THE ADOBE PHOTOSHOP LIGHTROOM CLASSIC CC BOOK

Plus an essential guide to
Adobe Photoshop Lightroom CC (2019 release) across desktop, web, and mobile

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Adobe

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Photograph: Gold Hill, Shaftesbury © 2016 Martin Evening
Sony A7rII | 70mm | 200 ISO | f/8 @ 1/320th

4 Develop module image editing

A definitive guide to working with the image-processing controls in the Develop module

One of the most powerful features in Lightroom is the image-processing engine, especially the way the image-adjustment processing is deferred until the time you choose to edit in Photoshop or export an image. This method of image processing actually originated in the early days of computer imaging, when deferred processing was adopted by such programs as Live Picture and xRes as a means to speed up the image editing. Computers were a lot slower back then, but it was possible to manipulate large image files in real time on relatively slow computers (with as little as 24 MB of RAM) and defer the image-rendering process to the end of a photo edit session.

Of course, these days, you can edit large images in no time at all in Photoshop. But one of the key advantages of Lightroom is that you can apply a crop, spot the image, make localized adjustments, tweak the color, do some more retouching, readjust the crop again, and so on, without ever touching the pixels in the original photograph. In a conventional pixel-editing workflow, the pixels are always modified in a consecutive sequence of steps. When you work in Lightroom, no restrictions are placed on the order in which you do things, and the edit changes you make in the Develop module are applied only when you output a photo as a rendered file, such as a PSD, TIFF, or JPEG.

SMARTER IMAGE PROCESSING

The Lightroom image-processing engine is notable for a number of reasons. First, the Adobe engineers have made Lightroom simple to use—there are no color management settings, color space issues, or profile warnings to worry about. But just because the image processing is simpler does not mean it is inferior, as these changes have been made without compromising on quality. The Lightroom image-processing engine ultimately reduces all of its pixel calculations into a single calculation, in which any image degradation is minimized. Another advantage of the Lightroom image-processing engine is that you have full access to all of the image controls when working with JPEG, PNG, HEIF, TIFF, and PSD images, just as you have when working with raw camera files. You can use any of the image controls available in the Lightroom Develop module.

Lightroom uses a single RGB workspace to carry out all its image calculations, which is similar to the ProPhoto RGB space that was originally specified by Kodak. It uses the same coordinates as ProPhoto RGB but has a gamma of 1.0 instead of 1.8. By using a 1.0 gamma, the Lightroom RGB workspace is able to match the native 1.0 gamma of raw camera files, and its wide gamut can therefore contain all the colors that any of today's digital cameras are capable of capturing. For these reasons, the Lightroom RGB workspace is ideally tailored to the task of processing the color data contained in the raw camera files. Concerns about banding in wide-gamut color spaces have perhaps been a little overrated, because it is really quite difficult to pull apart an image in ProPhoto RGB to the point where you see gaps appearing between the levels. Suffice it to say, the Lightroom RGB space uses a native bit depth of 16 bits per channel, which means that Lightroom is able to process up to 32,768 levels of tonal information per color channel. Because a typical digital camera will be capable of capturing only up to 4096 levels per color channel, it is probably true to say that the Lightroom RGB workspace can safely handle all of the tone and color information captured by any digital camera.

The Develop controls in Lightroom can be accessed as soon as a low-resolution preview has had a chance to load, instead of waiting for a full preview. For example, if a Smart Preview is available, Lightroom loads this first, before loading the full-sized image. When going to the Develop module, individual panels are not loaded into memory unless they are already open. This helps improve the initial launch speed of the Develop module. Lightroom Classic CC has fast switching from the Library to Develop modules. Furthermore, if you have 16 GB RAM or more, sequential navigation (using the keyboard arrows to move from one photo to the next) in Develop should be nice and fast. This is because Lightroom pre-caches upcoming photos, both before or after the direction you are navigating in. While you spend a few seconds on an image, Lightroom pre-loads the next two or three images to enable faster scrolling through these.

STEPS TO GET ACCURATE COLOR

The color management system in Lightroom requires no configuration, because Lightroom automatically manages the colors without your having to worry about profile mismatches, which color space the image is in, or what the default workspace is. There may be problems with missing profiles, but this applies only to imported files where a conscious decision has already been made not to color-manage an image. Apart from these rare instances, you can rely on Lightroom to manage the colors perfectly from import through to export and print. However, you do need to give special consideration to the computer display and ensure that it is properly calibrated and profiled before you can rely on it to judge the colors of your images. This is because you want the display to show as accurately as possible what you are likely to see in print. Calibrating and profiling the display is essential, but it does not have to be complicated or expensive. So if you want to get the colors right and avoid disappointments, you should regard the following pages as essential reading.

NOTE

You do not need to be concerned with RGB workspaces or profiles when working in Lightroom. As for raw files, Lightroom automatically applies profiles for all the currently supported cameras.

In the case of pixel images that have been imported into Lightroom, the profile recognition is handled automatically. Image files in Lightroom can be in any color space and color-managed accordingly (provided the image has an embedded profile). Whenever Lightroom encounters a file with a missing profile, it assumes the image to be sRGB.

CHOOSING A DISPLAY

The choice of display essentially boils down to which type of liquid crystal display (LCD) you should buy. As with all things in life, you get what you pay for. Because the display is what you will spend all your time looking at when making critical image adjustments, it is pointless to cut corners, just as it is pointless to scrimp on buying anything but the best-quality lenses for your camera. There are different classes of LCDs, starting with the budget-priced screens (such as those used on laptop computers) to large professional LCD displays that offer a high degree of color accuracy and wide color gamut, such as the Eizo ColorEdge and the NEC SpectraView. Both these displays are easy to calibrate and profile, and the large screen size means they are comfortable to work with.

CALIBRATING AND PROFILING THE DISPLAY

The only truly effective way to calibrate and profile a display is to use a colorimeter or spectrophotometer. It is possible to buy a good device along with the necessary software package for under $250. You can spend up to $1000 on a good-quality display plus calibration package or spend even more on a professional calibration kit that also allows you to measure and build custom print profiles. But if all you want to do is calibrate and profile the display, these more expensive devices do not offer any significant advantages over what a basic colorimeter device can do. Having said that, some software packages can help you build better profiles using the same basic hardware-profiling kit.

