CHAPTER 1

Exploring the Nikon D600

This chapter covers the key components of the D600, including the buttons, switches, dials, and knobs. These are the features you most need to master because you will use them all the time as you modify settings to adapt to changing shooting conditions.

The D600 is very similar to its DX sibling the D7000 and, indeed, was designed with this camera in mind. If you're upgrading to FX from the D7000, you will feel instantly at home. If you're stepping up from a D5100 or a D3200, the number of controls may surprise you. If you are accustomed to using one of Nikon's compact pro bodies such as the D300s, D700, or D800, you will definitely notice the difference in the control layout.



Getting to know all your camera's menus, buttons, and dials allows you to capture your images just as you envision them.

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Key Components of the D600

The exterior controls of the D600 are used to access features that are most commonly changed. The D600 is a more advanced model than the D3200 and D5100 series, so it has a lot more buttons and dials to allow you to change your settings more quickly, which is a good thing. On the other hand, the D600 has much fewer buttons than the higher-end cameras, so a lot of the buttons perform double or even triple duty, depending on what mode the camera is in.

The good news is that a number of buttons can be customized so that you can control the settings that you need to access the most.

Top of the camera

Most of the important buttons are on the top of the D600. This makes it easier to find them, especially when you have your eye to the viewfinder. This is where you find the dials to change the shooting modes as well as the all-important shutter-release button and the relatively new Movie record button.

- **Shutter-release button.** In my opinion, this is the most important button on the camera. Pressing this button halfway activates the camera's autofocus and light meter. Fully depressing this button releases the shutter and takes a photograph. When the camera has been idle, and has "gone to sleep," lightly pressing the shutter-release button wakes it up. 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 concentric to the shutter-release button, is used to turn the camera on and off. Push the switch all the way to the left to turn the camera off; pull the switch to the right to turn the camera on. The on/off switch also has a spring-loaded momentary switch, which, when pulled to the far right, turns on the control panel backlight.
- **Movie record button.** When the camera is in Live View movie mode (), pressing this button (which has a simple red dot on it) causes the camera to start recording video. Pressing it a second time stops the video recording. In Live View still photography mode () and standard shooting mode or scene modes, this button has no function at all.
- **Metering mode button ().** Pressing this button and rotating the Main Command dial allows you to change the metering mode among Matrix (), Center-weighted (), and Spot metering (). This is also one of the buttons

for the two-button formatting option used to format the active memory card. Press and hold this button in conjunction with the Delete button (🗑) until FOR blinks on the LCD control panel, and then press the buttons in conjunction a second time to complete formatting. This second button press is required as a fail-safe against accidental formatting.

- **Exposure Compensation button (±).** Pressing this button while spinning the Main Command dial allows you to modify the exposure that is set by the D600's light meter when it is set to Programmed auto (P), Shutter-priority auto (S), or Aperture-priority auto mode (A). Turning the Main Command dial to the right increases exposure while turning the dial to the left decreases the exposure. You may also notice a green dot next to this button. Pressing and holding this button in conjunction with the Zoom out/Thumbnail/ISO button (🔍/ISO) resets the camera to the default settings.

NOTE The ± button serves no function when shooting in automatic or scene modes.

- **Mode dial lock release button.** Press this button to unlock the Mode dial so that you can rotate the dial to change the settings.
- **Mode dial.** This is an important dial. Pressing the Mode dial lock release button and rotating the Mode dial allows you to quickly change your shooting mode. You can choose the scene mode, one of the semiautomatic modes, or Manual exposure mode (M), which lets you pick the exposure settings.

CROSS REF For a detailed description of all the exposure modes, see Chapter 2.

- **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 shutter. When measuring distance for calculating flash output, you measure the subject-to-focal-plane distance.
- **Hot shoe.** This is where you attach an accessory flash to the camera body. The hot shoe has an electronic contact that tells the flash to fire when the shutter is released. A number of other electronic contacts allow the camera to communicate with the flash, enabling the automated features of a dedicated flash unit such as the SB-700.
- **Control panel.** This LCD panel displays numerous controls and settings. The control panel is covered in depth later in the chapter.



Image courtesy of Nikon, Inc.

1.1 Top-of-the-camera controls

On the kit lens, you find four key features:

- **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, you turn the ring to focus the lens. Newer AF-S lenses, such as the kit lens, have a switch 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.
- **Focus distance scale.** This window displays the approximate focus distance in both metric and imperial measurements.

CROSS REF For more information on lenses and compatibility, see Chapter 4.

- **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 a few buttons 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 Main Command dial or the multi-selector. On the back of the camera, you also find several key features, including the all-important LCD and viewfinder.

- **Release mode dial.** Although technically the Release mode dial is located on the top of the camera, on recent Nikon cameras the release modes are easier to view from the rear of the camera. The release mode controls how the shutter is released when you press the shutter-release button. Press the Release mode dial lock release and rotate the Release mode dial to change the settings. There are seven modes:
  - **Single frame (S).** This mode allows you take a single photograph with each press of the shutter-release button. The camera does not fire multiple frames when the button is held down.
  - **Continuous low speed (CL).** When you're using this release mode, pressing and holding the shutter-release button allows the camera to shoot multiple frames at low speed. You can set the frame rate for this release mode in Custom Settings menu d5 (d5). You can select from 1 to 5 fps.
  - **Continuous high speed (CH).** When you use this release mode, pressing and holding the shutter-release button allows the camera to shoot multiple frames at high speed. The camera shoots at the maximum frame rate of 5.5 fps.

NOTE The actual maximum frame rate depends on the shutter speed, buffer, and memory card speed.

  - **Quiet shutter-release (Q).** This mode allows you to control the release of the reflex mirror. When you press the shutter-release button, the reflex mirror

stays up until you release the button. This allows you to take pictures more quietly by moving to a different area or covering up the camera before you release the shutter-release button, allowing the mirror to reset.

- **Self-timer (⏲).** This mode activates the self-timer that allows a delay between the time you press the shutter-release button and the shutter is released. You can set the timer in the Remote control mode (📷)) in the Shooting menu (📷).
- **Remote control (📷)).** This mode allows you to use the optional ML-L3 wireless remote to release the shutter. You can change the settings in the Remote control mode in the 📷 menu.
- **Mirror up (MUP).** This mode raises the reflex mirror with one press of the shutter-release button and releases the shutter and resets the mirror with a second press of the button. You can use this mode to minimize camera shake from mirror movement when shooting long exposures on a tripod or when using a long telephoto lens.

- **LCD monitor.** This is the most prominent feature on the back of the camera. This 3-inch, 921,000-dot liquid crystal display (LCD) is a very bright, high-resolution screen. The LCD is where you view all your current camera settings and review your images after shooting, and it displays the video feed for Live View and video recording.

