

Learn the best  
ways to compose  
your pictures!

# Canon EOS Rebel T2i/550D

From Snapshots to Great Shots

Get great detail  
in your subjects!

Jeff Revell

Canon EOS Rebel T2i / 550D: 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](http://www.peachpit.com)  
To report errors, please send a note to [errata@peachpit.com](mailto:errata@peachpit.com)  
Peachpit Press is a division of Pearson Education

Copyright © 2010 by Peachpit Press  
All photography © Jeff Revell except where noted

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](mailto: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-13 978-0-321-73391-7

ISBN-10 0-321-73391-6

9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America

# Contents

<b>INTRODUCTION</b>	<b>viii</b>
<b>CHAPTER 1: THE T2i TOP TEN LIST</b>	<b>1</b>
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. Set 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
<b>CHAPTER 2: FIRST THINGS FIRST</b>	<b>25</b>
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 T2i's Firmware	32
Cleaning the Sensor	35
Using the Right Format: RAW vs. JPEG	36
Lenses and Focal Lengths	39
What Is Exposure?	44
Motion and Depth of Field	48
Video and the T2i	51
Chapter 2 Assignments	57
<b>CHAPTER 3: THE BASIC ZONE</b>	<b>59</b>
Get Shooting with the Automatic Camera Modes	59
Poring Over the Picture	60

Poring Over the Picture	62
Full Auto Mode	64
Portrait Mode	65
Landscape Mode	66
Close-up Mode	66
Sports Mode	67
Night Portrait Mode	68
Flash Off Mode	69
Creative Auto Mode	71
Why You May Never Want to Use the Basic Zone Again	75
Chapter 3 Assignments	76
<b>CHAPTER 4: THE CREATIVE ZONE</b>	<b>79</b>
<b>Taking Your Photography to the Next Level</b>	<b>79</b>
Poring Over the Picture	80
Poring Over the Picture	82
P: Program Mode	84
Tv: Shutter Priority Mode	87
Av: Aperture Priority Mode	91
M: Manual Mode	96
A-DEP: Auto Depth of Field Mode	99
How I Shoot: A Closer Look at the Camera Settings I Use	101
Chapter 4 Assignments	102
<b>CHAPTER 5: MOVING TARGET</b>	<b>105</b>
<b>The Tricks to Shooting Sports and More</b>	<b>105</b>
Poring Over the Picture	106
Poring Over the Picture	108
Stop Right There!	110
Using Shutter Priority (Tv) Mode to Stop Motion	115
Using Aperture Priority (Av) Mode to Isolate Your Subject	117
Keep Them in Focus with AI Servo and Auto AF Focus Point Selection	118
Stop and Go with AI Focus AF	120
Manual Focus for Anticipated Action	121
Keeping Up with the Continuous Shooting Mode	123
A Sense of Motion	125
Tips for Shooting Action	127
Chapter 5 Assignments	128
<b>CHAPTER 6: SAY CHEESE!</b>	<b>131</b>
<b>Settings and Features to Make Great Portraits</b>	<b>131</b>
Poring Over the Picture	132

