

# Exploring the Nikon D3000

This chapter covers the key components of the Nikon D3000. These are the features that are most readily accessible because they are situated on the outside of the camera: the buttons, knobs, switches, and dials.

If you are upgrading from another dSLR, some of this will likely be a review, but there are some new features that you may or may not be aware of, so a quick read through is a good idea even if you are an experienced Nikon dSLR user.

For those of you who may be just beginning into the world of dSLRs, this chapter is a great way to get acquainted with some of the terms that are used in conjunction with your new camera.

So fasten your seatbelts, and get ready to explore the D3000!



**Getting to know all your camera's menus, buttons, and dials allows you to quickly change your settings so you don't miss a shot.**

# Key Components of the D3000

If you've read the Quick Tour, you should be pretty familiar with the basic buttons and switches that you need to do the basic settings. In this section, you look at the camera from all sides and break down the layout so that you know what everything on the surface of the camera does.

This section doesn't cover the menus, only the exterior controls. Although there are many features you can access with just the push of a button, oftentimes you can change the same setting inside of a menu option. Although the D3000 doesn't have the same amount of buttons as some of its bigger siblings in the Nikon line, it does have quite a few of them. Knowing exactly what these buttons do can save you loads of time and help you to not miss out on getting a shot.

## Top of the camera

The top of the D3000 is where you find some of the most important buttons and dials. This is where you can change the Shooting mode and press the Shutter Release button to take your photo. Also included in this section is a brief description of some of the things you will find on the top of the lens. Although your lens may vary, most of the features are quite similar from lens to lens.

- ▶ **Shutter Release button.** In my opinion, this is the most important button on the camera. Halfway pressing this button activates the camera's autofocus and light meter. When you fully depress this button, the shutter is released and a photograph is taken. When the camera has been idle and has "gone to sleep," lightly pressing the Shutter Release button wakes up the camera. When the image review is on, lightly pressing the Shutter Release button turns off the LCD and prepares the camera for another shot.
- ▶ **On/Off switch.** This switch, located around the Shutter Release button, is used to turn the camera on and off. Push the switch all the way to the left to turn off the camera. Pull the switch to the right to turn your camera on.
- ▶ **Mode dial.** This is an important dial. Rotating this dial allows you to quickly change your shooting mode. You can choose one of the scene modes, one of the semiautomatic modes, or you can choose to set the exposure manually. For a detailed description of all of the exposure modes, see Chapter 2.
- ▶ **Info button.** Pressing this button brings up the Information Display (Info display), which is discussed in more detail later in this chapter.



Image courtesy of Nikon, Inc.

## 1.1 Top-of-the-camera controls

- ▶ **Exposure compensation/Aperture button.** Pressing this button in conjunction with spinning the Command dial allows you to modify the exposure that is set by the D3000's light meter when set to P, S, or A mode. Turning the Command

dial to the right decreases exposure while turning the dial to the left increases the exposure. This button also doubles as the Aperture button when the camera is set to Manual exposure mode. Pressing the button while rotating the Command dial allows you to adjust your lens aperture. Additionally, when pressing this button in conjunction with the Flash mode, you can adjust your Flash Exposure Compensation by rotating the Command dial.



The Exposure compensation/Aperture button serves no functions when shooting in the automatic or scene modes.

- ▶ **Focal plane mark.** The focal plane mark shows you where the plane of the image sensor is inside the camera. The sensor is directly behind the lens opening. When doing certain types of photography, particularly macro photography using a bellows lens, you need to measure the length of the bellows from the front element of the lens to the focal plane. This is where the focal plane mark comes in handy.
- ▶ **Hot shoe.** This is where an accessory flash is attached to the camera body. The hot shoe has an electronic contact that tells the flash to fire when the shutter is released. There are also a number of other electronic contacts that allow the camera to communicate with the flash to enable the automated features of a dedicated flash unit such as the SB-600.
- ▶ **Focus ring.** Rotating the focus ring allows you to focus the lens manually. The location of the focus ring varies by lens. With old AF (non AF-S) lenses, and even older manual focus lenses, just turn the ring to focus the lens. With newer AF-S lenses, such as the kit lens, there's a switch on the lens labeled "A" and "M". Select M before attempting to manually focus. If you don't switch it over first, you can damage the lens. Some higher end AF-S lenses have a switch labeled "A/M" and "M". With these lenses set to the A/M position, you can manually override the autofocus at any time without damaging the lens.



