefined the center-weighted area to 6mm or 10mm in the Custom Setting menu (CSM 12).

- ♦ **Spot:** Exposure is calculated entirely from a 3.5mm circular area, centered around the currently selected focus area. (In other words, you can spot-meter off-center subjects.)

Adjusting ISO Sensitivity

The D80 can choose the sensitivity setting (ISO) for you automatically, or you can manually select an ISO setting. Just follow these steps:

1. If the LCD monitor is showing an image, tap the shutter button to cancel the display.
2. Hold down the ISO button on the back panel.
3. Rotate the main command dial to choose an ISO setting from ISO 100 to ISO 1600, plus H.03, H.07, or H1.0 (approximately ISO 2000, ISO 2500, and ISO 3200 equivalents).

Alternatively, you can set ISO using the menu system, which I discuss in Chapter 2.

Setting White Balance

To more closely match the D80's color rendition to the color of the illumination used to expose an image, you can set the white balance. To use a preset value, follow these steps:

1. If the LCD monitor is showing an image, tap the shutter button to cancel the display.
2. Hold down the White Balance button on the back panel.
3. Rotate the main command dial to choose a white balance from among Auto, Incandescent, Fluorescent, Direct Sunlight, Flash, Cloudy, Shade, and Preset.

White Balance can also be set 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.



1.22 White Balance options appear on the Control Panel LCD.

Programmed Exposure Modes

The D80 has seven Digital Vari-Program, or Scene modes (see figure 1.23), which make some of the setting decisions for you, while preventing you from making decisions yourself, which can be a good thing or a bad thing, depending on your experience and the current shooting environment. You can choose any of these modes from the Mode dial. They include:

- ♦ **Full Auto:** In this mode, the D80 takes care of most of the settings, based on its perception of what kind of shot you've framed in the viewfinder. For example, the camera knows how far away the subject is (from the automatic focus mechanism), the color of the light (which tells the camera whether you're indoors or outdoors), and can make some pretty good guesses about

the kind of subject matter (landscape, portrait, and so forth) from exposure data and other information. After comparing your shot to its 30,000-picture database, the D80 decides on the best settings to use when you press the shutter release. 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. If you change shooting angles or reframe your image, the D80 might match your shot with a different image in its database and produce a slightly different look.

- ♦ **Portrait:** Use this mode when taking a picture of a person or two posing relatively close to the camera. The D80 automatically focuses on the nearest subject and uses a wider lens opening to blur the background. The camera's sharpening effects are not used, to create a less-detailed picture with smoother skin tones. Exposure also tends to favor smooth tonal gradations to flatter for your subjects. Flash (if used) is set to reduce red-eye effects. Don't use this mode if your portrait subject is not the closest object to the camera.

- ♦ **Landscape:** Even though many landscape pictures are taken of distant objects, the D80 is smart enough to know you might have important subject matter closer to the camera, too, and uses a "nearest subject" focus. It 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, it increases sharpness and enriches colors to improve the appearance of foliage.



1.23 Seven Digital Vari-Program, or Scene modes, are available.

Don't use this mode if you need to use flash as a fill-in to illuminate shadows in subjects relatively close to the camera who are posing in front of your vistas.

- ♦ **Close-Up:** If you're shooting flowers or other close-up subjects, use this mode, which concentrates the D80's automatic focusing efforts on the center of the frame, where most close-up subjects are positioned.
- ♦ **Sports:** In this mode, the D80 switches into AF-C (continuous autofocus) mode so it can better track moving subjects and keep them sharp. The camera takes a photo even if focus is not locked in, because sometimes a slightly out-of-focus image at a crucial instant is better than no picture at all, or one that was taken a second too late. The camera also favors higher shutter speeds to freeze action, and disables the flash.
- ♦ **Night Landscape:** In this mode, the D80 uses longer shutter speeds to allow dark backgrounds and shadows to be properly exposed. The flash is turned off.
- ♦ **Night Portrait:** Similar to the Night Landscape mode, this mode adds flash capability and tries to balance flash exposure with the background illumination using front curtain slow synchronization.

Semiautomatic and Manual Exposure Modes

The Nikon D80 has 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. There is also a Manual mode that enables you to set shutter speed and aperture individually. You set these four modes (see figure 1.24) using the Mode dial:

- ♦ **Program:** The D80 selects a shutter speed and aperture for you. It's still possible for you to override the camera's calculated exposure by holding down the EV button and rotating the main 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 main command dial to the right to select a higher shutter speed/larger aperture or to the left to change to a slower shutter speed/smaller aperture combination.
- ♦ **Shutter Priority:** Turn the main command dial to choose the shutter speed. The D80 selects an

appropriate aperture to provide the correct exposure.

- ♦ **Aperture Priority:** Use the sub-command dial to choose the aperture, and the D80 chooses the correct shutter speed for the right exposure.
- ♦ **Manual:** Select both the shutter speed and aperture using the main and sub-command dials. When the proper exposure is specified, the indicator in the analog exposure scale in the viewfinder will be centered between the + and – indicators.



1.24 Manual, Aperture Priority, Shutter Priority, and Program modes are also available.

