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- Get amazing shots regardless of lighting conditions
- Control color, focus, and exposure like a pro

IN FULL COLOR!

Julie Adair King



Canon® EOS 70D

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by Julie Adair King

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Canon® EOS 70D For Dummies®

Published by: **John Wiley & Sons, Inc.**, 111 River Street, Hoboken, NJ 07030-5774, www.wiley.com

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Published simultaneously in Canada

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Library of Congress Control Number: 2013949523

ISBN 978-1-118-33596-3 (pbk); ISBN 978-1-118-338596-3 (ebk); ISBN 978-1-118-46187-7 (ebk)

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

Canon® EOS 70D For Dummies®

Visit www.dummies.com/cheatsheet/canoneos70d to view this book's cheat sheet.

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Introduction

In 2003, Canon revolutionized the photography world by introducing the first digital SLR camera (dSLR) to sell for less than \$1,000, the EOS Digital Rebel/300D. And even at that then-unheard-of price, the camera delivered exceptional performance and picture quality, earning it rave reviews and multiple industry awards. No wonder it quickly became a best seller.

That tradition of excellence and value lives on in the EOS Rebel 70D. Like its ancestors, this baby offers the range of advanced controls that experienced photographers demand plus an assortment of tools designed to help beginners be successful as well. Adding to the fun, this Rebel also offers the option to record full high-definition video, plus an articulating, touchscreen monitor that's not only useful but also just plain cool.

The 70D is so feature-packed, in fact, that sorting out everything can be a challenge, especially if you're new to digital photography or SLR photography, or both. For starters, you may not even be sure what SLR means, let alone have a clue about all the other terms you encounter in your camera manual — resolution, aperture, and ISO, for example. And if you're like many people, you may be so overwhelmed by all the controls on your camera that you haven't yet ventured beyond fully automatic picture-taking mode. That's a shame because it's sort of like buying a Porsche Turbo and never pushing it past 50 miles per hour.

Therein lies the point of *Canon EOS 70D For Dummies*. In this book, you can discover not only what each bell and whistle on your camera does but also when, where, why, and how to put it to best use. Unlike many

photography books, this one doesn't require any previous knowledge of photography or digital imaging to make sense of concepts, either. In classic *For Dummies* style, everything is explained in easy-to-understand language, with lots of illustrations to help clear up any confusion.

In short, what you have in your hands is the paperback version of an in-depth photography workshop tailored specifically to your Canon picture-taking powerhouse. Whether your interests lie in taking family photos, exploring nature and travel photography, or snapping product shots for your business, you'll get the information you need to capture the images you envision.

A Quick Look at What's Ahead

This book is organized into four parts, each devoted to a different aspect of using your camera. Although chapters flow in a sequence that's designed to take you from absolute beginner to experienced user, I also tried to make each chapter as self-standing as possible so that you can explore topics that interest you in any order you please.

Here's a quick look at what you can find in each part:

✓ **Part I: Fast Track to Super Snaps:** This part contains four chapters that help you get up and running. [Chapter 1](#) offers a brief overview of camera controls and walks you through initial setup and customization steps. [Chapter 2](#) explains basic picture-taking options, such as shutter-release mode and Image Quality settings, and [Chapter 3](#) shows you how to use the camera's simplest exposure modes,

including Scene Intelligent Auto, Creative Auto, and SCN (Scene) modes. [Chapter 4](#) explains the ins and outs of using Live View, the feature that lets you compose pictures on the monitor, and also covers movie recording.

- ✓ **Part II: Working with Picture Files:** As its title implies, this part discusses after-the-shot topics. [Chapter 5](#) explains picture playback features, and [Chapter 6](#) guides you through the process of transferring pictures from your camera to your computer and then getting pictures ready for print and online sharing. You can also get help with converting pictures shot in the Canon Raw file format (CR2) to a standard format in [Chapter 6](#).
- ✓ **Part III: Taking Creative Control:** Chapters in this part help you unleash the full creative power of your camera by moving into semi-automatic or manual photography modes. [Chapter 7](#) covers the all-important topic of exposure; [Chapter 8](#) offers tips for manipulating focus and color; and [Chapter 9](#) provides a quick-reference guide to shooting strategies for specific types of pictures: portraits, action shots, landscape scenes, and close-ups.
- ✓ **Part IV: The Part of Tens:** In famous *For Dummies* tradition, the book concludes with two top-ten lists containing additional bits of information. [Chapter 10](#) takes a look at ten features that although not found on most “Top Ten Reasons I Bought My 70D” lists, are nonetheless interesting, useful on occasion, or a bit of both. [Chapter 11](#) closes things out with ten ways to customize your camera not covered in earlier chapters.