For more information on lenses and compatibility, see Chapter 5.

- ▶ **Zoom ring.** Rotating the zoom ring allows you to change the focal length of the lens. Prime lenses do not have a zoom ring.
- ▶ **Focal length indicators.** These numbers indicate which focal length in millimeters your lens is zoomed to.

## Back of the camera

The back of the camera is where you find the buttons that mainly control playback and menu options, although there are a few buttons that control some of the shooting functions. Most of the buttons have more than one function — a lot of them are used in conjunction with the Command dial or the Multi-selector. On the back of the camera you also find several key features, including the all-important viewfinder and LCD.

- ▶ **LCD.** This is the most obvious feature on the back of the camera. This big 3-inch, 230,000-dot liquid crystal display (LCD) screen is a very bright, high-resolution screen. The LCD is where you view all your current camera settings as well as review your images after shooting.
- ▶ **Viewfinder.** This is what you look through to compose your photographs. Light coming through the lens is reflected from a series of five mirrors (called a pentamirror) enabling you to see exactly what you're shooting. Around the viewfinder is a rubber eyepiece that serves to give you a softer place to rest your eye and to block any extra light from entering the viewfinder as you compose and shoot your images.
- ▶ **Diopter adjustment control.** Just to the right of the viewfinder (hidden behind the eyecup) is the Diopter adjustment control. Use this control to adjust the viewfinder lens to suit your individual vision differences (not everyone's eyesight is the same). To adjust this, look through the viewfinder, and press the Shutter Release button halfway to focus on something. If what you see in the viewfinder isn't quite sharp, slide the Diopter adjustment up or down until everything appears in focus. The manual warns you not to put your finger or fingernail in your eye. I agree that this might not be a good idea.
- ▶ **AE-L/AF-L/Protect.** The Auto-Exposure/Autofocus lock button is used to lock the Auto-Exposure (AE) and Autofocus (AF). When in Playback mode this button can be pressed to lock an image to protect it from being deleted. A small key icon will be displayed in the upper left-hand corner of images that are protected. This button can be customized to provide AE Lock only, AF Lock only, AE Lock (hold), or AF-ON. AE Lock (hold) locks the exposure with one press of the button; the exposure is locked until the button is pressed again or the shutter is released. AF-ON engages the AF in the same way that half-pressing the shutter does.
- ▶ **Command dial.** This dial is used to change a variety of settings depending on which button you are using in conjunction with it. By default, it is used to change the shutter speed when in Shutter Priority and Manual mode or the aperture when in Aperture Priority. It is also used to adjust exposure compensation and change the flash mode.

- ▶ **Multi-selector.** The Multi-selector is another button that serves a few different purposes. In Playback mode the Multi-selector is used to scroll through the photographs you've taken, and it can also be used to view image information such as histograms and shooting settings. When in certain Shooting modes the Multi-selector can be used to change the active focus point when in Single-point or Dynamic-area AF mode. It also serves to navigate through the menu options.
- ▶ **OK button.** When in the Menu mode, press this button to select the menu item that is highlighted.



Image courtesy of Nikon, Inc.

