Exploring the COOLPIX Cameras

CHAPTER 1

In This Chapter

In this chapter you explore all the details of the different camera series and some of the specifications and features that each has to offer. We also cover the layouts and where to find the certain parts and buttons that make up the camera. This chapter is intended to help you learn the layout of the camera so you know where each part of your camera is and what it does.

The L Series

Nikon calls its COOLPIX L Series the "Life" series of cameras because they are designed to "capture your life, easily." These cameras are sophisticated, yet very simple to use: The camera controls almost all of the shooting functions, allowing you to concentrate on composing the image in the LCD viewfinder.

An L Series camera, although not as compact as an S Series one, is small enough to fit in your pocket so you can always have it with you. And although the L Series cameras are the most affordable in Nikon's lineup of point-and-shoot cameras, even these entry-level models offer an amazing array of features.

The L-series cameras start out with the L4's 4-megapixel image sensor, which is enough to print photos up to 8 × 10 inches in size, and go all the way up to the L5 and L12's 7-megapixel sensor, which allows you to print flawless-looking images as large as 16 × 20 inches!

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The cameras in the L Series have at least a 3X optical zoom lens. The L5 has a 5X optical zoom, which offers plenty of zoom for those far-off subjects. All the cameras also offer an additional 4X digital zoom for extra reach when the subject is extremely far away.

Basic camera layout

In this section, I discuss the various buttons on the camera and give a brief description of what each button does. Although there are some minor variations on the layout between the different camera models, everything is nearly the same.

Top of the camera

On the top of the L Series cameras, you have the On/Off button and the shutter release button. With the L5 and L12 cameras, the top of the camera is also where the Image Stabilization/Vibration Reduction (VR) and the One-Touch Portrait and D-Lighting buttons are located.

On cameras that offer a voice recording option, the speaker is also located on the top of the camera.

The On/Off button powers up the camera when you push and hold it for about three quarters of a second. The reason you need to press and hold the button is that otherwise it would be hard to prevent the camera from accidentally turning on in your pocket, purse, or camera bag if the button was momentarily pressed.

The Shutter Release button is the button you press to engage the autofocus and to make the picture.

For cameras equipped with this feature (L5), the VR button allows you to activate the Vibration Reduction. You can choose between VR off, VR normal, and VR active by pressing the button.

Optical Zoom versus Digital Zoom

Most compact digital cameras these days offer two types of zoom, optical and digital. There are some very big differences between the two. You may think that an extra 4X digital zoom is a good thing. Actually, it's not necessarily.

An *optical zoom* is the actual image that is produced by the optics, the lens, of the camera. Lenses are designed to give the sharpest images possible with the cameras they are paired with.

Digital zoom is not actually zooming at all. What digital zoom does is take a portion of the optical image and enlarge it. Essentially, what the camera is doing is taking the original image and cropping a piece of it out. Usually this leaves you with a grainy, pixilated-looking image. This same level of cropping can be done later with image editing software and yields much better results for you.

That being said, digital zoom is not all bad. It may be necessary for you to use if you don't use a computer to edit your images or if you print directly from the camera or memory card. Also, if you're not going to print your images any larger than 4 × 6 inches, you may not be able to notice the pixilation caused by the camera cropping into the image.

Image courtesy of Nikon, Inc.

1.1 Top view of the L6

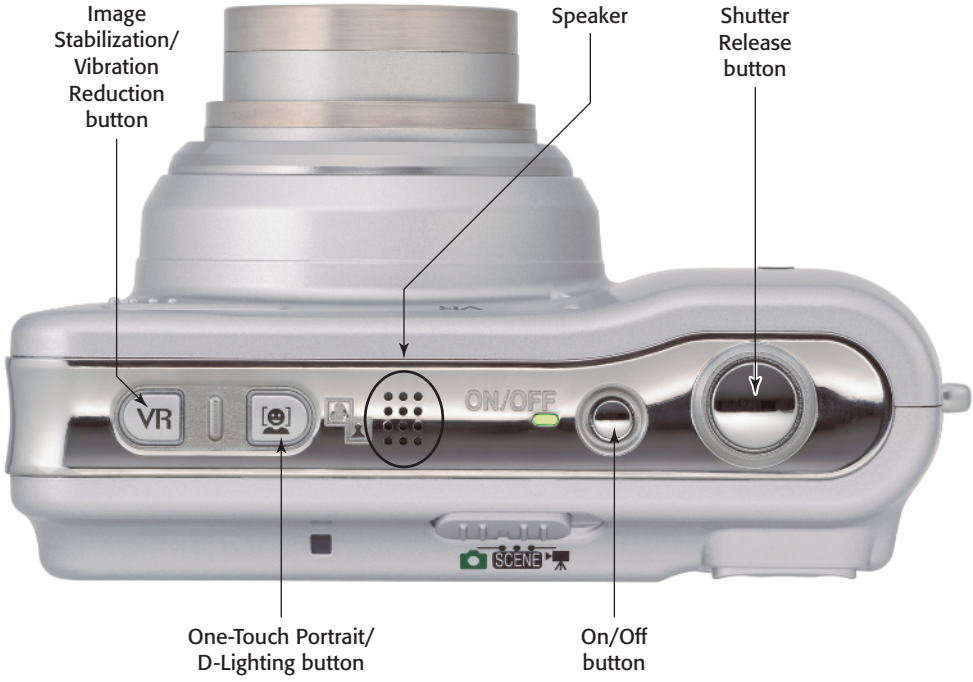

Image courtesy Nikon, Inc.

1.2 Top view of the L5

Cross-Reference *For more information on Vibration Reduction see Chapter 3.*

Another button that is only available on certain models is the One-Touch Portrait button. When you press this button, the camera switches to Face-Priority AF and applies In-Camera Red-Eye Fix in the next shot you take. If the camera is in Playback mode and you press this button, it is activates the D-Lighting button function. *D-Lighting* is a function within the camera that can fix the underexposure that can often happen to images that are backlit.

1.3 Close-up of the VR and One-Touch Portrait buttons

Front of the camera

The front of the camera is where the lens, the flash, and the AF-Assist illuminator and self-timer lights are located. On cameras with the sound recording function, the front of the camera is also where the built-in microphone is located so that you can record sound with your images or movies.

Nikon has been known for making some of the best lenses in the industry for going on seventy years. All Nikon COOLPIX cameras come equipped with high-quality Zoom-Nikkor lenses.

Located above the lens is the flash, or in Nikon terminology, the Speedlight. While there are all sorts of different reason to use flash, the main function of the flash is to provide ample illumination when the lighting is too dim to take a photograph.

The AF-Assist illuminator/Self-timer lamp lights up when there is not enough light for the camera to focus properly. The lamp provides enough light for the camera to detect enough contrast to focus. It also functions as a self-timer light. The self-timer light blinks, letting you know that the timer is activated and the shutter will fire.

There is a small microphone located just above and to the side of the lens area, if your camera has this feature, for recording sound when using the movie mode, or for recording notes to a still image.

Note *Not all L Series cameras have the AF-assist illuminator. Check your owner's manual for your specific model.*

Back of the camera

The back of the L Series cameras is where most of the controls and option buttons reside. Everything from the zoom to exposure compensation is controlled from here. This is also where the LCD panel is.