- **Viewfinder.** This is what you look through to compose your photographs. Light coming through the lens is channeled through a five-sided reflective prism (called a *pentaprism*), enabling you to see exactly what you're shooting. The rubber eyepiece around the viewfinder gives you a softer place to rest your eye and blocks 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 strength (not everyone's eyesight is the same). To adjust this control, 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 control 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 button (AE-L/AF-L).** The Autoexposure/Autofocus Lock button is used to lock the Autoexposure (AE) and Autofocus (AF). You can customize this button in the Custom Settings menu (✎ f5) to provide AE/AF Lock, AE Lock only, AE Lock (hold), AF Lock only, or AF-ON. AE Lock (hold) locks the exposure with one

press of the shutter-release button; the exposure is locked until you press the button again. AF-ON engages the AF in the same way that half-pressing the shutter-release button does, but it disengages the shutter-release button from any AF functions. You can also set the button to FV Lock when using the built-in flash or an accessory Speedlight.

- **Main Command dial.** You use this dial to change a variety of settings, depending on which button you are using with it. By default, it is used to change the shutter speed when the camera is in S, P, and Manual exposure mode (M). 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, you use it to scroll through the photographs you've taken, and you can also use it to view image information such as histograms and shooting settings. When the D600 is in Single-point AF ([·]) or Dynamic-area AF mode ([⋯]), you can use the multi-selector to change the active focus point. And you can use the multi-selector to navigate through the menu options.
- **OK button (OK).** When the D600 is in the Menu mode (MENU), you press the OK button to select the menu item that is highlighted. In Playback mode ([▶]), pressing OK brings up the Retouch menu ([✎]) options. In shooting mode, you can set OK to a couple of different functions using f1, Select center focus point, Highlight active focus point, or you can disable OK by selecting Not used.
- **Focus selector lock.** This switch, located concentric to the multi-selector, locks the focus point so that it cannot be moved with the multi-selector.
- **Ambient light sensor.** This sensor detects the luminosity of the ambient light so that the monitor brightness can be automatically adjusted.
- **Live View button/Live View selector.** With the introduction of the D800, Nikon added this switch, which makes it much more convenient to use the Live View settings. Simply pressing the Live View button ([LV]) activates the Live View option, and flipping the switch allows you to choose between shooting stills (📷) or video (🎥).
- **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. If the buffer is full when you switch the camera off, the camera will stay powered on and this lamp will continue blinking until the data finishes transferring from the buffer to the memory card.
- **Info button (info).** Pressing this button displays the shooting information on the monitor. Press this button twice to adjust settings in the info menu.

- **Speaker.** This small speaker enables you to hear the audio recorded with the video you have shot. I must admit that the fidelity of the speaker isn't that great, and it's quite hard to get an accurate representation of what the sound is going to be like when it is played back through your TV or computer speakers.
- **Rear infrared sensor.** This picks up the infrared signal from the optional wireless remote, the ML-L3.



Image courtesy of Nikon, Inc.

1.2 Back-of-the-camera controls

- **Playback button (▶).** Pressing this button activates Playback mode and by default displays the most recently taken photograph. You can also view other pictures by pressing the multi-selector left and right.
- **Delete button (🗑).** If you are reviewing your pictures and find some that you don't want to keep, you can delete them by pressing this button. To prevent you from accidentally deleting images, the camera displays a dialog box asking

you to confirm that you want to erase the picture. Press 🗑 a second time to permanently erase the image. This is also one of the buttons for the two-button formatting option used to format the active memory card. Press and hold this button in conjunction with the ⊞ button until FOR blinks on the LCD control panel, and then press the buttons in conjunction a second time to complete formatting. As mentioned previously, this second button press is required as a fail-safe against accidental formatting.

- **Menu button (MENU).** Press this button to access the D600 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 and press ⊛ to enter the specific menu screen.

- **Retouch/Picture Control button (✎/🖼).** Pressing this button in Shooting mode allows you to select and adjust the Picture Controls (🖼). When the camera is in Playback mode, pressing this button brings up the Retouch menu (✎) options or the Movie editing options if a video is selected during playback.

- **Help/Protect/White balance button (?/🔒/WB).** Pressing this button and rotating the Main Command dial allows you to change the white balance (WB) settings when in Shooting mode. Rotating the Sub-command dial allows you to fine-tune the selected WB setting by adding blue or amber to make the image cooler or warmer, respectively. You can add blue (b1–b6) by rotating the dial to the right and amber (a1–a6) by rotating to the left. When you're viewing the Information display and a question mark appears or when you're scrolling through the menu options and a question mark appears in the lower-left corner, you can press this button to get more information. When the D600 is in Playback mode, press this button to protect (lock) the image from accidentally being deleted. Press it again to unlock it.

- **Zoom in/QUAL button (🔍/QUAL).** When the D600 is in Shooting mode, pressing this button and rotating the command dials allows you to quickly change the image quality and size settings. Rotating the Main Command dial allows you to choose a format (RAW, JPEG, or RAW+JPEG) as well as the JPEG compression (Basic, Normal, Fine). Rotating the Sub-command dial allows you to choose the JPEG size but has no effect when the quality is set to RAW. When reviewing your images or using the LV option, you can press the 🔍/QUAL 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 you are 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 Main Command dial. To return to full-frame playback, press the Zoom out button (🔍/ISO). You may have to press 🔍/ISO multiple times, depending on how much you have zoomed in.

- **Zoom out/Thumbnail/ISO button (🔍/ISO).** In Shooting mode, pressing this button and rotating the Main Command dial allows you to change the ISO settings. 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 you're viewing the menu options, pressing this button displays a help screen that explains the functions of that particular menu option. This button also allows you to zoom out after you have zoomed in on a particular image. Pressing and holding this button in conjunction with the ± button resets the camera to the default settings.

Front of the camera

The front of the D600 (with the 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 also find some buttons that control focusing and Vibration Reduction (VR).

- **Sub-command dial.** The Sub-command dial is used to adjust a number of different things, but by default, it's used to change the aperture setting in A, M, and P exposure modes. It also changes various settings when used with other buttons.
- **AF-assist illuminator.** This is an LED that shines on the subject to help the camera focus when the lighting is dim. The AF-assist illuminator only lights up when in Single-servo AF mode (AF-S) or Full-time-servo mode (AF-F) and the center AF point is selected. This LED also lights up when you set the camera to Red-Eye Reduction mode (⚡👁) using the camera's built-in flash.
- **Built-in flash.** This handy feature 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. I highly recommend getting a pop-up flash diffuser if you plan on using it often. You can also use it to control off-camera Speedlights, which is a great option that isn't included on some of Nikon's lower-end models.
- **Preview button.** By default, this button stops down the aperture to the current setting (the lens aperture stays wide open until the shutter is released) so that you can see in real time what the depth of field will look like. It's a customizable button that you can change to a number of different settings. You can set the button to quickly change the image quality, ISO sensitivity, white balance, or Active D-Lighting settings via the Info display. Pressing the Preview button and rotating the Command dial changes the settings. You can change the setting options in ✎ f3.