Figure 4.1 *I normally use the X-Rite i1Photo to calibrate the displays I use at work.*

There are two stages to a profiling process. The first step is to calibrate the display to optimize the screen brightness and contrast, and to set the desired white point and gamma (**Figure 4.1**). The second step involves measuring various color patches on the screen; the measurements made from these patches provide the source data to build a profile. On some of the advanced displays, there may be controls that allow you to adjust the brightness and contrast of the display, as well as possibly some color controls for setting different white points and fine-tuning the color output. These settings can be adjusted during the calibration process to optimize the performance and neutralize the display before making the profile measurements. Most LCDs have only a brightness control that adjusts the luminance of the backlight on the screen. So when running through the preliminary calibration steps, there is often nothing you can adjust other than the brightness, and you simply skip the steps where you are unable to make any adjustments to the display.

WHITE POINT AND GAMMA

Apart from asking you to adjust the hardware settings, the calibration software will ask you to choose appropriate white point and gamma settings before you proceed to build the profile. On an LCD, it will not be possible to manually adjust the white point the way you could with a cathode ray tube (CRT) display. You can set a specific white point for an LCD, such as 6500 K, whereas some people may prefer to select the native white point for the LCD they are calibrating.

Matching white balances

People often assume that the goal should be to match the white balance between different displays and viewing light sources. For a side-by-side comparison using a light viewing box, this will be important. But the fact is, human vision is adaptive and our eyes always evaluate colors relative to what is perceived to be the whitest white. In reality, our eyes are constantly compensating and can accommodate changes in white balance from one light source to another. You can edit an image on a display using a white point of 6500 K and check the results with a viewing box that has a white balance of 5500 K, as long as the two are a distance apart.

Whether you are using a Mac or a PC, the gamma should ideally be set to 2.2. The 1.8-gamma Mac option is really only there for quaint historical reasons. In fact, the Mac 1.8 gamma dates back to the early days of Macintosh computers, long before color displays and ICC color management. Back then, it was found that the best way to get an image viewed on a Macintosh screen to match the output of an Apple black-and-white laser printer was to adjust the gamma of the monitor to 1.8. These days, Adobe programs such as Photoshop and Lightroom always compensate for whatever monitor gamma is used by the system to ensure that the images are displayed at the correct brightness regardless of the gamma that was selected when calibrating the display. Setting the gamma to 1.8 instead of 2.2

will have absolutely no impact on the lightness of the images that are displayed in Lightroom. These will be perceived as being displayed at the same brightness regardless of the monitor gamma. However, if you are mainly using your computer for image-editing work, it is best to use a gamma setting of 2.2, as the image tones will be more evenly distributed when previewed on the display. When using the basICColor software described below, you can also select the L* option. The technical reason why this is recommended is because L* uses the luminance tone axis as prescribed in the Lab color space; it's better because it more closely matches human perception and provides a more linear gray axis.

CALIBRATION AND PROFILING

The performance of your display will fluctuate, so it is advisable to update the display profile from time to time. LCDs vary in performance a lot less than CRT displays used to, so you will probably need to re-profile once every month or so only.

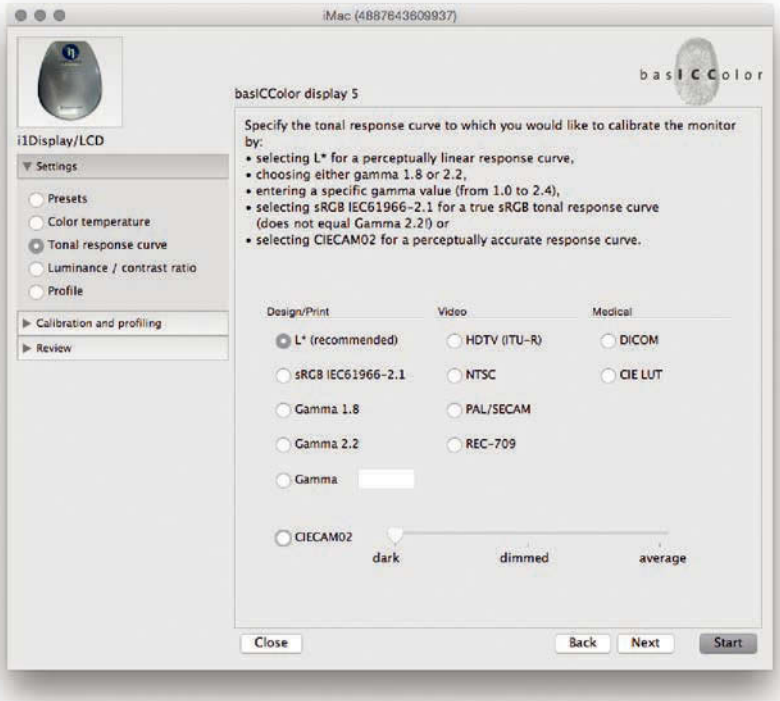
For accurate calibration, you first need to decide whether you want to buy a basic device for calibrating the display only or a more advanced device that allows you to create your own custom print profiles. The following steps show how the basICColor software can be used to calibrate and profile a display using a display calibration device such as the X-Rite i1Photo. Other calibrating software will look different of course, but the underlying principles of calibration and profiling will be the same. Prior to doing a calibration, you should make sure the calibrator head is clean and also ensure that the screen surface is clean and free of dust before making any measurements.

NOTE

The profile measurement process usually takes a few minutes to complete, so you will need to make sure that your screensaver does not kick in while the calibration is underway. For example, the energy conservation settings on an LCD laptop in battery-power mode may automatically dim the display halfway through the profiling process, and this can adversely affect the results of the profile measurement. Apple's True Color and Night Shift modes should be avoided as they will override the calibration. It is also recommended that the display be switched on at least 30 minutes before starting the calibration process.

1. To start with, I set the color temperature. Because you cannot physically adjust the white point of an LCD, it is usually best to select the Native White Point option. But with a good-quality LCD you can set this to a standard setting, such as D65.

2. Next, I went to the Tonal Response Curve section and selected the recommended L* option. When using other calibration software packages, I recommend selecting Gamma 2.2.



3. I then set the "Luminance/ contrast ratio." A maximum luminance of 110–140 candelas m^2 is ideal when calibrating and building profiles for a desktop LCD, but this is not an absolute figure and is dependent on the brightness of the ambient light where the display is located. You cannot always adjust the contrast on an LCD, but you can sometimes adjust the computer operating system brightness controls to adjust the luminance brightness of the display so that the measured brightness matches the desired target setting. Next, I was ready to place the calibrator on the screen and start the calibration process.