- **LCD screen.** The most obvious feature on the back of the camera is the LCD screen. The L Series cameras have anywhere from a 2- to 2.5-inch LCD screen. The LCD screen is where you compose and view your images, view the menus to change your settings, and, do any in-camera editing to your images such as in-camera cropping and D-Lighting adjustments. The

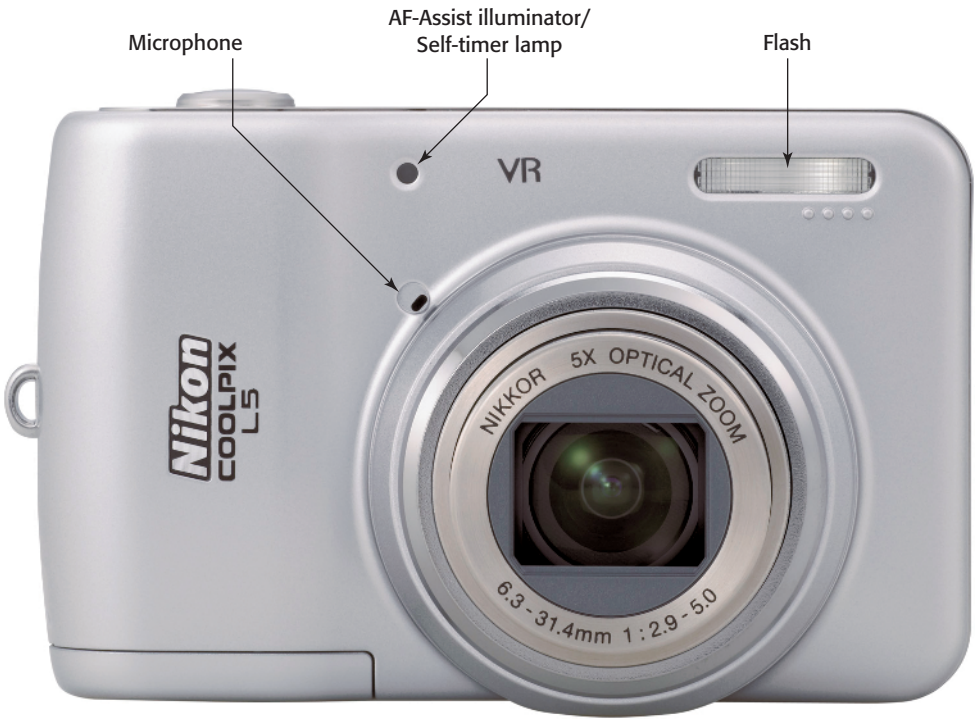

Image courtesy of Nikon, Inc.

1.4 Front view of the L5

LCD screens on the COOLPIX cameras are bright, easy to see, durable, and scratch-resistant.

- **Mode selector button.** At the top of the back of the camera is the Mode selector button. This button slides left and right, allowing you to choose the shooting mode to which you want to set your camera. The modes are Auto, Scene Mode, and Movie Mode.
- **Flash lamp.** Above the LCD panel is the flash lamp. This light indicates if the flash is ready and will fire or if the flash is charging. When the flash lamp is glowing solid, the flash is ready to fire. If the flash lamp is blinking, the flash is still charging, and will be ready in a few seconds. If the flash lamp is not lit, the flash will not fire.

Note

The Shutter Release button must be half-pressed in order for the flash lamp to come on.

- **Zoom button.** The Zoom button is a two-way rocker switch that allows you to zoom the lens in or out. To the left on this button is the wide-angle setting, marked with a W, which allows you to fit a lot of the scene into the image; the right button, marked with a T for telephoto, allows you to zoom in close to capture faraway subjects or to focus on a specific detail of a subject. The Zoom button also has two other uses, depending on the mode the camera is in:

- **In Playback mode.** Under the button on the left-hand (W) side is a small checkerboard pattern. When you press it in Playback mode, the LCD plays back your images as small thumbnails. Under the right-hand (T) side of the button is a magnifying glass icon. When you press this side of the button, you're able to zoom into the image that is being played back for closer inspection.
- **In Menu mode.** Next to the magnifying glass icon is a question mark symbol. When your camera is in Menu mode, you can press this button on the T side to display a brief description of whatever menu item is currently selected.

✦ **Menu button.** When you press this button, a menu where you can change settings appears on the LCD screen. Each menu is different depending on which mode you're in. For example, if your camera is set to Auto mode when the Menu button is pressed, you see the Shooting menu; if you're set to the Scene mode, you see the Scene menu, and so on. There is also a menu for the One-Touch Portrait mode on cameras with this feature.

✦ **Multi-selector in Shooting mode.** The multi-selector control is probably the most important and complex control on the camera because it is really a conglomeration of five buttons, with more than one function for each button. When you're in Shooting mode, whether you're in Auto or Scene mode, the primary function of the multi-selector is to enable you to change the most important features quickly. For ease of use, each button is marked with the icon of what it does.

- **Flash mode button.** This button is at the top of the multi-selector and is represented by a small lightning-bolt icon. When you press this button, the flash mode options appear on the LCD panel. Use this button to change the flash mode, choosing the one that is more suited to your needs.
- **Exposure compensation button.** Use the right button on the multi-selector to adjust the exposure compensation to fine-tune the image. It is represented by a plus and minus icon. After you preview the image, if it looks too dark or too light you can adjust the exposure compensation and re-shoot the picture with the adjustments in place.
- **Focus mode button.** You use the Focus mode button, which looks like a flower, to enable the close-up function. This allows you to focus very close to the subject to get greater detail in your images.
- **Self-timer button.** The left button, which looks like a clock or a timer, is used to set the self-timer. The self-timer puts a ten-second delay on the shutter so you can set your camera up for shooting self-portraits.
- **OK button.** The center OK button sets the selection of the function being modified.

Cross-Reference *All of these features and more are discussed in greater detail in Chapter 2*

- **Multi-selector in Playback mode.** When you are in Playback mode, you use the multi-selector to navigate through the images. The top button and the button on the left display previous images and the bottom button and right button display the next images in the order you took them. The OK button takes you into the Quick Playback Zoom mode, which divides the current displayed image into nine sections, initially zooming in on the center section. You can then use the directional button on the multi-selector to move to another section of the image. While in Quick Playback Zoom mode, you can also use the Zoom button to zoom in further or to zoom out.

Note *When you've connected to a computer via USB cable, press the OK button to start downloading all pictures that have been marked for transfer.*

- **Playback mode button.** Press this button to view a full-frame playback on the LDC screen of the images you have taken. Once in Playback mode, you can use the multi-selector to view the images as noted in the previous bullet. To return to the Shooting mode, press the Playback mode button again.