- **Function button (Fn).** You can set the **Fn** button to a number of different settings so that you can access them quickly, rather than searching through the menu options manually. You can set the button to change the image quality, ISO sensitivity, white balance, or Active D-Lighting settings via the Info display. Pressing one of the command dials changes the settings, depending on which option is selected. You can change the setting options in the Setup menu (🔧) in ✎ f2 under the Buttons option.

CROSS REF For a complete list of options for the Preview and **Fn** buttons, see Chapter 3.

- **Front infrared sensor.** This receiver picks up the infrared signal from the optional wireless remote, the ML-L3.
- **Built-in microphone.** This microphone can record sound while you're recording HD video. For best sound quality, I recommend using an external microphone.



Image courtesy of Nikon, Inc.

1.3 Front of the Nikon D600

Right side of the camera

On the right side of the camera (with the lens facing you) are the output terminals on the D600. These terminals are used to connect your camera to a computer or to an external source for viewing your images directly from the camera. They are hidden under a rubber cover that helps keep out dust and moisture.

- **Flash pop-up/Flash mode/Flash Exposure Compensation button (⚡/⚡±).** When you're using P, S, A, or M exposure mode, press this button to open and activate the built-in Speedlight. Pressing this button and rotating the Main Command dial on the rear of the camera allows you to choose a flash mode. Depending on the shooting mode, you can choose from Front-Curtain Sync (default) (⚡), Red-Eye Reduction (⚡👁), Red-Eye Reduction with Slow Sync (SLOW), Slow Sync (⚡ SLOW), Rear-Curtain Sync (⚡ REAR), or Rear-Curtain Slow Sync (⚡ SLOW REAR). Once the flash pops up, pressing this button and rotating the Main Command dial allows you to adjust the Flash Compensation (⚡±). This enables you to adjust the flash output to make the flash brighter or dimmer depending on your needs. When you're 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 (AUTO), Portrait, Child, Close-up.** When using these modes, you can select Auto-flash (⚡ AUTO), Auto with Red-Eye Reduction (⚡👁 AUTO), or Off.
  - **Night portrait.** With this mode, you can select Auto with Slow Sync and Red-Eye Reduction (SLOW), Auto with Slow Sync (⚡ AUTO SLOW), or Off (⚡).
  - **P, A.** With these modes, you can select ⚡👁, SLOW, ⚡ SLOW, or ⚡ SLOW REAR.
  - **S, M.** These modes allow you to use ⚡👁, or ⚡ REAR.
- **Auto-bracketing button (BKT).** You use this button to activate the Auto-bracketing feature. Pressing the button and rotating the Main Command dial allows you to choose from a three-frame bracket (normal, under, over), or a two-frame bracket (normal, over, or normal, under). Rotating the Sub-command dial lets you choose the bracketing increments; by default you can choose 0.3, 0.7, 1, 2, or 3 EV. When ✎ b2 is set to 1/2 step, the choices are 0.5, 1, 2, or 3.
- **Lens mounting mark.** Most lenses have a white or red mark on them to help you to line up your lens bayonet so that it can be rotated and locked into place. Use this mark to line up with the mounting mark on the lens.
- **Lens release button.** This button disengages the locking mechanism of the lens, allowing the lens to be rotated and removed from the lens mount.



Image courtesy of Nikon, Inc.

1.4 The right side of the D600

- **AF mode/AF-area mode button/Focus mode switch.** Flipping the switch allows you to choose between autofocus and manual focus. Pressing the button and rotating the Main Command dial allows you to select the AF mode; you can choose Auto-area AF (AF-A), Single-servo AF (AF-S), or Continuous servo AF (AF-C). Rotating the Sub-command dial allows you to select the AF-area mode. In AF-S, you can choose Single-point AF ([·]) or Auto ([▣]). In AF-A or AF-C, you can select from Single-point AF ([·], Dynamic-area AF ([⋰]) (9, 21, or 39 points), 3D-tracking ([3D]), or [▣].
- **Microphone input.** You can use this port to connect an external microphone, which records sound for your videos at a better quality that you can get from the built-in microphone.
- **USB port.** This is where you plug in the USB cable, attaching the camera to your computer to transfer images straight from the camera to the computer. You can also use the USB cable to connect the camera to the computer when using Nikon's optional Camera Control Pro 2 software.

- **HDMI output.** This terminal is for connecting your camera to an HDTV or HD monitor. It requires a type C mini-pin HDMI cable that's available at any electronics store.
- **GPS port.** This is an accessory port that allows you to connect the optional Nikon GP-1 or a third-party GPS accessory for geo-tagging your images. You can also use this port for connecting the WT-T10 transceiver.

If you purchased the camera with a kit lens, there are a few switches on the lens as well. If you're using a different Nikon lens or a third-party lens, there may be different switches or no switches at all, depending on the lens and the features that it offers.

- **Autofocus switch.** This switch is used to choose between using the lens in Auto or Manual focus.
- **VR on/off switch.** This switch enables you to turn the Vibration Reduction (VR) on or off. When you're shooting in normal or bright light, it's best to turn the VR off to reduce battery consumption.

Left side of the camera

On the left side of the camera (with the 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 cards.

