

***Digital Photography***  
**ALL-IN-ONE**  
**FOR**  
**DUMMIES®**  
**4TH EDITION**

**by David D. Busch**



WILEY

Wiley Publishing, Inc.



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## About the Author

As a roving photojournalist for more than 20 years, **David D. Busch** illustrated his books, magazine articles and newspaper reports with award-winning images. He's operated his own commercial studio, suffocated in formal dress while shooting weddings-for-hire, and shot sports for a daily newspaper and Upstate New York college. His photos have been published in magazines as diverse as *Scientific American* and *Petersen's PhotoGraphic*, and his articles have appeared in *Popular Photography & Imaging*, *The Rangefinder*, *The Professional Photographer*, and hundreds of other publications. He's currently reviewing digital cameras for CNet and *Computer Shopper*.

When About.com recently named its top five books on beginning digital photography, occupying the number one and two slots were this book and *Mastering Digital Photography*. His other 80 books published since 1983 include best-sellers like *Digital SLR Cameras & Photography For Dummies*, *The Nikon D70 Digital Field Guide*, *The Official Hewlett-Packard Scanner Handbook*, and *Digital Photography For Dummies Quick Reference*.

Busch earned top category honors in the Computer Press Awards the first two years they were given (for *Sorry About The Explosion* and *Secrets of MacWrite*, *MacPaint* and *MacDraw*), and later served as Master of Ceremonies for the awards.



## *Dedication*

I dedicate this book, as always, to Cathy.

## *Author's Acknowledgments*

Thanks to Wiley Publishing for the continued innovation that has helped keep this book fresh and up-to-date. Key personnel include Steve Hayes, Senior Acquisitions Editor; Pat O'Brien, Project Editor; and Heidi Unger, Copy Editor.

Technical Editor Michael D. Sullivan added a great deal to this book in addition to checking all the text for technical accuracy. A veteran photographer (in the military sense of the word!), he began his photo career in high school where he first learned the craft and amazed his classmates by having Monday morning coverage of Saturday's big game pictured on the school bulletin board. Sullivan pursued his interest in photography into the U.S. Navy, graduating in the top ten of his photo school class. Following Navy photo assignments in Bermuda and Arizona, he earned a BA degree from West Virginia Wesleyan College.

He became publicity coordinator for Eastman Kodak Company's largest division where he directed the press introduction of the company's major consumer products and guided their continuing promotion. Following a 25-year stint with Kodak, Sullivan pursued a second career with a PR agency as a writer-photographer covering technical imaging subjects and producing articles that appeared in leading trade publications. In recent years, Sullivan has used his imaging expertise as a Technical Editor specializing in digital imaging and photographic subjects for top selling books.

## **Publisher's Acknowledgments**

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# Introduction

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**T**he future of photography is in your hands, and it's becoming all digital! Not since the 19th century, when photographers had to be artisan, craftsperson, artist, chemist, and public relations expert rolled into one, has so much of the photographic process been entirely in the control of the person taking the picture. Now you can compose and view the exact picture you're going to take by using your camera's full liquid crystal display (LCD) screen. Review the picture an instant after pressing the shutter. If your computer is nearby, you can upload it seconds later, view a super-large version on your display, crop it, enhance it, and then make your own sparkling full-color print — all within minutes!

When you go digital, you never need to buy film or wait while your photos are processed in a lab. You decide which images to print and how large to make them. You can display your digital photographic work framed on your wall or proudly over your fireplace. You can make wallet-size photos, send copies to friends in e-mail, or create an online gallery that can be viewed by relatives and colleagues over the Web.

And if alchemy is in your blood, you can transform the simplest picture into a digital masterpiece by using an image editor. Correct your photos, delete your ex-brother-in-law from a family portrait, or transplant the Eiffel Tower to the seashore.

Digital photography gives you the power to take pictures on a whim or to create careful professional-quality work that others might be willing to pay for. The choices are all yours, and digital photography puts all the power in your hands. All you need is a little information about how to choose and use your tools and how to put them to work. That's what you'll find within the pages of this thick, comprehensive, all-in-one guidebook.