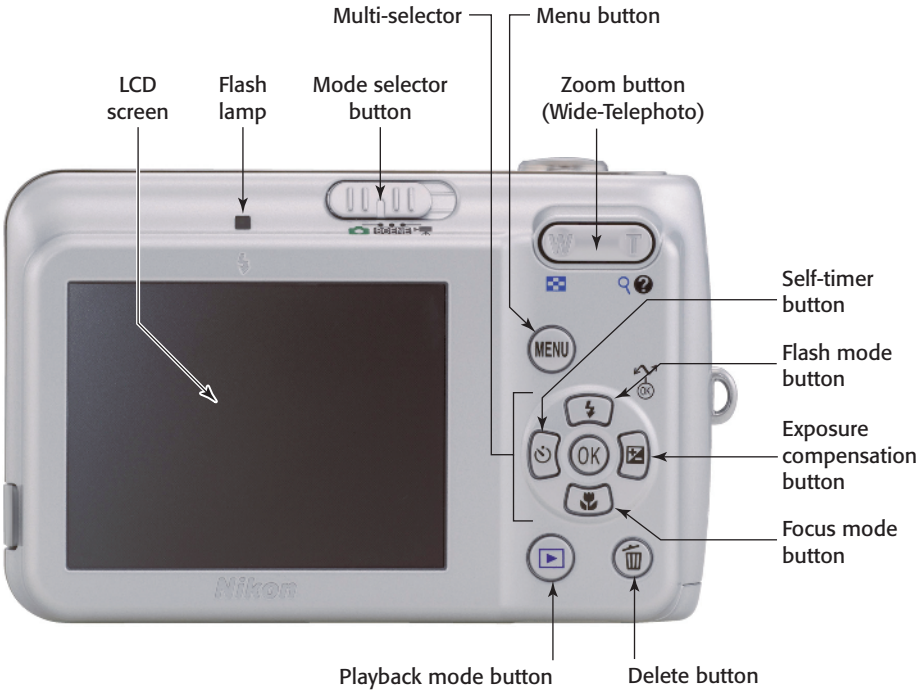

Image courtesy of Nikon, Inc.

1.5 Back view of the L5

- **Delete button.** This button is marked with an icon that looks like a trash can. If you're in Playback mode and you press the delete button, the image that appears in the LCD screen is permanently deleted. To save your images from accidental deletion, the camera asks whether you want to erase the image. Use the multi-selector up or down to select Yes or No, and then press the OK button.

The sides and bottom of the camera

The right side of the camera is where the USB port is located that you use to connect your camera to your computer to download your images; you can also use the USB cable to connect to a PictBridge compatible printer to print directly from the camera.

The left side of the camera has an eyelet that is used to attach the strap that is supplied with the camera.

On the bottom of the camera are the battery door cover and the tripod socket. The battery door cover opens to insert the batteries and also the memory card. The tripod socket is used to screw in the quick-release plate of a tripod or to connect the camera directly to a tripod head.

The S Series

Nikon calls its S Series cameras its "Style" series. These cameras are ultra-compact, yet are packed with features such as Vibration Reduction, and some models even include Wi-Fi. They have a high sensitivity ISO that allows you to take pictures in even the lowest light without using a flash. The S Series has a sleek and stylish look: Some models have brushed aluminum casings, some have a sleek wave design, and others have a sophisticated black finish.

An S Series camera is so compact that it can fit unobtrusively into your pocket, allowing you to have it with you at all times so you don't miss that once-in-a-lifetime shot.

All of the S Series cameras have a 3X optical zoom. The S4 and S10 cameras even have a 10X optical zoom. This is perfect if you're shooting wildlife and birds or any subject that you just can't get to close to. The S4 and S10 also have a swiveling lens that allows you to compose your images up high and down low; this way you don't have to resort to getting into an awkward position and are still able to view the LCD screen perfectly.

Basic camera layout

Cameras in the S Series vary widely, so there may be some differences in the basic layout of the cameras shown and the camera you own, but for the most part the descriptions are accurate for all S Series cameras.

Any major differences between the camera layouts are addressed separately.

Top of the camera

On the top of the S Series cameras, you have the On/Off button and the Shutter Release button. On models such as the S5, S6, S7c, S9, and S10, the Zoom button is also located on the top. On models S50, S50c, S200, and S500, the zoom button is located on the

back panel. The top of the camera is also the location of the One-Touch Portrait mode button on cameras that are equipped with this feature. On the S50, S50c, and the S500, the button for activating the Anti-Shake mode is located on the top as well. The Anti-Shake mode button is represented by a hand with shaky lines around it.

Cross-Reference *For more information on the Anti-Shake mode see Chapter 3.*

- **On/Off button.** Powers up the camera when you press and hold it for about three quarters of a second.
- **Shutter Release button.** You press this button to engage the auto focus and to actually make the picture.
- **One Touch Portrait button.** You press this button to switch the camera to Face-Priority AF and apply In-Camera Red-Eye fix. When the camera is in Playback mode, this button doubles as the D-Lighting button. *D-Lighting* is a function within the camera that can fix the underexposure that can often happen to images that are backlit.
- **Anti-Shake Button.** By pressing this button, Best Shot Selector, VR, and high ISO are all activated. This mode allows low light photography (without a flash) with Image Stabilization with a high ISO capability.

The major exceptions to the top of the camera view are the S4 and S10 cameras. These cameras have a swiveling lens capability, and when they are closed, the lens of the camera points straight up to the top of the camera.

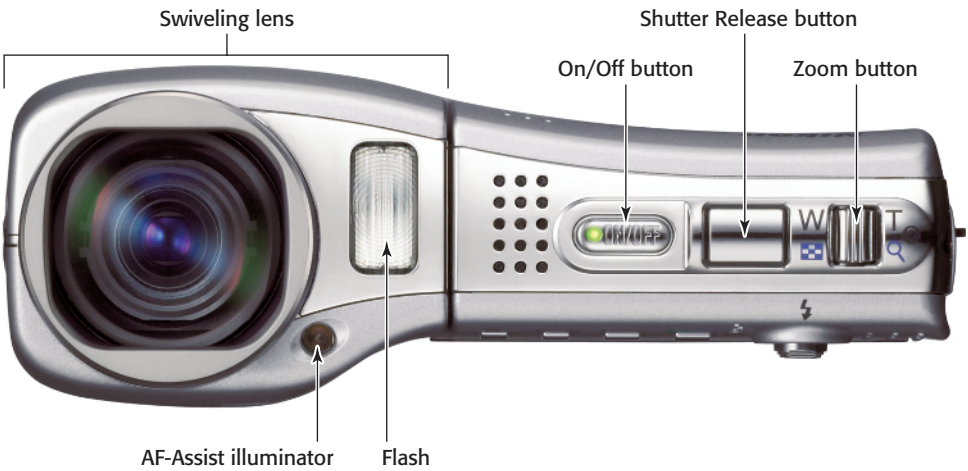

Image courtesy of Nikon, Inc.