Icons and Other Stuff to Note

If this isn't your first *For Dummies* book, you may be familiar with the large round icons that decorate its margins. If not, here's your very own icon-decoder ring:



A Tip icon flags information that saves you time, effort, money, or another valuable resource, including your sanity.



When you see this icon, look alive. It indicates a potential danger zone that can result in much wailing and teeth-gnashing if it's ignored.



Lots of information in this book is of a technical nature — digital photography is a technical animal, after all. But if I present a detail that's useful mainly for impressing your geeky friends, I mark it with this icon.



This icon highlights information that's especially worth storing in your brain's long-term memory or to remind you of a fact that may have been displaced from that memory by another pressing fact.

Additionally, I need to point out a few other details that will help you use this book:

- ✓ **Other margin art:** Replicas of some of your camera's buttons and onscreen graphics also appear in the margins of some paragraphs and in some tables. I include these images to provide quick reminders of the appearance of the button or option being discussed.
- ✓ **Software menu commands:** In sections that cover software, a series of words connected by an arrow indicates commands you choose from the program menus. For example, if a step tells you, "Choose File⇒Export," click the File menu to unfurl it and then click the Export command on the menu.

eCheat Sheet

As an added bonus, you can find an electronic version of the *For Dummies* Cheat Sheet at

www.dummies.com/cheatsheet/canoneos70d. The Cheat Sheet contains a quick-reference guide to all the buttons, dials, switches, and exposure modes on your camera. Log on, print it out, and tuck it in your camera bag for times when you don't want to carry this book with you.

Practice, Be Patient, and Have Fun!

To wrap up this preamble, I want to stress that if you initially think that digital photography is too confusing or too technical for you, you're in very good company.

Everyone finds this stuff a little mind-boggling at first. Take it slowly, experimenting with just one or two new camera settings or techniques at first. Then, every time you go on a photo outing, make it a point to add one or two more shooting skills to your repertoire. With some

time, patience, and practice, you'll soon wield your camera like a pro, dialing in the necessary settings to capture your creative vision almost instinctively.

So without further ado, I invite you to grab your camera and a cup of whatever it is you prefer to sip while you read and then start exploring the rest of this book. Your EOS 70D is the perfect partner for your photographic journey, and I thank you for allowing me, in this book, to serve as your tour guide.

Part I
Fast Track to Super Snaps



Visit www.dummies.com for more great *For Dummies* content online.

In this part . . .

- ✓ Get familiar with your camera's buttons, displays, and menus.
- ✓ Read about basic photo-taking settings and when to use each.
- ✓ Take great pictures easily by using the fully automatic shooting modes.
- ✓ Investigate Live View and movie recording.



1

Getting the Lay of the Land

In This Chapter

- ▶ Using an SLR lens
 - ▶ Adjusting the viewfinder and monitor
 - ▶ Practicing touchscreen gestures
 - ▶ Working with camera memory cards
 - ▶ Getting acquainted with external camera controls
 - ▶ Checking and changing camera settings
 - ▶ Customizing basic camera operations
-

If you're like me, shooting for the first time with a camera as sophisticated as the Canon EOS 70D produces a blend of excitement and anxiety. On one hand, you can't wait to start using your new equipment, but on the other, you're a little intimidated by all its buttons, dials, and menu options.

Well, fear not: This chapter provides the information you need to start getting comfortable with your 70D. Along with an introduction to the camera's external controls, I offer details about working with lenses and memory cards, viewing and adjusting camera settings, and choosing basic setup options.

Looking at Lenses

One of the biggest differences between a point-and-shoot camera and a dSLR (*digital single lens reflex*) camera is the lens. With a dSLR, you can change lenses to suit different photographic needs, going from an extreme close-up lens to a super-long telephoto, for example. In addition, a dSLR lens has a focusing ring that gives you the option of focusing manually instead of relying on the camera's autofocus mechanism.

I don't have room in this book to go into detail about the science of lenses, nor do I think that an in-depth knowledge of the subject is terribly important to your photographic success. But the next few sections offer advice that may help when you're shopping for lenses, figuring out whether the lenses you inherited from Uncle Ted or found on eBay will work with your 70D, and taking the steps involved in actually mounting and using a lens.

Choosing a lens

To decide which lens is the best partner for your camera, start by considering these factors:

- ✓ **Lens compatibility:** Your camera accepts two categories of Canon lenses: those with an EF-S design and those with a plain old EF design.