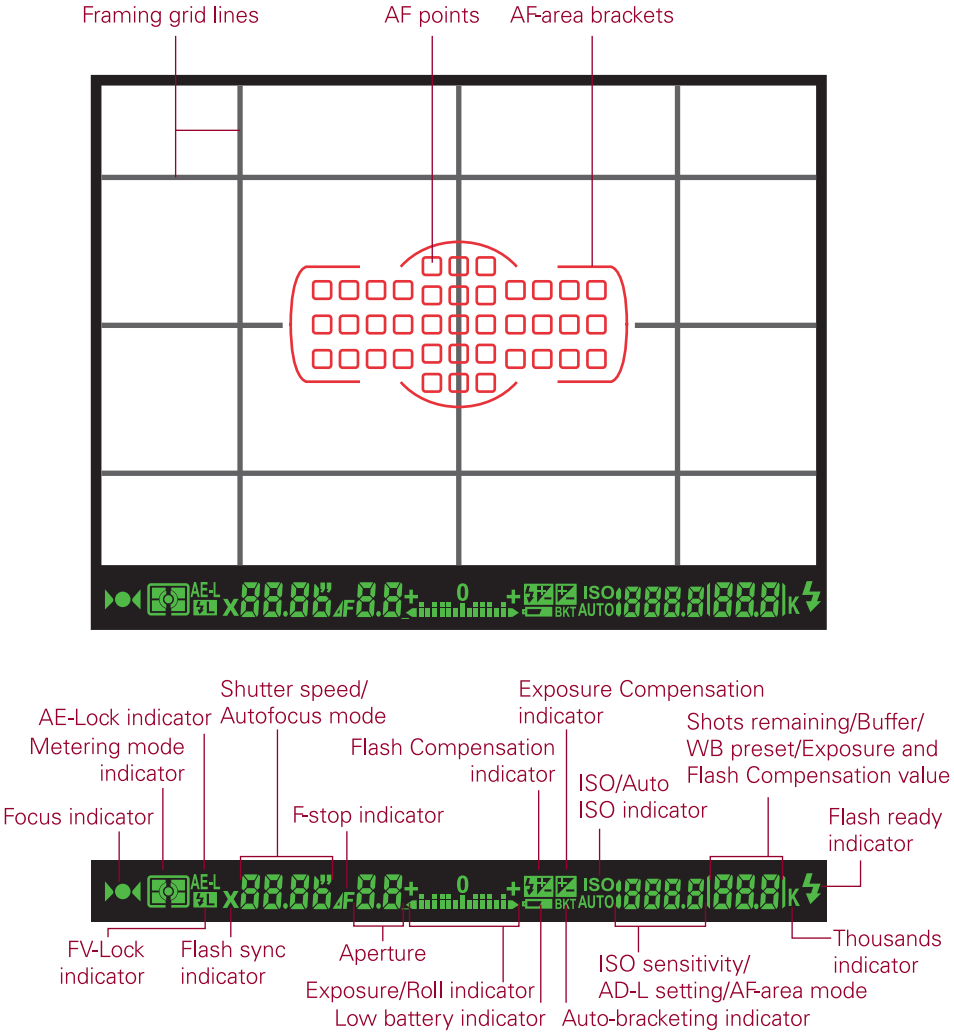


Image courtesy of Nikon, Inc.

1.5 Memory card slot cover

Viewfinder Display

The viewfinder display is kind of like the heads-up display in a jet plane. It allows you to see all the useful information about the settings of the camera. This aids you in setting up the shot without having to take your eye away from the viewfinder to check your settings. Most of the information also appears in the Information display, 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:



1.6 Viewfinder display

- **Framing grid.** When this option is turned on in the d2 menu, you will see a grid displayed in the viewing area. Use the grid to line up elements of your composition to ensure they are straight.
- **AF points.** The first thing you are likely to notice when looking through the viewfinder is a small rectangle near the center of the frame. This is your active focus point. Note that only the active focus point is shown full-time when you're using the [·], [⋯], or [3D] AF setting. When you set the camera to Auto-area AF ([▣]), no focus point is shown until the shutter-release button is half-pressed and focus is achieved. When you use AF-S, the AF point lights up momentarily and disappears. When you use AF-C, the AF point lights up and remains lit, although the point may change if the focus point shifts due to camera or subject movement.
- **AF-area brackets.** These brackets are used to indicate where the boundaries of the AF points are. The AF system does not recognize anything that lies outside the brackets. In the middle of the AF-area brackets on the top and bottom there is a semi-circle, which is the 12mm center-weighted metering circle.
- **Focus indicator.** This green dot 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. On either side of a dot is an arrow. When the left arrow lights up, the focus is in between the camera and the subject; when the right arrow lights up, the focus is falling behind the subject. Both arrows blinking indicates that the camera is unable to achieve focus.
- **Metering mode indicator ( ).** This indicator shows you which metering mode is active: Matrix metering ( ), Center-weighted metering ( ), or Spot metering ( ).
- **AE-Lock indicator (AE-L).** When this indicator lights up, you know that the Autoexposure has been locked.
- **FV-Lock indicator ( ).** When this indicator lights up, it means you have locked in the flash exposure value. The flash value (FV) can only be locked when the **Fn** button (or Preview button) has been set to do this.
- **Flash sync indicator (X).** This indicator is displayed as a small X. It comes on when you set your camera to the sync speed in e1. This setting is only available in S mode or M mode. To set the camera to the preset sync speed, dial the shutter speed down one setting past the longest shutter time, which is 30 seconds in S mode and Bulb in M mode.
- **Shutter speed/Autofocus mode.** This indicator shows how long your shutter is set to stay open, from 30 seconds (30") up to 1/4000 (4000) second. When you press the AF mode button, this shows your AF mode setting (AF-A, AF-C, or AF-S).

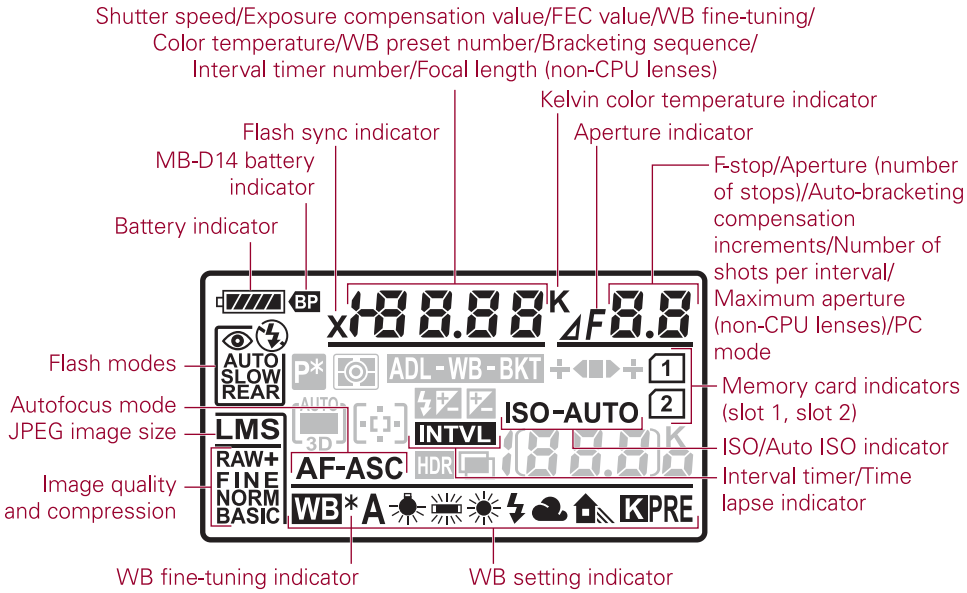
- **F-stop indicator.** This indicator appears when a non-CPU lens is attached that hasn't had non-CPU lens data entered. The camera displays the aperture steps in numbers. When wide open, the indicator reads F0, and each stop you click down is another full number; for example, stop down to f/5.6 when using an f/2.8 lens and the indicator reads F2. Stop down to f/22 and it reads F6, which is 6 stops away from f/2.8.
- **Aperture.** This indicator shows your current aperture setting. The words *aperture* and *f-stop* are used interchangeably. Your aperture setting indicates how wide your lens opening is. The aperture setting appears as numbers (1.4, 2, 2.8, 4, 5.6, and so on).
- **Exposure indicator/Exposure Compensation indicator/Roll indicator.** 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 at those settings (you can reverse this in f8). This option only appears when in M mode and when is applied. This display also doubles as a roll indicator for the Virtual horizon feature that allows you to ensure your camera is level, which is great when shooting landscapes. When the camera is tilted to the right, the bars appear on the left. When the camera is tilted to the left, the bars appear on the right. When the camera is level, a single bar appears directly under the zero. To use this feature, you must assign the Virtual viewfinder horizon to either the **Fn** button or Preview button.
- **Flash Compensation indicator ( ).** When this indicator appears, Flash Exposure Compensation is on. You adjust FEC by pressing the Flash mode button ( ) and rotating the Sub-command dial.
- **Low battery indicator ( ).** This indicator appears when the battery is low. When the battery is completely exhausted, this icon blinks and the shutter-release is disabled.
- **Auto-bracketing indicator (BKT).** This indicator appears when Auto-bracketing is engaged.
- **ISO indicator (ISO).** When you press the **ISO** button, this indicator shows up next to the ISO sensitivity setting, letting you know that the numbers you are seeing are the ISO numbers.
- **Auto ISO indicator ( ).** This indicator appears when the Auto ISO setting is activated to let you know that the camera is controlling the ISO settings. You can turn on Auto ISO in the ISO sensitivity settings, located in the Shooting menu ( ), or by pressing /ISO and rotating the Sub-command dial.

