

Charlotte K. Lowrie

# Canon® EOS 50D

## *Digital Field Guide*



*Full Color Throughout!*



# **Canon<sup>®</sup> EOS 50D**

## **Digital Field Guide**



# **Canon® EOS 50D Digital Field Guide**

**Charlotte K. Lowrie**



**WILEY**

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## Canon® EOS 50D Digital Field Guide

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***This book I dedicated in loving memory to  
Vera Sauer, a woman whose love, strength,  
integrity, and faith were, and continue to  
be, an inspiration to all who knew her.***



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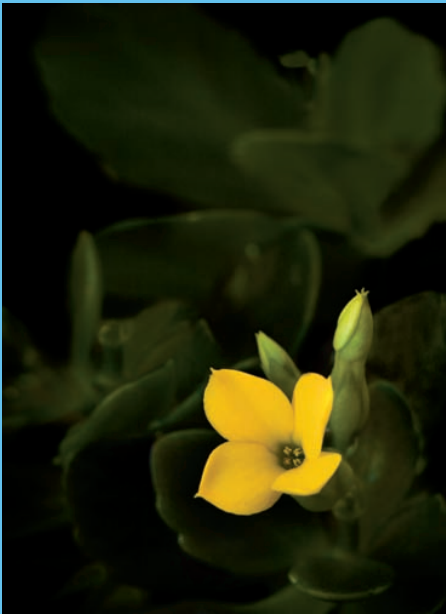
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# Introduction

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**W**elcome to the Canon EOS 50D Digital Field Guide. With the EOS 50D, Canon combined speed and responsiveness with high resolution and a full complement of features — all in a lightweight and fun-to-use camera. Whether this is your first digital SLR or you're an experienced photographer, this book is written to help you get the most from the camera. From personal experience, I know that the 50D is a fine tool that will help you realize and express your creative vision.

Achieving your creative vision with the 50D involves not only mastering the buttons, dials, and menus, but also learning what to expect from the camera as you work with it in the field, and, of course, your own skilled eye and creativity. It is in the field where you come to appreciate the camera's broad range of features, timesaving custom options, full creative control, and, of course, the data-rich images that the 50D delivers.

This book is designed to help you learn the basics and to go deeper into the camera so that you can take advantage of its full potential. If you're new to digital SLR's, then I suggest that you read at a high level, using the techniques that are described while saving the in-depth explanations for later. As you gain experience, then you can come back to the more detailed sections to understand more about the camera and photography itself. And if you're a more experienced photographer, I hope that the book will answer questions you may have, reveal new and creative ways to use the 50D, and inspire you to use the 50D to its full potential.

As a long-time photographer, I firmly believe that this book should not be only a reference book. Rather, I believe that photographers want to know how the camera responds and how it delivers in real shooting situations. I've used the EOS 50D long enough to be able to offer insights into the camera's performance and to share recommendations based on my experience. As readers often tell me, their preferences are different from my preferences. But you can use my recommendations as a springboard to setting up and shooting with the 50D in a way that suits your style and subject.

I hope that this book shows you things you didn't know before, that it clarifies concepts that were previously confusing, and, most important, I hope that it inspires you to make wonderful images. Writing this book was a rewarding journey for me. I hope that reading the book will be a rewarding journey into the creative world of photography for you.

# Making the Most of This Book

As much as is practicable, this book follows a sequence from learning the camera controls to setting up the camera, shooting and focus controls, controlling all aspects of image color, setting Custom Functions, and using a flash. By the time that you finish reading Chapter 5, you will have a good understanding of what the camera offers from the top level through to the finer details. But more important, with Chapter 5, you have the opportunity to setup the camera for your most common scenes and subjects. The time saving of using the custom options on the 50D including the C shooting modes translates directly into time savings for you in the field.

The 50D offers Live View shooting with some enhancements over previous versions of Live View. Chapter 6 gives you a step-by-step guide on how to set up for and use Live View shooting, and what scenes and subjects are best suited for shooting with Live View. This chapter also discusses shooting with the 50D attached to the computer, or *tethered* shooting. You learn how you can control the camera entirely from your computer including setting an instant sort of Custom White Balance, changing exposure settings, and more.