Poring Over the Picture	134
Automatic Portrait Mode	136
Using Aperture Priority Mode	136
Metering Modes for Portraits	139
Using the AE Lock Feature	141
Focusing: The Eyes Have It	142
Classic Black and White Portraits	143
The Portrait Picture Style for Better Skin Tones	146
Detect Faces with Live View	146
Use Fill Flash for Reducing Shadows	150
Portraits on the Move	151
Tips for Shooting Better Portraits	153
Chapter 6 Assignments	161
<b>CHAPTER 7: LANDSCAPE PHOTOGRAPHY</b>	<b>163</b>
<b>Tips, Tools, and Techniques to Get the Most Out of Your Landscape Photography</b>	<b>163</b>
Poring Over the Picture	164
Poring Over the Picture	166
Sharp and In Focus: Using Tripods	168
Using A-DEP to Maximize Depth of Field	170
Selecting the Proper ISO	171
Using Noise Reduction	173
Selecting a White Balance	174
Using the Landscape Picture Style	175
Taming Bright Skies with Exposure Compensation	177
Shooting Beautiful Black and White Landscapes	179
The Golden Light	181
Where to Focus	183
Easier Focusing	185
Making Water Fluid	186
Directing the Viewer: A Word about Composition	188
Advanced Techniques to Explore	193
Chapter 7 Assignments	201
<b>CHAPTER 8: MOOD LIGHTING</b>	<b>203</b>
<b>Shooting When the Lights Get Low</b>	<b>203</b>
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
Flash and Glass	229
A Few Words about External Flash	230
Chapter 8 Assignments	230
<b>CHAPTER 9: CREATIVE COMPOSITIONS</b>	<b>233</b>
<b>Improve Your Pictures with Sound Compositional Elements</b>	<b>233</b>
Poring Over the Picture	234
Poring Over the Picture	236
Depth of Field	238
Angles	240
Point of View	241
Patterns	242
Color	242
Contrast	244
Leading Lines	245
Splitting the Frame	246
Frames within Frames	246
Chapter 9 Assignments	248
<b>CHAPTER 10: ADVANCED TECHNIQUES</b>	<b>251</b>
<b>Impress Your Family and Friends</b>	<b>251</b>
Poring Over the Picture	252
Poring Over the Picture	254
Spot Meter for More Exposure Control	256
Manual Mode	260
Avoiding Lens Flare	263
Bracketing Exposures	265
Macro Photography	268
Auto Lighting Optimizer	269
The My Menu setting	270
Conclusion	272
Chapter 10 Assignments	273
<b>INDEX</b>	<b>274</b>

# 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 T2i, not as a rehash of the owner’s manual but as a resource to teach photography with the wonderful technology present in the T2i. 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 T2i 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 those chapters are written to stand on their own as guides to specific types of photography or shooting situations. So 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 T2i 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 "T2i 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 T2i movies even better. To access the bonus chapters, just log in or join [peachpit.com](http://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 T2i. 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 25 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  
1/250 sec.  
f/2.8  
70mm 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 in 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 you are controlling them. So let's move that Mode dial to the first of our Creative modes: Program mode.

## PORING OVER THE PICTURE

Spending time near the North Island Naval Air Station gave me a great opportunity to brush up on my action photography. There are aircraft coming and going from the base at all hours of the day. During my stay I had seen a lot of training jets taking off and landing, but on this particular day I was lucky enough to catch a pair of F18s as they broke formation overhead. I didn't have much time to think but since I had been shooting other aircraft, I was pretty confident that this shot would turn out just as well. I was even lucky enough to catch some nice vapor on the jet to the right.

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

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





It was a bright, sunny day, so a fairly low ISO of 200 still allowed for fast shutter speeds.

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

ISO 200  
1/1250 sec.  
f/5.6  
155mm 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 used 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 210–211 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 turn it off, 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 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 clicking. (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.



### FIGURE 4.4

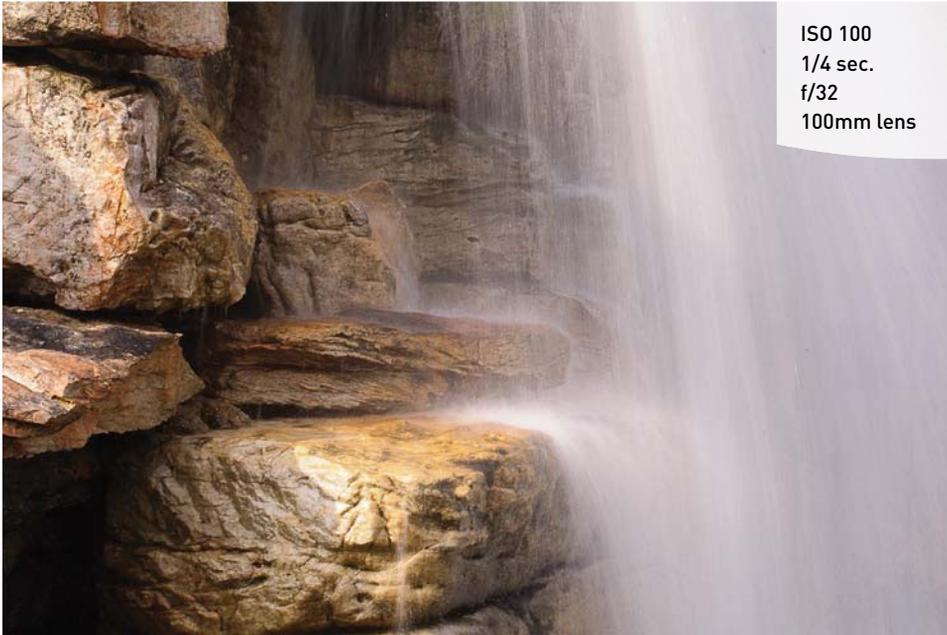
Slowing down the shutter speed allows your photographs to convey a sense of movement.