1.6 Top view of the S10

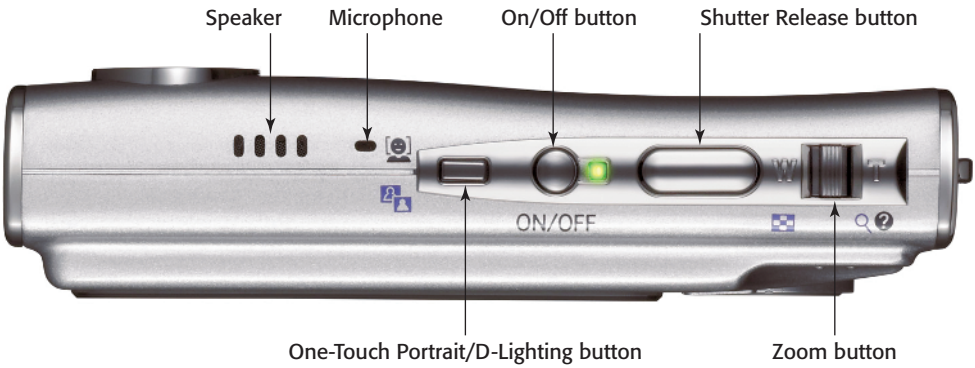

Image courtesy of Nikon, Inc.

1.7 Top view of the S9

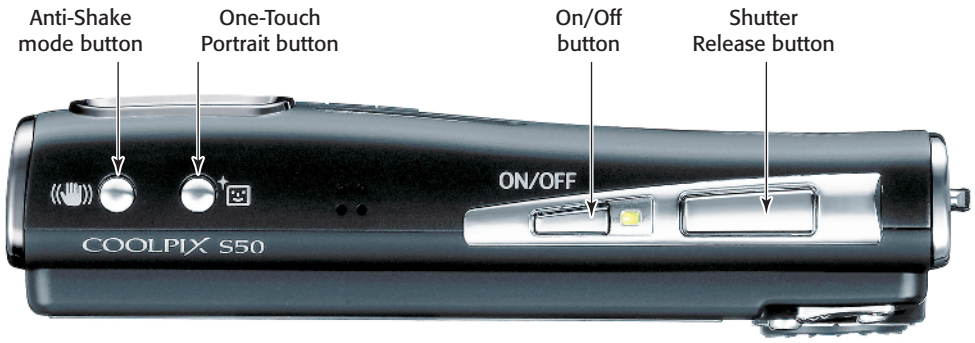

Image courtesy of Nikon, Inc.

1.8 Top view of the S50

Front of the camera

The front of the camera is where the lens, the flash, and the AF-assist illuminator/self-timer lights are located. On cameras such as the S200 and S500, this is also where the built-in microphone is located.

The lens on the S200 and S500 is easily visible as it protrudes from the front of the camera. The rest of the cameras, with the exception of the S10, have an internally zooming lens. This means that even when the camera is on, no lens sticks out from the front of the camera. The S7c and the S500 S Series cameras have a 3X zoom with the exception of the S4 and S10, which have an amazing 10X optical zoom.

Located above the lens is the flash, or in Nikon terminology, the Speedlight. Although several reasons to use flash exist, the main function of the flash is to provide ample illumination when the lighting is too dim to take a photograph.

Also on the front of the camera is the AF-assist illuminator/self-timer lamp. AF-assist lights up when there is not enough light for the camera to focus properly. This provides enough light to allow the camera to detect enough contrast to focus. The lamp also functions as a self-timer light. The self-timer light blinks, letting you know that the timer has been activated and the camera shutter will fire.

On the S200 and S500 models, there is a small microphone located on the front for recording sound when using the Movie mode, or for recording notes to a still image.

Back of the camera

The back of the S Series cameras is where most of the controls and option buttons reside. You can control everything from the zoom to exposure compensation from here. This is also where the LCD screen is located.

Start with the most obvious feature: the LCD screen. The S Series cameras have either a 2.5- or 3-inch LCD. The S7c, S50, and S50c all have a 3-inch LCD, while the remaining S Series cameras have a 2.5-inch LCD. The LCD panel is where you compose and view your images; view the menus to change

Image courtesy of Nikon, Inc.

1.9 Front view of the S200

Image courtesy of Nikon, Inc.

1.10 The front of the S50c

your settings; and do any in-camera editing to your images, such as in-camera cropping and D-Lighting. The LCD screens on the COOLPIX cameras are bright, easy to see, durable, and scratch-resistant.

✦ **Multi-selector in Shooting mode.** Probably the most important and complex button is the multi-selector. This button is really a conglomeration of five buttons, each having more than one function. When you're in Shooting mode, whether you're in Auto or Scene mode, the primary function of the multi-selector is to enable you to change the most important features quickly. For ease of use, each direction on the button is marked with the icon of what it does.

Note

In the S Series cameras, with the exception of the S9 and S200, the multi-selector also is a rotary multi-selector dial. The outer ring of the button rotates to make it easier and faster for you to scroll through the menus and pictures.

- **Flash button.** Represented by a small lightning bolt icon, when you press this button, the Flash mode options appear on the LCD panel. Use this button to change the Flash mode, choosing the one that is more suited to your needs.
- **Exposure compensation button.** Use the right button on the multi-selector to adjust the

exposure compensation to fine-tune the image to get it just right. It is represented by a plus and minus icon. Exposure compensation is used when you take a photograph. After you preview the image, if it looks too dark or too light you can adjust the exposure compensation and re-shoot the picture with the adjustments in place.

- **Focus mode button.** You use the Focus mode button, which looks like a flower, to enable the close-up function. This allows you to focus very close to the subject to get greater detail in your images.
- **Self-timer button.** The left button, which looks like a clock or a timer, is used to set the self-timer. The self-timer puts a ten-second delay on the shutter so you can set your camera up for shooting self-portraits.
- **OK button.** Use this button, located in the center of the multi-selector, to set the selection of the function being modified. Pressing the center button while the camera is in Shooting mode also puts the camera in Anti-shake mode, for cameras equipped with this feature.

✦ **Multi-selector in Playback mode.** Use the multi-selector to navigate through and review on the LCD the images that you've taken. The top and left buttons of the multi-selector display the previous images and the bottom and right buttons display the next images in the order you took them. You can also use the rotary multi-selector to scroll through the images. Scrolling the rotary multi-selector clockwise displays the images in the order you took them; scrolling it counter-clockwise displays the images in reverse order.

✦ **OK button.** When you're connected to a computer via USB cable, press the OK button to start downloading all pictures that have been marked for transfer.

✦ **Playback button.** Pressing this button allows you to view a full-frame playback of the images you have taken. Once in Playback mode, you can use the multi-selector or the rotary multi-selector to review the images. To return to the Shooting mode, press the Playback button again. When the camera is powered off, you can press and hold this button to turn the camera on in Playback mode.

✦ **The Mode button.** Press the Mode button when in Shooting or Playback mode to view the menus. You can switch between the Shooting mode menu and the Playback mode menu by pressing the Playback button.

✦ **The Menu button.** When you press this button, you see menus within specific shooting modes.

✦ **Delete button.** This button is marked with an icon that looks like a trash can. When you press the Delete button in Playback mode, the image on the LCD panel is permanently deleted. To save your images from accidental deletion, the camera asks whether you want to erase the image. Use the multi-selector up or down to select Yes or No, and then press the OK button.

