Canon EOS Rebel T3i/600D

From Snapshots to Great Shots

Jeff Revell

Canon EOS Rebel T3i/600D: From Snapshots to Great Shots

Jeff Revell

Peachpit Press

Canon EOS Rebel T3i / 600D: From Snapshots to Great Shots
Jeff Revell

Peachpit Press
1249 Eighth Street
Berkeley, CA 94710
510/524-2178
510/524-2221 (fax)

Find us on the Web at www.peachpit.com
To report errors, please send a note to errata@peachpit.com
Peachpit Press is a division of Pearson Education

Copyright © 2011 by Peachpit Press
All photography © Jeff Revell except where noted
Camera provided to author by B&H Photo (www.bhphotovideo.com)

Editor: Ted Waitt
Production Editor: Lisa Brazieal
Interior Design: Riezebos Holzbaur Design Group
Compositor: WolfsonDesign
Indexer: James Minkin
Cover Design: Aren Howell
Cover Image: Jeff Revell
Back Cover Author Photo: Scott Kelby

Notice of Rights
All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. For information on getting permission reprints and excerpts, contact permissions@peachpit.com.

Notice of Liability
The information in this book is distributed on an "As Is" basis without warranty. While every precaution has been taken in the preparation of the book, neither the author nor Peachpit shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the computer software and hardware products described in it.

Trademarks
All Canon products are trademarks or registered trademarks of Canon Inc.
Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Peachpit was aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or other affiliation with this book.

ISBN-13 978-0-321-77664-8
ISBN-10 0-321-77664-X

9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America

DEDICATION

For all my friends at Kelby Media Group for their continuous friendship and inspiration—Scott Kelby, Dave Moser, Matt Kloskowski, RC Concepcion, Kathy Siler, and Brad Moore.

ACKNOWLEDGMENTS

Even though I have written plenty of books for this series (this makes number eight), the experience is always a little new. Just the other day I had a friend ask me if I wasn't tired of writing camera books, and the answer was a resounding, "No!" I love new cameras and photography gear, in general, and writing these books allows me to really get in-depth with the latest technology and see how it is shaping the photography of tomorrow. Of course I couldn't do that without the help of some great people like the ones at Peachpit Press. With the talents (and patience) of people like my editor Ted Waitt, production editor Lisa Brazieal, and all the other wonderful people who put this book together, we have continued to improve with every new edition.

And while the publisher and author have a big part in bringing you this book, none of it would have happened without the assistance of my friends at B&H Photo. They worked with me to ensure that I had a brand new camera in hand as soon as they started arriving on our shores. Of course, this doesn't surprise me at all because I have been purchasing photography equipment from them for years; I can say without a doubt that they are fantastic at what they do. They are always courteous and helpful, their knowledge is second to none, and they always give me a great deal. They are my number one go-to resource for anything photographic, so check them out on the web when you get the chance: www.bhphotovideo.com.

Contents

INTRODUCTION viii

CHAPTER 1: THE T3i TOP TEN LIST 1

Ten Tips to Make Your Shooting More Productive Right Out of the Box 1

Poring Over the Camera 2

Poring Over the Camera 4

1. Charge Your Battery 5

2. Turn Off the Release Shutter without Card Setting 6

3. Set Your JPEG Image Quality 7

4. Turn Off the Auto ISO Setting 8

5. Setting Your Focus Point and Mode 10

6. Set the Correct White Balance 12

7. Adjust the Viewfinder Diopter 15

8. Know How to Override Autofocus 15

9. Review Your Shots 16

10. Hold Your Camera for Proper Shooting 22

Chapter 1 Assignments 23

CHAPTER 2: FIRST THINGS FIRST 25

A Few Things to Know and Do Before You Begin Taking Pictures 25

Poring Over the Picture 26

Poring Over the Picture 28

Choosing the Right Memory Card 30

Formatting Your Memory Card 31

Updating the T3i's Firmware 33

Cleaning the Sensor 36

Using the Right Format: RAW vs. JPEG 38

Lenses and Focal Lengths 40

What Is Exposure? 46

Motion and Depth of Field 49

Video and the T3i 52

Chapter 2 Assignments 59

CHAPTER 3: THE BASIC ZONE 61
Get Shooting with the Automatic Camera Modes 61
Poring Over the Picture 62
Poring Over the Picture 64
Scene Intelligent Auto Mode 66
Portrait Mode 67
Landscape Mode 69
Close-up Mode 70
Sports Mode 71
Night Portrait Mode 72
Flash Off Mode 73
Creative Auto Mode 75
Why You May Never Want to Use the Basic Zone Again 78
Chapter 3 Assignments 79

CHAPTER 4: THE CREATIVE ZONE 81
Taking Your Photography to the Next Level 81
Poring Over the Picture 82
Poring Over the Picture 84
P: Program Mode 86
Tv: Shutter Priority Mode 89
Av: Aperture Priority Mode 93
M: Manual Mode 98
A-DEP: Auto Depth of Field Mode 101
How I Shoot: A Closer Look at the Camera Settings I Use 103
Chapter 4 Assignments 104

CHAPTER 5: MOVING TARGET 107
The Tricks to Shooting Sports and More 107
Poring Over the Picture 108
Poring Over the Picture 110
Stop Right There! 112
Using Shutter Priority (Tv) Mode to Stop Motion 117
Using Aperture Priority (Av) Mode to Isolate Your Subject 119
Keep Them in Focus with AI Servo and Auto AF Focus Point Selection 120
Stop and Go with AI Focus AF 122
Manual Focus for Anticipated Action 123
Keeping Up with the Continuous Shooting Mode 125
A Sense of Motion 126
Tips for Shooting Action 128
Chapter 5 Assignments 130

CHAPTER 6: SAY CHEESE! 133
Settings and Features to Make Great Portraits 133
Poring Over the Picture 134
Poring Over the Picture 136
Automatic Portrait Mode 138
Using Aperture Priority Mode 138
Metering Modes for Portraits 141
Using the AE Lock Feature 143
Focusing: The Eyes Have It 144
Classic Black and White Portraits 146
The Portrait Picture Style for Better Skin Tones 149
Detect Faces with Live View 150
Use Fill Flash for Reducing Shadows 153
People on the Move 154
Tips for Shooting Better Portraits 155
Chapter 6 Assignments 163

CHAPTER 7: LANDSCAPE PHOTOGRAPHY 165
Tips, Tools, and Techniques to Get the Most Out of Your Landscape Photography 165
Poring Over the Picture 166
Poring Over the Picture 168
Sharp and In Focus: Using Tripods 170
Using A-DEP to Maximize Depth of Field 172
Selecting the Proper ISO 173
Using Noise Reduction 175
Selecting a White Balance 176
Using the Landscape Picture Style 177
Taming Bright Skies with Exposure Compensation 179
Shooting Beautiful Black and White Landscapes 181
The Golden Light 183
Where to Focus 184
Easier Focusing 186
Making Water Fluid 188
Directing the Viewer: A Word about Composition 190
Advanced Techniques to Explore 194
Chapter 7 Assignments 201

CHAPTER 8: MOOD LIGHTING 203
Shooting When the Lights Get Low 203
Poring Over the Picture 204
Poring Over the Picture 206

Raising the ISO: The Simple Solution 208
Using Very High ISOs 210
Stabilizing the Situation 211
Focusing in Low Light 215
Shooting Long Exposures 217
Using the Built-In Flash 218
Compensating for the Flash Exposure 222
Reducing Red-Eye 224
2nd Curtain Sync 226
Using an External Speedlite 229
Chapter 8 Assignments 233