ISO 400  
25 sec.  
f/22  
30mm lens

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



ISO 100  
1/4 sec.  
f/32  
100mm lens

**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 those 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 T2i 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 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 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 never 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**)

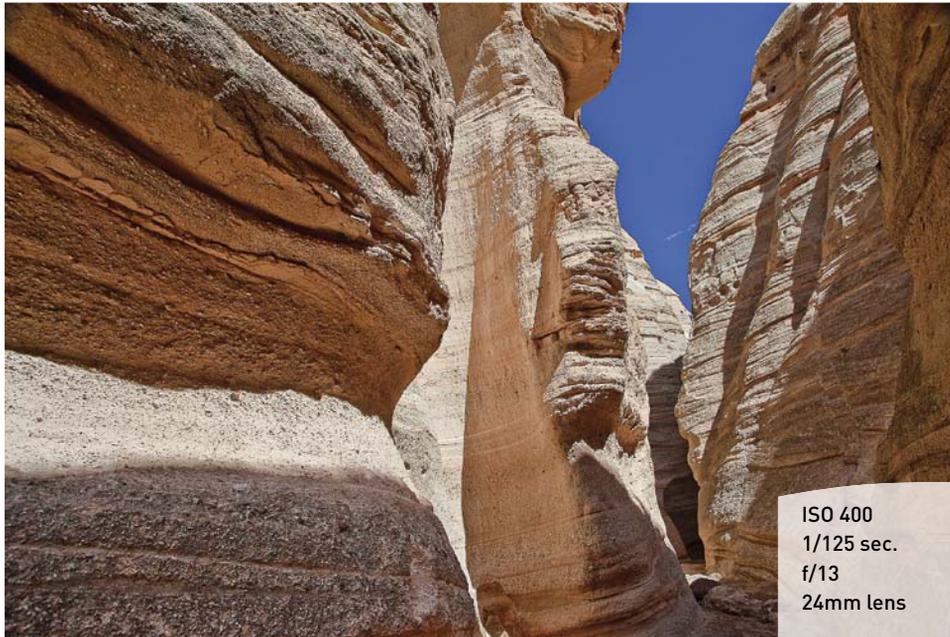
**FIGURE 4.7**

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.



ISO 100  
1/125 sec.  
f/13  
105mm lens



**FIGURE 4.9**  
Small apertures  
give more sharp-  
ness in macro  
images.

**FIGURE 4.10**

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



ISO 200  
1/1000 sec.  
f/8  
30mm lens

## 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.



## 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**

Using manual mode allows you to use exposure settings that your camera would never select if placed in an automatic mode. This image was purposely underexposed to keep the sky dark.

#### FIGURE 4.12

Beaches and snow are always a challenge for light meters.