- **Zoom button.** The newest of the S Series, the S50, S50c, S200, and the S500 cameras have the Zoom button on the back of the camera. The Zoom button is a two-way rocker switch that allows you to zoom the lens in or out. To the left on this button is the wide-angle setting, marked with a W, which allows you to fit a lot of the scene into the image; the right button, marked with a T for telephoto, allows you to zoom in close to capture faraway subjects or to focus on a specific detail of a subject. The Zoom button also has two other uses, depending on the mode the camera is in:
  - **In Playback mode.** Under the button on the left-hand (W) side is a small checkerboard pattern. When you press it in Playback mode, the LCD plays back your images as small thumbnails. Under the right-hand (T) side of the button is a magnifying glass icon. When you press this side of the button, you're able to zoom into the image that is being played back for closer inspection.
  - **In Menu mode.** Next to the magnifying glass icon is a question mark symbol. When your camera is in Menu mode, you can press this button on the T side to display a brief description of whatever menu item is currently selected.

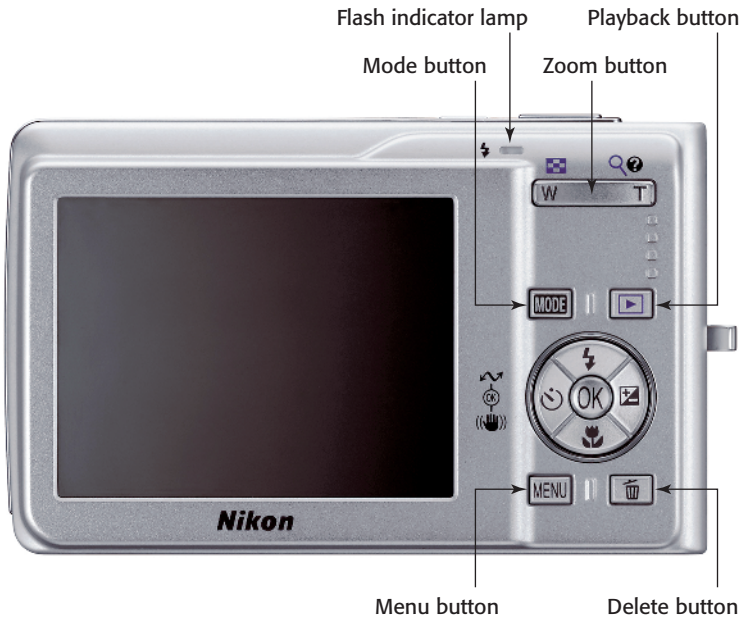

Image courtesy of Nikon, Inc.

1.11 Back of the S200

Image courtesy of Nikon, Inc.

1.12 Back view of the S7c

Sides and bottom of the camera

One side of the camera has the USB port that you use to connect your camera to your computer to download your images; you can also use the USB cable to connect to a PictBridge compatible printer to print directly from the camera.

Note

Some COOLPIX cameras, such as the S7c and the S50c, come with a special connection that is not USB, but has a USB output. See your owner's manual for detailed information on the cable.

The side of the camera also has an eyelet that you use to attach the strap that is supplied with the camera.

On the bottom of the camera are the battery door cover and the tripod socket. You open the battery door cover to insert the batteries as well as the memory card. You use the tripod socket to screw in the quick-release plate of a tripod or to connect the camera directly to a tripod head.

The P Series

Nikon calls the P Series the "Performance" series because there are more shooting controls and generally a higher megapixel count. These advanced shooting modes allow you control the camera settings rather than let the camera choose them for you. Of course, the P Series cameras also have the Auto settings and Scene modes that are available on the L and S Series cameras.

Due to the advanced settings and the need for more controls and buttons on the camera, the P Series cameras are slightly larger than models in the other COOLPIX camera series; however, these cameras are still compact enough to fit in your pocket, purse, or a small camera bag.

With the addition of the Programmed, Aperture Priority on the P3 and P4; and Programmed, Aperture Priority, Shutter Priority, and Manual modes on the P5000, the P Series cameras allow you set your camera the way you want, enabling you

greater creative control over your images. These are the same settings that are available on Nikon's much more expensive digital SLR (dSLR) cameras.

The P5000 even has a flash hot-shoe attachment so that you can use a larger flash unit, called a Speedlight, such as the SB-400, SB-600, or SB-800. These larger Speedlights have a much greater range than the built-in flash can offer. Using an SB-600 or an SB-800 also allows you to do some more advanced flash techniques such as *bouncing.* Bouncing the flash is a technique where you tilt the flash head at an angle to create a more diffused and natural-looking light.

Hot-shoe is just a photography term for the place where you attach an external accessory flash, such as a Speedlight, to your camera.

Basic camera layout

There are some minor differences between the camera models, but the layouts are closely related.

Image courtesy of Nikon, Inc.

1.13 P5000 with SB-400 Speedlight attached at the hot-shoe

Top of the camera: P3 and P4 models

The P3 and P4 cameras are nearly identical with the exception of the WiFi setting, so this section starts there, and then continues on with the P5000.

- **Mode dial.** The most prominent feature on top of the P3 and P4 cameras is the Mode dial. This is where you set your camera to the mode that you desire to work in. The Mode dial is also where you enter the menus in order to change the settings of your camera. The P3 also has the wireless setting menu on the Mode dial.
- **On/Off button and power lamp.** On the right side of the top of the camera are the On/Off button and the power lamp. Pressing and holding the On/Off button for about a half-second turns the camera on, thus lighting the power lamp.
- **Shutter Release button.** You use the Shutter Release button to initiate the camera's autofocus and then take the picture.
- **Vibration Reduction/Image Stabilization button.** On the left side of the P3 and P4 cameras is the Vibration Reduction/Image Stabilization (VR) button. You press this button to choose between VR off, VR normal, and VR active.

Top of the camera: P5000 model

The P5000 is currently the most advanced feature-wise of all the Nikon COOLPIX cameras. There are more controls and the camera allows for more flexibility when deciding how to shoot in various situations. Take a look at the top of the camera.

- **Mode dial.** The P5000 Mode dial is a little different than the Mode dial on the P3 and P4. The P5000 Mode dial has a few more shooting modes. These modes include the Auto mode, P, S, A, and M modes, as well as an Anti-shake mode and a mode for shooting with a high ISO, VR, and Best Shot Selector. The modes also include the standard Scene mode and the Movie mode. Like the P3 and P4, the P5000 setup menu is also accessed through the Mode dial.
- **On/Off button and power lamp.** On the right side of the top of the P5000 are the On/Off button and the power lamp. Pressing the On/Off button for about half a second turns the camera on, lighting the power lamp.
- **Shutter Release button.** This is the button you press to focus and take the picture.
- **Zoom button.** Located right next to the Shutter Release button, use this rocker-style button to zoom from wide-angle to telephoto and back when in Shooting mode. In Playback mode, you use the Zoom button to zoom in and out of images being viewed on the LCD screen.
- **Command dial.** You use the Command dial to change the various settings when using the Manual mode or one of the semi-manual modes such as Aperture Priority or Shutter Priority mode.