Chapter 7 concentrates on using the built-in and an accessory flash unit, using multiple Speedlites with stands and light modifiers such as softboxes and umbrellas, and there is also a brief look at using the 50D with a studio lighting system.

I've seldom met a photographer who isn't looking to buy another lens. And in Chapter 8, you look at lenses and their characteristics. You can use these lens characteristics for both classic renderings as well as creative applications.

One of the distinguishing characteristics of the Digital Field Guide series of books is a concentration on shooting with cameras in real-world shooting scenarios. Chapter 9 is devoted to shooting in the field. Three common and broadly applicable areas are discussed: Landscape and Nature, Portraits, and Action and Events. From the information on these three subject areas, you can extrapolate to many other subjects including travel, architecture and interiors, documentary, and stock subject, environmental portraits, headshots, publicity, editorial assignments, and more. The focus of Chapter 9 is to provide suggestions and examples from my experience with the 50D that you can use or modify for your photography. Again, my experiences can serve as a starting place for you to setup your shooting.

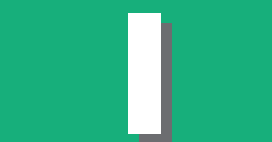
Finally, Appendix A is a must read if you're new to photography. Here you learn the basics of photographic exposure. And if you're contemplating RAW shooting, be sure to read Appendix B that outlines the advantages, and takes a look at a sample RAW image conversion.

I hope that this book helps you not only make the most of your EOS 50D, but that it also inspires and challenges you in your daily shooting.

The editor, the staff at Wiley, and I hope that you enjoy reading this book as much as we enjoyed creating it for you.

# Navigating and Setting Up the EOS 50D

P A R T



## In This Part

### **Chapter 1**

Roadmap to the EOS  
50D

### **Chapter 2**

Setting Up the EOS  
50D

### **Chapter 3**

Controlling Exposure  
and Focus

### **Chapter 4**

Getting Great Color

### **Chapter 5**

Customizing the EOS  
50D







# Roadmap to the EOS 50D

CHAPTER



**T**hree words can describe Canon's 50D dSLR — fast, sleek, and fun. It fits easily and comfortably in the hand with a compact yet substantial heft. It responds with the speed of a gazelle delivering images at a rate of 6.3 frames per second (fps) and at a stunning 15.1-megapixels. The EOS 50D is packed with Canon's latest features and technologies that collectively deliver speedy and reliable performance and superior image quality. Whether you're new to digital photography or a veteran, the EOS 50D hits a sweet spot of high image resolution, speed, and creative control.

This chapter puts some of the new features and technologies of the EOS 50D into everyday perspective and offers a roadmap to navigating the camera controls and menus. Where possible, I offer paradigms for using the camera that help you spend less time remembering what control to use and more time shooting.

## Key Technology

Before we begin, it's worthwhile to look at key technology that the 50D offers. The first, the 15.1-megapixel image sensor at  $4752 \times 3168$  pixels produces full-resolution prints at  $15.5 \times 10.7$  inches at 300 ppi, or  $19.4 \times 13.4$  inches at 240 ppi for inkjet prints. The new CMOS (complementary metal-oxide semiconductor) features Canon's newest technology including:

- ◆ **"Gapless" microlens technology and increased ISO range.** While the EOS 50D packs more and smaller pixels on a sensor that's the same size as the EOS 40D (4.7 versus 5.7 micron pixels sizes,



### In This Chapter

Key technology

Camera features overview

Lens controls



respectively), the new sensor is engineered to increase each pixel's light sensitive area and to use a larger microlens over each pixel. The spaces between microlens on the sensor array are now gapless so that each microlens covers more of the pixel surface than in previous Canon digital SLR sensors. Thus the EOS 50D provides approximately 1 to 1.5 f-stops better digital noise performance at high ISO sensitivities than previous sensors. In everyday shooting, this translates into new opportunities for lowlight shooting particularly when you're using an Image-Stabilized (IS) lens.