NOTE

You can learn about Lightroom shortcuts by going to the module help options via the Help menu (or using ⌘?). The following shortcuts enable you to switch between individual modules. (These are Mac shortcuts. PC users should use Ctrl Alt plus the number).

⌘Alt1 to select Library
⌘Alt2 to select Develop
⌘Alt3 to select Map
⌘Alt4 to select Book
⌘Alt5 to select Slideshow
⌘Alt6 to select Print
⌘Alt7 to select Web
⌘Alt↑ to go back to the previous module

Also, G selects the Library module in Grid mode, E selects the Library module in Loupe mode, R selects the Crop Overlay mode, Q selects the Spot Removal tool, M selects the Graduated Filter, ShiftM selects the Radial filter, K selects the Adjustment Brush, and D selects the main Develop module again.

THE DEVELOP MODULE INTERFACE

The Develop module has everything photographers need to make adjustments and corrections to their images (**Figure 4.7**). The main controls are located in the right panel section, where the panels can be expanded by clicking the panel headers. If you Alt-click an individual panel header, you put the panels into "solo" mode, which means that as you click to select and expand a panel, this action simultaneously closes all the other panels. You can reset the individual Develop settings at any time by double-clicking the slider names. At the top are the Histogram panel and Develop Tools panel, and below that the Basic panel, which is where you can make an initial profile selection and carry out all the main tone and color adjustments. This is followed by a Tone Curve panel, which provides you with a more advanced level of control over the image tones, letting you further fine-tune the tone settings after they have been adjusted in the Basic panel. The Tone Curve features a Target Adjustment tool, which when you click to activate it, allows you to click and drag on an area in the image itself to lighten or darken, instead of dragging the sliders. Similar Target mode controls are available when making HSL and B&W panel adjustments. The Tone Curve panel also features a Point Curve editing mode and the ability to edit individual RGB channels.

Below that is the HSL/Color panel. The HSL tab section provides similar controls to the Hue/Saturation adjustment in Photoshop, where you can separately adjust the hue, saturation, and luminance components of an image. The Color tab section is similar to HSL but with simpler controls (and no Target mode option). Converting an image to black and white changes this to a B&W panel and lets you make custom monochrome conversions, creatively blending the RGB color channels to produce different types of black-and-white outputs.

The Split Toning controls can be used to colorize the shadows and highlights separately (the Split Toning controls work quite nicely on color images, as well as on black-and-white photos). The Detail panel lets you adjust the sharpness for imported images and has controls for suppressing the color and luminance noise.

The Lens Corrections panel allows you to correct for global lens vignetting, as well as the chromatic aberrations responsible for color fringing. It also offers auto lens corrections, plus automatic perspective and manual transforms. The Effects panel includes post-crop vignette sliders for applying vignette effects to cropped images and Grain sliders for adding film grain effects.

The Calibration panel retains legacy manual calibration sliders and also is used to access a Process Version menu. Develop settings can be saved as custom presets. The left panel contains a selection of default presets to get you started, but it is easy to create your own presets using all, or partial combinations, of the Develop module settings. As you roll over the list in the Presets panel, you will see an instant preview in the Navigator panel, without having to click to apply the effect to an image.

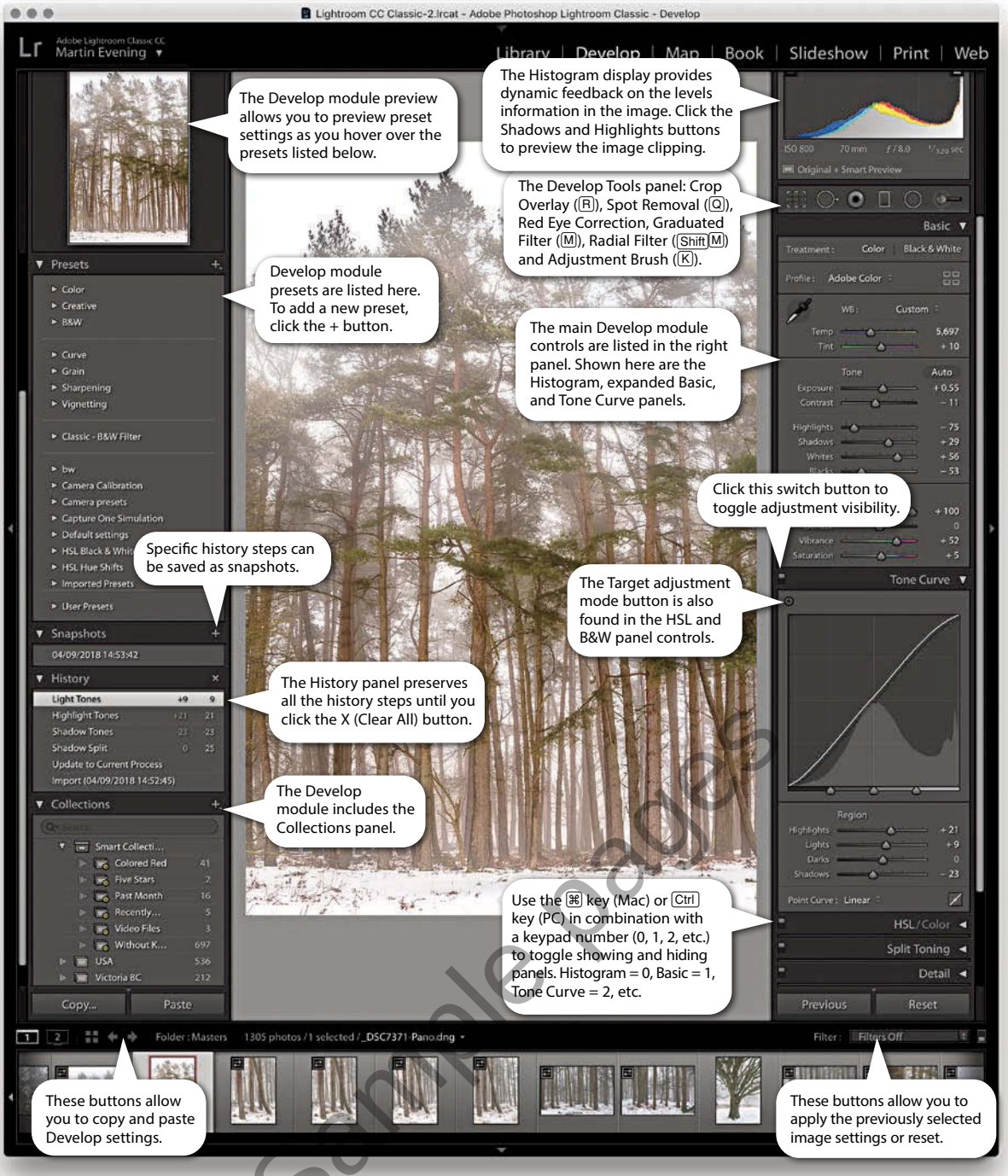


Figure 4.7 *The Develop module interface.*

Figure 4.8 *The Develop View Options dialog. The options here are the same as in the Loupe View settings in the Library View Options dialog (see page 100).*

VIEW OPTIONS IN DEVELOP

If you go to the view menu and choose View Options (⌘J [Mac] or Ctrl J [PC]), you can access the dialog shown in **Figure 4.8**. This includes a "Show message when loading or rendering photos" option at the bottom; check it if you want a message to appear whenever the Develop module is processing a photo.