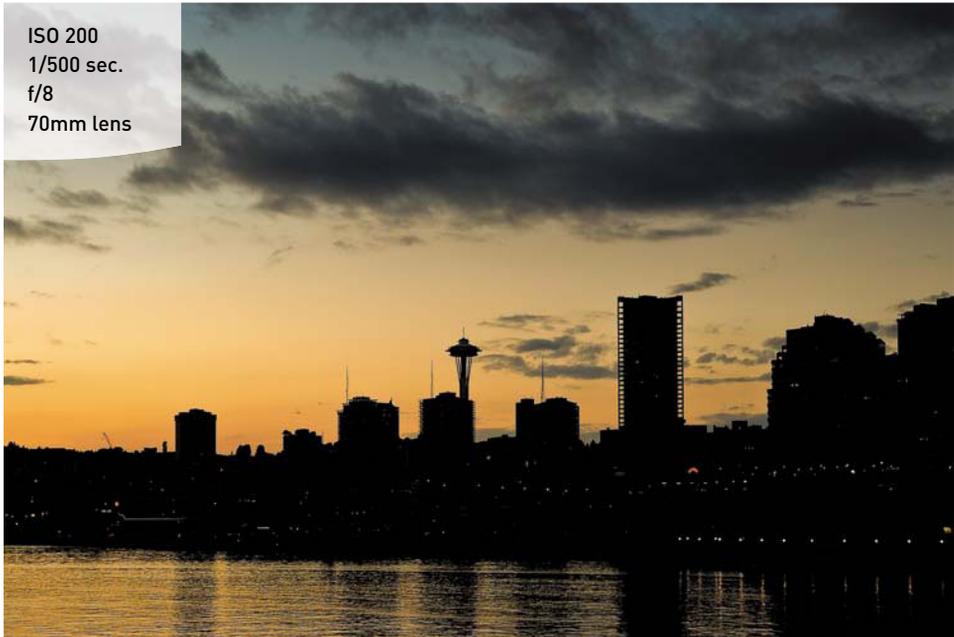
ISO 200  
1/200 sec.  
f/11  
38mm lens



#### 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.

ISO 200  
1/500 sec.  
f/8  
70mm lens



## 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 on 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 is 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.



ISO 400  
1/100 sec.  
f/14  
20mm lens

## 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.

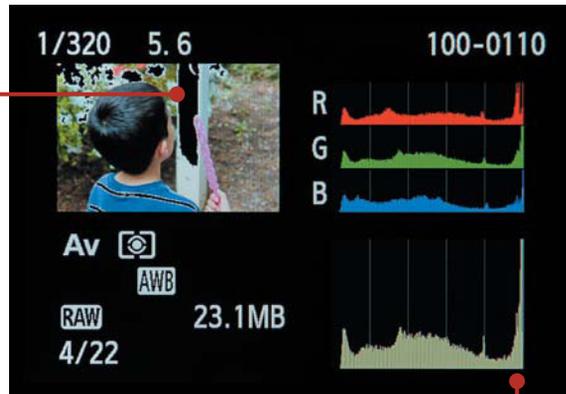
The other concern that I have when I am setting up my camera is just how low I can keep my ISO. I raise the ISO only as a last resort because each increase in sensitivity is an opportunity for more digital noise to enter my image. To that end, I always have the High ISO Noise Reduction feature turned on (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 for the Histogram mode and then you will see the highlight alert (**Figure 4.15**).

**FIGURE 4.15**  
The T2i'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 image.

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/canonrebel2i550dfromsnapshotstogreatshots](https://www.flickr.com/groups/canonrebel2i550dfromsnapshotstogreatshots)*

# INDEX

1st and 2nd Curtain Sync modes, 226–229  
14-bit RAW images, 37

## A

action photography, 105–129  
  annotated examples of, 80–81, 106–109  
  assignments on shooting, 128–129  
  automatic mode for, 67–68  
  composing shots in, 127–128  
  continuous shooting mode for, 123–124  
  conveying motion in, 125–126  
  depth of field in, 117–118  
  direction of travel in, 110, 111  
  focus modes used for, 118–122  
  ISO setting and, 115–116  
  isolating subjects in, 117–118  
  portraits as, 151–152  
  shutter speed and, 87, 88, 110–113, 115–116  
  speed of subject in, 112  
  stopping motion in, 115–116  
  subject-to-camera distance in, 113  
  tips for shooting, 127–128  
Adams, Ansel, 179  
A-DEP mode, 99–100, 170–171, 220  
AI Focus mode, 10, 76, 120–121  
AI Servo mode, 76, 118–119  
angles, 240  
animal photography, 28–29, 91, 92  
Aperture Priority (Av) mode, 91–96  
  assignment on using, 103  
  flash sync speeds in, 219  
  isolating subjects using, 117–118  
  portrait photography and, 136–138  
  setting up and shooting in, 95–96  
  situations for using, 91–95, 268  
aperture settings  
  action photography and, 117–118  
  depth of field and, 49–50, 91, 117–118  
  exposure and, 45, 46–47  
  f-stops and, 95  
  landscape photography and, 91, 92  
  portrait photography and, 136–138  
  prioritizing, 91–96  
  zoom lenses and, 43–44, 96