## 1.2 Back-of-the-camera controls

- ▶ **Delete button.** When reviewing your pictures, if you find some that you don't want to keep, you can delete them by pressing this button marked with a trash-can icon. To prevent accidental deletion of images, the camera displays a dialog box asking you to confirm that you want to erase the picture. Press the Delete button a second time to permanently erase the image.
- ▶ **Memory card access lamp.** This light blinks when the memory card is in use. Under no circumstances should you remove the card when this light is on or blinking. You could damage your card or camera and lose any information in the camera's buffer.
- ▶ **Playback button.** Pressing this button displays the most recently taken photograph. You can also view other pictures by pressing the Multi-selector left and right.
- ▶ **Menu button.** Press this button to access the D3000 menu options. There are a number of different menus, including Playback, Shooting, Custom Settings, and Retouch. Use the Multi-selector to choose the menu you want to view.
- ▶ **Thumbnail/Zoom out/Help button.** In Playback mode, pressing this button allows you to go from full-frame playback (or viewing the whole image) to viewing thumbnails. The thumbnails can be displayed as 4, 9, or 72 images on a page. You can also view images by calendar date. When viewing the menu options, pressing this button displays a help screen that explains the functions of that particular menu option. When in Shooting mode, pressing this button explains the functions of that particular mode. When viewing the Information Display and a flashing question mark appears, you can press this button for help. This button also allows you to zoom out after you have zoomed in on a particular image.
- ▶ **Zoom in button/Info display button.** When reviewing your images, you can press the Zoom in button to get a closer look at the details of your image. This is a handy feature for checking the sharpness and focus of your shot. When zoomed in, use the Multi-selector to navigate around within the image. To view your other images at the same zoom ratio, you can rotate the Command dial. To return to full-frame playback, press the Zoom out button. You may have to press the Zoom out button multiple times depending on how much you have zoomed in. When the camera is "asleep," pressing this button shows the Info display. When the Info display is shown, pressing this button again gives access to some settings that can be changed. Use the Multi-selector to highlight the desired setting to change, then press the OK button to access the options.



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For more detailed information on changing settings in the Info display, see Chapter 3.

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## Front of the camera

The front of the D3000 (lens facing you) is where you find the buttons to quickly adjust the flash settings as well as some camera focusing options, and with certain lenses you will find some buttons that control focusing and Vibration Reduction (VR).

- ▶ **Built-in flash.** This option is a handy feature that allows you to take sharp pictures in low-light situations. Although not as versatile as one of the external Nikon Speedlights such as the SB-600 or SB-400, the built-in flash can be used very effectively and is great for snapshots; although I highly recommend getting a flash diffuser if you plan on using it much.



For more on using flash, see Chapter 6.



Image courtesy of Nikon, Inc.

### 1.3 Front of the Nikon D3000

- ▶ **AF-assist illuminator.** This is an LED that shines on the subject to help the camera to focus when the lighting is dim. The AF-assist illuminator only lights when in Single Focus mode (AF-S) or Automatic Focus mode (AF-A). This is also lit when the camera is set to Red-Eye Reduction flash using the camera's built-in flash.
- ▶ **Infrared receiver.** This allows you to wirelessly control the camera shutter release using the optional ML-L3 infrared transmitter. The ML-L3 is a great little accessory that costs less than \$20. It's one of the best accessories you can get.

## Right side

On the right side of the camera (lens facing you) are the output terminals on the D3000. These are used to connect your camera to a computer or to an external source for viewing your images directly from the camera. These terminals are hidden under a plastic cover that helps keep out dust and moisture.



Image courtesy of Nikon, Inc.

