

Exploring the Nikon D7100

This chapter covers the key components of the D7100 — the buttons, switches, dials, and knobs. These are the features you will need to master because you will be using them all the time to modify settings in order to adapt to changing shooting conditions.

The D7100 is very similar to its precursor, the D7000, and also very similar to its FX sibling, the D600. If you're upgrading from the D7000 or you purchased the D7100 as an adjunct to the D600, you'll feel right 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, then 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.

Key Components of the D7100




You use the exterior controls of the D7100 to access features that you change often. Being a higher-end model than the D3200 and D5100 series, the D7100 offers 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 D7100 has fewer buttons than the professional-grade 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 you can customize a number of buttons so that you can control the settings that you need to access most often.


Top of the camera


A lot of important buttons are on the top of the D7100. 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 a photograph is taken. 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 in conjunction with spinning the Main Command dial allows you to modify the exposure that is set by the D7100's light meter when it is set to Programmed auto () , Shutter-priority auto () , or Aperture-priority auto () mode. Turning the Main Command dial to the right increases the 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 Thumbnail/zoom out button () resets the camera to the default settings.

CAUTION When shooting in Manual exposure () , exposure compensation can also be applied. Because you are controlling the exposure manually, there is no need to apply exposure compensation; it's simpler to adjust the aperture or shutter speed if you need to under or over expose.

NOTE The Exposure Compensation button () serves no function when shooting in automatic or scene modes.

- ▶ **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 () , which lets you pick the exposure settings.
- ▶ **Mode dial lock release button.** Press this button to unlock the Mode dial so that you can rotate the dial to change the 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. The minimum focus distance for lenses is measured from this point. When measuring distance for calculating flash output, you should measure the subject-to-focal-plane distance.



Image courtesy of Nikon, Inc.

1.1 Top-of-the-camera controls.

- ▶ **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.
- ▶ **Stereo microphone.** This built-in stereo microphone allows you to record sound to go along with your video.
- ▶ **Control panel.** This LCD panel displays numerous controls and settings. The control panel is covered in depth later in the chapter.

On the kit lens, you find three 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.

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 screen and viewfinder.

- ▶ **Release Mode dial lock release.** Press the Release Mode dial lock release and rotate the Release Mode dial to change the settings.
- ▶ **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. There are seven modes:
 - **Single frame (s).** This mode allows you to 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 shooting (cl).** When using this 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 Setting menu (Ⓔ) d5. You can select from 1 to 5 fps.

- **Continuous high-speed shooting (CH).** When you use this 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 mode (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 release mode (⌚).** This mode activates the self-timer that allows a delay between when you press the shutter-release button and when the shutter is released. You can set the timer in the Remote control mode (📷) in the Shooting menu (📷).
 - **Remote (📷).** 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 Shooting menu (📷).
 - **Mirror up mode (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, 930,000-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 reflected from a series of five mirrors (called a *pentamirror*), enabling you to see exactly what you're shooting. The rubber eyepiece around the viewfinder gives you a soft 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 (almost 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 at the menu bar and slide the diopter adjustment up or down until it appears sharp.
- ▶ **AE-L/AF-L button (AF-L).** The Auto-Exposure/Autofocus Lock button is used to lock the Autoexposure (AE) and Autofocus (AF). You can customize this button in the Custom Setting 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 or the shutter is released. AF-ON engages the AF in the same way that half-pressing the shutter-release button does. You can also set the button to FV lock when using an accessory Speedlight.
- ▶ **Main Command dial.** You use this dial 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 the camera is in Shutter-priority auto (S), Programmed auto (P), and Manual exposure (M) mode. 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 D7100 is in Single-point AF (L) or Dynamic-area AF (L) mode, you can use the multi-selector to change the active focus point. You can also use the multi-selector to navigate through the menu options.
- ▶ **OK button (OK).** When the D7100 is in Menu mode, you press the OK button (OK) to select the menu item that is highlighted. In Playback mode, pressing the OK button (OK) displays the Retouch Menu (R) options. In Shooting mode, you can set the OK button (OK) to a couple of different functions using the Custom Setting menu (f1), Select center focus point, Highlight active focus point, or you can disable the OK button (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.
- ▶ **Live View button.** Simply pressing the Live View button (LV) activates the Live View option.