The most exciting aspect of digital photography is how rapidly the technology is changing to bring you new capabilities and features that you can use to improve your pictures. Today, digital cameras with 4-megapixel (mp) or less resolution are difficult to find except in photo-capable cell phones — and some cell phones offer 10-megapixel or more resolution! Even the leanest digital camera you're likely to find in stores will have 5–6 megapixels of resolution. I've tested models in this range that cost less than \$150! You'll find 7-megapixel and 9-megapixel cameras for \$500 or so, and 10-megapixel models are widely available for quite a bit less than \$1,000. Digital single-lens reflex cameras (dSLRs) with interchangeable lenses are available from companies like Nikon, Canon, Olympus, and Sony if you're willing to pay top dollar.

Adobe Photoshop has bumped up the image-editing ante with lots of new capabilities of interest to digital photographers, and even inexpensive applications like Adobe Photoshop Elements have more features than you could find in the most powerful image editor four or five years ago. Your new hardware and software tools make working with digital images easier while giving you important new capabilities.

## *About This Book*

This book, now in its fourth edition, has been updated to include all the latest technology and gadgets available to the digital photographer. It is written for the person who has a good grasp of using a computer and navigating an operating system and has at least a cursory knowledge of the operation of a digital camera. It would help if you have some familiarity with an image editor, such as Corel Paint Shop Pro, Corel Photo Paint, or Adobe's Photoshop or Photoshop Elements. It is intended to be a comprehensive reference book that you can read cover to cover or reach for when you're looking for specific information about a particular task.

Wherever I can, I sneak in a useful tip or an interesting technique to help you put digital photography to work for your project needs.

If you have some knowledge of conventional photography, this book will help you fine-tune your capabilities. If you know very little about photography, there's help for you here, too. One large chunk of the book — Book III — is devoted to tips on the most popular genres of photography, from close-up and sports photography to travel photography and shooting for publication. Check out the helpful section on getting the best composition. If you're puzzled over what equipment to buy, look to the sections on choosing cameras, photo accessories, and related equipment, such as printers and scanners.

## *What's in This Book*

This book is broken down into mini-books, each covering a general topic. Each mini-book comprises chapters, each covering a more specific topic under the general one. Each chapter is then divided into sections, and some of those sections have subsections. I'm sure you get the picture.

You can read the book from front to back, or you can dive right into the mini-book or chapter of your choice. Either way works just fine. Anytime a concept is mentioned that isn't covered in depth in that chapter, you'll find a cross-reference to another book and chapter where you'll find all the details. If you're looking for something specific, check out either the Table of Contents or the index.

The Cheat Sheet at the beginning of the book provides helpful information you'll use often. Tear it out, tape it to your monitor, and don't forget to say, "Thanks." (You're welcome.)

And finally, you get pictures. Lots of them. Many of these pictures illustrate good photo techniques as well as traps to avoid. You'll find examples of the kinds of pictures you can take right away and maybe a few that you'll want to strive to equal or exceed.

This book contains seven mini-books. The following sections offer a quick synopsis of what each book contains.

### ***Book I: Building Your Digital Photography Studio***

This section is your digital photography short course, providing all the information on a variety of topics that you really need to know to get started. This book helps you choose the right camera, whether it's your first digital camera or the one you're dreaming about as a replacement for your current model. You'll read all the facts on resolution, lens settings, storage, and accessories. One chapter shows you the requirements for setting up a PC for digital photography. The good news is that you probably already have everything you need in your computer. I'll give you some advice on some recommended upgrades that can make your system work even better with digital images.

### ***Book II: Using Digital SLRs***

This book provides a concise overview of the tools and capabilities you'll find in the latest digital SLR cameras. You find out why these cameras can do things that their non-SLR counterparts cannot and how to use those features to improve your photography.