DEVELOP MODULE CROPPING

From any of the modules in Lightroom, you can use the R keyboard shortcut to switch directly to the Crop Overlay mode in the Develop module. Or, if you are already in the Develop module, you can also click the Crop Overlay mode button in the Tools panel. **Figure 4.9** shows a close-up view of the Crop Overlay tool panel controls. Once you are in the Crop Overlay mode, a crop bounding box appears, initially selecting all of the image. As you drag the crop handles, the image and crop edges move relative to the center of the crop and the areas outside the crop bounding box appear shaded. In the **Figure 4.10** example, as I dragged the top-right handle inward, the image shifted out of the way to accommodate the change made to the crop area, and the center crop handles (aligned to the green line) always remained in the center of the content area.

Dragging inside the crop bounding box lets you easily reposition the photograph relative to the crop bounding box. If you hold down the Alt key, you can resize the crop bounding box relative to the crop box center. You can also click the Crop Frame tool in the Tools panel (Figure 4.9) to activate it: Place the Crop Frame tool over the photograph, and then click and drag to make a free-form crop (as you would using the Crop tool in Photoshop). When you have finished defining a crop, the Crop Frame tool returns to its docked position in the Tools panel. Click the Close button to apply a crop and exit the Tools panel (or just press R). To reset the Crop Overlay, click the Reset button or use ⌘Alt R (Mac) or Ctrl Alt R (PC). Whenever you drag one of the crop handles to make a non-rotational crop, you will see a dividing-thirds grid overlay the image (as in Figure 4.10). The dividing-thirds overlay lines can be useful as an aid to composition, though you can also choose from other custom overlay options. In the Toolbar, you can choose for the Tool overlay to always be on, off, or in Auto mode, when it will be visible only when you drag one of the crop handles.

Rotating a crop

To rotate and crop an image at the same time, move outside the crop bounding box, click, and drag. Alternatively, you can use the Straighten tool to do this, or use the Angle slider in the Crop Overlay panel to straighten a photograph. In either case, the image rotates relative to the crop bounding box (which always remains level).

Figure 4.9 *A close-up view of the Crop Overlay tool panel controls.*

Figure 4.10 *An example of a crop overlay being applied to an image.*

1. I clicked to select the Crop Frame tool, then simply dragged to apply a free-form crop to the photograph. When I released the click, the Crop Frame tool returned to its usual location in the Crop Overlay panel.

2. First, I clicked the Constrain Aspect Ratio Lock button (circled) to unlock. This allowed me to then click a corner or side handle of the crop bounding box and drag to reposition the crop without restriction.

3. I then clicked to select the Straighten tool and dragged it across the image to define a straighten angle (you can also adjust the straighten angle by using the Angle slider in the Tools panel).

4. You can also straighten a photograph by clicking anywhere outside the crop bounding box and dragging. As you can see here, when I did so, a fine grid appeared. You can use the grid lines to help align the rotation to elements within the photograph.

Constrain to image cropping

Because Lightroom can apply lens profile corrections and transform adjustments, profile-corrected or transformed images can end up being distorted to some degree. For example, when you apply a lens profile correction, the crop is normally constrained to the warped image bounds. However, extreme Upright adjustments or manual transforms can result in white padded areas showing around the outer bounds of the image. Checking the Constrain to Image option ensures the crop bounds never exceed the image bounds (**Figure 4.11**).

Figure 4.11 *Checking the Constrain to Image box in the Crop Overlay and Lens Corrections panel settings automatically constrains the warp to the image bounds.*

Auto straightening

The Crop Overlay tool panel options include an Auto button. This essentially provides the same function as a Level Upright adjustment applied via the Transform panel (which is discussed later in this chapter). The following steps demonstrate applying the Auto option being applied.

1. I began by selecting the Crop Overlay tool.

2. I then clicked the Auto button (circled) to auto straighten the photograph. This applied the same type of adjustment as a Level Upright adjustment in the Lens Corrections panel.

NOTE

Whenever you enter large numbers for a custom crop aspect ratio (anything greater than 20), you will notice that as these are entered, the decimal place will shift over to the left. So, for example, if you type in a screen display ratio of, say, 1675 x 1150, this will actually set a ratio of 16.75 x 11.5. When you enter crop ratio units, Lightroom always tries to reduce these to the simplest ratio expression possible.

Crop aspect ratios

When the Constrain Aspect Ratio Lock is on (A toggles the lock closed/on and open/off), the current crop aspect ratio will be preserved as you apply a crop (**Figure 4.12**). If no crop has been applied yet, the aspect ratio will be locked to the current image proportions. So, if you click the crop bounding box and drag any of the handles, such as a corner handle, the crop area will match the exact proportions of the current image. In Crop Overlay mode, you can use the X key to rotate the aspect ratio (i.e., you can change a current landscape aspect ratio crop to a portrait crop). You can quite easily flip the aspect ratio from landscape to portrait (or vice versa) by dragging the corner handle in such a way as to force the aspect ratio to switch.

You can select an aspect ratio preset, such as 1x1 or 2x3, from the Aspect Ratio list. Hold down the Alt key when changing the aspect ratio to have the Crop Overlay fill the current image bounds. Or, you can choose Enter Custom, which opens the dialog shown in **Figure 4.13**. Here, you can enter settings for a new custom aspect ratio setting and click OK to add this setting to the Crop presets list.