Image courtesy of Nikon, Inc.

1.2 Back-of-the-camera controls.

- ▶ **Live View switch.** Flipping the switch allows you to choose between shooting still photos (📷) 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 button will continue blinking until the data finishes transferring from the buffer to the memory card.
- ▶ **Info button (📄).** Pressing this button displays the shooting information on the monitor.
- ▶ **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 receiver.** This receiver picks up the infrared signal from the optional wireless remote, the ML-L3.

- ▶ **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 the Delete button (⏏) 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 metering mode 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 D7100 menu options. There are a number of menus, including Playback (▶), Shooting (📷), Custom Settings (🔧), and Retouch (🖋). Use the multi-selector to choose the menu you want to view and press the OK button (⊙) to enter the specific menu screen.
- ▶ **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 D7100 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 D7100 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 Live View (LV) option, 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 you are zoomed in, use the multi-selector to navigate 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 (/ISO) button. You may have to press the Zoom out button (/ISO) multiple times, depending on how much you have zoomed in.

- ▶ **Thumbnail/Zoom out/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 Exposure compensation button () resets the camera to the default settings.
- ▶ **i button (.** This is a brand-new button introduced with the D7100. It allows you to quickly access the most important settings by immediately displaying the information edit menu.

Front of the camera

The front of the D7100 (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.** You use the Sub-command dial to adjust a number of settings, but by default, you use it to change the aperture setting. You also use it to change various settings in conjunction 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 () or Full-time-servo mode () and the center AF point is selected. This LED also lights up when you set the camera to Red-Eye Reduction flash () using the camera's built-in flash.
- ▶ **Built-in flash.** This 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-700 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 the lower-end Nikon models.



Image courtesy of Nikon, Inc.

1.3 Front of the Nikon D7100.

- ▶ **Preview button (Pv).** By default, this button stops down the aperture 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 one of the Command dials changes the settings, depending on which option is selected. You can change the setting options in Custom Setting menu (🔧) f3.
- ▶ **Function button (Fn).** You can set the Function button (Fn) to a number of 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 the Function button (Fn) and rotating 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 Custom Setting menu (🔧) f2 under the Buttons option.

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

- ▶ **Front infrared receiver.** This receiver picks up the infrared signal from the optional ML-L3 wireless remote.

Left side of the camera

On the left side of the camera (with the lens facing away from you) are the output terminals on the D7100. 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 compensation button (⚡/⚡/⚡).** When you're using Programmed auto (**P**), Shutter-priority auto (**S**), Aperture-priority auto (**A**), or Manual (**M**) exposure modes, 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 among Front-Curtain Sync (default) (⚡), Red-Eye Reduction (⚡⊗), Red-Eye Reduction with Slow Sync (⚡^{SR}_{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, 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 (⚡⊗^{AUTO}_{SLOW}), Auto with Slow Sync (⚡^{AUTO}_{SLOW}), or Off (⊖).
- **P, A.** With these modes, you can select Red-Eye Reduction (⚡⊗), Red-Eye Reduction with Slow Sync (⚡^{SR}_{Slow}), Slow Sync (⚡^{SLOW}), or Rear-Curtain Slow Sync (⚡^{SLOW}_{REAR}).
- **S, M.** These modes allow you to use Red-Eye Reduction (⚡⊗) or Rear-Curtain Sync (⚡^{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 five-frame (normal, two under, two over) 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; you can choose from 0.3, 0.7, 1, 2, or 3 EV.
- ▶ **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.
- ▶ **AF-mode button/Focus Mode selector.** 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 Single-servo AF mode (AF-S), you can choose Single-point AF (AF-S) or Auto (AF-A). In Auto-area AF mode (AF-A) or Continuous Servo AF mode (AF-C), you can select from Single-point AF (AF-S), Dynamic-area AF (AF-C) (9, 21, or 39 points), 3D-tracking (AF-C), or Auto-area AF (AF-A).
- ▶ **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 connector.** 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. The USB cable is also used to connect the camera to the computer when using the Camera Control Pro 2 software from Nikon.
- ▶ **HDMI connector.** 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.
- ▶ **Accessory terminal.** 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.