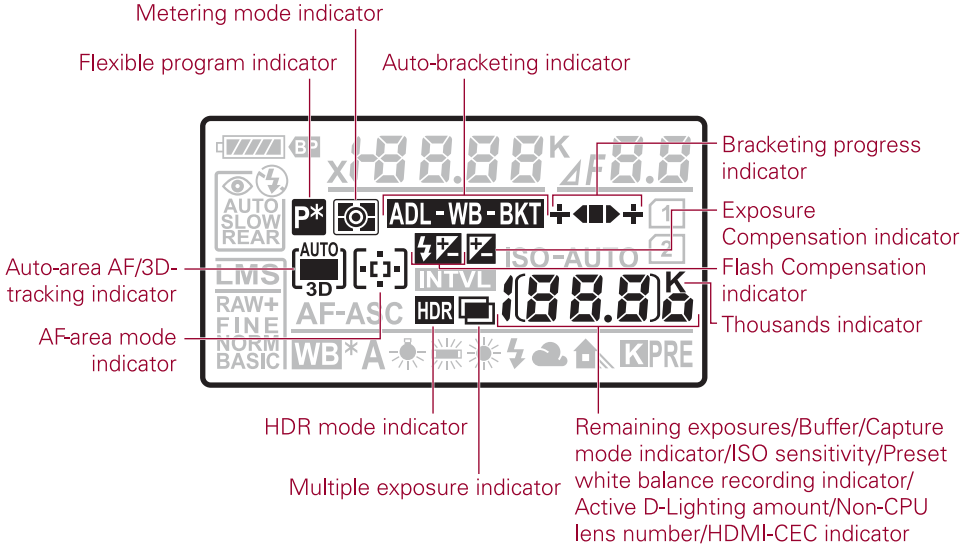
- **ISO sensitivity/AD-L setting/AF-area mode.** By default this readout displays the ISO sensitivity setting number. If Active D-Lighting is assigned to the Preview button or **Fn** button, then when you press the button the AD-L amount is displayed here. Pressing the button and rotating the Main Command dial changes the setting. When you press the AF-area mode button, the AF-area mode is displayed.
- **Shots remaining/Buffer/WB preset/Exposure and Flash Compensation value.** By default, 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 you half-press the shutter-release button, 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 also shows the WB preset recording indicator (**PRE**), as well as ± values and ⚡± values.
- **Thousands indicator (K).** This indicator lets you know that there are more than 1,000 exposures remaining on your memory card.
- **Flash ready indicator (⚡).** When this indicator appears, 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.

Control Panel

The control panel on the top of the camera gives you a quick way to reference some of the most important settings on your D600.

- **Kelvin color temperature indicator (K).** This indicator displays to alert you that the numbers you are seeing represent the color temperature in the Kelvin scale. It only appears when you have set the camera to Kelvin WB and you press the **WB** button.
- **Shutter speed.** By default, this set of numbers shows you the shutter speed setting. These numbers also show a myriad of other settings depending on which buttons you are pressing and what modes are activated. Here's a list:
  - **Exposure compensation value.** When you press the ± button and rotate the Sub-command dial, the exposure value (EV) compensation number appears.
  - **FEC value.** Pressing the ⚡ button and rotating the Sub-command dial displays the FEC value.





1.7 Control panel

- **WB fine-tuning.** Pressing the WB button and rotating the Sub-command dial fine-tunes the white balance setting. A is warmer and B is cooler.
- **Color temperature.** When you set the WB to K, the panel displays the color temperature in the Kelvin scale when you press the WB button.
- **WB preset number.** When you set the WB to one of the preset numbers, pressing the WB button displays the preset number currently being used.
- **Bracketing sequence.** When the D600 Auto-bracketing feature is activated, pressing the BKT button displays the number of shots left in the bracketing sequence. This includes WB, exposure, and flash bracketing.
- **Interval timer number.** When you set the camera to use the interval timer for time-lapse photography, this displays the number of shots remaining in the current interval.
- **Focal length (non-CPU lenses).** When the camera's Fn button is set to choose a non-CPU lens number when you press the Fn button, the focal length of the non-CPU lens appears. You must enter the lens data in the menu.

- **MB-D14 battery indicator.** When the MB-D14 battery grip is attached and the camera is using the battery installed in the grip, this icon appears.
- **Battery indicator.** This display shows the charge remaining on the active battery. When this indicator is blinking, the battery is dead and the shutter is disabled.
- **Flash modes.** These icons denote which flash mode you are using. The flash modes include Red-Eye Reduction, Red-Eye Reduction with Slow Sync, Slow Sync (SLOW), and Rear-Curtain Sync (SLOW REAR). To change the Flash sync mode, press the button and rotate the Main Command dial.
- **Autofocus mode.** This indicator lets you know which focus mode is being used: AF-A, AF-C, or AF-S.
- **JPEG image size.** When you're shooting JPEG or RAW + JPEG files, this indicator tells you whether you are recording Large, Medium, or Small files. This display is turned off when shooting RAW files.
- **Image quality and compression.** This indicator displays the type of file format you are recording. You can shoot RAW or JPEG. When you're shooting JPEG or RAW + JPEG, it displays the compression quality: FINE, NORM, or BASIC.
- **WB fine-tuning indicator.** When the white balance fine-tuning feature is activated, this asterisk appears. You can fine-tune WB by pressing the WB button and rotating the Sub-command dial.