- ♦ **DIGIC 4 processor.** Every new iteration of Canon's DIGIC processor improves the speed of image processing, and that's no less true with the fourth generation of Canon's on-board processor. The 14-bit DIGIC 4 processor offers 30 percent faster image processing than previous processors. It also offers increased functionality including full and variable resolutions; High ISO Noise Reduction options; Auto Lighting Optimizer with three selectable levels; and Peripheral Illumination Correction, or vignette control, for JPEG capture (and vignette control for RAW files using Canon's Digital Photo Professional program). And the faster processor results in a faster and more responsive autofocus system. Taken together, DIGIC 4 performs more processing with more selectable options for image correction — all with no appreciable loss of speed and performance.

## Camera Features Overview

If you've had your EOS 50D for any amount of time, then you are likely familiar with most of the controls on the camera. However, the following sections are designed to provide a paradigm for using the controls in logical and efficient ways because once you learn the overall design, you can make camera adjustments more efficiently. And chances are that there are some buttons and controls that you haven't figured out yet, so these sections help you make full use of all the 50D has to offer.

### Note

*It's important to become familiar with the names of camera controls now because I refer to these names throughout this book.*

There are three main controls that can be used together or separately to control most functions on the EOS 50D. Here is a quick synopsis of the controls and when to use them.

- ♦ **Main dial and Quick Control dial.** You use the Main and Quick Control dials to make changes for the for dual-function buttons located along the top LCD panel such as the AF-Drive button (Autofocus mode and Drive mode). Use the Main dial to change the first named function. So for the AF-Drive button, you turn the Main dial to change the Autofocus mode. For the second named function, you make changes using the Quick Control dial. So, you turn the Quick Control dial to change the Drive mode. This holds true for the



Metering mode-White Balance and ISO-Flash Compensation buttons on the camera as well. Some camera menu screens such as the Quality screen also use the Main and Quick Control dials for selecting different values on the screen.

- ♦ **Multi-controller.** This eight-way control functions as a button when it's pressed, and as a joystick when it's tilted in any direction. With the new Quick Control screen, the Multi-controller is the primary control. Ironically, the Quick Control dial would seem to be the logical choice to activate the Quick Control screen, but, such is not the case. To activate the Quick Control menu, press the center of the Multi-controller, and then tilt the Multi-controller to move around the screen. Once an option is selected on the Quick Control screen, you can turn the Quick Control dial or Main dial to make changes.



1.2 The Multi-controller

- ♦ **Set button.** The Set button is located in the center of the Quick Control dial, and you use it to confirm changes you make to many menu items and to open sub-menus. When you're using the Quick Control screen, you can select a setting, such as White Balance, and then press the Set button to display all the options for the setting, in this case, the White Balance screen showing all White Balance options.



Main dial



Quick Control dial

1.1 The Main and Quick Control dials

## Front of the camera

While you, as the photographer, don't often see the front of the camera, it includes the nicely sculpted grip that increases control and balance when handling the camera, and it includes controls that you use often.

The front-of-the-camera features include, from left to right side, the following:

- ♦ **Shutter button.** The Shutter button is a two-step control. When you press the Shutter button halfway, the 50D meters the light in the scene and focuses on the subject using either the autofocus (AF) point that you've selected or at the AF point(s) that the camera's selected automatically. Completely pressing the Shutter button fires the shutter to make the picture. In

High-Speed or Low-Speed Continuous drive mode, pressing and holding the Shutter button starts burst shooting at either 3 frames per second (fps) or 6.3 fps, respectively. In Self-timer modes, pressing the Shutter button completely initiates the 2- or 10-second timer, and after the timer delay, the shutter fires to make the picture.

- ♦ **Red-eye Reduction/Self-timer lamp.** When using the built-in flash with the Red-eye reduction option turned on, this lamp lights to help reduce pupil size to reduce the appearance of red in the subject's eyes if the subject looks at the lamp. In the two Self-timer modes, this lamp flashes to count down the seconds, either 2 or 10 seconds, to shutter release.