### 1.4 The right side of the D3000

- ▶ **Flash pop-up button/Flash mode button/Flash Exposure Compensation button.** When using P, S, A, or M exposure modes, press this button to open and activate the built-in Speedlight. Pressing this button and rotating the Command dial on the rear of the camera allows you to choose a flash mode. Depending on the shooting mode you can choose from among Front-Curtain Sync, Red-Eye Reduction, Red-Eye Reduction with Slow Sync, Slow Sync, and Rear-Curtain Sync. Once the flash is popped up, pressing this button in conjunction with the Exposure Compensation button and rotating the Command dial allows you to adjust the Flash Exposure Compensation (FEC). FEC allows you to adjust the flash output to make the flash brighter or dimmer depending on your needs. When shooting in Auto or scene modes, the flash is automatically activated and some Flash sync modes aren't available depending on the scene mode.
- **Auto, Portrait, Child, Close-up.** When using these modes, you can select Auto-flash, Auto with Red-Eye Reduction, or set to Off.
  - **Night portrait.** With this mode you can select Auto with Slow Sync and Red-Eye Reduction, Auto with Slow Sync, or set to Off.
  - **P, A.** With these modes you can select Fill flash, Red-Eye Reduction, Slow Sync with Red-Eye Reduction, Slow Sync, or Rear Curtain with Slow Sync.
  - **S, M.** These modes allow you to use Fill flash, Red-Eye Reduction, or Rear-Curtain Sync.
- ▶ **Self-timer/Fn (function) button.** By default, pressing this button activates the camera's self-timer. When the self-timer is on, the camera delays the shutter release to allow you to get into the picture or to reduce vibration caused by shaking the camera when pressing the Shutter Release button while the camera is attached to a tripod. This button can also be set to provide other functions. You can set the button to quickly change the release mode, image quality, ISO sensitivity, or white balance via the Info display. Pressing the Fn button and rotating the Command dial changes the settings. You can change the setting in the Setup menu under the Buttons option.
- ▶ **Lens release button.** This button disengages the locking mechanism of the lens, allowing the lens to be rotated and removed from the lens mount.
- ▶ **Video out.** This connection, officially called Standard video output, is used to connect the camera to a standard TV or VCR for viewing your images on-screen. The D3000 is connected with the EG-D100 video cable that is available separately from Nikon.

- ▶ **USB port.** This is where the USB cable plugs in to attach the camera to your computer to transfer images straight from the camera. The USB cable is also used to connect the camera to the computer when using Nikon's optional Camera Control Pro 2 software.
- ▶ **Lens Focus mode selector.** This switch is used to choose between using the lens in Auto or Manual focus.
- ▶ **VR switch.** This allows you to turn the Vibration Reduction (VR) on or off. When shooting in normal or bright light it's best to turn the VR off to reduce battery consumption.

## Left side

On the left side of the camera (lens facing you) is the memory card slot cover. Sliding this door toward the back of the camera opens it so you can insert or remove your memory card.

## Bottom

The bottom of the camera has a couple of features that are quite important.

- ▶ **Battery chamber cover.** This covers the chamber that holds the EN-EL9a battery that is supplied with your D3000. If you look closely at the battery chamber, there is a small rubber cover that can be moved out of the way to make way for the cord of the EH-5a AC adapter that is available separately from Nikon.
- ▶ **Tripod socket.** This is where you attach a tripod or monopod to help steady your camera.