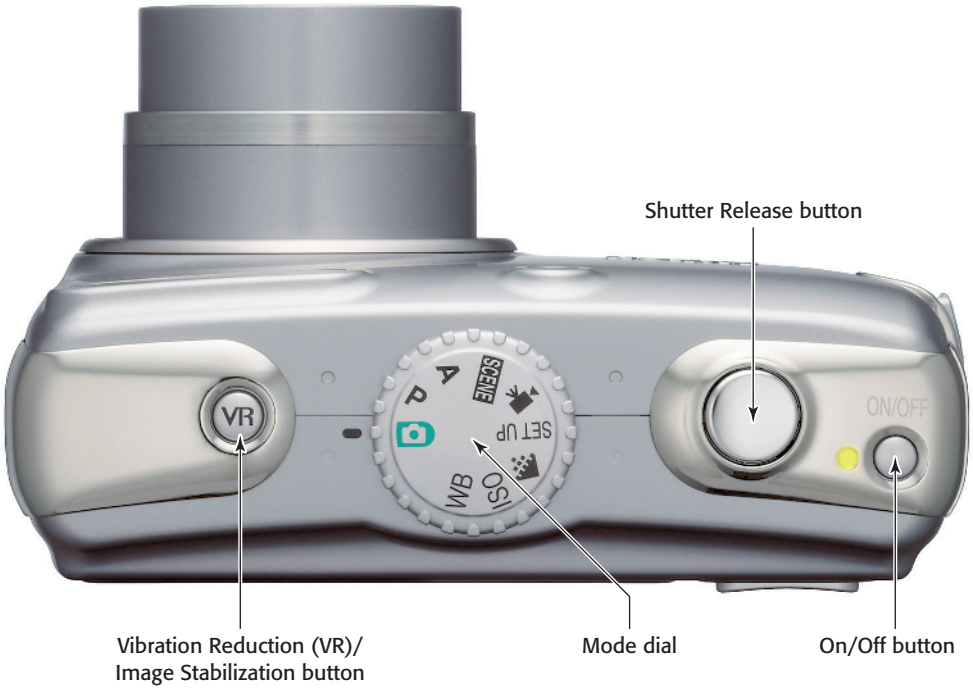

Image courtesy of Nikon, Inc.

1.14 Top view of the P4

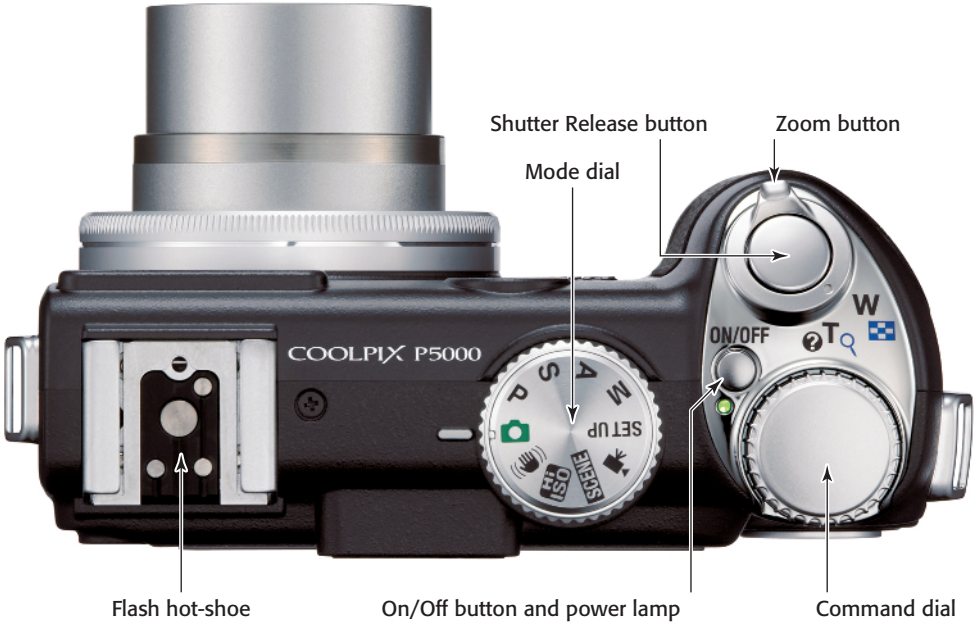

Image courtesy of Nikon, Inc.

1.15 Top view of the P5000

- **Flash hot-shoe.** The P5000 features a flash hot-shoe. This is where an external Speedlight is attached to the P5000 camera body. Terminals underneath the removable plastic cover of the hot-shoe interact with a Nikon Speedlight, communicating electronically to tell that flash at what power to fire to achieve the correct exposure for the subject that you are photographing.

Front of the Camera

Located in the front of the P Series cameras are the lens, the built-in Speedlight, the AF-assist illuminator, and the microphone. The P5000 also has an optical viewfinder to facilitate shooting in all lighting conditions.

The lenses on the P Series cameras are high-quality Zoom-Nikkor lenses. The P Series cameras come equipped with 3.5X zoom. The lens has an aperture, or lens opening that varies between f/2.7 and f/5.3 at its widest, depending on how far the lens zooms in.

Located above the lens is the built-in Speedlight or flash. While there are all sorts of different reasons to use flash, the main function of the flash is to provide enough illumination to take a photograph when the lighting is too dim, or to fill in flash in a backlit situation.

Cross-Reference *For more on using the built-in flash see Chapter 3.*

Image courtesy of Nikon, Inc.

1.16 Front view of the P4

Also on the front of the camera is the AF-assist illuminator. This is a small LED lamp that lights up in dimly lit situations to allow your camera's autofocus to achieve the proper focus. This lamp also doubles as a self-timer lamp that blinks a countdown when you have your camera in the Self-timer mode so you can know when the camera is going to fire.

There is also a small microphone on the front of the P-series cameras. This is used for recording sound when the camera is in Movie mode. It can also be used to record notes attached to specific images when the camera is in Playback mode.

Additionally, the P5000 has the element optical viewfinder on the front of the camera. I discuss the optical viewfinder and its uses in the next section, which covers the back of the camera.

The back of the camera: P3 and P4 models

The back of the camera has the bulk of the buttons for accessing most of the features available on your P Series camera. This is where you enter the Playback and Shooting modes, dial in exposure compensation, change flash modes, set the self-timer, and control or access a multitude of other features.

Image courtesy of Nikon, Inc.