### ***Book III: Taking Great Pictures***

This is the meat of the book for veteran and aspiring photographers alike. Each of the six chapters is devoted to a different kind of photography. You'll see the basic rules for composing great photos — and when to break them. You'll discover the secrets of close-up photography and how to make pleasing portraits of individuals and groups.

Whether shooting for publication is part of your job description or just a goal, you'll find tips on how to take publishable photos and how to market them. I also include chapters on sports and action photography as well tips on travel photography.

### ***Book IV: Basics of Image Editing***

This book is your introduction to image editing, providing general tips on what you can — and can't — do with popular image editors such as Paint Shop Pro, Corel PhotoPaint, PhotolImpact, or Adobe Photoshop and Photoshop Elements. You'll see the capabilities of these programs, discovering the full range of tools at your disposal.

### ***Book V: Editing with Adobe Photoshop and Photoshop Elements***

This book goes into a little more detail on the use of the two most popular image-editing programs: Adobe Photoshop (favored by professionals) and Adobe Photoshop Elements (an inexpensive younger sibling that has lots of power but is still easy to use). You discover the power of making selections, brush away problems in your digital photos, correct your colors, and apply special effects with filters.

Although this book is not a complete guide to Photoshop, you'll find lots of good information you can use right away to try out your digital photo-editing muscles. (For tons of in-depth coverage, read *Photoshop CS4 All-in-One Desk Reference For Dummies*, by Barbara Obermeier [Wiley].)

### ***Book VI: Restoring Old Photos***

Continue your study of Photoshop and Photoshop Elements with this book, which shows you how to restore old photos and make some common repairs to your digital images. Read chapters on scanning in print images, tips for working with slides and negatives, and some common fixes for vintage photos.

### ***Book VII: Printing and Sharing Your Digital Images***

Your digital photos are going to be so good that you won't be able to keep them to yourself. This book provides more information on printing your photos and shows you ways to share your pictures over the Internet. You'll become more comfortable with your printer's capabilities, discovering all the things that you can do with photos online, whether it's showcasing your pictures among your friends and colleagues or making photo greeting cards, T-shirts, or other gift items.

## ***Conventions Used in This Book***

Digital photography knows no operating system limits. All digital cameras and many software applications work equally well on a PC and a Macintosh. To that end, this book is cross-platform. Understandably, some differences do

crop up, particularly in the chapters that deal with image editing. In this book, Windows commands are given first, followed by Mac commands, like this:

Press Enter (or Return on the Mac) to begin a new line.

Occasionally, text will be specific to one platform or another. Commands listed often involve using the keyboard along with the mouse — for example, “Press Shift while dragging with the Rectangular Marquee tool to create a square,” or “Alt+click (Option+click) the eyeball to redisplay all layers.”

When you see a command arrow (⇨) in the text, it indicates that you should select a command from the menu bar. For example, “Choose Edit⇨Define Custom Shape” means to click the Edit menu and then choose the Define Custom Shape option.

Although this book was written based on the latest digital cameras and the newest software (such as Photoshop Elements 7), if you’re still bouncing around with earlier versions, you can still glean valuable info. You might just have to poke around a little more to find a tool or option that has moved — and of course, the topics covering new features won’t be applicable. But hey, seeing the cool new features might just be the impetus you need to go out and upgrade!

## Icons Used in This Book

While perusing this book, you’ll notice some icons in the margins beckoning you for your attention. Don’t ignore them; embrace them! These icons point out fun, useful, and memorable tidbits about digital photography, plus facts you’d be unwise to ignore.



This icon indicates information that will make your digital photography experience easier. It also gives you an icebreaker at your next cocktail party. Whipping out, “Did you know that many digital cameras can focus down to within an inch of an object?” is bound to make you the center of conversation.



This icon is a reminder of things that I want to *gently* re-emphasize. Or I might be pointing out things that I want you to take note of in your future digital photography excursions.



The little bomb icon is a red flag. Heed these warnings, or else your camera or image editor might show its ugly side.