Image courtesy of Nikon, Inc.

1.4 The left side of the D7100.

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

Right side of the camera

On the right side of the camera (with the lens facing away from 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 Nikon D7100 has a brand-new viewfinder display that features a great OLED element that makes the viewfinder information much sharper and easier to see. The viewfinder display is kind of like the heads-up display in a jet plane. It allows you to see a lot of 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 on 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:



- ▶ **Framing grid lines.** When you turn this option on in the Custom Setting menu (✎) d2, a grid displays in the viewing area. Use the grid to line up elements of your composition to ensure they are straight (or not).
- ▶ **Focus 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 Single-point AF (L[□]), Dynamic-area AF (L[□]), or 3D-tracking AF (L[□]) setting. When you set the camera to Auto-area AF (L[□]), no focus point is shown until the shutter-release button is half-pressed and focus is achieved.
- ▶ **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.

Around the edges of the main viewfinder frame there are a few icons that appear when certain settings are engaged. Clockwise from top these icons are:

- ▶ **Special effects mode indicator.** When the D7100 mode dial is set to Effects (EFFECTS), this indicator is shown as a reminder.
- ▶ **Monochrome indicator.** When the camera is set to the Monochrome Picture Control (MCMC), this indicator (B/W) is displayed.



1.6 Viewfinder display.

- ▶ **1.3X DX Crop area.** When the D7100 is set to 1.3X DX crop () the cropped area is outlined.
- ▶ **1.3X DX Crop indicator.** This icon appears when the crop feature is activated.
- ▶ **Roll indicator (portrait).** When the virtual horizon option is on, this display is shown to indicate when the camera is tilted toward the front or back.
- ▶ **Roll indicators (landscape).** When the virtual horizon option is on, this display is shown to indicate when the camera is tilted toward the left or right.
- ▶ **No memory card indicator ().** This icon is shown when no memory cards are present in the camera.

- ▶ **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. On either side of the 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.
- ▶ **AE-Lock indicator (AE-L).** When this indicator lights up, you know that the Autoexposure has been locked.
- ▶ **FV-Lock indicator (L).** 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 Function (Fn) (or Preview) button has been set to do this.
- ▶ **Flash sync indicator (X).** This indicator comes on when you set your camera to the sync speed in Custom Setting menu (e1). This setting is only available in Shutter-priority auto (S) or Manual (M) exposure 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 Shutter-priority auto (S) and Bulb shooting mode (Bulb) in Manual exposure mode (M).
- ▶ **Shutter speed/AF mode.** This indicator shows how long your shutter is set to stay open, from 30 seconds (30") up to 1/8000 (8000) second. When you press the AF mode button, this shows your AF mode setting Auto-servo AF (AF-A), Continuous Servo AF (AF-C), or Single-servo AF (AF-S).
- ▶ **Aperture stop indicator (A).** 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 number.** 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/Exposure compensation/Roll.** When the bars are in the center, you are at the proper settings to get a good exposure according to the camera's metering mode settings; 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 Custom Setting menu (f8). This option only

appears when in Manual exposure (M) and when exposure compensation (±) 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 Function button (Fn) or the Preview button.

- ▶ **Flash compensation indicator (±).** When this indicator appears, Flash compensation is on. You adjust FEC by pressing the Flash mode button (⚡) and rotating the Sub-command dial.
- ▶ **Low battery warning (🔋).** 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.
- ▶ **Exposure Compensation indicator (±).** When exposure compensation is activated this icon is displayed. When the Exposure Compensation button (±) is pressed and the Main Command dial is rotated, the icon changes to show whether exposure is being added to (↗) or reduced (↘).
- ▶ **ISO sensitivity indicator (ISO).** When you press the ISO button, this indicator appears next to the ISO sensitivity setting, letting you know that the numbers you are seeing are the ISO numbers.
- ▶ **Auto ISO indicator (ISO-A).** 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 the Thumbnailplayback/ISO button (📷/ISO) and rotating the Sub-command dial.
- ▶ **Exposures remaining/WB preset/exposure and flash compensation value/ISO sensitivity/Active D-Lighting amount/AF-area mode.** 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 the exposure compensation (±) values and flash compensation (⚡±) values. You can also program








