Digital Photography

FOR DUMMES



- Your Digital Studio
- Using Digital SLRs
- Taking Great Pictures
- Basics of Image Editing
- Editing with Photoshop/Photoshop Elements
- Restoring Old Photos
- Printing and Sharing Digital Images

IN FULL COLOR!

David D. Busch

Making Everything Easier!™

Digital Photography

4th Edition

ALL-IN-ONE

DUMMES



- Your Digital Studio
- Using Digital SLRs
- Taking Great Pictures
- Basics of Image Editing
- Editing with Photoshop/Photoshop Elements
- Restoring Old Photos
- Printing and Sharing Digital Images

IN FULL COLOR!

David D. Busch

Digital Photography All-in-One Desk Reference For Dummies[®], 4th Edition

Visit <u>www.dummies.com/how-</u> <u>to/content/digital-photography-allinone-for-</u> <u>dummies-cheat-she.html</u> to view this book's cheat sheet.

Table of Contents

Introduction

<u>About This Book</u> <u>What's in This Book</u>

Book I: Building Your Digital Photography Studio Book II: Using Digital SLRs Book III: Taking Great Pictures Book IV: Basics of Image Editing Book V: Editing with Adobe Photoshop and Photoshop Elements Book VI: Restoring Old Photos Book VII: Printing and Sharing Your Digital Images

Conventions Used in This Book Icons Used in This Book Where to Go from Here

Book I: Building Your Digital Photography Studio

Book I: Chapter 1: Choosing the Right Camera

Choosing a Camera Category

<u>Web cams</u> <u>Camera phones</u> <u>Point-and-shoot models</u> <u>Intermediate models</u> <u>Advanced consumer models</u> <u>Prosumer digital SLR models</u> <u>Professional models</u>

Examining the Parts of a Digital Camera Evaluating Your Lens Requirements Understanding How Lenses Work

<u>Magnifications and focal lengths</u> <u>Lens apertures</u> <u>Focus range</u> <u>Exposure controls</u>

Selecting Your Resolution Choosing Your View

<u>LCD viewfinders</u> <u>Optical viewfinders</u> <u>Electronic viewfinders (EVFs)</u> <u>SLR viewfinders</u> No Flash in the Pan: Determining Your Lighting Needs A Dozen Exotic Digital Camera Features Checking Out Ease of Use Is Your Computer Ready? Choosing a Computer Platform What Equipment Do You Need? Determining How Much Memory You Need Choosing Local Storage Archiving and Backing Up

Zip disks (R.I.P.) CD-Rs and CD-RWs DVDs

Visually Speaking

Book I: Chapter 2: Getting Your Pictures from the Camera to the Digital Darkroom

Making the Connection between Camera and Computer Getting Wired

<u>FireWire</u> <u>Riding the (infrared) light wave</u> <u>Transfers with teeth (blue)</u>

Memory Cards

<u>CompactFlash cards</u> <u>Secure Digital/MMC cards</u> <u>Memory Stick</u> <u>SmartMedia cards</u> <u>Mini-CD</u> <u>Microdrive</u>

<u>Transferring Images from Camera to</u> <u>Computer</u>

Transferring pictures using camera utility software Copying files to your hard drive Importing images into image-editing software

Organizing Your Photos

<u>Using your computer's file-management</u> <u>tools</u> <u>Using photo album software</u> <u>Using online galleries</u>

Archiving and Backing Up Photos

Backing up your best shots Using CD-R and CD-RW DVD storage Off-site storage for maximum safety

Book I: Chapter 3: Picking Up Some Accessories

Getting Support from Tripods

<u>Types of tripods</u> <u>Scrutinizing tripod features</u> Checking out tripod alternatives

Making Good Use of an Electronic Flash

<u>Types of electronic flash units</u> <u>What to look for in a photographic slave</u> <u>flash</u> <u>Lighting/flash accessories</u>

<u>Choosing a Camera Bag</u> <u>Acquiring Other Useful Devices</u>

<u>A filter holder</u> <u>Filters</u> <u>A second camera</u> <u>Cleaning kits</u> <u>Waterproof casings and housings</u> <u>Battery packs</u>

Book II: Using Digital SLRs

Book II: Chapter 1: The Digital SLR Advantage

Six Great dSLR Features

A bigger, brighter view Faster operation Lenses, lenses, and more lenses Better image quality Camera-like operation More control over depth of field

Six dSLR Drawbacks That Are Ancient History

No LCD preview? Meet Live View! Limited viewing angles? No longer! Lack of super-wide lenses? Improvements made! Dirt and dust? Automatic cleaning has arrived! No movies? Not always! Too much weight and size? The gap is narrowing!