- **WB setting indicator.** This indicator shows you which white balance setting is currently selected.
- **Aperture indicator.** This icon appears when a non-CPU lens is attached without the non-CPU lens data being entered. This indicates that the numbers next to it are not aperture settings, but aperture stops starting from F0, which is wide open.
- **F-stop.** At the default settings, this indicator displays the aperture at which the camera is set. It also displays other settings as follows:
  - **Aperture (number of stops).** This shows the number of stops for a non-CPU lens with no data entered into the camera.
  - **Auto-bracketing compensation increments.** You can adjust the exposure bracketing to over- and underexpose in 1/3-stop increments. When you set the **Fn** button to Auto-bracketing, the number of EV stops appears here. The choices are 0.3, 0.7, or 1.0 EV. You can also adjust the WB Auto-bracketing; the settings are 1, 2, or 3.
  - **Number of shots per interval.** When you set the D600 to Interval Timer shooting, this indicator displays the number of frames shot in the interval.
  - **Maximum aperture (non-CPU lenses).** When a non-CPU lens is attached and the non-CPU lens data has been entered, this indicator displays the aperture setting of the specified lens.
  - **PC mode.** This indicator appears as PC when you connect the D600 to a computer via a USB cable.
- **Memory card indicators (slot 1, slot 2).** This indicator appears when a memory card is inserted into a slot. If a number appears in the icon, the slot contains the active card and the images are being recorded to it. Both slots can be active when you're using slot 2 as a backup or recording RAW to slot 1 and JPEG to slot 2.
- **ISO/Auto ISO indicator.** ISO indicates that the numbers below are the ISO sensitivity settings. ISO-A appears when the Automatic ISO setting is activated to let you know that the camera is controlling the ISO settings.
- **Interval timer/Time lapse indicator (INTVL).** When you turn on the camera's Interval timer or Time lapse option, this indicator appears in the control panel.
- **Metering mode indicator.** This indicator displays the metering mode setting (▦, ◎, ·).

- **Flash sync indicator (X).** This indicator appears as a small X when you set your camera to the sync speed in e1. This is only available in S mode or M mode. To set the camera to the preset sync speed, dial the shutter speed down one setting past the longest shutter time, which is 30 seconds in S mode and Bulb in M mode.
- **Flexible program indicator (P*).** When using P exposure mode, this indicator appears when the settings have been changed from their default to an equivalent exposure.
- **Auto-area AF mode/3D-tracking indicator.** This indicator lets you know if the Auto-area AF mode (▣) or 3D-tracking (3D) is selected and in use.
- **HDR mode indicator (HDR).** This indicator appears when the camera is set to shoot High Dynamic Range images. You can set this option in the camera menu. Note that this can only be enabled when shooting JPEG only.
- **Multiple exposure indicator.** This icon informs you that the camera is set to record multiple exposures. You set multiple exposures in the camera menu.
- **Auto-bracketing indicator.** When the D600 is in the Autoexposure or flash bracketing setting, this indicator appears on the control panel; when it is using WB bracketing, a WB icon (WB) also appears. When using Active D-Lighting bracketing, the ADL indicator (ADL) appears. You set Auto-bracketing in e6.
- **Bracketing progress indicator.** This indicator shows you your place in the bracketing sequence when Auto-bracketing is turned on.
- **Exposure Compensation indicator.** When this icon appears in the control panel, your camera has exposure compensation activated. This affects your exposure. Adjust the exposure compensation by pressing the ± button and rotating the Main Command dial.
- **Thousands indicator (K).** This icon lets you know that there are more than 1,000 exposures remaining on your memory card.
- **Remaining exposures.** By default, this indicator displays the number of remaining exposures. It also displays a few other things, depending on the mode and what buttons are being pressed, as follows:
  - **Buffer.** When you half-press the shutter-release button, the indicator displays the number of shots remaining until the buffer is full.
  - **Capture mode indicator.** This indicates specific settings when the camera is connected to a computer through the USB (PC) port, and other settings when using Capture Control Pro 2 or the WT-4 wireless transmitter.