this in Custom Setting menu (🔧) d3 to display the ISO sensitivity setting number. If Active D-Lighting (ADL) is assigned to the Preview button or the Function button (Fn), then when you press the button, the AD-L amount appears 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 appears.

- ▶ **Thousands indicator.** This indicator, which appears as a “K,” 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.

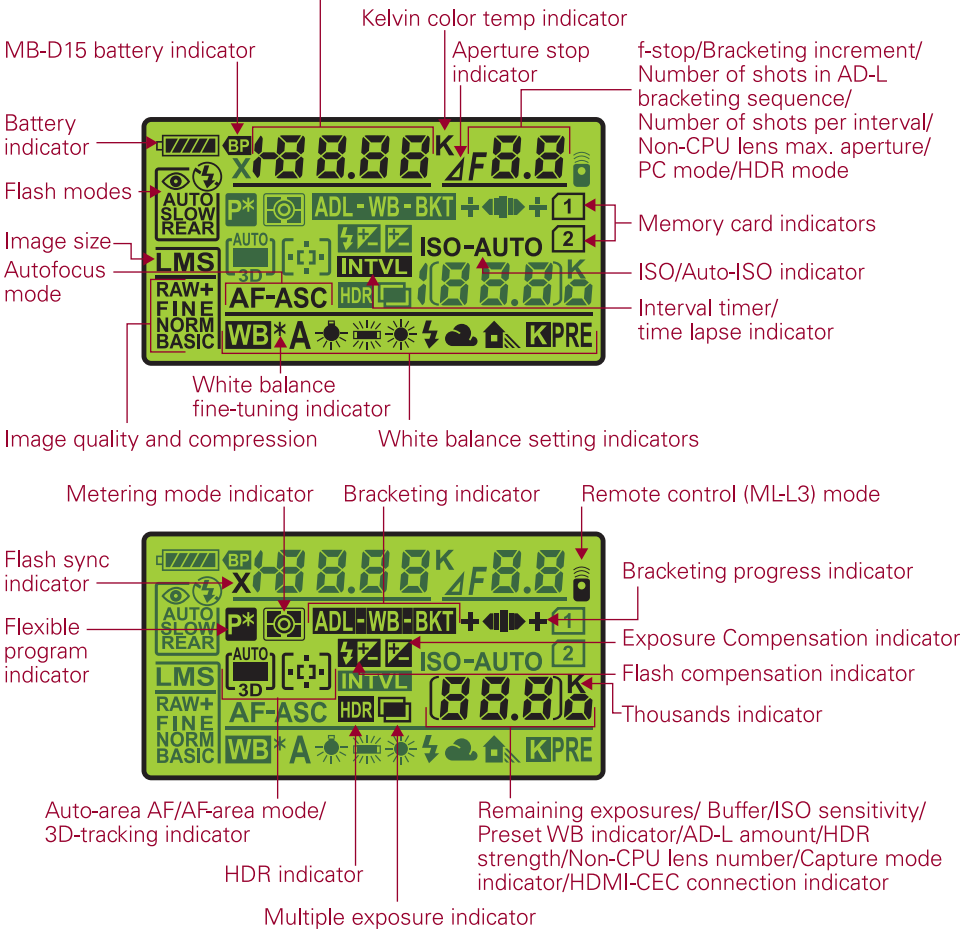
Control Panel

The LCD control panel on the top of the camera gives you a quick way to reference some of the most important settings on your D7100.