CHAPTER 9: CREATIVE COMPOSITIONS 235
Improve Your Pictures with Sound Compositional Elements 235
Poring Over the Picture 236
Poring Over the Picture 238
Depth of Field 240
Angles 242
Point of View 243
Patterns 244
Color 244
Contrast 245
Leading Lines 247
Splitting the Frame 247
Chapter 9 Assignments 249

CHAPTER 10: ADVANCED TECHNIQUES 251
Impress Your Family and Friends 251
Poring Over the Picture 252
Spot Meter for More Exposure Control 254
Manual Mode 258
Avoiding Lens Flare 260
Using the Sun Creatively 260
Bracketing Exposures 262
Macro Photography 265
Auto Lighting Optimizer 266
The My Menu setting 267
Customize Your White Balance 268
Shooting Through Obstructions 270
Conclusion 272
Chapter 10 Assignments 273

INDEX 274

Introduction

Walk into any bookseller, go to the photography section, and you will see countless books on the subject of photography. Look a little further and you will locate the camera-specific books. It is this divide between the camera-specific and instructional photography books that inspired me to write this book. What I was seeing in the store was a lot of books that were just sort of missing the mark—especially when it came to using a specific brand and model of camera along with actual photographic instruction. So with that, I set about to write this book on the Canon T3i, not as a rehash of the owner's manual but as a resource to teach photography with the wonderful technology present in the T3i. I have put together a short Q&A to help you get a better understanding of just what it is that you can expect from this book.

Q: IS EVERY CAMERA FEATURE GOING TO BE COVERED?

A: Nope, just the ones I felt you need to know about in order to start taking great photos. Believe it or not, you already own a great resource that covers every feature of your camera: the owner's manual. Writing a book that just repeats this information would have been a waste of my time and your money. What I did want to write about was how to harness certain camera features to the benefit of your photography. As you read through the book, you will also see callouts that point you to specific pages in your owner's manual that are related to the topic being discussed. For example, in Chapter 6 I discuss the use of the AE-L button but there is more information available on this feature in the manual. I cover the function that applies to our specific needs but also give you the page numbers in the manual to explore this function even further.

Q: SO IF I ALREADY OWN THE MANUAL, WHY DO I NEED THIS BOOK?

A: The manual does a pretty good job of telling you how to use a feature or turn it on in the menus, but it doesn't necessarily tell you *why* and *when* you should use it. If you really want to improve your photography, you need to know the whys and whens to put all of those great camera features to use at the right time. To that extent, the manual just isn't going to cut it. It is, however, a great resource on the camera's features, and it is for that reason that I treat it like a companion to this book. You already own it, so why not get something of value from it?

Q: WHAT CAN I EXPECT TO LEARN FROM THIS BOOK?

A: Hopefully, you will learn how to take great photographs. My goal, and the reason the book is laid out the way it is, is to guide you through the basics of photography as they relate to different situations and scenarios. By using the features of your T3i and this book, you will learn about aperture, shutter speed, ISO, lens selection, depth of field, and many other photographic concepts. You will also find plenty of large full-page photos that include captions, shooting data, and callouts so you can see how all of the photography fundamentals come together to make great images. All the while, you will be learning how your camera works and how to apply its functions and features to your photography.

Q: WHAT ARE THE ASSIGNMENTS ALL ABOUT?

A: At the end of most of the chapters, you will find shooting assignments, where I give you some suggestions as to how you can apply the lessons of the chapter to help reinforce everything you just learned. Let's face it—using the camera is much more fun than reading about it, so the assignments are a way of taking a little break after each chapter and having some fun.

Q: SHOULD I READ THE BOOK STRAIGHT THROUGH OR CAN I SKIP AROUND FROM CHAPTER TO CHAPTER?

A: Here's the easy answer: yes and no. No, because the first four chapters give you the basic information that you need to know about your camera. These are the building blocks for using the camera. After that, yes, you can move around the book as you see fit because the later chapters are written to stand on their own as guides to specific types of photography or shooting situations. You can bounce from portraits to shooting landscapes and then maybe to a little action photography. It's all about your needs and how you want to address them. Or, you can read it straight through. The choice is up to you.

Q: I DON'T SEE ANY CHAPTERS DEVOTED TO VIDEO.

A: I know that one of the reasons you probably bought the T3i was its ability to capture video. I have covered some basic video setup information in Chapter 2 but I really wanted the focus of this book to center around the photographic capabilities and possibilities. Don't worry, though; read the next Q&A and I think you will be happy.

Q: IS THERE ANYTHING ELSE I SHOULD KNOW BEFORE GETTING STARTED?

A: In order to keep the book short and focused, I had to be pretty selective about what I put in each chapter. The problem is that there is a little more information that might come in handy after you've gone through all the chapters. So as an added value for you, I have written two bonus chapters called "Pimp My Ride" and "T3i Video: Beyond the Basics." The first chapter is full of information on photo accessories that will assist you in making better photographs. In it, you will find my recommendation for things like filters, tripods, and much more. The second chapter will lead you through some video tips and techniques to make your T3i movies even better. To access the bonus chapters, just log in or join peachpit.com (it's free), then enter the book's ISBN. After you register the book, a link to the bonus chapters will be listed on your Account page under Registered Products.

Q: IS THAT IT?

A: One last thought before you dive into the first chapter. My goal in writing this book has been to give you a resource that you can turn to for creating great photographs with your Canon T3i. Take some time to learn the basics and then put them to use. Photography, like most things, takes time to master and requires practice. I have been a photographer for 30 years and I'm still learning. Always remember, it's not the camera but the person using it who makes beautiful photographs. Have fun, make mistakes, and then learn from them. In no time, I'm sure you will transition from a person who takes snapshots to a photographer who makes great shots.

4

ISO 400
1/160 sec.
f/5.6
55mm lens

The Creative Zone

TAKING YOUR PHOTOGRAPHY TO THE NEXT LEVEL

The Creative zone is the name given by Canon to the shooting modes that offer you the greatest amount of control over your photography. To anyone who has been involved with photography for any period of time, these modes are known as the backbones of photography. They allow you to influence two of the most important factors for taking great photographs: *aperture* and *shutter speed*. To access these modes, you simply turn the Mode dial to the Creative mode of your choice and begin shooting. But wouldn't it be nice to know exactly what those modes control and how to make them do our bidding? Well, if you really want to take that next step in controlling your photography, it is essential that you understand not only how to control these modes, but why and when to adjust them so that you get the results you want. So let's move that Mode dial to the first of our Creative modes: Program mode.

PORING OVER THE PICTURE

It was a late summer day with a bright sun setting at my back, so a fairly low ISO of 400 still allowed for fast shutter speeds.

Because I was more concerned with motion rather than depth of field, I used the Tv (Shutter Priority) shooting mode.

One of my most anticipated summer activities is the motocross jumping event at my county fair. Each year, the motocross daredevils launch their bikes some 30–40 feet into the air while performing amazing acrobatic moves and then landing on a ramp that seems much too small for its task. And I am there to capture it all with a long lens and a fast shutter speed.

The drive mode was set to Continuous so the camera could fire more than one shot.

AI Servo focus helped lock the focus and then follow my subjects, so as I shot, everything stayed sharp.

ISO 400
1/2000 sec.
f/2.8
300mm lens

PORING OVER THE PICTURE

I know it's not really manly but I have to tell you, I have a thing for flowers. I'm not much into growing them or having them around the house; I prefer to photograph them. With so many varieties and ways of lighting and photographing them, they are always presenting me with new challenges. One of my favorite varieties to photograph is the orchid. This bunch, grown by a friend, was bursting with color and crying out to be shot, so I just had to oblige.