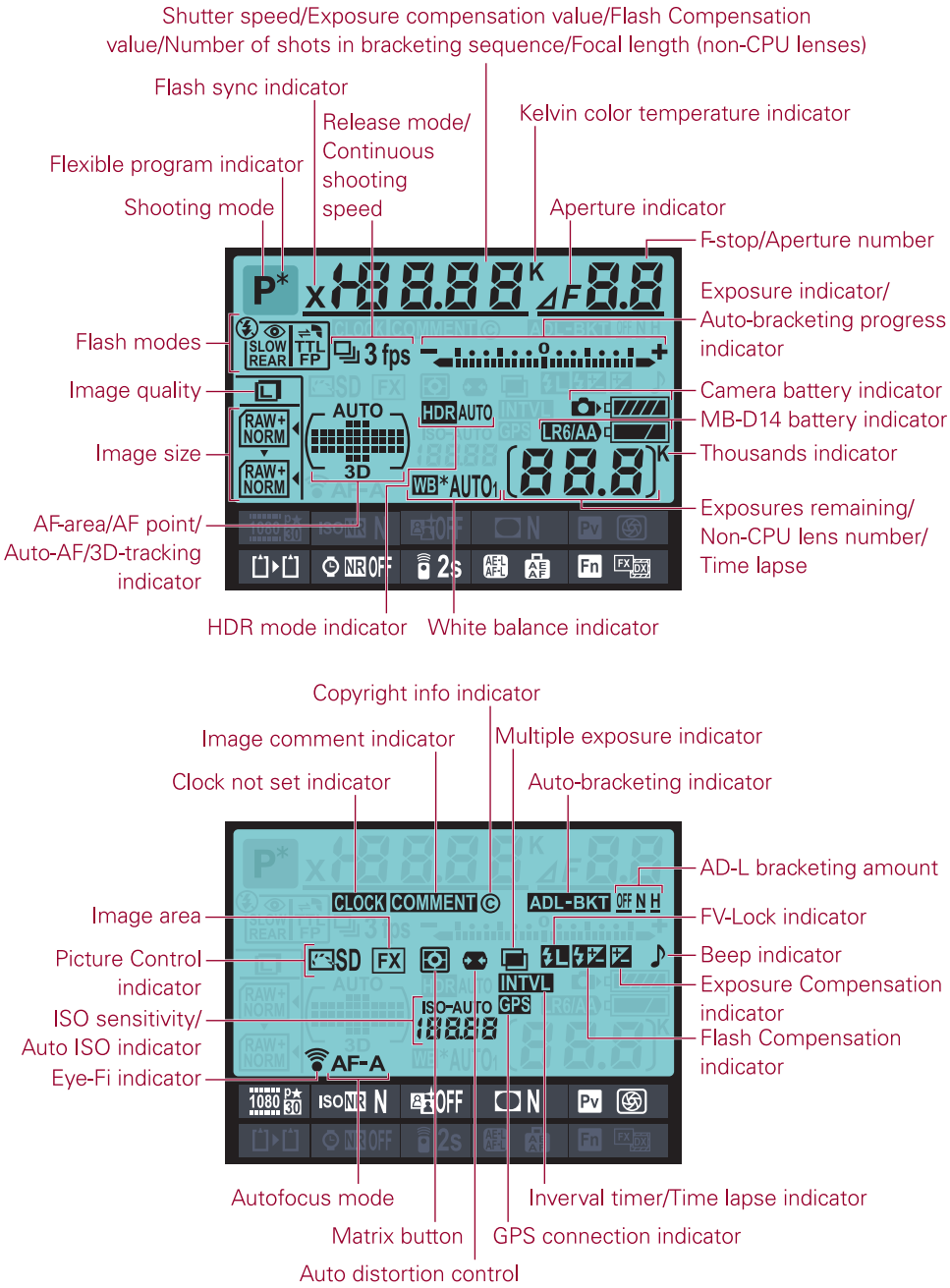
- **ISO sensitivity.** This is the ISO sensitivity setting number.
- **Preset white balance recording indicator.** When recording a custom WB, the indicator flashes PRE.
- **Active D-Lighting amount.** This only appears when you assign Active D-Lighting to the **Fn** or Preview button and press that button. It displays the current setting (Auto, Off, HP [Extra High], H [High], n [Normal], L [Low]).
- **Non-CPU lens number.** This only appears when you assign non-CPU lens data to the **Fn** or Preview button and press that button. It displays the number of the lens setting (n-1–n-9).
- **HDMI-CEC indicator.** When your camera is connected to an HDMI device that supports HDMI-CEC (Consumer Electronics Control), this icon appears. This means that the multi-selector is disabled and the HDMI device remote is controlling the playback.

Information Display

The Information display, which I 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 only appear here. When this display appears on the rear LCD, you can view and change some of the settings without looking through the viewfinder.

You activate the Info display by pressing the Info button (info), located on the bottom right of the camera directly under the focus selector lock. Pressing the info button twice brings up the Info display settings, which allows you to change some key settings on the camera. These settings are detailed in Figure 1.8. By default, when the Info display settings are active, using the multi-selector highlights the setting you want to change and the D600 displays the Screen tips to guide you through what each setting does. If you don't want Screen tips to appear, you can turn this feature off in d4.

The information remains on display until no buttons have been pushed for about 10 seconds (default) or you press the shutter-release or info button.



1.8 Information display

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 you are holding it vertically, and the Info display is shown upright, regardless of which way you are holding your camera.

- **Shooting mode.** This indicator displays the shooting mode that your camera is currently set to. This can be one of the scene modes (in which case it displays the appropriate icon), or one of the other exposure modes, such as P, S, A, or M. This display changes when you rotate the Mode dial.
- **Flexible program indicator (P*).** This icon appears when using P mode to indicate that you have changed the default Autoexposure setting to better suit your creative needs.
- **Flash sync indicator (X).** This indicator appears when you set your camera to the sync speed in e1. This is only available in S or M mode. To set the camera to the preset sync speed, dial the shutter speed down one setting past the longest shutter time, which is 30 seconds in S mode and Bulb in M mode.
- **Shutter speed.** By default this indicator displays the shutter speed setting. It also shows a few other settings, as follows:
  - **Exposure compensation value.** When you press the button and rotate the Sub-command dial, the exposure value (EV) compensation number appears.
  - **Flash Compensation value.** Pressing the button and rotating the Sub-command dial displays the Flash Compensation value.
  - **Number of shots in bracketing sequence.** When you press the BKT button, you look here to determine the settings.
  - **Focal length (non-CPU lenses).** When the camera's Function button is set to choose a non-CPU lens number when you press the Fn button, the focal length of the non-CPU lens is displayed. You must enter the lens data in the menu.
- **Kelvin color temperature indicator (K).** This indicates that the number immediately preceding it is the color temperature in the Kelvin scale. This isn't to be confused with the thousands indicator K.
- **Aperture indicator.** This icon appears when a non-CPU lens is attached without the non-CPU lens data being entered. This indicates that the numbers next to it are not aperture settings, but aperture stops starting from F0, which is wide open.

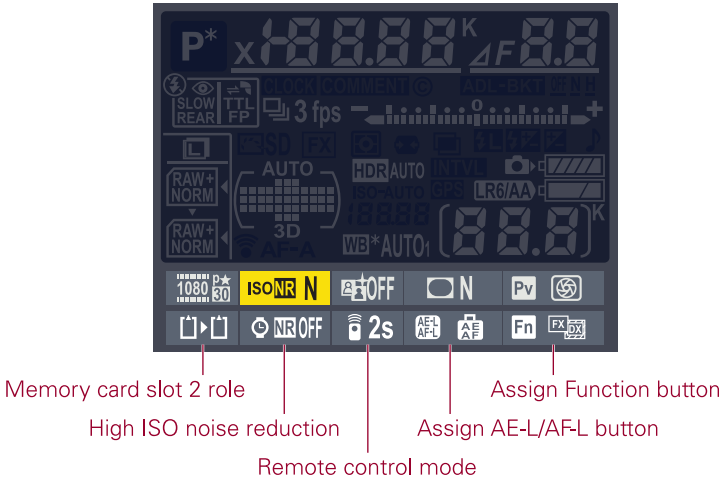
- **F-stop/Aperture number.** At the default settings, this indicator displays the aperture at which the camera is set. It also displays other settings as follows:
  - **Aperture (number of stops).** This shows the number of stops for a non-CPU lens with no data entered into the camera.
  - **Auto-bracketing compensation increments.** You can adjust the exposure bracketing to over- and underexpose in 1/3-stop increments. When you press the **BKT** button to Auto-bracketing, the number of EV stops appears in this area. The choices are 0.3, 0.7, or 1.0 EV. You can also adjust the WB Auto-bracketing; the settings are 1, 2, or 3.
  - **Maximum aperture (non-CPU lenses).** When a non-CPU lens is attached and the non-CPU lens data has been entered, the aperture setting of the specified lens appears.
  - **Active D-Lighting amount.** This displays the number of shots left in the Active D-Lighting sequence if the auto-bracketing feature is set to Active-D Lighting.
- **Release mode/Continuous shooting speed.** This indicator displays the Release mode settings. When you set the camera to a Continuous Release mode, the frames per second (fps) also appears.
- **Exposure Indicator.** 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. You can reverse this setting in f8.
  - **Exposure compensation display.** If any exposure compensation or flash compensation is applied, the indicator shows that you have an under- or overexposed image.
  - **Auto-bracketing progress indicator.** When you have turned on Auto-bracketing, you can use this indicator to track your progress. The display shows a small line under the 0 (normal), the + side (overexposure), and the – side (underexposure).
  - **White balance indicator.** When you set bracketing to WB, three small lines appear on either side of the zero, indicating each shot to be taken. The line disappears when you have taken the shot.
- **HDR mode indicator (HDR).** This indicator appears when you set the camera to shoot High Dynamic Range images. You set this option in the camera menu under HDR (high dynamic range). HDR is NOT available when shooting RAW or RAW + JPEG.