Memory card slot cover

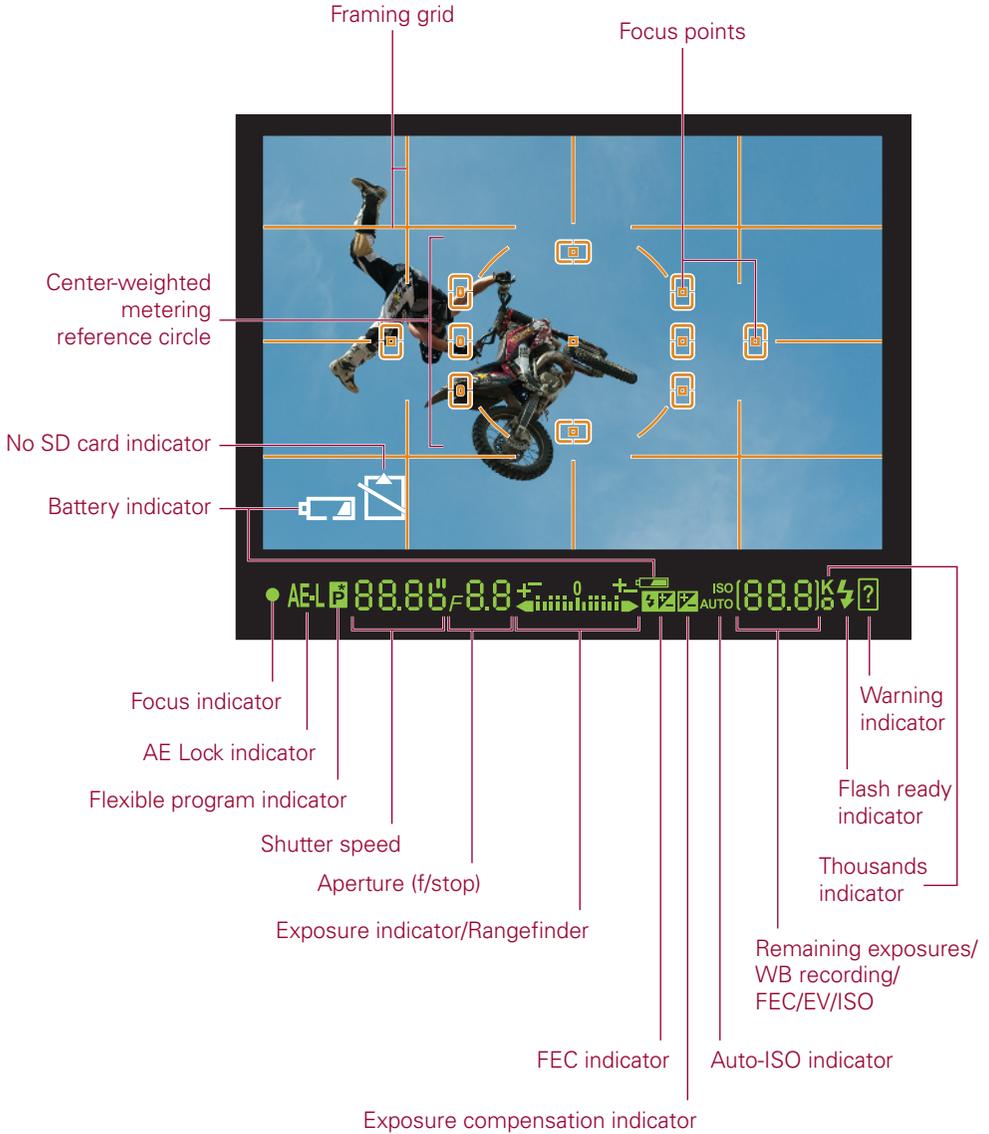
Image courtesy of Nikon, Inc.

### 1.5 Memory card slot cover.

## Viewfinder Display

When looking through the viewfinder, you see a lot of useful information about the photo you are setting up. Most of the information is also displayed in the Information Display screen, but it is less handy when you are looking through the viewfinder composing a shot. Here is a complete list of all the information you get from the viewfinder display.

- ▶ **Framing grid.** This grid is used as an aid in composition. You can use the intersecting lines to compose in the Rule of Thirds and the straight line to line up your compositions. By default the framing grid is turned off, but it can be turned on in the Setup menu under the Viewfinder options heading.
- ▶ **Center-weighted metering reference.** This circle gives you an idea of how much of the frame is being used to calculate 75 percent of the exposure when using Center-weighted metering.
- ▶ **No SD card indicator.** When this icon is blinking, there is no card in the slot or the card is locked, inserted improperly, corrupt, or otherwise damaged.
- ▶ **Battery indicator.** This shows up when the battery is low. When the battery is completely exhausted, this icon blinks and the shutter release is disabled.
- ▶ **Focus point display.** This shows you which AF point is chosen by showing it with a bracket around it. When set to Auto Area, no AF point is chosen until the camera achieves focus, then one or more AF points will be displayed with brackets.
- ▶ **Focus indicator.** This is a green dot that lets you know whether the camera detects that the scene is in focus. When focus is achieved, the green dot lights up; if the camera is not in focus, no dot is displayed.
- ▶ **AE Lock indicator.** When this is lit, you know that the Auto-Exposure Lock button has been pressed. The exposure is now locked and remains so until the button is released.
- ▶ **Shutter speed display.** This simply shows how long your shutter is set to stay open from 30 seconds (30") up to 1/4000 (4000) second.
- ▶ **Aperture/f-stop display.** This shows what your current aperture setting is. The words *aperture* and *f/stop* are used interchangeably. Your aperture setting is how wide your lens opening is.