Figure 4.12 *The Constrain Aspect Ratio Lock is closed (circled), which means the crop bounding box is locked to the current aspect ratio.*

Figure 4.13 *The Enter Custom Aspect Ratio dialog.*

Repositioning a crop

The Crop Overlay tool in Lightroom always restricts the cropping to within the boundary of the document. Unlike in Photoshop, you cannot drag the Crop tool outside the image document area to increase the canvas area. You can crop an image only within the confines of the photograph (plus padded areas). So, however you drag or rotate the crop, you will always be applying the crop to the inside of the picture. When you click inside the crop bounding box, the pointer changes to show the Hand tool, which lets you scroll the image relative to the crop. As you drag, the crop box remains static and the image moves behind the crop.

Crop guide overlays

When the Crop Overlay tool is active, you can choose from seven crop guide overlays in the Tools ⇨ Crop Guide Overlay menu. These range from the simple grid crop guide overlay shown earlier, to other more exotic overlay designs, such as a Diagonal crop and an Aspect Ratios crop guide overlay. The Thirds overlay provides a standard reference that you may already be used to seeing in, say, a camera viewfinder screen, while the Golden Ratio and Golden Spiral crop overlays offer new ways to preview a photo as you compose a crop. With regards to the Aspect Ratios overlay appearance, you can go to the Tools ⇨ Crop Guide Overlay menu and select Choose Aspect Ratios to open the dialog shown in **Figure 4.14**. This lets you select which aspect ratio options you want made visible. Regardless of which crop guide overlay you choose, the Grid overlay design shown in Step 4 on page 171 always appears whenever you rotate a crop by dragging outside the crop bounding box. The Grid overlay is useful in these instances because it can help you align the horizontal or vertical lines when straightening an image.

When working in Crop Overlay mode, you can use the O keyboard shortcut to cycle through the crop guide overlays and the Shift O shortcut to cycle through the crop guide orientation for the individual Triangle and Golden Spiral crop overlay modes. Triangle includes two modes and Golden Spiral has eight. The cycled overlay options can be accessed via the Tools ⇨ Crop Guide Overlay menu (**Figure 4.15**). You can use this to choose which options are available as you cycle through them using the O keyboard shortcut.

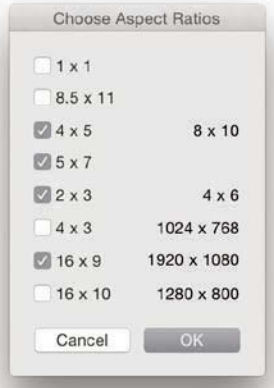


Figure 4.14 *The Choose Aspect Ratios dialog.*

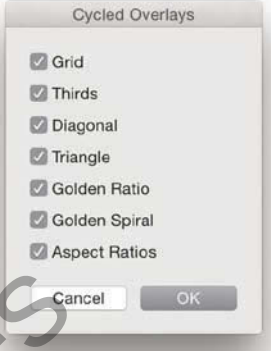


Figure 4.15 *The Tools ⇨ Crop Guide Overlay ⇨ Cycled Overlays options.*

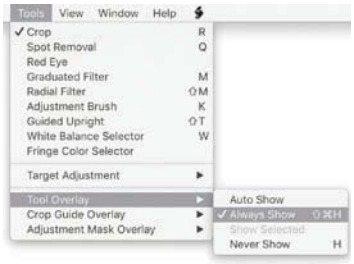


Figure 4.16 *The Tool Overlay menu options.*

So, why should you want to use these different crop overlays? Cropping is partly about trimming away parts of the picture that are distracting and aligning straight edges, but it is also about creating a nice-looking, well-balanced visual composition of the picture content. These alternative crop overlays can, therefore, help you compose better when applying a crop.

Canceling a crop

You can use the Esc key to revert to a previously applied setting made during a crop session. Let's say you have a photo that has been cropped and rotated slightly. If you were to alter the crop by adjusting the crop ratio or crop angle and then press the Esc key, you would be taken back to the original crop setting. If, on the other hand, you adjusted the crop, exited the crop mode for this photo, started editing photos in another folder, and returned later to this picture, the new crop setting would be the one Lightroom reverts back to if you readjusted the crop and pressed the Esc key. Essentially, canceling a crop is not the same as resetting the Crop Overlay. Canceling takes you back to how the image was before you edited it, which might include a previously applied crop adjustment.

Tool Overlay menu

The Tool Overlay options can be accessed via the Toolbar (T) at the bottom of the content area (see Figure 4.12) or the Tools menu (**Figure 4.16**). The Tool Overlay menu can be used to control the behavior of on-screen overlays. Different options appear when the Spot Removal, Red Eye, Graduated Filter, Radial Filter, or Adjustment Brush are made active. I will be covering these in more detail toward the end of the chapter. But for now let's just look at the Tool Overlay menu options in the context of the Crop Overlay tool.

THE TOOL OVERLAY OPTIONS

The Tool Overlay options in Crop Overlay mode determine the visibility of the crop overlays. If you select the Always Show menu option, the crop overlay remains visible at all times. If you want to hide the crop overlays, select Never Show. The Auto Show mode makes the tool overlays visible only when you hover over the content area. In other words, the Crop Overlay guides will disappear from view whenever you roll the pointer outside the image area, such as to the top panel menu.

Another way to work with the tool overlay show/hide feature is to use the ⌘ Shift H (Mac) or Ctrl Shift H (PC) keyboard shortcut, which acts as a toggle for switching between the Always Show and Never Show options. An easier-to-remember (and more flexible) shortcut is to simply use the H key. This toggles between the Auto Show and Never Show modes. Or, it toggles between the Always Show and Never Show modes (depending on whether you had Auto Show or Always Show selected first).

QUICK DEVELOP CROPPING

The Crop Ratio menu options in the Library module Quick Develop panel (**Figure 4.17**) can be used to apply a preset crop ratio that trims the photo evenly on either side. Cropping is something you usually want to apply manually to each photo individually, but having a quick way to change the aspect ratio for a bunch of photos in one go might be quite useful for someone like a school portrait photographer who wants to quickly prepare a set of portraits using a fixed-aspect ratio setting. As with the Develop module Crop Overlay options, you can click the Enter Custom item in the Crop Ratio pop-up menu to create your own Custom Aspect Ratio crop settings for use in the Quick Develop panel (Figure 4.17). In the **Figure 4.18** example below, I selected an 8.5 x 11 proportional crop and applied this to the selected photograph. The custom crop settings are also shared between the Develop module and the Quick Develop panel in the Library module.