The EF stands for *electro focus*; the S stands for *short back focus*. And *that* simply means the rear element of the lens is closer to the sensor than with an EF lens. And no, you don't need to remember what the abbreviation stands for. Just make sure if you buy a Canon lens other than one of the two sold as a bundle

with the camera, that it carries either the EF or EF-S specification. If you want to buy a non-Canon lens, check the lens manufacturer's website to find out which lenses work with your camera.

Two other lens acronyms to note: First, the 18–55mm and 18–135mm lenses that you can buy as part of a 70D kit are *IS* lenses, which means that they offer *image stabilization*, a feature you can explore a few sections from here. Second, they also carry the designation *STM*. That abbreviation refers to the fact that the autofocus system uses *stepping motor technology*, which is designed to provide smoother, quieter autofocus.



Finally, be aware that some lenses can't take full advantage of the Dual Pixel CMOS (*see-moss*) autofocus system that's used during Live View and Movie recording. Don't worry about what the name means — the important point is that it produces faster, more accurate autofocus. If you're interested in learning more, go to the 70D product page at the Canon USA website (www.usa.canon.com), which has a link to a section that explains the technology and lists lenses that support it.

- ✓ **Focal length and the crop factor:** The focal length of a lens, stated in millimeters, determines the angle of view that the camera can capture and the spatial relationship of objects in the frame. Focal length also affects *depth of field*, or the distance over which focus appears acceptably sharp.

You can loosely categorize lenses by focal length as follows:

- *Wide-angle*: Lenses with short focal lengths — generally, anything under 35mm — are known as *wide-angle lenses*. A wide-angle lens has the visual effect of pushing the subject away from you and making it appear smaller. As a result, you can fit more of the scene into the frame without moving back. Additionally, a wide-angle lens has a large depth of field, which means that both the subject and background objects appear sharp. These characteristics make wide-angle lenses ideal for landscape photography.
- *Telephoto*: Lenses with focal lengths longer than about 70mm are *telephoto* lenses. These lenses create the illusion of bringing the subject closer to you, increase the subject's size in the frame, and produce a short depth of field so that the subject is sharply focused but distant objects are blurry. Telephoto lenses are great for capturing wildlife and other subjects that don't permit up-close shooting.
- *Normal*: A focal length in the neighborhood of 35mm to 70mm is considered "normal" — that is, somewhere between a wide-angle and telephoto. This focal length produces the angle of view and depth of field that are appropriate for the kinds of snapshots that most people take.

[Figure 1-1](#) offers an illustration of the difference that focal length makes, showing the same scene captured at 42mm (left image) and 112mm (right image). Of course, the illustration shows just two of countless possibilities, and the question of which focal length best captures a scene depends on your creative goals.



Figure 1-1: I used a focal length of 42mm to capture the first image and then zoomed to a focal length of 112mm to capture the second one.



Note, however, that the focal lengths stated in this book are so-called *35mm equivalent* focal lengths. Here's the deal: When you put a standard lens on most dSLR cameras, including your 70D, the available frame area is reduced, as if you took a picture on a camera that uses 35mm film negatives and then cropped it. This so-called *crop factor* varies depending on the camera, which is why the photo industry adopted the 35mm-equivalent measuring stick as a standard. With the 70D, the crop factor is roughly 1.6. So the 18-135mm kit lens, for example, captures the approximate area you would get from a 29-216mm lens on a 35mm film camera. (Multiply the crop factor by the lens focal length to get the actual angle of view.) In [Figure 1-2](#), the red line indicates the image area that results from the 1.6 crop factor.