Although I was using a fairly fast shutter speed, I still used a tripod to eliminate any possibility of shake from handholding the camera.

It took several shots to get an accurate exposure since the dark flowers and background were fooling the camera's light meter.

I used the selective focus point to get the camera to focus on just the right spot without having to move the camera.
A black background was placed in the back to keep the emphasis on the flowers.
ISO 100
1/125 sec.
f/13
105mm lens

P: PROGRAM MODE

There is a reason that Program mode is only one click away from the Basic modes: with respect to apertures and shutter speeds, the camera is doing most of the thinking for you. So, if that is the case, why even bother with Program mode? First, let me say that it is very rare that I will use Program mode because it just doesn't give as much control over the image-making process as the other Creative modes. There are occasions, however, when it comes in handy, like when I am shooting in widely changing lighting conditions and I don't have the time to think through all of my options, or I'm not very concerned with having ultimate control of the scene. Think of a picnic outdoors in a partial shade/sun environment. I want great-looking pictures, but I'm not looking for anything to hang in a museum. If that's the scenario, why choose Program over one of the Basic modes? Because it gives me choices and control that none of the Basic modes, including Creative Auto, can deliver.

Manual Callout

To see a comparison of all of the different modes in the Basic and Creative zones, check out the tables on pages 268–269 of your owner's manual.

WHEN TO USE PROGRAM (P) MODE INSTEAD OF THE BASIC ZONE MODES

- When shooting in a casual environment where quick adjustments are needed
- When you want control over the ISO
- If you want or need to shoot in the Adobe RGB color space
- If you want to make corrections to the white balance

Let's go back to our picnic scenario. As I said, the light is moving from deep shadow to bright sunlight, which means that the camera is trying to balance our three photo factors (ISO, aperture, and shutter speed) to make a good exposure. From Chapter 1, we know that Auto ISO is just not a consideration, so we have already turned that feature off (you did change it, didn't you?). Well, in Program mode, you can choose which ISO you would like the camera to base its exposure on. The lower the ISO number, the better the quality of our photographs, but the less light sensitive the camera becomes. It's a balancing act with the main goal always being to keep the ISO as low as possible—too low an ISO, and we will get camera shake in our images from a long shutter speed; and too high an ISO means we will have an unacceptable amount of

digital noise. For our purposes, let's go ahead and select ISO 400 so that we provide enough sensitivity for those shadows while allowing the camera to use shutter speeds that are fast enough to stop motion.

STARTING POINTS FOR ISO SELECTION

There is a lot of discussion concerning ISO in this and other chapters, but it might be helpful if you know where your starting points should be for your ISO settings. The first thing you should always try to do is use the lowest possible ISO setting. That being said, here are some good starting points for your ISO settings:

- 100: Bright sunny day
- 200: Hazy or outdoor shade on a sunny day
- 400: Indoor lighting at night or cloudy conditions outside
- 800: Late night, low-light conditions or sporting arenas at night

These are just suggestions and your ISO selection will depend on a number of factors that will be discussed later in the book. You might have to push your ISO even higher as needed, but at least now you know where to start.

With the ISO selected, we can now make use of the other controls built into Program mode. By rotating the Main dial, we now have the ability to shift the program settings. Remember, your camera is using the internal light meter to pick what it believes are suitable exposure values, but sometimes it doesn't know what it's looking at and how you want those values applied (**Figures 4.1** and **4.2**). With the program shift, you can influence what the shot will look like. Do you need faster shutter speeds in order to stop the action? Just turn the Main dial clockwise. Do you want a smaller aperture so that you get a narrow depth of field? Then turn the dial counterclockwise until you get the desired aperture. The camera shifts the shutter speed and aperture accordingly in order to get a proper exposure, and you will get the benefit of your choice as a result.

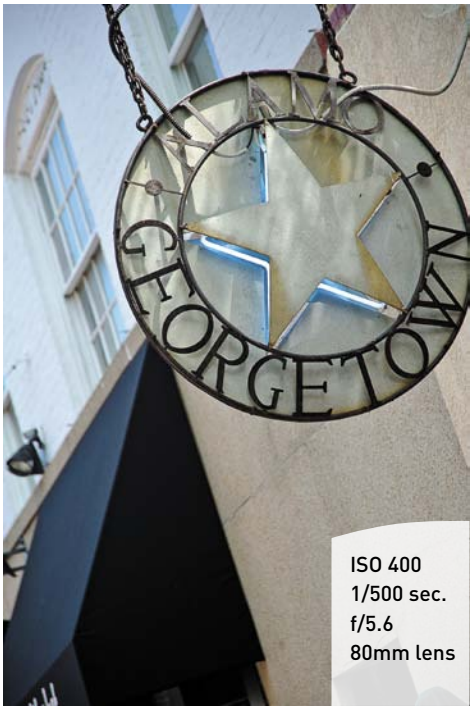

FIGURE 4.1
(left) This is my first shot using Program mode. Because I was pointing the camera more towards the building in the shade, the exposure was longer.

FIGURE 4.2
(right) By zooming out and including more of the bright sky in the photo, there was less of the front of the shaded building to influence the light meter, resulting in a change of exposure.

Let's set up the camera for Program mode and see how we can make all of this come together.

SETTING UP AND SHOOTING IN PROGRAM MODE

1. Turn your camera on and then turn the Mode dial to align the P with the indicator line.
2. Select your ISO by pressing the ISO button on the top of the camera, and then turning the Main dial to the desired setting and press the ISO button again (the ISO selection will appear in the rear LCD panel).
3. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
4. View the exposure information in the bottom of the viewfinder or by looking at the display panel on the back of the camera.
5. While the meter is activated, use your index finger to roll the Main dial left and right to see the changed exposure values.
6. Select the exposure that is right for you and start shooting. (Don't worry if you aren't sure what the right exposure is. We will start working on making the right choices for those great shots beginning with the next chapter.)

TV: SHUTTER PRIORITY MODE

Tv mode is what we photographers commonly refer to as Shutter Priority mode. If you dig deep in your manual, you will actually see that Tv stands for "Time Value." I'm not sure who came up with this term, but I can tell you that it wasn't a photographer. In all my years of shooting, I don't ever recall thinking, "Hey, this would be a great situation to use the Time Value mode." However, you don't need to know why it is called Tv mode; the important thing is to know why and when to use it.

Just as with Program mode, Tv mode gives us more freedom to control certain aspects of our photography. In this case, we are talking about shutter speed. The selected shutter speed determines just how long you expose your camera's sensor to light. The longer it remains open, the more time your sensor has to gather light. The shutter speed also, to a large degree, determines how sharp your photographs are. This is different from the image being sharply in focus. One of the major influences on the sharpness of an image is camera shake as well as the subject's movement. Because a slower shutter speed means that light from your subject is hitting the sensor for a longer period of time, any movement by you or your subject will show up in your photos as blur.

SHUTTER SPEEDS

A *slow* shutter speed refers to leaving the shutter open for a long period of time—like 1/30 of a second or longer. A *fast* shutter speed means that the shutter is open for a very short period of time—like 1/250 of a second or less.

WHEN TO USE SHUTTER PRIORITY (TV) MODE

- When working with fast-moving subjects where you want to freeze the action (**Figure 4.3**); much more on this is in Chapter 5
- When you want to emphasize movement in your subject with motion blur (**Figure 4.4**)
- When you want to use a long exposure to gather light over a long period of time (**Figure 4.5**); more on this is in Chapter 8
- When you want to create that silky-looking water in a waterfall (**Figure 4.6**)

FIGURE 4.3
Even the fastest of subjects can be frozen with the right shutter speed.