architectural photography, 91, 94  
audio recording, 53–55  
Auto Cleaning feature, 35  
Auto Depth of Field. *See* A-DEP mode  
Auto Exposure (AE) Lock feature, 141, 221  
Auto Exposure Bracketing (AEB), 198, 265, 267  
Auto Focus (AF) point mode, 119–120  
Auto ISO setting, 9, 69  
Auto Lighting Optimizer, 269–270  
Auto Power Off setting, 74  
Auto white balance setting, 13  
autofocus system, 15–16, 215  
Av mode. *See* Aperture Priority (Av) mode

## B

backgrounds  
  blurring, 50, 136, 137  
  isolating subjects from, 50, 118  
  portrait, 156, 157  
backup battery, 5  
Basic shooting modes, 13, 59, 64–77  
  assignments on using, 76–77  
  Close-up mode, 66–67  
  Creative Auto mode, 71–74  
  Flash Off mode, 69–70  
  Full Auto mode, 64  
  Landscape mode, 66  
  limitations of, 75  
  Night Portrait mode, 68–69  
  Portrait mode, 65  
  Sports mode, 67–68  
battery, charging, 5  
battery level indicator, 5  
black and white images  
  landscape photos as, 179–180  
  portraits as, 143–145  
blinkies, 101, 177  
blur  
  background, 50, 136, 137  
  motion, 48, 126, 129  
bonus chapters, 272  
bracketing exposures, 200, 253, 265–267, 273  
brightness, 20, 189  
buffer, 123  
built-in flash, 218–222, 231  
Bulb shutter setting, 261–262, 273

## C

Canon Speedlite system, 230  
Canon T2i camera  
  features illustration, 2–4  
  firmware updates, 32–34  
  properly holding, 22, 23  
catchlight, 150  
Center-Weighted metering mode, 139  
charging the battery, 5  
children  
  action portraits of, 151, 152  
  shooting at their level, 159  
Clean Now feature, 35, 36  
cleaning the sensor, 35–36, 57  
clipping, 20  
Close-up mode, 66–67, 76  
close-up photography, 268  
  annotated examples of, 62–63, 82–83, 254–255  
  aperture priority mode for, 91, 93, 268  
  assignment on shooting, 273  
  automatic mode for, 66–67  
Cloudy setting, 13, 174  
color composition, 242–243  
color temperature, 14, 181  
composition, 233–248  
  action photo, 127–128  
  angles and, 240  
  annotated examples of, 234–237  
  assignments on, 248  
  color and, 242–243  
  contrast and, 244–245  
  depth of field and, 238–239  
  framing and, 246–247  
  landscape, 60–61, 188–192  
  leading lines and, 245  
  patterns and, 242  
  point of view and, 241  
  portrait, 153–160  
  rule of thirds and, 190–191  
continuous shooting mode, 122, 123–124  
contrast, 244–245  
Creative Auto (CA) mode, 71–74, 77  
  description of, 71  
  settings in, 72–74  
Creative shooting modes, 13, 79, 84–103  
  A-DEP mode, 99–100  
  Aperture Priority mode, 91–96  
  assignments on using, 102–103  
  Manual mode, 96–99  
  Program mode, 84–86