## 1.6 Viewfinder display

- **Remaining exposures.** This set of numbers lets you know how many more exposures can fit on the memory card. The actual number of exposures may vary according to file information and compression. When the Shutter Release button is half-pressed, the display changes to show how many exposures can fit in the camera's *buffer* before the buffer is full and the frame rate slows down. The buffer is in-camera RAM that stores your image data while the data is being

written to the memory card. This area also indicates that the WB is ready to be set by flashing PRE; it displays the amount of exposure compensation and FEC when the Exposure Compensation button is pressed. The ISO sensitivity is also displayed here when the Fn. button is set to ISO sensitivity.

- ▶ **K.** This lets you know that there are more than 1,000 exposures remaining on your memory card.
- ▶ **Flash ready indicator.** When this is displayed, the flash, whether it is the built-in flash or an external Speedlight attached to the hot shoe, is fully charged and ready to fire at full power.
- ▶ **Flexible Program indicator.** When this is lit, it lets you know that the exposure has been modified from the original settings defined when using the Programmed Auto exposure mode. To return to the default settings, rotate the Command dial until this indicator disappears or simply switch to another exposure mode setting and switch back.
- ▶ **Exposure indicator/Exposure Compensation/Rangefinder.** Although Nikon gives this feature a confusing moniker, in simpler terms this is your light meter. When the bars are in the center, you are at the proper settings to get a good exposure; when the bars are to the left, you are underexposed; and when the bars are to the right, you are overexposing your image. This feature is shown when using Manual exposure. When the Exposure Compensation button is set, this display is also shown indicating how much over- or underexposure is being set. When the Rangefinder option is turned on (you can find this in the Setup menu under Viewfinder options) and the lens is set to Manual focus, this shows you a bar graph that indicates distance. When the subject is in focus, the bars are even on both sides of a 0. When the bars are displayed to the left, this indicates that you are focused in front of the subject; bars to the right indicate that the focus is falling behind the subject. Use the focus ring to adjust the focus. The Rangefinder display is not available when shooting in Manual exposure mode.
- ▶ **FEC indicator.** When this is displayed, your Flash Exposure Compensation is on. Flash Exposure Compensation is used to add or subtract light output from your flash. This applies to both the built-in flash and an accessory Speedlight.
- ▶ **Exposure compensation indicator.** When this appears in the viewfinder, your camera has exposure compensation activated, and you may not get a correct exposure. Exposure compensation is used to add or subtract from the overall exposure chosen by the camera meter.
- ▶ **Auto ISO indicator.** This is displayed when the Automatic ISO setting is activated to let you know that the camera is controlling the ISO settings.

- ▶ **Warning indicator.** When this question mark icon is flashing, the camera is warning you that there may be a problem with your settings. Press the Help button to view the warning.

## Information Display

The Information Display, which I will refer to as the Info display for brevity, shows some of the same shooting information that appears in the viewfinder, but there are also quite a few settings that are only displayed here. When this is displayed on the LCD, you can view and change the settings without looking through the viewfinder. When the camera is turned on, the Shooting info is automatically displayed on the LCD monitor. The info remains on display until no buttons have been pushed for about 8 seconds (default) or the Shutter Release button is pressed. You can change the length of time this is displayed in the Setup menu under the Auto-off timers option Playback/menus.

This display shows you everything you need to know about your camera settings. Additionally, the camera has a sensor built in that tells it when the camera is being held vertically, and the Info display is shown upright no matter which way you are holding your camera.