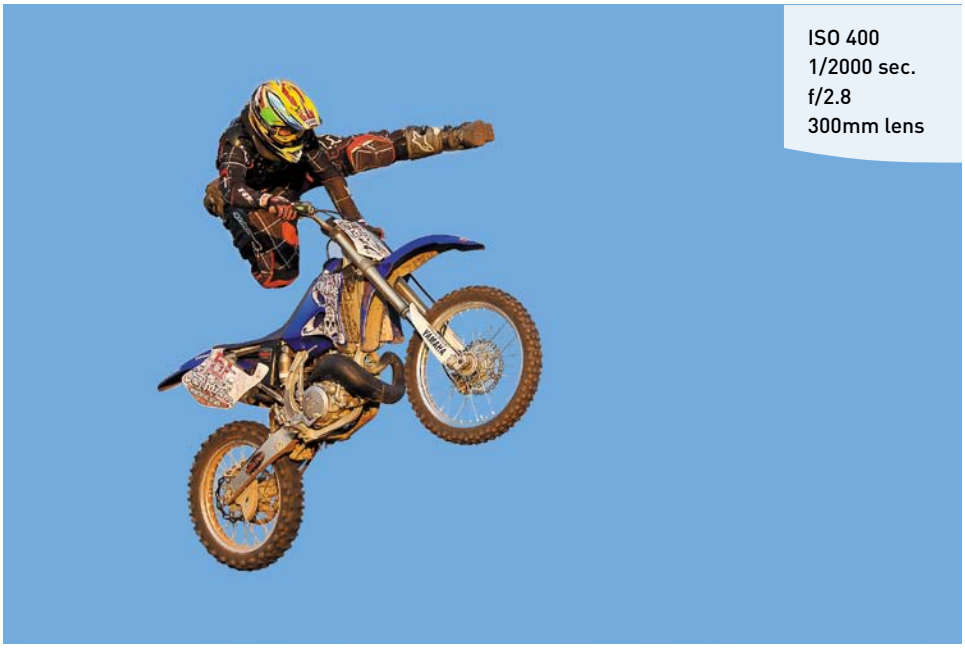
ISO 400
1/2000 sec.
f/2.8
300mm lens

FIGURE 4.4
Slowing down the shutter speed allows your photographs to convey a sense of movement.

ISO 500
1/2 sec.
f/22
86mm lens

FIGURE 4.5
A long exposure coupled with a small aperture and a steady tripod helped capture this beach scene at night.

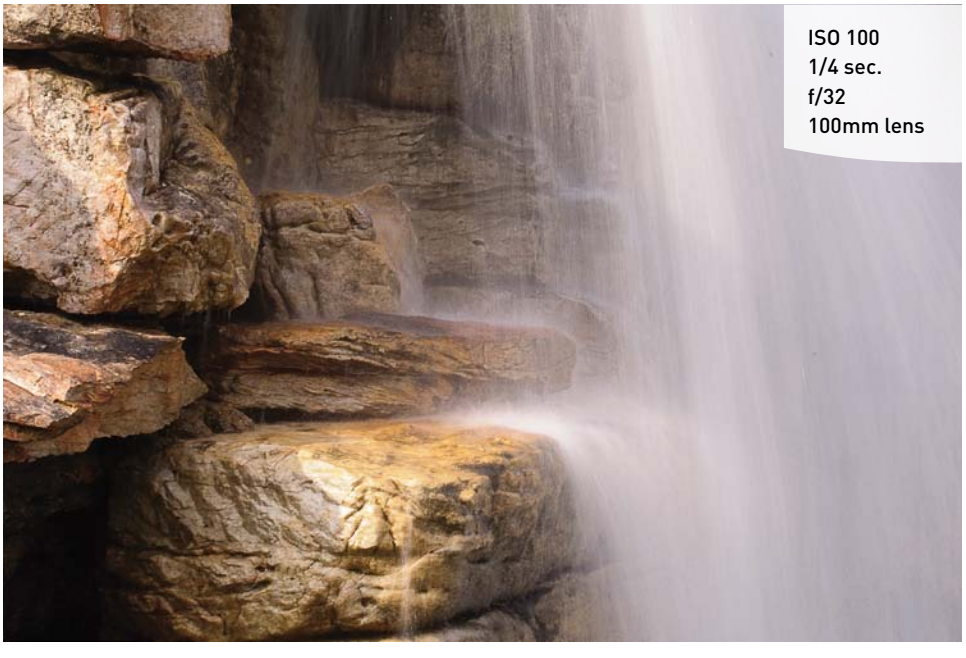

FIGURE 4.6
Increasing the length of the exposure time gives flowing water a silky look.

As you can see, the subject of your photo usually determines whether or not you will use Tv mode. It is important that you are able to visualize the result of using a particular shutter speed. The great thing about shooting with digital cameras is that you get instant feedback by checking your shot on the LCD screen. But what if your subject won't give you a do-over? Such is often the case when shooting sporting events. It's not like you can go ask the quarterback to throw that touchdown pass again because your last shot was blurry from a slow shutter speed. This is why it's important to know what these speeds represent in terms of their abilities to stop the action and deliver a blur-free shot.

First, let's examine just how much control you have over the shutter speeds. The T3i has a shutter speed range from 1/4000 of a second all the way down to 30 seconds. With that much latitude, you should have enough control to capture almost any subject. The other thing to think about is that Tv mode is considered a "semiautomatic" mode. This means that you are taking control over one aspect of the total exposure while the camera handles the other. In this instance, you are controlling the shutter speed and the camera is controlling the aperture. This is important to know because there will be times that you want to use a particular shutter speed but your lens won't be able to accommodate your request.

For example, you might encounter this problem when shooting in low-light situations: if you are shooting a fast-moving subject that will blur at a shutter speed slower than 1/125 of a second but your lens's largest aperture is f/3.5, you might see that your aperture display in your viewfinder and the rear LCD panel will begin to blink. This is your warning that there won't be enough light available for the shot—due to the limitations of the lens—so your picture will be underexposed (too dark).

Another case where you might run into this situation is when you are shooting moving water. To get that look of silky, flowing water, it's usually necessary to use a shutter speed of at least 1/15 of a second, if not longer. If your waterfall is in full sunlight, you may get that blinking aperture display once again because the lens you are using only closes down to f/22 at its smallest opening. In this instance, your camera is warning you that you will be overexposing your image (too light). There are workarounds for these problems, which we will discuss later (see Chapter 7), but it is important to know that there can be limitations when using Tv mode.

SETTING UP AND SHOOTING IN TV MODE

1. Turn your camera on and then turn the Mode dial to align the Tv with the indicator line.
2. Select your ISO by pressing the ISO button on the top of the camera, and then turning the Main dial (the ISO selection will appear in the rear LCD panel).

3. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
4. View the exposure information in the bottom area of the viewfinder or by looking at the rear LCD panel.
5. While the meter is activated, use your index finger to roll the Main dial left and right to see the changed exposure values. Roll the dial to the right for faster shutter speeds and to the left for slower speeds.

AV: APERTURE PRIORITY MODE

You wouldn't know it from its name, but Av mode is one of the most useful and popular modes in the Creative zone. Av stands for Aperture Value and, like Time Value, it's another term that you'll seldom hear a photographer toss around. The mode, however, is one of my personal favorites, and I believe that it will quickly become one of yours, as well. Av, more commonly referred to as Aperture Priority mode, is also deemed a semiautomatic mode because it allows you to once again control one factor of exposure while the camera adjusts for the other.