How Digital SLRs Work Managing dSLR Quirks

Noise about noise The real dirt on sensors Going in crop factor circles

Book II: Chapter 2: Mastering Digital SLR Controls

Exposure Controls

<u>Metering modes</u> <u>Correcting exposure</u> <u>Other exposure adjustments</u> <u>Shooting modes</u>

Focus Controls Other Controls

Book II: Chapter 3: Working with Lenses

Optical Allusions Primes or Zooms Pros for primes Pros for zooms

Special Features

Book III: Taking Great Pictures

Book III: Chapter 1: Tools and Techniques of Composition

<u>Understanding Photo Composition: The Big</u> <u>Picture</u> <u>Visualizing a Concept for Your Picture</u>

What do you want your image to say? Where will the image be used? Whom are you creating the image for?

Selecting a Subject and a Center of Interest

Narrowing your subject matter Choosing one main subject Using secondary subjects

Choosing an Orientation Arranging Your Subjects

Choosing subject distance Optimizing backgrounds

Framing the Shot with the Rule of Thirds in Mind

Placing important objects at imaginary junction points When to break the Rule of Thirds

Incorporating Direction and Movement Using Straight Lines and Curves Balancing an Image Framing an Image What's That Tree Doing Growing Out of My Head?

Book III: Chapter 2: Close-Up Photography

Defining Macro Photography Why Digital Macro Photography Is Cool Picking a Place to Shoot Shooting Macros Simplified Setting Up a Macro Studio

Background check Visible means of support Lighting equipment Other equipment

Shooting Tips for Macro Photography

Positioning your subject and background Setting up your camera Lights, please Ready . . . aim . . . Fire!

Digital SLRs and Close-Up Photography

Book III: Chapter 3: Photographing People

<u>Candid People Pictures</u> <u>Capturing Satisfying Portraits</u> <u>Where to Shoot Informal Portraits</u> <u>Setting Up an Informal Portrait Environment</u>

<u>Choosing backgrounds</u> <u>Basic lighting options</u> <u>Lighting gadgets</u>

Lighting Basics

<u>Using available light</u> <u>Using a single external flash</u> <u>Using multiple light sources</u>

Preparing to Take Your First Portraits

Working on a tight schedule When you have more time

Portrait Tips

Book III: Chapter 4: Shooting for Publication

Finding Outlets for Print or Digital Publication Breaking into Newspaper Photography

<u>Submitting photos to your local</u> <u>newspaper</u> <u>Taking pictures for your local paper</u> <u>Gathering publishable photographs</u> <u>Making contact with a publication or Web</u> <u>site</u> <u>Submitting your photos</u> Getting model releases

Shooting Groups for Publication

Understanding group photography basics Photographing groups of two to two dozen Composing effective group shots Managing the group

PR Photography

Executive portraits <u>Company events</u> <u>Arranging a PR event worth</u> <u>photographing</u> <u>Other photo-worthy events</u> <u>Producing placeable PR photos</u> <u>Submitting your PR photos</u> <u>Writing cutlines</u> <u>Preparing the cutline for submission</u> <u>Submitting the photo</u> <u>Following up</u>

Book III: Chapter 5: Sports and Action Photography

<u>Choosing Your Weapons for Sports</u> <u>Photography</u> Digital Camera Features and Action Photography

Viewfinder Electronic flash Tripods and monopods Lenses and attachments

Latency and Shutter Lag

Dealing with latency of your camera Coping with shutter lag Timing your shot properly

Choosing Your Sport and Your Spot

Football Baseball and softball Basketball Soccer Other sports Winter sports: A special case

Exploring Action Photo Techniques

Setting your ISO speed Freezing action with fast shutter speeds or an accessory flash Stopping action with slow shutter speeds Panning Capturing action approaching the camera Using blur creatively Taking the Picture

Capturing great sports moments Setting up for predictable action Photographing action sequences

Book III: Chapter 6: Travel Photography

Getting the Right Gear

Selecting a camera for your needs Choosing key features for travel photography Selecting lenses for travel Considering a tripod Investing in an accessory flash Selecting a camera bag Keeping your camera powered Picking up other useful devices

<u>Getting Ready to Go on the Road</u> <u>Meeting Your Storage Requirements</u> <u>Tried-and-True Travel Photography Techniques</u>

<u>Shooting scenics</u> <u>Capturing monuments and architecture</u> <u>Shooting panoramas</u> <u>Equipment for shooting adventure sports</u> <u>Photographing people</u> <u>Capturing people and their environments</u>

Documenting Your Trip

Varying your shots Composing your shots Getting organized

Book IV: Basics of Image Editing

Book IV: Chapter 1: What You Can and Can't Do with Image-Editing Tools

Correcting Colors

You can't add color that isn't there Fixing color casts Causes of color catastrophe