The camera also allows you a number of options on how the information is displayed. You can choose between Classic or Graphic. You can also change the color of the Shooting Info Display. In Classic mode you can choose between black, blue, and orange. In Graphic mode, you can choose between green, black, or brown. You can also choose a different display for the scene and P, S, A, and M modes. These settings can be accessed in the Setup menu under the Info display format heading.



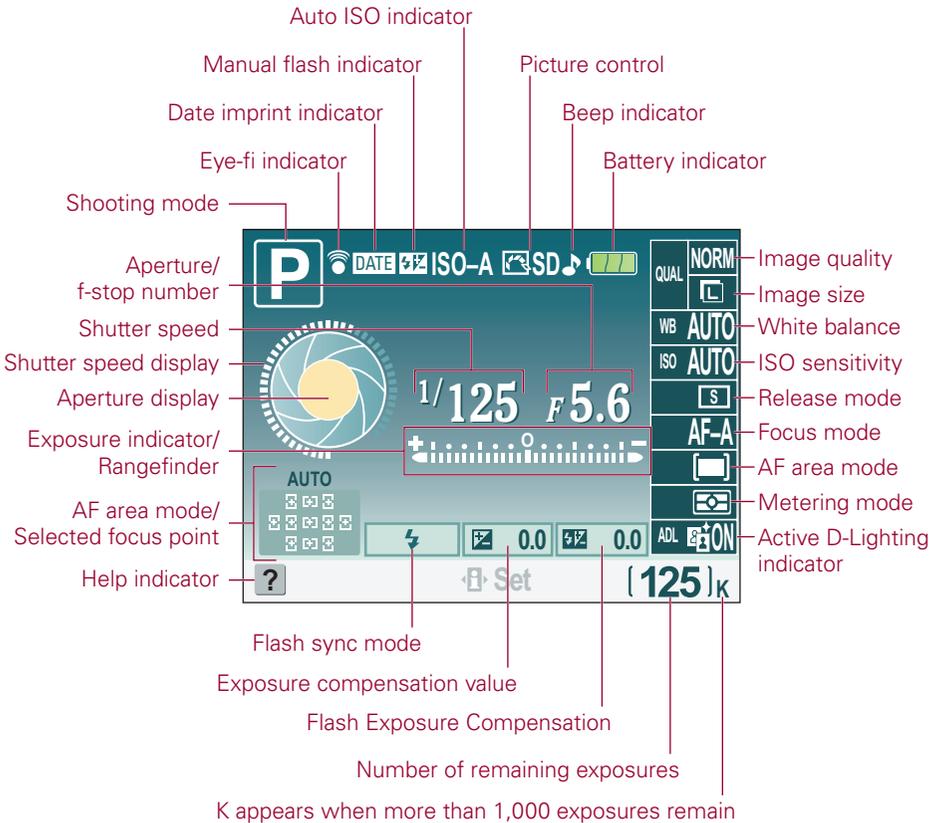
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For more info on the Setup menu, see Chapter 3.

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- ▶ **Shooting mode.** This displays the Shooting mode that your camera is currently set to. This can be one of the scene modes, in which case the display will be the appropriate icon, or one of the Semi-auto modes such as P, S, A, or M, in which case the display will show the corresponding letter. This display changes when the Mode dial is rotated.
- ▶ **Aperture/f-stop number.** This tells you how wide your aperture or lens opening is. The terms *aperture* and *f-stop* are interchangeable. Higher f-numbers denote smaller openings, while lower f-numbers mean that the opening is wider, letting in more light.