Why, you may ask, is this one of my favorite modes? It's because the aperture of your lens dictates depth of field. Depth of field, along with composition, is a major factor in how you direct attention to what is important in your image. It is the controlling factor of how much area in your image is in focus. If you want to isolate a subject from the background, such as when shooting a portrait, you can use a large aperture to keep the focus on your subject and make both the foreground and background blurry. If you want to keep the entire scene sharply focused, such as with a landscape scene, then using a small aperture will render the greatest amount of depth of field possible.

WHEN TO USE APERTURE PRIORITY (AV) MODE

- When shooting portraits or wildlife (**Figure 4.7**)
- When shooting most landscape photography (**Figure 4.8**)
- When shooting macro, or close-up, photography (**Figure 4.9**)
- When shooting architectural photography, which often benefits from a large depth of field (**Figure 4.10**)

FIGURE 4.7
A fairly large aperture combined with a long focal length created a very blurry background, so all the emphasis was left on the subject.

FIGURE 4.8
The smaller aperture setting brings sharpness to near and far objects.

FIGURE 4.9
Small apertures give more sharpness in macro images.

FIGURE 4.10
A wide-angle lens combined with a small aperture makes for a lot of depth of field.

F-STOPS AND APERTURE

As discussed earlier, when referring to the numeric value of your lens aperture, you will find it described as an *f-stop*. The f-stop is one of those old photography terms that, technically, relates to the focal length of the lens (e.g., 200mm) divided by the effective aperture diameter. These measurements are defined as "stops" and work incrementally with your shutter speed to determine proper exposure. Older camera lenses used one-stop increments to assist in exposure adjustments, such as 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, and 22. Each stop represents about half the amount of light entering the lens iris as the larger stop before it. Today, most lenses don't have f-stop markings since all adjustments to this setting are performed via the camera's electronics. The stops are also now typically divided into 1/3-stop increments to allow much finer adjustments to exposures, as well as to match the incremental values of your camera's ISO settings, which are also adjusted in 1/3-stop increments.

We have established that Aperture Priority (Av) mode is highly useful in controlling the depth of field in your image. But it's also pivotal in determining the limits of available light that you can shoot in. Different lenses have different maximum apertures. The larger the maximum aperture, the less light you need in order to achieve a properly exposed image. You will recall that, when in Tv mode, there is a limit at which you can handhold your camera without introducing movement or hand shake, which causes blurriness in the final picture. If your lens has a larger aperture, you can let in more light all at once, which means that you can use faster shutter speeds. This is why lenses with large maximum apertures, such as f/1.4, are called "fast" lenses.

On the other hand, bright scenes require the use of a small aperture (such as f/16 or f/22), especially if you want to use a slower shutter speed. That small opening reduces the amount of incoming light, and this reduction of light requires that the shutter stay open longer.

SETTING UP AND SHOOTING IN AV MODE

1. Turn your camera on and then turn the Mode dial to align the Av with the indicator line.
2. Select your ISO by pressing the ISO button on the top of the camera, and then turning the Main dial.
3. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
4. View the exposure information in the bottom area of the viewfinder or by looking at the rear display panel.

5. While the meter is activated, use your index finger to roll the Main dial left and right to see the changed exposure values. Roll the dial to the right for a smaller aperture (higher f-stop number) and to the left for a larger aperture (smaller f-stop number).

ZOOM LENSES AND MAXIMUM APERTURES

Some zoom lenses (like the 18–55mm kit lens) have a variable maximum aperture. This means that the largest opening will change depending on the zoom setting. In the example of the 18–55mm zoom, the lens has a maximum aperture of f/3.5 at 18mm and only f/5.6 when the lens is zoomed out to 55mm. Fixed aperture zoom lenses maintain the same maximum aperture throughout the zoom range. They are typically much more expensive than their variable maximum aperture counterparts.

M: MANUAL MODE

Once upon a time, long before digital cameras and program modes, there was manual mode. In those days it wasn't called "manual mode" because there were no other modes. It was just photography. In fact, many photographers, including myself, cut their teeth on completely manual cameras. Let's face it—if you want to learn the effects of aperture and shutter speed on your photography, there is no better way to learn than by setting these adjustments yourself. However, today, with the advancement of camera technology, many new photographers never give this mode a second thought. That's truly a shame, as not only is it an excellent way to learn your photography basics, it's also an essential tool to have in your photographic bag of tricks.

When you have your camera set to Manual (M) mode, the camera meter will give you a reading of the scene you are photographing. It's your job, though, to set both the f-stop (aperture) and the shutter speed to achieve a correct exposure. If you need a faster shutter speed, you will have to make the reciprocal change to your f-stop. Using any other mode, such as Tv or Av, would mean that you just have to worry about one of these changes, but Manual mode means you have to do it all yourself. This can be a little challenging at first, but after a while you will have a complete understanding of how each change affects your exposure, which will, in turn, improve the way that you use the other modes.

WHEN TO USE MANUAL (M) MODE

- When learning how each exposure element interacts with the others (**Figure 4.11**)
- When your environment is fooling your light meter and you need to maintain a certain exposure setting (**Figure 4.12**)
- When shooting silhouetted subjects, which requires overriding the camera's meter readings (**Figure 4.13**)

FIGURE 4.11
Shooting in Manual mode is a great way to learn about how ISO, aperture, and shutter speed affect your exposure.

FIGURE 4.12
Beaches and snow are always a challenge for light meters.

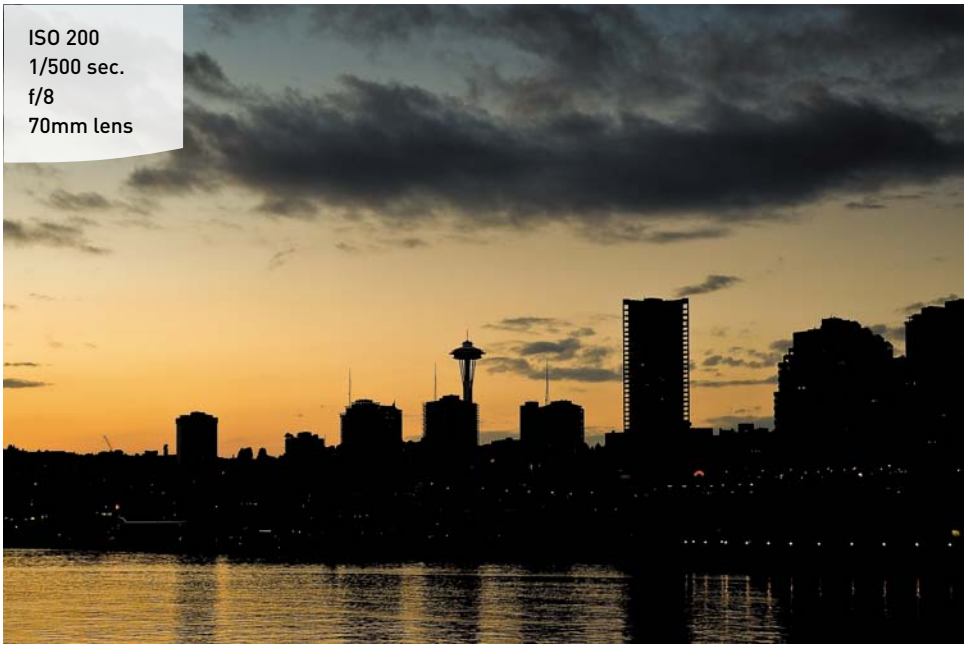

FIGURE 4.13
Although the meter was doing a pretty good job of exposing for the bright sky, I used Manual mode to push the foreground elements into complete black silhouette.