- ▶ **Kelvin color temp indicator.** 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 (K) and you press the WB button (WB).
- ▶ **Shutter speed.** By default, this set of numbers shows you the shutter speed setting. These numbers also show myriad 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 Exposure compensation button (±) and rotate the Sub-command dial, the exposure value (EV) compensation number appears.
 - **Flash compensation value.** Pressing the Flash mode button (⚡) and rotating the Sub-command dial displays the FEC value.
 - **White balance fine-tuning.** Pressing the White balance button (WB) 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.
 - **White balance preset number.** When you set the white balance to one of the preset numbers, pressing the White balance button (WB) displays the preset number currently being used.

- **Number of shots in bracketing sequence.** When the D7100 Auto-bracketing feature is activated, pressing the Bracketing button (**BKT**) displays the number of shots left in the bracketing sequence. This includes white balance, exposure, and flash bracketing.
 - **Number of intervals for interval timer photography.** 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.
 - **Non-CPU lens focal length.** When you set the camera's Function button (**Fn**) to choose a non-CPU lens number when the Function button (**Fn**) is pressed, the focal length of the non-CPU lens appears. You must enter the lens data in the Setup menu (**Y**).
- ▶ **MB-D15 battery indicator.** When the MB-D15 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 REAR}), and Rear-Curtain Sync ( ^{REAR}). To change the Flash sync mode, press the Flash mode 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 (.
 - ▶ **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 White balance button (**WB**) and rotating the Sub-command dial.
 - ▶ **WB setting indicators.** This shows you which white balance setting is currently selected by displaying the white balance setting icon.
 - ▶ **Aperture stop 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.

Shutter speed/Exposure compensation value/Flash compensation value/White balance fine-tuning/Color temperature/
White balance preset number/Number of shots in bracketing sequence/Number of intervals for interval timer photography/
Non-CPU lens focal length



1.7 LCD control panel.

► **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 set the Function button (**Fn**) 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 D7100 to Interval timer (**INTVL**) 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 D7100 to a computer via a USB cable.
 - **HDR strength setting.** When HDR is set to the **Pv** or **Fn** button, when the button is pressed this is where you see the HDR mode settings: Auto, Extra High, High, Normal, or Low.
- ▶ **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 (**ISO**) indicates that the numbers below are the ISO sensitivity settings. Auto ISO (**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.
 - ▶ **Remote control (ML-L3) mode (**R**).** This indicator is displayed when the camera's remote control mode is activated.
 - ▶ **Metering mode indicator.** This indicator displays the metering mode setting (Matrix (**M**)), Center-weighted (**C**), Spot metering (**S**)).
 - ▶ **Flash sync indicator (**X**).** This indicator appears when you set your camera to the sync speed in Custom Setting menu (e1). This is only available in Shutter-priority auto (**S**) or Manual (**M**) exposure modes. 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 Shutter-priority auto (**S**) and Bulb (**Bulb**) in Manual (**M**).
 - ▶ **Flexible program indicator (**P***).** When using Programmed auto exposure mode (**P**), this indicator appears when the settings have been changed from their default to an equivalent exposure.


- ▶ **Auto-area AF/AF-area mode/3D-tracking indicator.** This indicator lets you know if the Auto AF-area mode or 3D-tracking is selected and in use.
- ▶ **HDR indicator (HDR).** This indicator appears when the camera is set to shoot High Dynamic Range images. You can set this option in the Shooting menu (CAM). Note that this can only be enabled when shooting JPEG.
- ▶ **Multiple exposure indicator.** This icon informs you that the camera is set to record multiple exposures. You set multiple exposures in the Shooting menu (CAM).
- ▶ **Bracketing indicator.** When the D7100 is in the exposure or flash bracketing setting, this indicator appears on the control panel; when the D7100 is using white balance bracketing, a WB icon (WB) also appears. When it is using Active D-Lighting bracketing, the ADL indicator (ADL) appears. You set Auto-bracketing in Custom Setting menu (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 Exposure Compensation button (±) and rotating the Main Command dial.
- ▶ **Thousands indicator.** 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 (PC).** 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.** When recording a custom white balance, the indicator flashes PRE (PRE).
 - **Active D-Lighting amount.** This only appears when Active D-Lighting is assigned to the Function (Fn) or Preview button and you press that button. It displays the current setting (Auto, Off, HP [Extra High], H [High], n [Normal], L [Low]).