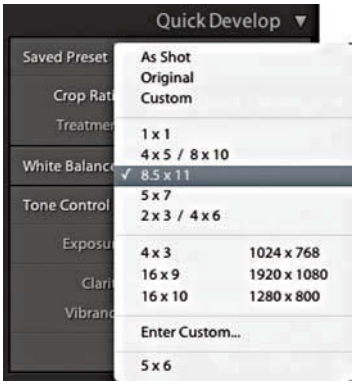


Figure 4.17 *The Quick Develop Crop Ratio menu contains a list of presets.*

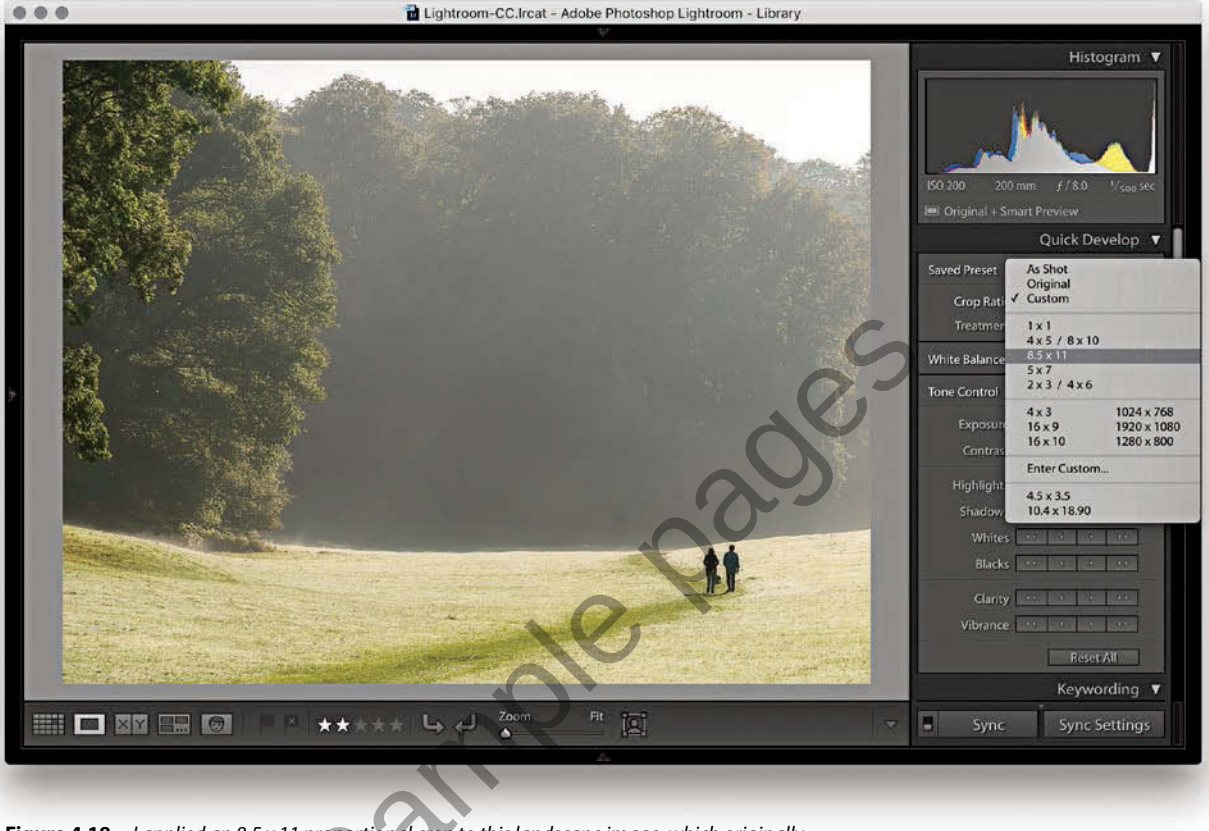


Figure 4.18 *I applied an 8.5 x 11 proportional crop to this landscape image, which originally had a 2 x 3 aspect ratio.*

TIP

When setting the white balance, as you zoom out, the magnified pixel view shows more and more of the image (this is good for averaging large areas for high-ISO images). As you zoom in, the magnified pixel view shows less and less of the image (which is good for picking out small, specific areas). In other words, the white balance sample area is zoom-level dependent.

THE BASIC PANEL

When working with the Basic panel tools, remember that you can click the inside panel edge and drag to adjust the width of the side panels. **Figure 4.19** shows the Basic panel in normal and expanded form. A wider panel offers you more precision when dragging the sliders. If you also hold down the Alt key as you drag, you can drag the panel as wide as you like. (Incidentally, this width resizing is possible with all side panels.)