SETTING UP AND SHOOTING IN MANUAL MODE

1. Turn the Mode dial to align the M with the indicator line.
2. Select your ISO by pressing the ISO button on the top of the camera, and then turning the Main dial.
3. Point the camera at your subject and then activate the camera meter by depressing the shutter button halfway.
4. View the exposure information in the bottom area of the viewfinder or by looking at the rear display panel.
5. While the meter is activated, use your index finger to roll the Main dial left and right to change your shutter speed value until the exposure mark is lined up with the zero mark. The exposure information is displayed by a scale with marks that run from –2 to +2 stops. A "proper" exposure will line up with the arrow mark in the middle. As the indicator moves to the left, it is a sign that you will be underexposing (there is not enough light hitting the sensor to provide adequate exposure). Move the indicator to the right and you will be providing more exposure than the camera meter calls for. This is overexposure.
6. To set your exposure using the aperture, depress the shutter release button until the meter is activated. Then, using your thumb, hold in on the Av button on the back of the camera and then use your index finger to turn the Main dial right for a smaller aperture (large f-stop number) or left for a larger aperture (small f-stop number).

A-DEP: AUTO DEPTH OF FIELD MODE

The A-DEP, or Auto Depth of Field, setting is on the Creative zone side of the dial, but in my opinion it should be over in the Basic zone. The mode works this way: As you depress the shutter release button to focus on your subject, the camera will use the other focus points to measure the distance of the other objects in the viewfinder. Then, it will determine what the appropriate aperture setting should be to render all of the objects in focus (**Figure 4.14**). The only way to adjust your exposure is to change the ISO. There will be more discussion of the A-DEP mode and how to use it in Chapter 7.

FIGURE 4.14
Landscapes with subjects that are at differing distances could benefit from the A-DEP mode.

HOW I SHOOT: A CLOSER LOOK AT THE CAMERA SETTINGS I USE

The great thing about working with a dSLR camera is that I can always feel confident that some things will remain unchanged from camera to camera. For me, these are the Aperture Priority (Av) and Shutter Priority (Tv) shooting modes. Although I like to think of myself as a generalist in terms of my photography, I do tend to lean heavily on the landscape and urban photography genres. Working in these areas means that I am almost always going to be concerned with my depth of field. Whether it's isolating my subject with a large aperture or trying to maximize the overall sharpness of a sweeping landscape, I always keep an eye on my aperture setting.

If I do have a need to control the action, I use Shutter Priority. If I am trying to create a silky waterfall effect, I can depend on Tv to provide that long shutter speed that it will deliver. Maybe I am shooting a motocross jumper. I definitely need the fast shutter speeds that will freeze the fast-moving action. While the other camera modes have their place, I think you will find that, like myself and most other working pros, you will use the Av and Tv modes for 90 percent of your shooting.

The other concern that I have when I am setting up my camera is just how low I can keep my ISO. I raise the ISO only as a last resort because each increase in sensitivity is an opportunity for more digital noise to enter my image. To that end, I always have the High ISO Noise Reduction feature turned on Standard (see Chapter 7).

To make quick changes while I shoot, I often use the Exposure Compensation feature (covered in Chapter 7) so that I can make small over- and underexposure changes. This is different than changing the aperture or shutter; it is more like fooling the camera meter into thinking the scene is brighter or darker than it actually is.

One of the reasons I change my exposure is to make corrections when I see the "blinkies" while looking at my images on the rear LCD. Blinkies are the warning signal that part of my image has been overexposed to the point that I no longer have any detail in the highlights. The highlight alert will flash wherever the potential exists for overexposure. The only unfortunate thing about this feature is that it doesn't work with the full-screen preview mode. You have to set your camera display to one of the Histogram modes and then you will see the highlight alert (**Figure 4.15**).

FIGURE 4.15
The T3i's highlight alert screen.

The flashing black areas are alerting me that these highlights are overexposed and will lose detail.

Notice how the histogram is pushed up against the right side of the graph.

As you work your way through the coming chapters, you will see other tips and tricks I use in my daily photography, but the most important tip I can give is that you take the time to understand the features of your camera so that you can leverage the technology in a knowledgeable way. This will result in better photographs.

Chapter 4 Assignments

The information covered in this chapter will define how you work with your camera from this point on. Granted, there may be times that you just want to grab some quick pictures and will resort to the Basic zone, but to get serious with your photography, you should learn the modes in the Creative zone.

Starting off with Program mode

Set your camera on Program mode and start shooting. Become familiar with the adjustments you can make to your exposure by turning the Main dial. While shooting, make sure that you keep an eye on your ISO.

Learning to control time with the Tv mode

Find some moving subjects and then set your camera to Tv mode. Have someone ride their bike back and forth or even just photograph cars as they go by. Start with a slow shutter speed of around 1/30 of a second and then start shooting with faster and faster shutter speeds. Keep shooting until you can freeze the action. Now find something that isn't moving, like a flower, and work your shutter speed from something fast like 1/500 of a second and then work your way down to about 1/4 of a second. The point is to see how well you can handhold your camera before you start introducing hand shake into the image.

Controlling depth of field with the Av mode

The name of the game with Av mode is depth of field. Set up three items in equal distance from you. I would use chess pieces or something similar. Now focus on the middle item and set your camera to the largest aperture that your lens allows (remember, large aperture means a small number like f/3.5). Now, while still focusing on the middle subject, start shooting with ever-smaller apertures until you are at the smallest f-stop for your lens. If you have a zoom lens, try doing this exercise with the lens at the widest and then the most telephoto settings. Now move up to subjects that are farther away, like telephone poles, and shoot them in the same way. The idea is to get a feel for how each aperture setting affects your depth of field.

Giving and taking with Manual mode

Go outside on a sunny day and, using the camera in Manual mode, set your ISO to 100, your shutter speed to 1/125 of a second, and your aperture to f/16. Now press your shutter release button to get a meter reading. You should be pretty close to that zero mark. If not, make small adjustments to one of your settings until it hits that mark. Now is where the fun begins. Start moving your shutter speed slower, to 1/60, and then set your aperture to f/22. Now go the other way. Set your aperture on f/8 and your shutter speed to 1/500. Now review your images. If all went well, all the exposures should look the same. This is because you balanced the light with reciprocal changes to the aperture and shutter speed. Now go back to our original setting of 1/125 at f/16 and try just moving the shutter speed without changing the aperture. Just make 1/3-stop changes (1/125 to 1/100 to 1/80 to 1/60), and then review your images to see what a 1/3 stop of overexposure looks like. Then do the same thing going in the opposite way. It's hard to know if you want to over- or underexpose a scene until you have actually done it and seen the results.

Share your results with the book's Flickr group!