1.17 Front view of the P5000

- **LCD screen.** The most obvious feature on the back of the camera is the LCD screen. The P Series cameras have a 2.5-inch LCD panel with an anti-reflective coating and adjustable brightness levels. The LCD is where you compose and view your images, view the menus to change your settings, and do any in-camera editing to your images, such as in-camera cropping and D-Lighting. The LCD screens on the COOLPIX cameras are bright, easy to see, durable, and scratch-resistant.
- **Zoom button.** The button at the top right of the camera is the Zoom button, which is a two-way rocker switch. The Zoom button has three functions, depending on the Mode your camera is in:
  - **In any Scene mode.** The Zoom button allows you to zoom the lens in or out. The left of this button is marked with a W for wide-angle, which allows you to fit a lot of the scene into the image; the right is marked with a T for telephoto, which allows you to zoom in close to capture faraway subjects or to focus on a specific detail of a subject.
  - **In Playback mode.** Under the button on the left-hand (W) side is a small checkerboard pattern. When you press this in Playback mode, the LCD plays back your images as small thumbnails. Under the right-hand (T) side of the button is a magnifying glass icon. When you press this side of the button, you're able to zoom into the image that is displayed for closer inspection.
  - **In Menu mode.** Next to the magnifying glass icon is a question mark symbol. With your camera in Menu mode, you can press this button on the T side to display a brief description of whatever menu item is currently selected.
- **Menu button.** When you press this button, the LCD panel shows a menu enabling you to change various camera settings. The menus have different options depending on which mode you're in. If your camera is set to Auto mode, when you press the menu button, you will be in the Shooting menu. If you're set to the Scene mode, then you will see the Scene menu and so on.
- **Multi-selector in Shooting mode.** When you're in Shooting mode, whether you're in Auto, Scene, or one of the Exposure modes, the primary function of the multi-selector is to enable you to change the most important features quickly. For ease of use, each direction on the button is marked with the icon of what it does.
  - **Flash mode button.** A small lightning-bolt icon represents the Flash mode button. When you press this button, the Flash mode options appear on the LCD panel. This is used to change the Flash mode to choose one that is more suited to your needs.

- **Exposure compensation button.** You use the right button on the multi-selector to adjust the exposure compensation to fine-tune the image to get it just right. Exposure compensation is used when you take a photograph. After you preview the image, if it looks too dark or too light you can adjust the exposure compensation and re-shoot the picture with the adjustments in place.
- **Focus mode button.** You use the button on the bottom of the multi-selector to change the focus mode.
- **Self-timer button.** The left button allows you to set the self-timer. The self-timer puts a three- or ten-second delay on the shutter so you can set your camera up for shooting self-portraits or reduce the effect of camera shake caused from pressing the shutter release button while the camera is mounted on a tripod.
- **OK button.** You use the OK button in the center of the multi-selector to set the selection of the function being modified.

Image courtesy of Nikon, Inc.

1.18 Back view of the P4

All of these features and more are discussed in greater detail in Chapter 2.

- **Multi-selector in Playback mode.** Use the multi-selector to navigate through the images. The top button and the button on the left display the previous images, and the bottom and right buttons display the next images in the order you took them. The OK button enters you into the Quick Playback Zoom mode. This divides the current displayed image into nine sections, initially zooming in on the center section. You can then use the directional buttons on the multi-selector to quickly move to another section of the image. While in Quick Playback Zoom mode, you can also use the Zoom button to zoom in further or to zoom out.

When you are connected to a computer by using a USB cable, press the OK button to start downloading all pictures that have been marked for transfer.

The back of the P5000 Series

The back of the P5000 has more buttons and options on it than all of the other COOLPIX series cameras. The P5000 is designed to be more flexible than the typical compact camera, so there are buttons that allow you direct access to some of the options that you can only reach by going through menus on the other cameras. This is a very convenient feature that allows you to make adjustments on the fly without missing shots.

- **Optical viewfinder.** Directly above the LCD panel on the P5000 is the optical viewfinder. You can use the optical viewfinder when bright sunlight makes the LCD screen difficult to see or when you may want to turn the LCD monitor screen off to conserve battery power.

The image in the viewfinder may not appear the same as the final picture, especially when you're shooting close-up and shooting in 3:2 or 16:9 image mode, which have a different length and width from the standard image.

- **Flash indicator lamp.** Located right next to the optical viewfinder is the Flash indicator lamp. The Flash indicator lamp lights up when the shutter is half-pressed to show you the status of the flash. When the light is on, the flash is ready to fire. If the light is blinking, the flash is charging; wait a few seconds until the light stops blinking and then take the photo. If the light is off, the flash is turned off or is not needed.
- **AF indicator lamp.** The AF indicator lamp lights when focus is achieved. If the camera is unable to focus, the AF lamp blinks rapidly.
- **Multi-selector in Shooting mode.** The multi-selector on the P5000 is on the right side of the camera. When you're in Shooting mode, whether you're in Auto, Scene, or one of the Exposure modes, the primary function of the multi-selector is to enable you to change the most important features quickly.

- **Flash button.** A small lightning-bolt icon represents this. When you press this button, the Flash mode options appear on the LCD panel. You use this to change the flash mode, selecting the one that best suits your needs.
- **Exposure compensation button.** You use the right button on the multi-selector to adjust the exposure compensation to fine-tune the image to get it just right.
- **Focus mode button.** You use the button on the bottom of the multi-selector to change the focus mode.
- **Self-timer button.** You use the left button to set the self-timer. The self-timer puts a three- or ten-second delay on the shutter so you can set your camera up for shooting self-portraits or reduce the effect of camera shake caused from pressing the shutter release button while the camera is mounted on a tripod.
- **OK button.** You use the OK button to set the selection of the function being modified.

✦ **Multi-selector in Playback mode.** When in Playback mode, you use the multi-selector to navigate through the images. The top button and the button on the left display the previous images, and the bottom button and right button display the next images in the order you took them. The OK button takes you into the Quick Playback Zoom mode. This divides the current displayed image into nine sections, initially zooming in on the center section. You can then use the directional button on the multi-selector to quickly move to another section of the image. While in Quick Playback Zoom mode you can also use the Zoom button to zoom in further or to zoom out.

When you are connected to a computer via USB cable, you press the OK button to start downloading all pictures that have been marked for transfer.

On the left side of the back of the camera is a series of five buttons. In descending order, they are as follows:

✦ **Function button.** This button is a shortcut. When in Scene mode, you can press this button and use the Command dial to scroll through the different modes without actually having to enter the Scene Mode menu screen; the Function button works in the same way it does when it's in Movie mode. When the camera is set to P, S, A, or M, you can customize the Function button to quickly adjust the ISO, Image Quality, Image Size, White Balance, or Vibration Reduction settings.

✦ **Monitor button.** Pressing this button in Shooting mode allows you to view or hide the displays on the LCD panel. When in P, S, A, or M, you can use this button to turn off the LCD panel altogether. When in Playback mode, pressing the monitor button enables you to view the shooting data and the histogram, which represents the graphic representation of the tonal distribution of the image being displayed.

- **Playback button.** Pressing this button allows you to view a full-frame playback of the images you have taken with your P5000. Once in Playback mode, you can use the multi-selector to view the images. To view pictures in the order they were taken, press the right or down buttons; to view the images in reverse order, press the left button. To return to the Shooting mode, press the Playback button again or tap the Shutter Release button.
- **Menu button.** When you press this button, the LCD panel shows a Settings menu. The menu may have different options depending on which mode you're in. If your camera is set to Auto mode, when you press the Menu button, you are in the Shooting menu. If you're set to the Scene mode, then you see the Scene menu.
- **Delete button.** Pressing this button while in Playback mode deletes the image currently displayed in the monitor. While in Shooting mode, pressing this button displays the last image taken and asks if you want to delete it.

Image courtesy of Nikon, Inc.

1.19 Back view of the P5000

Sides and bottom of the camera

The bottom of the P Series cameras contains a tripod socket for attaching the camera to a tripod head or to a tripod quick release plate. Also on the bottom of the camera is the battery chamber door. Opening this door allows you access to the battery and the memory card. This is also where you would attach the optional external power supply.