1.3 EOS 50D camera front

- ♦ **Mirror.** As you compose an image, the reflex mirror reflects light from the lens to the pentaprism so that you can see in the eyepiece of the viewfinder what will be captured by the imaging sensor. The viewfinder offers 95 percent frame coverage. In Live View shooting the mirror is flipped up to allow a live view of the scene. If you are using Live mode focusing, the mirror flips down to focus, thereby suspending Live View momentarily.
- ♦ **Lens mount and contacts.** The lens mount is compatible with Canon's EF and EF-S lenses. EF-S lenses are compatible with only the cropped image sensor size of the 50D and other Canon EOS digital SLR cameras. EF lenses are compatible with all EOS digital SLRs. The lens mount includes a red index marker that's used to line up EF-mount lenses and a white index mount marker that's used to line up EF-S lenses.
- ♦ **Depth of field preview button.** Pressing this button stops down the lens diaphragm to the currently selected aperture so that you can preview the depth of field in the viewfinder. The larger the area of darkness, the more extensive the depth of field will be. The button can be used in regular and Live View shooting. If the lens is set to the maximum aperture, the Depth-of-field preview button can't be depressed because the diaphragm is already fully open.
- ♦ **Lens Release button.** This button releases the lens from the lens mount. To disengage the lens, depress and hold down the Lens Release button as you turn the lens so that the red or white index mark moves toward the top of the camera.

- ♦ **Flash button.** In P, Tv, Av, M, A-DEP, and C shooting modes, press this button to pop up and use the built-in flash. In automatic modes such as CA, Portrait, Landscape, and so on, pressing the Flash button has no effect because the camera automatically determines when to use the built-in flash.

## Top of the camera

Dials and controls on the top of the camera provide access to frequently accessed shooting functions in addition to the hot shoe and diopter control. Here is a look at the top of the 50D.

- ♦ **Mode dial.** Turning this dial selects the shooting mode, which determines how much control you have over image exposures. Shooting modes are grouped into three zones including the Image, or automatic, Creative, and Camera User Settings zones. Automatic shooting modes are CA (Creative Auto), Full Auto, Portrait, Landscape, Close-up, Sports, Night Portrait, and Flash Off. Creative Zone shooting modes are P (Program AE), Tv (Shutter-priority AE), Av (Aperture-priority AE), M (Manual exposure), and A-DEP (Automatic depth-of-field AE) modes. The third zone, Camera User Settings, encompasses C1 and C2, shooting modes that you can program with your favorite settings. Just turn the dial to line up the shooting mode that you want to use with the white mark to the right of the dial.

Cross-Reference

*Shooting modes are detailed in Chapter 3, including the noncustomizable shooting modes. Chapter 5 explains how to set up the customizable C1 and C2 modes.*



#### 1.4 EOS 50D top of the camera

♦ **Hot shoe.** The hot shoe mounting plate with flash sync contacts is where you mount an accessory flash unit. The 50D hot shoe is compatible with E-TTL II auto flash with accessory Canon EX-series Speedlites and supports wireless multi-flash support. When using a 580 EX II Speedlite, the 50D offers flash configuration from the camera using the Set-up 3 (yellow) menu. The camera also provides Flash Exposure Compensation to decrease or increase the flash output by up to plus/minus 2 stops in 1/3- or 1/2-stop increments.

♦ **Dioptic adjustment knob.** Turn this control forward or backward to adjust the sharpness for your vision by -3 to +1 diopters. If you wear eyeglasses or contact lenses for shooting, be sure to wear them as you turn the dioptic adjustment control. To make the adjustment, point the lens to a light-colored surface such as a piece of white paper or a white wall, and then turn the control until the AF points are perfectly sharp and crisp for your vision.