Join the group here: flickr.com/groups/canonrebelt3i600dfromsnapshotstogreatshots

INDEX

1st and 2nd Curtain Sync modes, 226–229

A

action photography, 107–131
  annotated examples of, 82–83, 108–111
  assignments on shooting, 130–131
  automatic mode for, 71
  composing shots in, 128–130
  continuous shooting mode for, 125–126
  conveying motion in, 126–128
  depth of field in, 119–120
  direction of travel in, 112–113
  focus modes used for, 120–124
  ISO setting and, 117–118
  isolating subjects in, 119–120
  portraits as, 154–155
  shutter speed and, 89, 90, 112–115, 117–118
  speed of subject in, 114
  stopping motion in, 117–118
  subject-to-camera distance in, 115
  tips for shooting, 128–130
A-DEP mode, 101–102, 172–173, 220
AE Lock feature, 143–144, 221
AI Focus mode, 10, 78, 122–123
AI Servo mode, 78, 120–121
ambience setting, 76
angular lines, 242
animal photography
  wildlife photography, 28–29, 93, 94
  zoo photography, 252–253, 270–271
Aperture Priority (Av) mode, 93–98
  assignment on using, 105
  flash sync speeds in, 219, 220
  isolating subjects using, 119–120
  portrait photography and, 138–140
  setting up and shooting in, 97–98
  situations for using, 93–97, 265
aperture settings
  action photography and, 119–120
  depth of field and, 51, 93, 119–120
  exposure and, 47, 48–49
  f-stops and, 48, 97
  landscape photography and, 93, 94
  portrait photography and, 138–140
  prioritizing, 93–98
  zoom lenses and, 46, 98
architectural photography, 93, 96
audio recording, 55–56
Auto Cleaning feature, 36
Auto Depth of Field. *See* A-DEP mode
Auto Exposure Bracketing (AEB), 200, 262–264
Auto Focus (AF) point mode, 121–122
Auto ISO setting, 9, 74
Auto Lighting Optimizer, 266–267
Auto white balance setting, 13
autofocus system, 15–16, 215
Av mode. *See* Aperture Priority (Av) mode

B

backgrounds
  blurring, 51, 67, 138, 139
  isolating subjects from, 51, 120
  sharpness setting for, 76
backup battery, 5
Basic shooting modes, 13, 61, 66–79
  assignments on using, 79
  Close-up mode, 70
  Creative Auto mode, 75–77
  Flash Off mode, 73–74
  Landscape mode, 69
  limitations of, 78
  Night Portrait mode, 72–73
  Portrait mode, 67–68
  Scene Intelligent Auto mode, 66–67
  Sports mode, 71
battery, charging, 5
black and white images
  landscape photos as, 181–182
  portraits as, 146–149
blinkies, 103–104, 179
blur
  background, 51, 67, 138, 139
  motion, 49, 50, 127–128, 131
bonus chapters, 58, 272
bracketing exposures, 201, 262–264, 273
brightness, 20, 190
buffer, 126
built-in flash, 218–222
Bulb shutter setting, 258–259, 273

C

Canon Speedlites, 229–232
Canon T3i camera
  features illustration, 2–4
  firmware updates, 33–35
  properly holding, 22, 23
catchlight, 153
Center-Weighted metering mode, 141
charging the battery, 5
children
  action portraits of, 154
  shooting at their level, 160, 161
Clean Now feature, 36, 37
cleaning the sensor, 36–37, 59
clipping, 20–21
Close-up mode, 70, 79
close-up photography, 265
  annotated examples of, 64–65, 84–85
  aperture priority mode for, 93, 95, 265
  assignment on shooting, 273
  automatic mode for, 70
Cloudy setting, 13, 176
color composition, 244–245
color temperature, 14, 183
composition, 235–249
  action photo, 128–130
  angular lines and, 242
  annotated examples of, 236–239
  assignments on, 249
  color and, 244–245
  contrast and, 245–246
  depth of field and, 240–241
  framing and, 247–248
  landscape, 62–63, 190–193
  leading lines and, 247
  patterns and, 244
  point of view and, 243
  portrait, 155–162
  rule of thirds and, 190–192
continuous shooting mode, 124, 125–126
contrast, 245–246
Creative Auto (CA) mode, 75–77
  assignment on using, 79
  description of, 75
  settings in, 76–77
Creative shooting modes, 13, 81, 86–105
  A-DEP mode, 101–102
  Aperture Priority mode, 93–98
  assignments on using, 104–105
  Manual mode, 98–101
  Program mode, 86–88
  Shutter Priority mode, 89–93
Custom white balance setting, 13

D

Daylight setting, 13, 176
deleting images, 19
depth, creating, 192–193
depth of field
  action photos and, 119–120

A-DEP mode and, 101–102, 172–173
aperture settings and, 51, 93, 119–120
composition and, 240–241
landscapes and, 184–186, 201
lenses and, 42, 43
portraits and, 138, 140, 163
Depth of Field preview button, 185–186
Digital Photo Professional software, 39
digital zoom feature, 54
diopter adjustment, 15
Display button, 17–18, 19
distance compression, 43
distortion, 157
drive modes, 76–77, 124, 125–126
dynamic range, 38

E

environmental portraits, 140
EOS Utility program, 35
E-TTL II metering, 220–221
Evaluative metering mode, 141–142, 221
exposure, 46–49
bracketing, 201, 262–264
calculating, 48–49
factors of, 46–47
histograms of, 20–21
long, 89, 91, 217
Exposure Compensation feature, 103, 179–180, 188
Exposure Triangle, 46–47
exposure value (EV), 46
external flash, 229–232
eyes
catchlight in, 153
focusing on, 144–146
red-eye reduction, 224–226

F

Face Detection mode, 150–151
"fake" panoramas, 194–195
fill flash, 153–154
filters
black & white photography, 148, 181–182
polarizing and neutral density, 188
fireworks, 258
firmware updates, 33–35, 59
flash
built-in, 218–222
CA mode settings, 77
disabling, 216
external, 229–232
fill, 153–154
metering modes, 220–222
range/distance, 221
red-eye reduction, 224–226
synchronization, 218, 219–220, 226–229
Flash Exposure Compensation feature, 222–224
Flash Exposure (FE) Lock feature, 221–222
Flash Off mode, 73–74
Flash white balance setting, 13
flower photography, 84–85, 209, 265
Fluorescent setting, 13, 176
Focus Assist mode, 215–216
focus modes, 78
AI Focus, 10, 78, 122–123
AI Servo, 78, 120–121
assignments on, 23, 131
manual, 15–16, 123–124, 131, 215
One Shot, 11, 12, 78, 123, 144, 146
setting/choosing, 11, 123
focus points, 11, 121–122
focusing
for action photography, 120–124
for landscape photography, 184–187
for low-light photography, 214–216
for portraits, 144–146
for video recording, 52, 56
focusing system, 10–12
formatting memory cards, 31–32, 59
framing images, 155–156, 160, 161, 247–248
f-stops, 47, 48–49, 97
See also aperture settings

G

Grid overlay feature, 152, 201

H

handholding your camera, 22, 211–212, 233
HDMI cable, 58
High Capacity (SDHC) cards, 30
high dynamic range (HDR) images, 199–201
High ISO Speed Noise Reduction feature, 103, 208–210
high-definition video, 52
high-key vs. low-key images, 181
Highlight Alert feature, 103–104, 179, 188
histograms, 18–21
display modes for, 18–19
value of using, 20–21
horizon line, 247
hyper focal distance (HFD), 184–186, 201

I

image formats, 38–40
JPEG, 7–8, 38
RAW, 38–39
image quality settings, 8, 40
Image Review button, 58, 116
image stabilization (IS) lenses, 171, 211–213
interlaced video, 53
ISO setting, 8–9
action photos and, 117–118
changing on the fly, 10, 118
expansion feature, 210–211
exposure and, 47, 48–49
flash range and, 221
landscape photos and, 173–174
low-light situations and, 208–211
noise and, 10, 173–174, 175
Program mode and, 86–87
starting points for, 87
steps for selecting, 9