This icon points out info you don’t necessarily need to know. If you’re interested in getting more technical, however, you’ll find such information interesting.

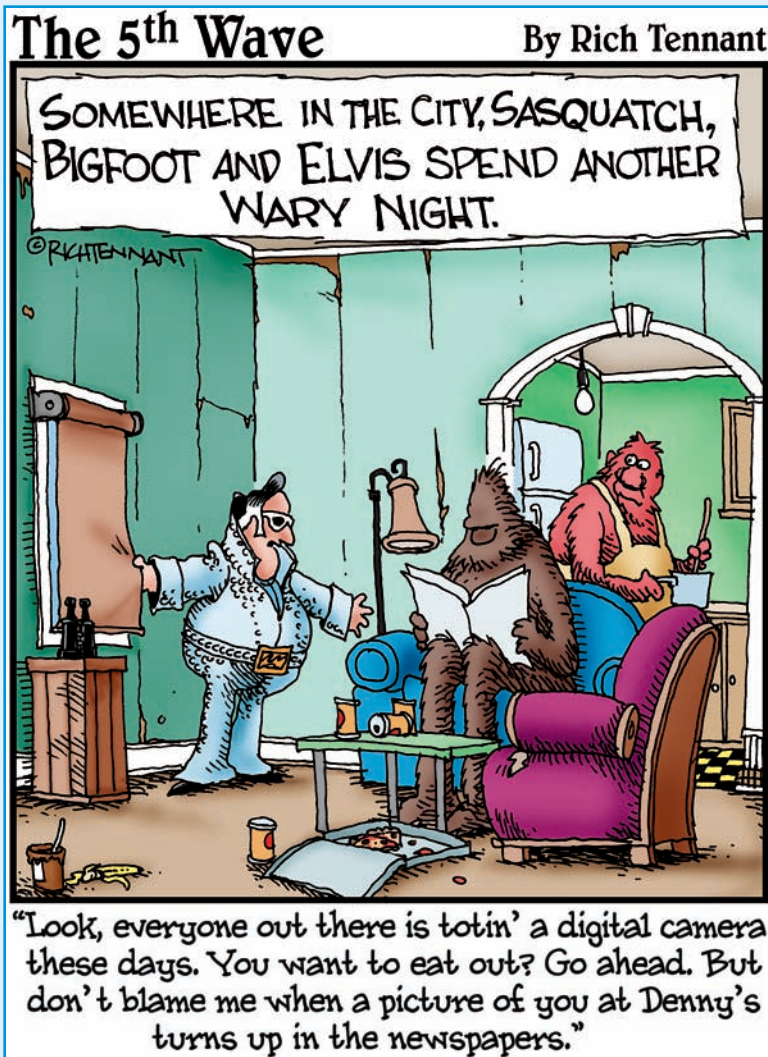
## *Where to Go from Here*

If you want your voice to be heard, you can contact the publisher of the *For Dummies* books by visiting [www.dummies.com](http://www.dummies.com), by sending an e-mail to [customer@wiley.com](mailto:customer@wiley.com), or by sending snail mail to Wiley Publishing, Inc., 10475 Crosspoint Boulevard, Indianapolis, IN 46256.

And, of course, the very next place to go is to the section of this book that covers your favorite topic. Go ahead and dive right in.

# Book I

## Building Your Digital Photography Studio



**I**n this book, I show you how to assemble a suitable digital photography arsenal, with explanations of all the key features of the weapons at your disposal, including camera equipment, computer gear, printers, and cool accessories like tripods, electronic flashes, and (if you're going the digital SLR route) add-on lenses.

I also give you in-depth explanations of key features, including zooms, viewfinders, storage options, and whether you really do need a gazillion megapixels of resolution. You'll find out how to set up your computer, transfer pictures from your camera to your hard drive, and archive your photos effectively for posterity. I also show you how a few accessories can make a dramatic difference in the quality of your photos.