- ♦ **Focal plane mark.** The mark indicates the equivalent of the film plane and is useful in macro photography when you need to know the exact distance from the front of the image sensor plane to the subject.
- ♦ **LCD Panel Illumination button.** This button is tucked to the far left of the buttons above the LCD panel. Pushing the LCD Panel Illumination button turns on an amber light to illuminate the LCD panel for approximately 6 seconds. This is a handy option for making LCD panel adjustments in lowlight or in the dark.
- ♦ **Main dial.** The Main dial selects a variety of options. Turn the Main dial to change first named option on the dual-function buttons, cycle through camera Menu tabs, cycle through autofocus (AF) points when selecting an AF point manually, set the aperture in Av and C modes, set the shutter speed in Tv and Manual (M) modes, and shift the exposure in Program (P) mode.
- ♦ **Metering modes.** The choices include Evaluative (35-zone TTL full-aperture metering), Partial (9 percent at center frame), Spot (3.8 percent at center frame), and Center-weighted Average.
- ♦ **White Balance.** Choices include Auto (3000-7000 degrees Kelvin (K)), Daylight (5200 K), Shade (7000 K), Cloudy (6000 K), Tungsten (3200 K), White Fluorescent (4000 K), Flash (6000 K), Custom (2000-10000 K), and K (Kelvin Temperature, 2500-10000 K).
- ♦ **AF mode/Drive mode button.** Pressing this button enables you to change the Autofocus mode using the Main dial, or to change the Drive mode using the the Quick Control dial. The options for each are listed here:
  - **AF modes.** The choices are One-shot AF, AI Focus AF, and AI Servo AF.
  - **Drive modes.** The Drive modes you can choose from are Single-shot, High-speed Continuous (6.3 frames per second, or fps), Low-speed Continuous (3 fps), and Self-timer (10- and 2-sec. delays).
- ♦ **ISO/Flash Exposure Compensation button.** Pressing this button enables you to change the ISO sensitivity setting using the Main dial or the Flash Exposure Compensation using the Quick Control dial. The options for each are as follows:
- ♦ **Metering mode/White Balance button.** Press this button to change the Metering mode and/or the White Balance settings. To change the Metering mode, turn the Main dial, or to change the White Balance, turn the Quick Control dial. The options for each are as follows:

**Note**

*Although the features are discussed with the dials, you can check out Table 1.1 for a quick reference for using the Main dial and Quick Control dial with the LCD Panel buttons.*

- **ISO.** You can choose from Auto, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, and with C.Fn I-3 turned on, you can also choose H1: 6400, and H2: 12800.

- **Flash Exposure Compensation.** You can choose to adjust this plus or minus 2 stops (EV) in 1/3-stop increments. Or you can make changes in 1/2-stop increments by setting C.Fn I-1 to Option 1.

Table 1.1  
Using the Main and Quick Control Dials with  
the LCD Panel Buttons

| Main Dial  | Quick Control Dial                   |
|--|--------------------------------------|
| <b>LCD Panel Button: Metering Mode-WB (White Balance)</b>  |                                      |
| <b>Metering Modes:</b>   | <b>White Balance Options:</b>        |
| Evaluative (35-zone TTL full-aperture metering)  | Auto (3000-7000 K)                   |
| Partial (9 percent at center frame)  | Daylight (5200 K)                    |
| Spot (3.8 percent at center frame)   | Shade (7000 K)                       |
| Center-weighted Average  | Cloudy (6000 K)                      |
|  | Tungsten (3200 K)                    |
|  | White Fluorescent (4000 K)           |
|  | Flash (6000 K)                       |
|  | Custom (2000-10000 K)                |
|  | K (Kelvin Temperature, 2500-10000 K) |
| <b>LCD Panel Button: AF-Drive (Autofocus mode/Drive mode)</b>  |                                      |
| <b>Autofocus Modes:</b>  | <b>Drive Modes:</b>                  |
| One-shot AF (locks focus with a half-press of the Shutter button)  | Single-shot                          |
| AI Focus AF (half-pressing the shutter initiates AF subject movement tracking using the center AF point) | High-speed Continuous (6.3 fps)      |
| AI Servo AF (monitors subject movement and switches to AI Servo if the camera detects subject movement)  | Low-speed Continuous (3 fps)         |
|  | Self-Timer (10- and 2-sec. delays)   |