J

JPEG format, 7–8
quality settings, 8
RAW + JPEG option, 40
reasons for using, 38

K

Kelvin temperature scale, 14
kit lenses, 46

L

Landscape mode, 69, 79
landscape photography, 165–201
A-DEP mode for, 172–173
annotated examples of, 166–169
aperture settings and, 93, 94
assignments on shooting, 201
automatic mode for, 69
black and white, 181–182
composition of, 62–63, 190–193
exposure compensation for, 179–180, 188
focusing for, 184–187
HDR images and, 199–201
ISO settings for, 173–174
noise reduction for, 175
panoramas and, 194–198
picture style for, 69, 177–179
sunrise/sunset in, 183–184

landscape photography *(continued)*
tripods used for, 170–171, 184, 187
waterfall shots in, 188–189
white balance settings for, 176–177
LCD display
reviewing photos in, 16–21, 23
reviewing videos in, 58
zooming in on, 116
leading lines, 247
lens flare, 260
lenses, 40–46
assignments on using, 59, 131
focal lengths for, 41–46
image stabilization, 171, 211–213
normal, 43, 44
recommended, 46
telephoto, 43, 45
wide-angle, 41–42
zoom, 46
lighting
Auto Lighting Optimizer and, 266–267
red-eye reduction and, 224
See also flash; low-light photography; sunlight
lightning storms, 259, 260
Live View feature, 150–152
Face Detection mode, 150–151
Grid overlay option, 152, 201
video recording and, 52
white balance settings, 176, 177
long exposures, 89, 91, 217, 233
Low Level Format option, 32
low-light photography, 203–233
annotated examples of, 204–207
assignments on shooting, 233
automatic modes for, 72–74
built-in flash for, 218–222
external flash for, 229–232
flash compensation for, 222–224
flash sync modes and, 226–229
focusing for, 214–216
image stabilization lenses for, 211–213
long exposures for, 217
raising the ISO for, 208–211
red-eye reduction in, 224–226
luminance, 20

M

macro photography. *See* close-up photography
Magnify Image button, 116
manual focus (MF) mode, 15–16, 23, 123–124, 131, 215
Manual (M) mode, 98–101, 258–259
assignment on using, 105
Bulb setting in, 258–259
flash sync speeds in, 220
setting up and shooting in, 101
situations for using, 99–100
megapixels (MP), 39
memory cards, 30–32
choosing, 30–31
formatting, 31–32, 59
Release Shutter without Card setting, 6–7
updating the firmware using, 35
video recording and, 31
metering modes, 141, 220–222
Center-Weighted, 141
Evaluative, 141–142, 221
Partial, 141, 142–143
Spot, 141, 254–256
microphone
built-in, 55
external, 56
Mirror Lockup feature, 259
mirror reflections, 242
Monochrome picture style, 146–149, 181–182
motion
assignments on shooting, 130–131
continuous shooting mode for, 125–126
depth of field and, 119–120
examples of shooting, 108–111
shutter speed and, 49–50, 89, 90, 112–115, 117–118
techniques for conveying, 126–128
tips for shooting, 128–130
See also action photography
motion blur, 49, 50, 127–128, 131
Movie mode, 52
multiple-image panoramas, 196–198
My Menu function, 267–268

N

natural light. *See* sunlight
neutral density filter, 188
Night Portrait mode, 72–73, 219
nighttime photography. *See* low-light photography
noise
features for reducing, 175, 208–210
ISO setting and, 10, 173–174, 175
normal lenses, 43, 44
NTSC video standard, 53

O

obstructions, 270–271
off-camera flash, 229–232
One Shot focus mode, 11, 12, 23, 78, 123, 144, 146
overexposure warning, 103–104, 179

P

PAL video standard, 53
panning, 126–127, 131
panoramas, 194–198
creating "fake," 194–195
multiple-image, 196–198
Partial metering mode, 141, 142–143
patterns, 244
picture styles
Landscape, 69, 177–179
Monochrome, 146–149, 181–182
Portrait, 67–68, 149
pixel resolution, 39
point of view, 243
polarizing filter, 188
pop-up flash, 218–222
Portrait mode, 67–68, 79, 138
portrait orientation, 158
portraits, 133–163
action shots as, 154–155
AE Lock feature for, 143–144
annotated examples of, 134–137
Aperture Priority mode for, 138–140
assignments on shooting, 163
automatic mode for, 67–68, 138
black and white, 146–149
composition of, 155–162
depth of field in, 138, 140, 163
environmental, 140
Face Detection mode for, 150–151
fill flash for, 153–154
focusing for, 144–146
Grid overlay option for, 152
lenses used for, 68, 138, 140, 157
metering modes for, 141–143
Night Portrait mode for, 72–73
picture styles for, 67–68, 146–149, 163
tips for shooting, 155–162
prime lenses, 46
Program (P) mode, 86–88
assignment on using, 104
flash sync speed in, 219
setting up and shooting in, 88
situations for using, 86–88
progressive video, 53

Q

quality settings, 40
  JPEG format, 8
  video, 52–54
Quick Control screen, 143, 151

R

RAW format, 38–39
  advice for shooting in, 39
  HDR images and, 200
  RAW + JPEG option, 40
  reasons for using, 38–39
reciprocal exposures, 48–49
Red-Eye Reduction feature, 224–226
Reduce Image button, 116
reflections, photographing, 240, 241, 242
Release Shutter without Card setting, 6–7
remote switch, 259
resolution
  image, 39
  video, 52–53
reviewing photos, 16–21
  assignment on, 23
  display modes for, 17–19
  histograms used in, 18–21
  time setting for, 17
  zooming in for, 116
reviewing videos, 58
rule of thirds, 190–192, 201

S

Scene Intelligent Auto mode, 66–67, 79
SD, SDHC, and SDXC memory cards, 30
self-timer, 66, 77, 213
sensor cleaning, 36–37, 59
Shade setting, 13, 176
sharpness of images, 76, 186, 190
Shutter Priority (Tv) mode, 89–93
  action photos and, 117–118
  assignment on using, 105
  flash sync speeds in, 219
  setting up and shooting in, 92–93
  situations for using, 89–92
shutter speed
  explanation of, 89
  exposure and, 47, 48–49
  flash synchronization and, 218, 219–220
  motion and, 49–50, 89, 90, 112–115, 117–118
  prioritizing, 89–93
silhouetted subjects, 99, 100
single-point focusing, 10, 23, 144, 146
sound recording, 55–56
Speedlites, 229–232
Sports mode, 71, 79
sports photography. *See* action photography
Spot metering mode, 141, 254–256, 273
sunlight
  creative use of, 260–261
  golden hours of, 183–184
  lens flare from, 260
  portraits and, 159, 160, 163
sunny 16 rule, 48
sunrise/sunset photos, 183–184, 256–257, 273
synchronized flash, 218, 219–220, 226–229

T

tack sharp images, 186
telephoto lenses, 43, 45
Trash button, 19
tripods, 170–171, 184, 187, 265
Tungsten setting, 13
TV connection, 58
Tv mode. *See* Shutter Priority (Tv) mode

U

updating the firmware, 33–35, 59

V

video ports, 58
video recording, 52–58
  assignment on, 59
  bonus chapter on, 58
  digital zoom feature, 54
  focusing the camera for, 52, 56
  frame rates for, 53
  memory cards for, 31
  quality settings, 52–54
  reviewing recorded videos, 58
  sound recording with, 55–56
  starting/stopping, 52
  taking pictures while, 56–57
  Video Snapshot feature, 57
video standards, 53
viewfinder diopter, 15

W

waterfall photos, 89, 91, 188–189
white balance settings, 12–14
  assignment on using, 23
  choices available for, 13
  color temperature and, 14
  creating custom, 268–270
  landscape photos and, 176–177
  Live View feature and, 176, 177
  steps for selecting, 14
wide-angle lenses, 41–42, 140, 157
wildlife photography, 28–29, 93, 94
wireless flash, 229–232
wireless remote, 259

Z

zoo photography, 252–253, 270–271
zoom lenses, 46, 98
zooming the LCD display, 116