Shutter Priority mode, 87-91  
Custom white balance setting, 13

## D

Daylight setting, 13, 174  
deleting images, 19  
depth, creating, 191-192  
depth of field  
  action photos and, 117-118  
  A-DEP mode and, 99-100, 170-171  
  aperture settings and, 49-50, 117-118  
  composition and, 238-239  
  landscapes and, 183-184, 201  
  lenses and, 40, 43  
  portraits and, 136, 138, 161  
Depth of Field preview button, 184  
Digital Photo Professional software, 37  
digital single lens reflex (DSLR) camera, 39  
diopter adjustment, 15  
Display button, 17-18, 19  
distance compression, 43  
distortion, 154  
drive modes, 73-74, 122  
dynamic range, 37

## E

environmental portraits, 138  
EOS Utility program, 34  
E-TTL II metering, 220-221  
Evaluative metering mode, 139-140, 221  
exposure, 44-47  
  bracketing, 200, 253, 265-267  
  calculating, 46-47  
  factors of, 45-46  
  histograms of, 20-21  
  long, 87, 89, 217  
Exposure Compensation feature, 101, 177-178, 186  
Exposure Triangle, 45-46  
exposure value (EV), 45  
external flash, 230  
eyes  
  catchlight in, 150  
  red-eye reduction, 224-226

## F

Face Detection mode, 146-148  
“fake” panoramas, 193-194

features illustration for Canon T2i, 2-4  
  back-of-camera features, 3  
  front-of-camera features, 2  
  top-of-camera features, 4  
fill flash, 150-151  
filters  
  black & white photography, 144, 179-180  
  polarizing and neutral density, 188  
fireworks, 261  
firmware updates, 32-34, 57  
flash  
  built-in, 218-222  
  disabling, 216  
  external, 230  
  fill, 150-151  
  metering modes, 220-222  
  range/distance, 221  
  red-eye reduction, 224-226  
  reflections, 229  
  synchronization, 218, 219-220, 226-229  
Flash Exposure Compensation feature, 222-224  
Flash Exposure (FE) Lock feature, 221, 222  
Flash Off mode, 69-70  
Flash setting, 13  
flower photography, 82-83, 254-255  
Fluorescent setting, 13, 174, 175  
Focus Assist mode, 215-216  
focus modes, 76  
  AI Focus, 10, 76, 120-121  
  AI Servo, 76, 118-119  
  assignments on, 23, 129  
  manual, 15-16, 121-122, 129, 215  
  One Shot, 11, 12, 76, 121, 142-143  
  setting/choosing, 11, 121  
focus points, 11  
focusing  
  for action photography, 118-122  
  for landscape photography, 183-186  
  for low-light photography, 214-216  
  for portraits, 142-143  
  for video recording, 51, 55  
focusing system, 10-12  
formatting memory cards, 31-32, 57  
framing images, 158, 246-247  
f-stops, 45, 46, 47, 95  
  *See also* aperture settings  
Full Auto mode, 64, 76

## G

Grid overlay feature, 148-149

## H

handholding your camera, 22, 211-212, 230-231  
HDMI cable, 56  
High Capacity (SDHC) cards, 30  
high dynamic range (HDR) images, 198-200  
High ISO Noise Reduction feature, 101, 208-210  
high-definition video, 51, 52  
high-key vs. low-key images, 179  
Highlight Alert feature, 101-102, 177, 186  
histograms, 18-21  
  display modes for, 18-19  
  value of using, 20-21  
horizon line, 246  
hyper focal distance (HFD), 183, 185, 201

## I

image formats, 36-39  
  JPEG, 7-8, 36  
  RAW, 37-38  
image quality settings, 8, 38-39  
Image Review button, 55, 114  
image stabilization (IS) lenses, 169, 211-213  
interlaced video, 52  
ISO setting, 8-9  
  action photos and, 115-116  
  changing on the fly, 10, 116  
  expansion feature, 210-211  
  exposure and, 45, 46-47  
  flash range and, 221  
  landscape photos and, 171-172  
  low-light situations and, 208-211  
  noise and, 10, 171-172, 173  
  Program mode and, 84-85  
  starting points for, 85  
  steps for selecting, 9