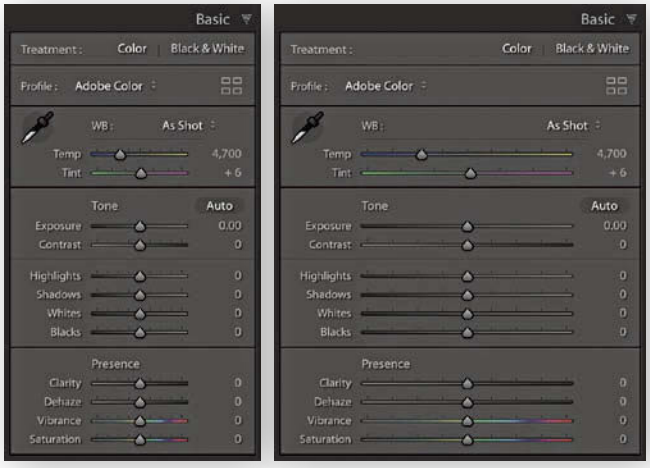


Figure 4.19 *Lightroom panels can be expanded by dragging on the side edge.*

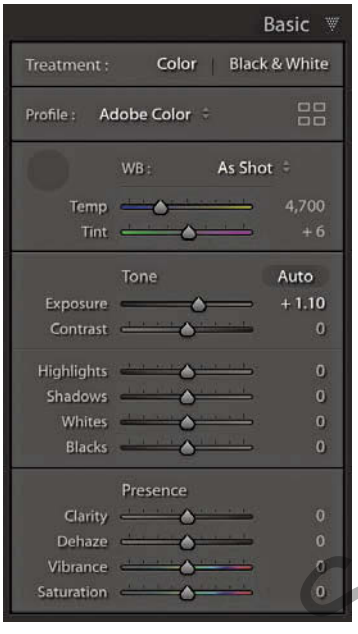


Figure 4.20 *The White Balance tool undocked from the Basic panel.*

WHITE BALANCE TOOL

The Temp and Tint sliders in the White Balance (WB) section can be used to precisely adjust the white balance of a photograph. With these, you can color-correct most images or apply alternative white balances to your photos. There is also a White Balance tool ( ). You can activate this by clicking it or by using the W shortcut. This unlocks the tool from its docked location and lets you click anywhere in the image to set a new white balance (**Figure 4.20**). The floating loupe magnifier provides an extreme close-up of the pixels you are measuring, which can really help you select the correct pixel reading. As you hover over an image, you will also see the RGB readout values for the point immediately beneath the pointer (**Figure 4.21**), as well as at the bottom of the Histogram panel. These RGB readings are shown as percentage values and can help you locate and check the color readings (if the RGB values are all close enough to the same value, the color can be regarded as neutral). You can also use the ⌘ Shift U (Mac) or Ctrl Shift U (PC) keyboard shortcut to apply Auto White Balance. If the Auto Dismiss option is disabled in the Toolbar (see Step 1), all you have to do is click W to activate the White Balance tool and continue clicking with the tool until you find the right setting. You can then use the Esc key or the W key again to cancel working with the White Balance tool and return it to its normal docked position in the Basic panel.

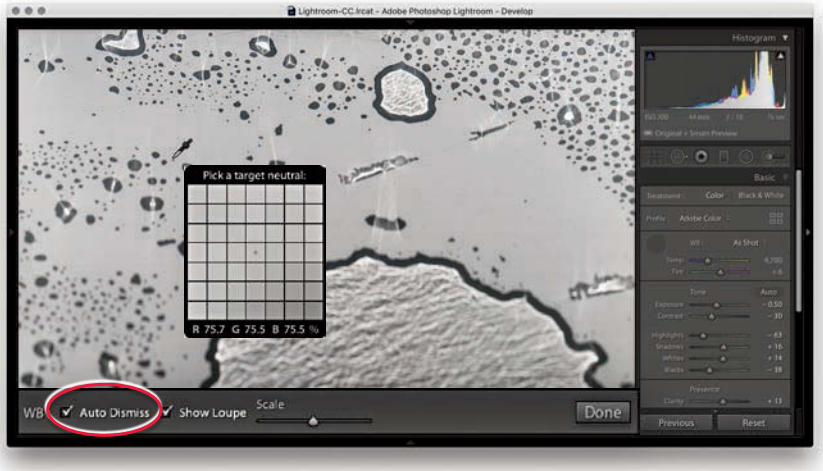
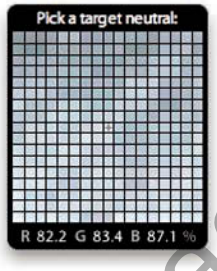


Figure 4.21 *A close-up view of the Loupe magnifier and RGB percentage readouts below.*

1. To make a white balance adjustment, I selected an area of the picture that was neutral in color (but not a bright white area). If the Auto Dismiss box (circled) in the Toolbar is checked, the White Balance tool automatically returns to its docked position in the Basic panel after a single click. If the Auto Dismiss box is unchecked, you can click and keep clicking with the White Balance tool until you are satisfied with the white balance adjustment that you have made.



2. The Show Loupe check box allows you to toggle displaying the loupe that appears below the White Balance tool. You can adjust the loupe scale setting by dragging the slider next to the Show Loupe item in the Toolbar. This slider adjusts the sample grid pixel size, and dragging the slider to the right increases the number of pixels used when sampling a white balance point measurement. Increasing the pixel sample size can be beneficial if you want to aggregate the pixel readings more, such as when you are sampling a really noisy image and you do not want the white balance measurement to be unduly affected by the pixels that contain color noise or other artifacts.

NOTE

Do we still need the 0 to 255 scale in the readout section? I know some people say that they would like to see this as an option, but there are no real valid reasons for doing so. The 0 to 255 scale came into existence only because of the way the number of levels are calculated for pixel-rendered 8-bit images. The percentage scale (in my view) makes it easier to interpret what the Eyedropper readout numbers mean. Having said that, when you view a photo with Soft Proofing turned on, the RGB numbers in the Histogram display use the 0 to 255 scale (see pages 503 to 505).

Figure 4.22 *The X-Rite ColorChecker Classic chart. To take a white balance reading in Lightroom, click the light gray patch next to the white patch.*

White Balance corrections

In most shooting environments, once you have found the right white balance, all the other colors will tend to fit into place. You can help get the white balance right in-camera by choosing a fixed or Auto setting. Or, you can use a white balance or color checker chart (like the X-Rite ColorChecker Classic chart shown in **Figure 4.22**) as a preparatory step that will help you make a more accurate, measured reading later in Lightroom. A camera Auto White Balance setting may do a good job, but it really depends on the camera you are using, because even the best cameras will not know how to handle every lighting situation. **Figure 4.23** shows a scene with mixed lighting conditions. This photograph could be processed for either the exterior daylight or the tungsten lighting indoors, and each could be said to be correct. In situations like this, you cannot always rely on the camera's Auto White Balance setting; you have to decide for yourself which setting works best. This is where the White Balance tool can come in handy. The trick is to analyze the picture and look for an area in the scene that should be a neutral, nonspecular, textural highlight. Aim to select something that should be a neutral light gray. If you click on an area that is too bright, there may be some clipping in one or more of the color channels, which can result in a false white balance measurement and consequently make an inaccurate adjustment.

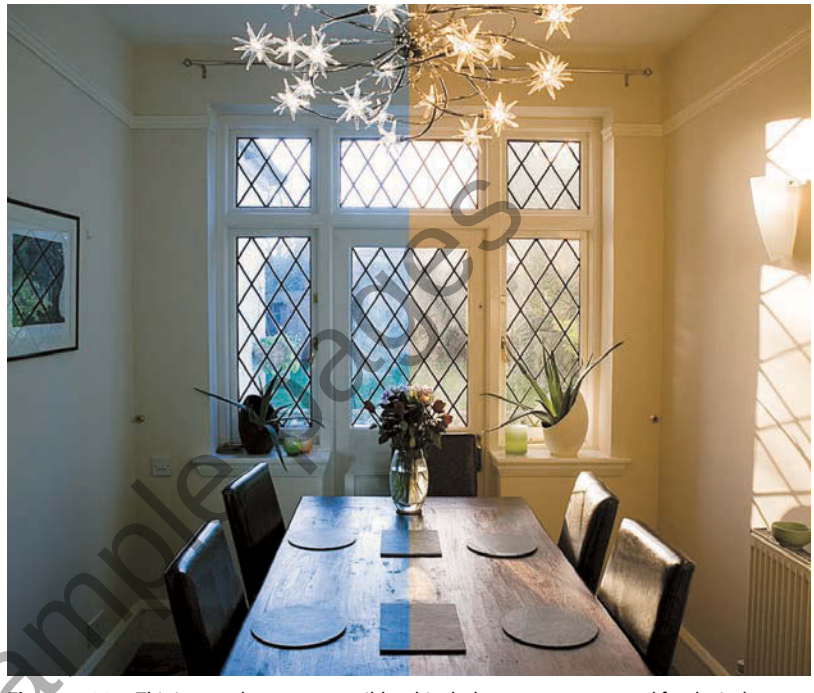


Figure 4.23 *This image shows two possible white balances: one measured for the indoor lighting (left) and one measured for the outside daylight (right).*