On the left side of the camera with the lens facing you, you'll see the USB port, which has a cover to keep the dust and debris out. There is also a place to attach a strap.

The right side of the camera (when the lens is facing you) is where the built-in speaker resides. The P3 also has an LED that flashes when the camera is in Wireless Transfer mode. The P5000 also has an additional strap attachment here for attaching a neck strap.

Power Requirements

Although the S and P Series cameras come with rechargeable Nikon Lithium-ion (Li-on) batteries and a charger, the L Series cameras use standard AA sized batteries. There are a few different options available to you when it comes to powering your L Series camera.

The LCD on the camera can use a lot of power; you most likely want to invest in a good set of rechargeable batteries.

Non-rechargeable batteries

If you don't use your camera much or if you aren't ready to invest in a set of rechargeable batteries, there are a few different battery options for you to choose from.

- **Zinc-carbon.** These are the cheapest batteries you can buy. They are generally very low-priced store-brand batteries. I wouldn't recommend using these types of batteries unless you are in pinch and can't get anything else.
- **Alkaline-manganese.** These are your everyday, standard-type of battery; alkaline batteries are available nearly everywhere, from the local gas station to high-end camera shops. There can be differences in quality depending on the manufacturer. When you buy these types of batteries, I suggest purchasing those batteries that specify they are for use with digital cameras. They usually last longer than the cheaper brands.
- **Lithium.** Lithium batteries cost a little more than standard alkaline batteries, but they last a lot longer, are lighter, and have a longer life in cold weather conditions. You can find lithium batteries at mass-market retailers and some camera shops.

Rechargeable

Rechargeable batteries do require an initial investment, but you easily get your money back in what you save by not having to buy disposable batteries often. There are two types of rechargeable batteries to choose from for your COOLPIX cameras:

- **NiCad.** Nickel-cadmium batteries are the most common type of rechargeable batteries. Department stores usually sell them along with a charger for less than ten dollars. Also, you can usually find them at most camera stores. Although NiCad batteries are rechargeable, they don't last forever. Eventually

they hold less and less of a charge until they're finally depleted. If the battery is repeatedly charged when it has not been fully exhausted, the life of the NiCad is even shorter. For example, if you come home from shooting and your battery was only used to half of its capacity, you likely place it in the charger for your shoot tomorrow. After doing that several times, the battery remembers that it only charges to half power, which is called battery memory. Some manufacturers, however, claim that battery memory does not exist.

Choosing the Right Battery

When choosing a battery for your camera, you must decide how much you are going to use your camera and how often you are willing to change the batteries. Because most compact digital cameras have no other means of composing the image than using the LCD screen, they tend to use quite a bit of energy powering the display, not to mention using the zoom and flash. Throw in VR and WiFi and you have quite a power hog.

If you plan on only shooting a few snapshots here and there and don't mind buying new batteries once in a while, you can probably get away with just buying standard AA alkaline or lithium batteries.

If you carry your camera with you all the time and tend to take quite a few pictures—sometimes using flash and you take your time composing the image to get it just right—chances are you probably want to invest in a set of rechargeable batteries. In fact, you probably want to invest in at least two sets. This way you can have a set to use while the other set is charging.

Regardless of whether you use rechargeable on disposable batteries, it's a good idea to have at least one extra set of batteries on you. You don't ever want to miss out on that once-in-a-lifetime shot because your batteries died.

Another thing to consider when choosing a battery is how much power they can hold. This is expressed in Milliamp Hours or, more commonly, mAh. Simply put, batteries with higher mAh ratings last longer than ones with lower ratings.

Typical AA zinc-carbon batteries range from 400-900 mAh. Zinc-chloride batteries, which are almost the same as zinc-carbon batteries, are usually rated at 1000-1500 mAh. Ni-Cad batteries are commonly available in the 650-800 mAh range. Although this is not a high-power battery, because it can be recharged, it's generally a better buy than a standard battery of that power range. Ni-MH batteries usually range anywhere between 1400 and 2900 mAh. Obviously, the higher the mAh rating, the more expensive the battery will be. Personally, I use 2500 mAh batteries in my COOLPIX L5. On average, they cost just a little more than $20 for four batteries and a charger.

I recommend making the initial investment in a good set of high-mAh Ni-MH batteries. The time and money you save on batteries is well worth it in the long run.

- **Ni-MH.** Nickel metal hydride batteries are the most expensive type of batteries, but as the saying goes, "You get what you pay for." AA Ni-MH batteries have two to three times the capacity of AA NiCd batteries; therefore, they last longer on a single charge than NiCd batteries do, and the battery memory problem is not as significant. You can find Ni-MH batteries pretty easily in any store that sells any type of electronic equipment.

With Ni-MH batteries, you must fully charge the batteries before you install them into your COOLPIX camera. If one of the batteries in the set becomes discharged before the others, the discharged battery goes into polarity reversal*, which means the positive and negative poles become reversed, causing permanent damage to the cells, rendering the battery useless and possibly damaging your camera.*

Choosing the Right Memory Card

A memory card is where your camera stores the data that makes up the images that you have taken with your camera. Although your Nikon COOLPIX camera has anywhere from 7 to 32 megabytes of internal memory (depending on which camera model you own), this little bit of memory is usually only enough for a few pictures. To get the most out of your camera, you're going to need to get a larger memory card.

Although there are many different types of memory cards, the Nikon COOLPIX series of cameras use what is called SD or MMC. SD stands for Secure Digital media and MMC stands for Multi Media Card. The only difference between these two types of cards is that SD cards have a write protect switch that you can use to prevent the accidental loss of data.

Memory cards come in many different memory amounts, ranging from 16 megabytes all the way up to 8 gigabytes. With the leaps and bounds being made every day in the memory business, you can easily find a high capacity memory card at an affordable price.

Choosing the right memory card depends on a few different things. First and foremost is how much resolution your camera has. A 3-megapixel camera image has a much smaller file size than the image from a camera with a 7-megapixel sensor. Therefore, the higher the resolution of your camera, the larger the memory card you need to have.

Another thing to consider is how many photos you take on a typical outing. If you only shoot a few images here and there, maybe you don't need as much memory, or if you immediately delete any unsatisfactory images, it may be possible to get away with using a smaller card.

Finally, consider how often you download your images to a computer. If you tend to go quite a while without downloading your images, you may be a candidate for a very high capacity card. This way you can store a lot of images without having to go through and delete any to make space for new images.

To give you a rough estimate of how many images you can store on various sizes of cards, see Table 1.1.

Table 1.1
Memory Card Image Storage*

Number of Megapixels	***Memory Card Size***						
	128 mb	***256 mb***	***512 mb***	***1 gb***	***2 gb***	***4 gb***	***8 gb***
3 mp	120	240	490	996	2000	4000	8000
5 mp	48	95	195	395	800	1600	3200
7 mp	35	72	149	297	600	1200	2400
10 mp	26	53	110	221	445	887	1723

** The actual numbers of images varies according to image data, resolution, and compression.*