## J

JPEG format, 7-8  
  quality settings, 8  
  RAW + JPEG option, 38  
  reasons for using, 36

## K

Kelvin temperature scale, 14  
kit lenses, 44

## L

Landscape mode, 66, 76  
landscape photography, 163–201  
    A-DEP mode for, 170–171  
    annotated examples of, 164–167  
    aperture settings and, 91, 92  
    assignments on shooting, 201  
    automatic mode for, 66  
    black and white, 179–180  
    composition of, 60–61, 188–192  
    exposure compensation for, 177–178, 186  
    focusing for, 183–186  
    HDR images and, 198–200  
    ISO settings for, 171–172  
    noise reduction for, 173  
    panoramas and, 193–197  
    picture style for, 175–176  
    sunrise/sunset in, 181–182  
    tripods used for, 168–169, 183, 186  
    waterfall shots in, 186–188  
    white balance settings for, 174–175  
LCD display  
    reviewing photos in, 16–21, 23  
    reviewing videos in, 55  
    zooming in on, 114  
leading lines, 245  
lens flare, 263–264  
lenses, 39–44  
    assignments on using, 57, 129  
    explanation of, 39  
    focal lengths for, 39–44  
    image stabilization, 169, 211–213  
    normal, 40, 41, 42  
    recommended, 44  
    telephoto, 43, 44  
    wide-angle, 39–40, 41  
    zoom, 43–44  
lighting  
    Auto Lighting Optimizer and, 269–270  
    red-eye reduction and, 224  
    *See also* flash; low-light photography  
lightning storms, 262, 263  
Live View feature, 146–149  
    Face Detection mode, 146–148  
    Grid overlay option, 148–149  
    video recording and, 51

    white balance settings, 175  
    long exposures, 87, 89, 217, 231  
    Low-Level Formatting option, 32  
low-light photography, 203–231  
    annotated examples of, 204–207  
    assignments on shooting, 230–231  
    automatic modes for, 68–70  
    built-in flash for, 218–222  
    external flash for, 230  
    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, 114  
manual focus (MF) mode, 15–16, 23, 121–122, 129, 215  
Manual (M) mode, 96–99, 260–262  
    assignment on using, 103  
    Bulb setting in, 261–262  
    flash sync speeds in, 220  
    setting up and shooting in, 99  
    situations for using, 97–98  
megapixels (MP), 38  
memory cards, 30–32  
    choosing, 30  
    formatting, 31–32, 57  
    Release Shutter without Card option, 6–7  
metering modes, 139, 220–222  
    Center-Weighted, 139  
    Evaluative, 139–140, 221  
    Partial, 139, 140–141  
    Spot, 139, 256–258  
microphone  
    built-in, 53  
    external, 54–55  
mirror lockup, 259–260  
mirror reflections, 240  
Monochrome picture style, 143–145, 179–180  
motion  
    assignments on shooting, 128–129  
    continuous shooting mode for, 123–124  
    depth of field and, 117–118

    examples of shooting, 106–109  
    shutter speed and, 48, 87, 88, 110–113, 115–116  
    techniques for conveying, 125–126, 128  
    tips for shooting, 127–128  
    *See also* action photography  
motion blur, 48, 126, 129  
Movie mode, 51  
multiple-image panoramas, 195–197  
My Menu function, 270–271

## N

natural light, 161  
neutral density filter, 188  
Night Portrait mode, 68–69, 77, 219  
nighttime photography. *See* low-light photography  
noise  
    features for reducing, 173, 208–210  
    ISO setting and, 10, 171–172, 173  
normal lenses, 40, 41, 42

## O

One Shot focus mode, 11, 12, 23, 76, 121, 142–143  
online bonus chapters, 272  
overexposure warning, 101–102, 177

## P

panning, 125, 129  
panoramas, 193–197  
    creating “fake,” 193–194  
    multiple-image, 195–197  
Partial metering mode, 139, 140–141  
patterns, 242  
picture styles, 73  
    Landscape, 175–176  
    Monochrome, 143–145, 179–180  
    Portrait, 146, 151, 161  
pixel resolution, 38  
point of view, 241  
polarizing filter, 188  
pop-up flash, 218–222, 231  
Portrait mode, 65, 76, 136  
portrait orientation, 155  
portraits, 131–161  
    action shots as, 151–152  
    AE Lock feature for, 141  
    annotated examples of, 132–135  
    Aperture Priority mode for, 136–138