- ▶ **Shutter speed.** This shows in seconds or fractions of seconds how long your shutter stays open when the Shutter Release button is pressed.
- ▶ **Shutter speed display.** When set to the Graphic mode, this gives you a visual representation about the length of your shutter speed when the camera is held in the horizontal position.
- ▶ **Aperture display.** When set to Graphic mode, this shows you approximately what your lens opening looks like when the camera is held in the horizontal position.
- ▶ **Exposure indicator/Rangefinder.** This acts as your light meter. When the bars are in the center, you are at the proper settings to get a good exposure; when the bars are to the left, you are overexposed; when the bars are to the right, you are underexposing your image. This feature is only displayed in Manual exposure. This display blinks when the light is too dark or too bright in P, S, A, or one of the scene modes. It is also displayed when exposure compensation is applied showing how much compensation is applied.
- ▶ **AF area mode/Selected focus point.** This tells you which AF area mode is selected: Auto-area, Dynamic-area, or Single-point. This also tells you when 3D-tracking is enabled and which focus point is selected when in Single-point AF.
- ▶ **Help indicator.** When this icon (shown as a question mark) is flashing, there may be a problem with one of your settings. Pressing the Help/Zoom out button will display information on rectifying the problem. When this icon appears and is not flashing, press the Help button to display information on the currently selected option.
- ▶ **Flash Sync mode.** This shows which mode your flash is set to. You can change the Flash mode by pressing the Flash button and rotating the Command dial. For more information on Flash Sync modes, see Chapter 6.
- ▶ **Exposure compensation value.** This shows the amount of exposure compensation, if any, that has been set. Exposure compensation is used to increase or decrease the amount of exposure to fine-tune your image.
- ▶ **Flash Exposure Compensation.** This shows you the amount, if any, of Flash Exposure Compensation (FEC), which is used to make the flash more or less bright. FEC is set by simultaneously pressing the Flash mode button, the Exposure Compensation button, and rotating the Command dial. Rotating to the right decreases flash exposure; rotating to the left increases the exposure.



### 1.7 LCD display in Wide (landscape) orientation

- ▶ **Number of remaining exposures.** This shows you approximately how many exposures can be saved to your memory card. When the Preset White Balance is ready to be set, this will blink PRE.
- ▶ **K.** This icon appears when you have more than 1,000 exposures remaining on your memory card.
- ▶ **Active D-Lighting indicator.** This shows whether you have Active D-Lighting on or off. Active D-Lighting can be set in the Info display.
- ▶ **Metering mode.** This displays which metering mode your camera is set to: Matrix, Center-weighted, or Spot. For more information on metering, see Chapter 2.
- ▶ **AF area mode.** This icon tells you which Autofocus area mode is set. The AF area modes determine how the focus point is chosen.

- ▶ **Focus mode.** This tells you which focus mode your camera is set to: AF-A (Automatic), AF-C (Continuous), AF-S (Single), or MF (Manual).
- ▶ **Release mode.** This lets you know what Release mode your camera is set to: Single frame, Continuous, Self-timer, Delayed remote, or Quick response remote.
- ▶ **ISO sensitivity.** This tells you what your current ISO setting is.
- ▶ **White balance.** This displays which white balance setting you are currently using.
- ▶ **Image size.** This tells you the size of the image you are recording.
- ▶ **Image quality.** This display shows the quality or compression of the JPEG or shows that you are recording a RAW image.
- ▶ **Battery indicator.** This shows you the remaining charge on your battery.
- ▶ **Beep indicator.** This icon (musical note) tells you whether you have the camera set to beep when focus is achieved in Single Focus mode. When the icon has a slash through it, the beep is turned off (recommended).
- ▶ **Picture Control.** This section of the display shows you what Picture Control is being applied to your images. For more information on Picture Controls, see Chapter 3.
- ▶ **Auto-ISO indicator.** This icon is displayed only when Auto-ISO is enabled.
- ▶ **Manual flash indicator.** This icon appears when the built-in flash is set to Manual, but only when the flash is popped up. When an optional Speedlight is attached, this icon is displayed when FEC is applied directly on the Speedlight.
- ▶ **Date imprint indicator.** This icon is shown when the optional date imprint function is applied. This function prints the date at the bottom of the image as it's being recorded.
- ▶ **Eye-fi indicator.** This icon only appears when using an Eye-fi wireless SD card.



**1.8 LCD display in Tall (portrait) orientation**