- **HDR mode.** When HDR is set to the **Pv** or **Fn** button, when the button is pressed the HDR mode is shown. You can choose Off, Single, or Continuous by pressing the button and rotating the Main Command dial.
- **Manual lens number.** This only appears when non-CPU lens data is assigned to the Function (**Fn**) or Preview button and you press that button. It displays the number of the lens setting (n-1 to n-9).
- **HDMI-CEC connection.** 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

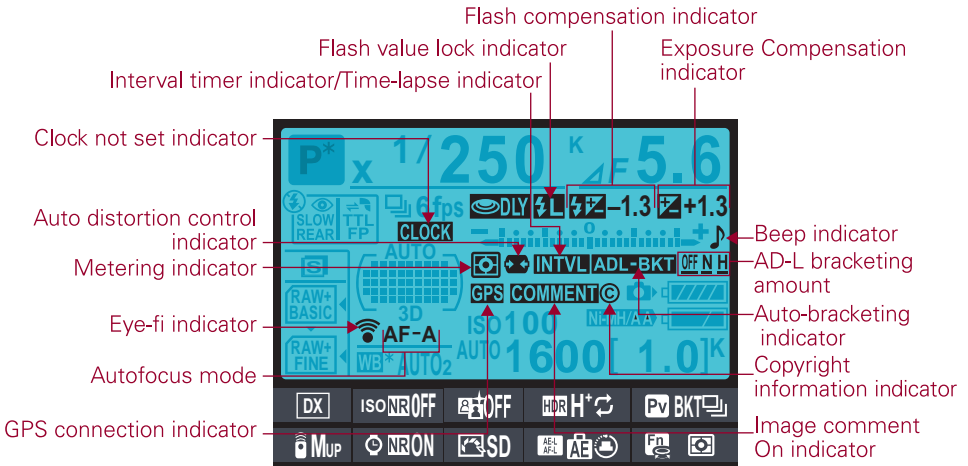
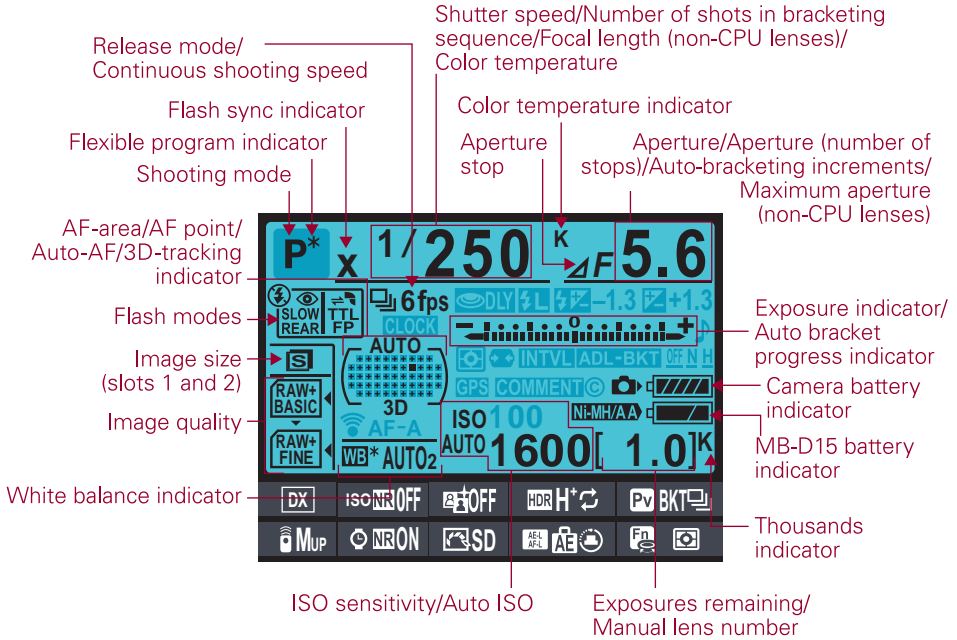
The Information display, which I refer to as the Info display for brevity, shows some of the same shooting information that appears in the viewfinder, but there are also quite a few settings that only appear here. When this display appears on the rear LCD monitor, you can view and change some of the settings without looking through the viewfinder.