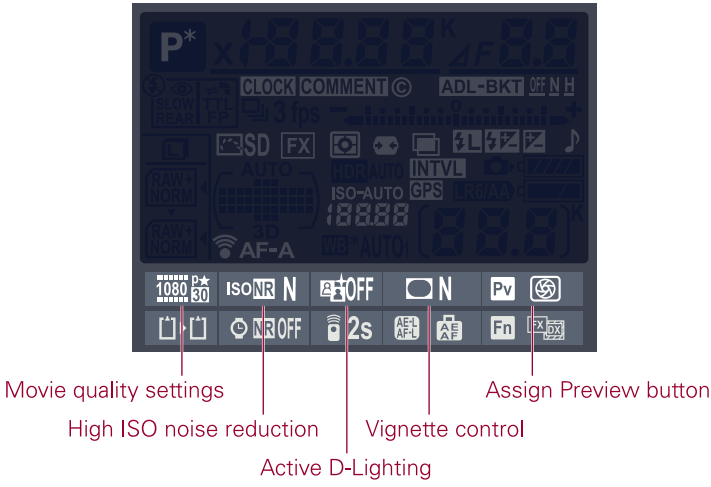
- **AF-area/AF point/Auto-AF/3D-tracking indicator.** This indicator shows the AF-area mode and the active AF point, and it denotes when the AF area is set to Auto or 3D-tracking.
- **Camera battery indicator.** This indicator shows the charge remaining on the battery that is in the camera.
- **MB-D14 battery indicator.** When you are using an optional MB-D14 battery grip, this indicator displays the type of battery being used as well as the amount of charge remaining on the battery.
- **Thousands indicator (K).** This icon lets you know that there are more than 1,000 exposures remaining on your memory card.
- **Exposures remaining/Non-CPU lens number/Time lapse.** This indicator displays the number of exposures remaining. When the **Fn** or Preview button is assigned to non-CPU lens data, this indicator displays the lens number for the selected lens. It also displays the shooting time left remaining in hours and minutes when you use the time-lapse photography option.
- **White balance indicator.** This indicator shows your WB settings. If the WB has been changed from the default, an asterisk appears.
- **Image quality.** The image quality settings appear here. There are two areas: one for slot 1 and one for slot 2.
- **Image size.** This indicator displays the size settings for JPEG images.
- **Flash modes.** This indicator displays the different flash modes and settings.
- **Image area.** This indicator shows whether the camera is set to FX (FX) or DX (DX) mode.
- **Metering (▦).** This indicates your metering mode (▦, ⊙, or ·).
- **Auto distortion control (◓).** This indicator appears when you activate the auto distortion control (you can find this setting in the 📷 menu).
- **Clock not set indicator.** When this indicator appears, the camera's internal clock has not been set and the time and date will not appear in the EXIF (Exchangeable Image File Format) data.
- **Image comment indicator.** You can add a line or two of text into the EXIF data using the Image comment option. This indicator informs you that this feature is on.
- **Copyright info indicator.** You can program the D600 to add copyright information to the EXIF data of all your images. When you turn this option on, this indicator appears.

- **Auto-bracketing indicator.** This indicator appears when you turn on the D600 Auto-bracketing feature.
- **AD-L bracketing amount.** This indicator shows the amount of Active D-Lighting that is being applied with AD-L bracketing.
- **Multiple exposure indicator.** This icon appears when you activate the multiple exposure feature.
- **Beep indicator (♪).** When you set the camera to beep for AF confirmation (d1), ♪ appears here.
- **Exposure Compensation indicator ( ).** This icon appears when exposure compensation is applied.
- **Flash Compensation indicator ( ).** This is displayed when the flash exposure has been adjusted using Flash Exposure Compensation.
- **FV-Lock indicator ( ).** This indicator is displayed when the flash value has been locked. To lock the flash value, you must assign either the Preview button or **Fn** button.
- **Interval timer/Time lapse indicator (INTVL).** When you set the camera to shoot at intervals or time-lapse, the INTVL icon is shown.
- **GPS connection indicator.** This indicator appears when using an optional GPS device with the D600. If the icon is flashing the GPS unit is searching for a signal, if no icon is shown there is no GPS connection, and if the GPS indicator is solid the GPS unit has a connection.
- **Aufofocus mode.** This indicator lets you know which AF-area mode is selected and in use.
- **Eye-Fi indicator.** When an optional Eye-Fi memory card is being used in the camera, this icon appears.
- **ISO sensitivity/Auto ISO indicator.** This indicator displays the ISO sensitivity setting. If you turn on Auto-ISO, the ISO-A appears.
- **Picture Control indicator ( ).** This indicator displays your Picture Control settings.

The following are adjustable settings. Pressing the info button twice gives you access to these common settings so that you can change them quickly. Once you have selected an option, pressing OK brings up the Settings menu.

- **Movie quality settings.** This allows you to change the resolution quality of the videos.





1.9 Info settings display

- **High ISO noise reduction.** You can adjust the high ISO noise reduction settings here.
- **Active D-Lighting.** You can change the Active D-Lighting settings here.
- **Vignette control.** This option allows you set the lens vignette control quickly.
- **Assign Preview button.** This option allows you to change the settings for the Preview button.

- **Memory card slot 2 role.** This option allows you to change the settings for the function of the memory card in slot 2 (if one is used).
- **Remote control mode.** This option allows you to change the settings of the Remote control mode.
- **Assign AE-L/AF-L button.** You can assign different functions to the AE-L/AF-L button using this menu option.
- **Assign Fn button.** This is where you select the settings for the **Fn** button.