- assignments on shooting, 161
- automatic mode for, 65
- black and white, 143-145
- composition of, 153-160
- depth of field in, 136, 138, 161
- environmental, 138
- Face Detection mode for, 146-148
- fill flash for, 150-151
- focusing for, 142-143
- Grid overlay option for, 148-149
- lenses used for, 65, 138, 154
- metering modes for, 139-141
- Night Portrait mode for, 68-69
- picture styles for, 146, 151, 161
- tips for shooting, 153-160

prime lenses, 43

Program (P) mode, 84-86

- assignment on using, 102
- flash sync speed in, 219
- setting up and shooting in, 86
- situations for using, 84-86

progressive video, 52

**Q**

quality settings, 38-39

- JPEG format, 8
- video, 52-53

Quick Control screen, 267

**R**

RAW format, 37-38

- advice for shooting in, 37-38
- HDR images and, 198
- RAW + JPEG option, 38
- reasons for using, 37

reciprocal exposures, 46-47

Red-Eye Reduction feature, 224-226, 231

Reduce Image button, 114

reflections

- eliminating flash on glass, 229
- photographing, 240

Release Shutter without Card option, 6-7

remote switch, 262

resolution

- image, 38
- video, 52

reviewing photos, 16-21

- assignment on, 23
- display modes for, 17-19
- histograms used in, 18-21

- time setting for, 17
- zooming in for, 114

reviewing videos, 55-56

rule of thirds, 190-191

**S**

SD (Secure Digital) memory cards, 30

SDXC memory cards, 30

self-timer, 74, 213, 260

sensor cleaning, 35-36, 57

Shade setting, 13, 174

sharpening photos, 37

sharpness of images, 189

Shutter Priority (Tv) mode, 87-91

- action photos and, 115-116
- assignment on using, 103
- flash sync speeds in, 219
- setting up and shooting in, 90-91
- situations for using, 87-90

shutter speed

- explanation of, 87
- exposure and, 45, 46-47
- flash synchronization and, 218, 219-220
- motion and, 48, 87, 88, 110-113, 115-116
- prioritizing, 87-91
- silhouetted subjects, 97, 98
- silky waterfall effect, 89, 186-188
- single-point focusing, 10, 23, 142, 143
- skies, 181-182
- sound recording, 53-55

Sports mode, 67-68, 77

sports photography. *See* action photography

Spot metering mode, 139, 256-258, 273

sunlight

- lens flare from, 263-264
- portrait photography and, 156, 157, 161

sunny 16 rule, 46

sunrise/sunset photos, 181-182, 258-259, 273

synchronized flash, 218, 219-220, 226-229

**T**

tack sharp images, 183

telephoto lenses, 43, 44

Trash button, 19

tripods, 168-169, 183, 186, 259, 268

Tungsten setting, 13

TV connection, 55-56

Tv mode. *See* Shutter Priority (Tv) mode

**U**

updating the firmware, 32-34, 57

**V**

Versace, Vincent, 248

video ports, 56

video recording, 51-56

- assignment on, 57
- focusing the camera for, 51, 55
- frame rates for, 52, 53
- quality settings, 52-53
- reviewing recorded videos, 55-56
- sound recording with, 53-55
- starting/stopping, 51
- taking pictures while, 55

viewfinder diopter, 15

**W**

waterfall photos, 89, 186-188

white balance settings, 12-14

- assignment on using, 23
- choices available for, 13
- color temperature and, 14
- landscape photos and, 174-175
- Live View feature and, 175
- steps for selecting, 14

wide-angle lenses, 39-40, 41, 138, 154

wildlife photography, 28-29, 91, 92

wireless remote, 262

**Z**

zoom lenses, 43-44, 96

zooming the LCD display, 114