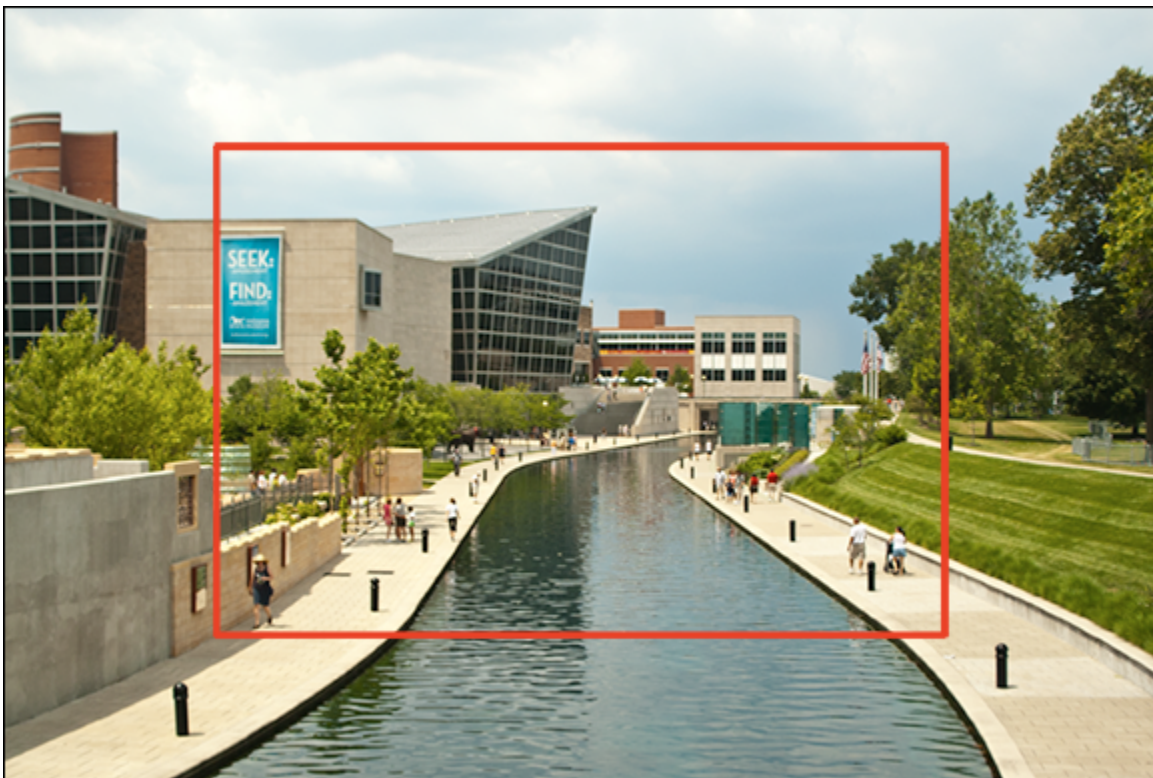


Figure 1-2: The 1.6 crop factor produces the angle of view indicated by the red outline.

When shopping for a lens, remember this crop factor to make sure that you get the focal length designed for the type of pictures you want to take.

✓ **Prime versus zoom lenses:** A *prime* lens is a single focal-length lens. With a zoom lens, you get a range of focal lengths in one unit. For example, the kit lens I feature in this book has a focal-length range of 18–135mm.

Why select a lens that offers a single focal length when a zoom lens offers a range of focal lengths? In a word, quality. Because of some lens science I won't bore you with, you typically see some reduction in picture quality at certain points in the range of a zoom lens. On the flip side, a zoom lens is more convenient than carting around a bag of prime lenses, and many zoom lenses today offer very good image quality.

✓ **Aperture range:** The *aperture* is an adjustable diaphragm in a lens. By adjusting the aperture size, you can control the amount of light that enters through the lens and strikes the image sensor, thereby controlling exposure. The aperture setting also affects depth of field: A wide-open aperture produces a short depth of field, so the subject is sharply focused but distant objects appear blurry; a narrow aperture produces a long depth of field so that both the subject and distant objects appear sharp.

Chapters [7](#) and [8](#) cover these issues in detail. For the purposes of lens shopping, you need to know just a few things.

- *Every lens has a specific range of aperture settings.* Obviously, the larger that range, the more control you have over exposure and depth of field.
- *The larger the maximum aperture, the “faster” the lens.* Aperture settings are stated in *f-stops*, with a lower number meaning a larger aperture. For example, a setting of $f/2$ results in a more open aperture than $f/4$. And if you have one lens with a maximum aperture of $f/2$ and another with a maximum aperture of $f/4$, the $f/2$ lens is said to be *faster* because you can open the aperture wider, thereby allowing more light into the camera and permitting the image to be captured in less time. This not only benefits you in low-light situations but also when photographing action, which requires a fast shutter speed (short exposure time). So, all other things being equal, a faster lens is better.
- *With some zoom lenses, the maximum and minimum aperture change as you zoom the lens.* For example, when you zoom to a telephoto focal length, you usually can’t open the aperture as much as you can

at a wide-angle setting. You can buy lenses that maintain the same maximum and minimum aperture throughout the whole zoom lens, but you pay more for this feature.

After studying these issues and narrowing down your choices, finding the right lens in the category you want is just a matter of doing some homework. Study lens reviews in photography magazines and online photography sites to find the best performing lens in your price range.

Attaching and removing a lens

Whatever lens you choose, follow these steps to attach it to the camera body:

- 1. Turn the camera off and remove the cap that covers the lens mount on the front of the camera.**
- 2. Remove the cap that covers the back of the lens.**
- 3. Locate the proper lens mounting index on the camera body.**

A *mounting index* is a mark that tells you where to align the lens with the camera body when connecting the two. Your camera has two of these marks, one red and one white, as shown in [Figure 1-3](#).