You activate the Info display by pressing the Info button () , located on the bottom right of the camera directly under the focus selector lock. Pressing the *i* button () brings up the Info display settings; this 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 D7100 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 Custom Setting menu () 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 () .

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 to which your camera is currently set. This can be one of the scene modes (in which case it displays the appropriate icon), or one of the semiautomatic modes, such as Programmed auto (**P**), Shutter-priority auto (**S**), Aperture-priority auto (**A**), or Manual (**M**) (in which case it displays the corresponding letter). This display changes when you rotate the Mode dial.
- ▶ **Flexible program indicator (**P***).** This asterisk appears when using Programmed auto (**P**) to indicate that you have changed the default auto-exposure setting to better suit your creative needs.
- ▶ **Flash sync indicator (**X**).** This indicator appears when you set your camera to the sync speed in Custom Setting menu (⚙) e1. This is only available in Shutter-priority auto (**S**) or Manual (**M**) exposure modes. 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 Shutter-priority auto (**S**) and Bulb (**Bulb**) in Manual (**M**).
- ▶ **Shutter speed.** By default, this indicator displays the shutter speed setting. It also shows a few other settings, as follows:
 - **Number of shots in bracketing sequence.** When you press the Bracket button (**BKT**), you look here to determine the settings including exposure, flash, and white balance bracketing.
 - **Focal length (non-CPU lenses).** When you have set the camera's Function button (**Fn**) to choose a non-CPU lens number when the Function button (**Fn**) is pressed, the focal length of the non-CPU lens appears. You must enter the lens data in the Setup menu (**Y**).
 - **Color temperature.** When the white balance is set by Kelvin, this appears as the number in the Kelvin scale.
- ▶ **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."
- ▶ **Aperture stop.** 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.
















1.8 Information display.

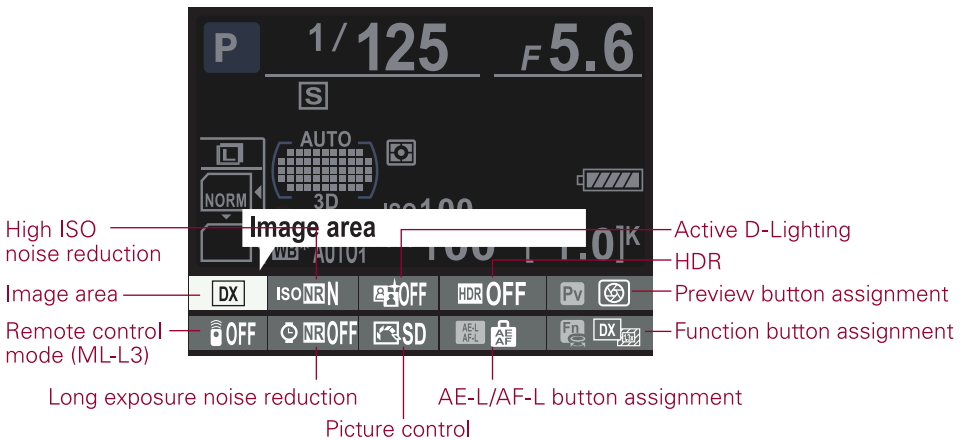
► **F-stop/aperture number.** At the default settings, this indicator displays the aperture at which the camera is set. It also displays other settings as follows:

- **Aperture (number of stops).** This shows the number of stops for a non-CPU lens with no data entered into the camera.