Creative white balance adjustments

Who is to say if a correct white balance is any better than an incorrect one? Before digital capture and the ability to set accurate white balances, photographers could only choose between shooting with daylight-balanced or tungsten-balanced film emulsions. Most would simply accept whatever colors the film produced. With digital cameras, it is easy to set the white balance precisely. There may be times, such as when shooting catalog work, when it is critical to get the color exactly right from camera to screen to print. But you do not always have to obsess over the color temperature at the capture stage on every type of image. You have the freedom to interpret a master raw file any way you like, and can change the mood in a photograph completely by setting the white balance to an alternative, incorrect setting (**Figure 4.24**). The key point to emphasize here is that the White Balance controls are used to *assign* the white point as opposed to *creating* a white balance. Dragging the Temp slider to the right makes an image warmer and dragging to the left makes it cooler.

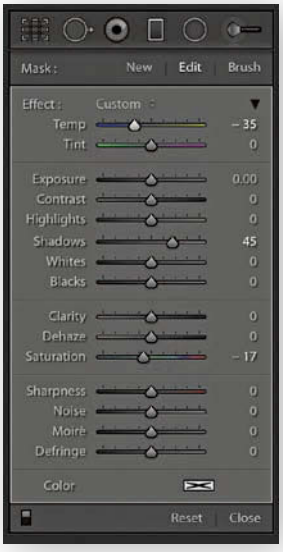
TIP

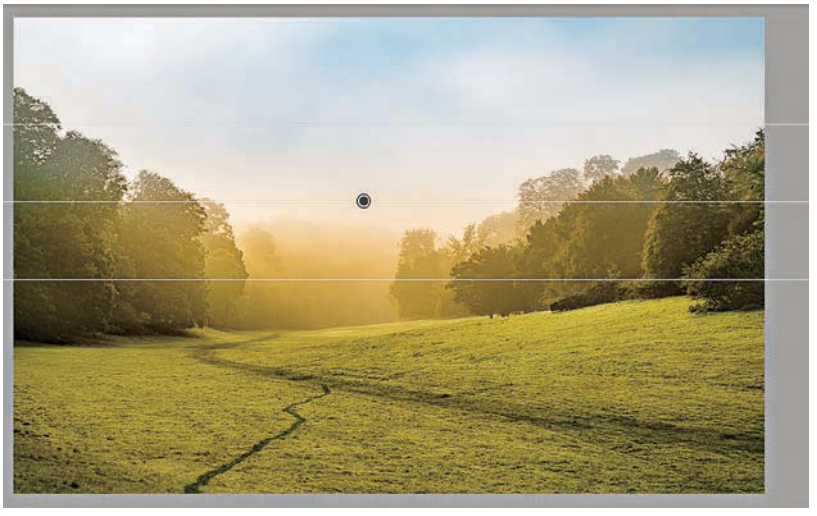
Warning! If you shoot using a studio flash system (not with the built-in flash) and have the camera set to Auto White Balance, the white balance reading will be influenced by the ambient light, such as the tungsten modeling lights instead of the strobe flash.

Figure 4.24 *Consider the same image processed using two different white balance settings. It is often largely a matter of personal judgment when deciding which version you prefer, because neither example has what could be described as a "correct" white balance.*

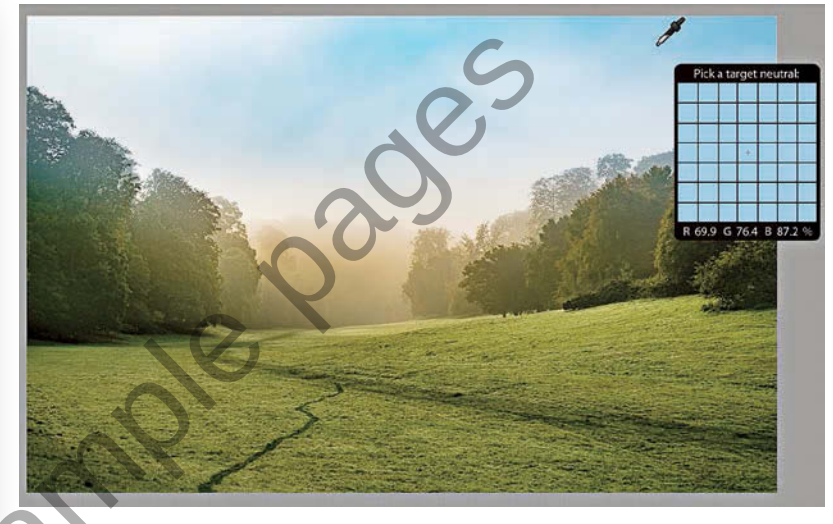
White balance and localized adjustments

The Basic panel White Balance tool takes into account locally applied white balance adjustments. For example, if you use the Graduated Filter tool to apply a cooling white balance, when you then click with the White Balance tool, it ignores localized Temp or Tint adjustments to ensure the pixels where you click are neutralized.





1 Here, I applied a cooling Temp setting Graduated Filter to the sky in this image.



2 When I selected the White Balance tool and clicked the top half of the image, the new, calculated white balance adjustment ignored the locally applied Temp adjustment and applied a cooler white balance as if there were no filter effect.

Independent auto white balance adjustments

As well as selecting Auto from the White Balance menu, you can use the ⇧Shift key plus a double-click on the Temp and Tint sliders to set these independently.

1 I opened this image in Lightroom, which currently shows the As Shot white balance.

2 I held down the ⇧Shift key and double-clicked the Tint slider. This auto-set the Tint slider only to apply an auto-calculated "Tint only" White Balance setting.