- **Auto-bracketing increments.** You can adjust the exposure bracketing to over- and underexpose in 1/3-stop increments. When you set the Function button (**Fn**) 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 white balance 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.
- ▶ **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.** When the bars are in the center, you are at the proper setting to get a good exposure according to the camera's light meter settings; 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 Custom Setting menu (✎) f9.
 - **Exposure compensation display.** If any exposure compensation is applied, the indicator shows that you have an under- or overexposed image.
 - **Bracketing progress.** 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).
 - **WB bracketing.** When you set bracketing to white balance, 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.
- ▶ **Camera battery indicator.** This indicator shows the charge remaining on the battery that is in the camera.
- ▶ **MB-D15 battery indicator.** When you are using an optional MB-D15 battery grip, this indicator displays the type of battery being used as well as the amount of charge remaining on the battery.
- ▶ **Thousands indicator.** This icon, which appears as a “K,” lets you know that there are more than 1,000 exposures remaining on your memory card.
- ▶ **Exposures remaining/manual lens number.** This indicator displays the number of exposures remaining. When the Function (**Fn**) or Preview button is assigned to non-CPU lens data, this indicator displays the focal length data for the selected lens.

- ▶ **White balance indicator.** This indicator shows your white balance settings. If the white balance 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 (slots 1 and 2).** This indicator displays the size settings for JPEG images.
- ▶ **Flash modes.** This indicator displays the different flash modes and settings.
- ▶ **AF-area/AF point/Auto-AF/3D-tracking indicator.** This is where you find the important information about your autofocus settings. This shows you the AF-area mode, which AF point is selected, and shows when 3D-tracking is activated.
- ▶ **Metering indicator** (, , or ). This indicator shows your metering mode: Matrix () , Center-weighted () , or Spot ().
- ▶ **Auto distortion control indicator** (). This indicator appears when you activate the auto distortion control (you can find this setting in the Shooting 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 On 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 information indicator.** You can program the D7100 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 D7100 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. It is not shown in Figure 1.8, but it appears in the same location as the AD-L bracketing amount indicator.
- ▶ **Beep indicator** (). When you set the camera to beep for AF confirmation (Custom Setting menu () d1), a music note appears here.
- ▶ **Exposure Compensation indicator** (). This icon appears when exposure compensation is applied.

- ▶ **Flash compensation indicator (⚡).** This indicator appears when the flash exposure has been adjusted using flash compensation.
- ▶ **Flash value lock indicator (⚡L).** This indicator appears when the flash value has been locked. To lock the flash value, you must assign either the Preview button or the Function button (Fn).
- ▶ **Interval timer indicator.** When you set the camera to shoot at intervals the Interval-timer indicator (INTVL) appears.
- ▶ **GPS connection indicator.** This indicator appears when using an optional GPS device with the D7100. If the icon is flashing, the GPS unit is searching for a signal. If no icon is shown, there is no GPS connection. If the GPS indicator is solid, the GPS unit has a connection.
- ▶ **Autofocus mode.** This indicator lets you know which AF-area mode is selected and in use, AF-A, AF-C, or AF-S.
- ▶ **Eye-Fi indicator.** When an optional Eye-Fi memory card is being used in the camera, this icon appears.
- ▶ **ISO Sensitivity/Auto ISO.** This indicator displays the ISO sensitivity setting. If you turn on Auto-ISO, the ISO-A appears.



1.9 Info settings display.

The following are adjustable settings. Pressing the *i* button (i) twice gives you access to these common settings so that you can change them quickly. Once you select an option using the multi-selector, pressing the OK button (OK) displays the settings menu for that option.

- ▶ **Image area.** This setting allows you to change the crop from DX format (☐) to 1.3X crop.
- ▶ **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.
- ▶ **HDR.** This option allows you to set the options for the in-camera HDR feature.
- ▶ **Preview button assignment.** This option allows you to change the settings for the Preview button (Pv).
- ▶ **Remote control mode (ML-L3).** This option allows you to activate and change the settings for the wireless ML-L3 remote.
- ▶ **Long exposure noise reduction.** Here you can change the settings of the long exposure NR.
- ▶ **Picture Control.** This option allows you to change the Picture Control and also gives you access to adjust the settings.
- ▶ **AE-L/AF-L button assignment.** You can assign different functions to the AE-L/AF-L button (AE-L) using this option.
- ▶ **Function button assignment.** This option allows you to select the settings for the Function button (Fn).