Adjusting Brightness and Contrast

<u>Murky shadows and washed-out</u> <u>highlights</u> <u>Maintaining consistency</u> <u>Reviving lost detail</u>

Using Blurring and Sharpening Tools

Sharpening here and there Blurring for effect

Removing Artifacts (Tiny Blemishes)

<u>Finding an artifact's source</u> <u>Sweeping away dust</u> <u>Painting over the dirt</u> <u>Smudging or blurring out the paint lines</u> Spackling over More Serious Damage

Preparing your digital spackle Replacing content that's ripped or torn away

Removing Unwanted Image Content Combining Pictures

Pasting content from other images Using layers to create overlapping images Adjusting opacity for interesting effects

Book IV: Chapter 2: Common Editing Options

<u>Checking Out Your Editing Toolkit</u> <u>Painting Tools</u>

<u>Customizing your Brush and Pencil tools</u> <u>Choosing a paint color</u> <u>Applying the paint</u>

Selection Tools

<u>Making geometric selections</u> <u>Drawing freeform selections</u> <u>Selecting pixels by color with the Magic</u> <u>Wand</u>

Blending Tools

Smudging and smearing your colors

Blurring the edges Using the Scratch Remover

Correction Tools

Using the Sponge tool to add and remove color Adjusting lights and darks

Book V: Editing with Adobe Photoshop and Photoshop Elements

Book V: Chapter 1: Introduction to Photoshop CS4 and Photoshop Elements 7

The Relationship between Photoshop and Photoshop Elements Adobe Photoshop CS4: Alone at the Top

<u>What's good about Photoshop</u> <u>What's not so good about Photoshop</u> <u>What you can do with Photoshop</u>

What's New in Photoshop CS4 Adobe Photoshop Elements 7

What's good about Elements What's not so good about Elements What you can do with Elements

What's New in Elements 7

Book V: Chapter 2: Making Selections

Making Simple Selections with the Marquee Tools

Selecting geometric shapes Selecting single-pixel rows and columns Adding to, reducing, and combining selections

<u>Snagging Irregular Shapes with the Lasso</u> <u>Tools</u>

<u>Selecting freeform shapes</u> <u>Selecting magnetically</u>

The Magic Wand Tool's Digital Prestidigitation

<u>Making and adjusting selections based on</u> <u>color</u> <u>Controlling the magic</u>

Specialized Selection Tools

Working with the Quick Select/Selection Brush tools Selecting in Quick Mask mode

Using the Select Menu

Book V: Chapter 3: Brushing Away Problems with Digital Photos

Photoshop and Photoshop Elements' Painting and Drawing Tools Working with Brushes and Pencils

Painting with the Brush tool Working with the Pencil tool

Customizing Your Brushes and Pencils

<u>Choosing the right size and shape</u> <u>Obtaining third-party brush sets</u>

Book V: Chapter 4: Restoring Images

Adding Light and Shadows

Using the Dodge tool to lighten tones Burning your image to darken areas

<u>Using Smudging, Sharpening, and Blurring</u> <u>Tools</u>

Finger painting to blend colors and textures Using the Sharpen tool to add detail Blurring some or all of your image

Finding Relief with the Healing Tools

<u>Using the Healing Brush</u> <u>Working with the Patch tool</u> <u>Cloning content to cover damage and</u> <u>unwanted content</u> Book V: Chapter 5: Correcting Faded, Funny, or Funky Colors and Tones

<u>Using Automated Tools in Photoshop and</u> <u>Elements</u>

Auto Correction in Photoshop Auto Correction in Photoshop Elements

Adjusting Color Balance

Adjusting levels Using the Variations dialog box Equalizing colors Fixing a color cast Displaying and using channels

Working with Color Intensity and Quality

Increasing and decreasing color intensity Tinkering with brightness and contrast Riding the curves

Removing Red-Eye

Book V: Chapter 6: Enhancing Photos with Filters and Special Effects

Working with Photoshop's and Photoshop Elements' Filters

<u>Understanding how filters work</u> <u>Fixing flaws with corrective filters</u> Turning photos into paintings with artistic filters Going a little crazy with special effects filters

The Photoshop Elements Effects Palette

Displaying and moving the tab Applying an effect

Book VI: Restoring Old Photos

Book VI: Chapter 1: Scanning Old Photos

Scan Film or Prints? Scanning Options

Let the pros do it Buy a slide scanner Use a transparency-capable flatbed

Examining Different Types of Originals

Prints Transparent originals Exotica

<u>Scanning Prints</u> <u>Working with Scanner Settings</u>

<u>Choosing a resolution</u> <u>Interpolate, schmerpolate</u> <u>Sharpening</u> Blurring/descreening Knowing when to halftone Other scanner controls

Scanning Film

Prepping the film Performing the scan

Book VII: Printing and Sharing Your Digital Images

Book VII: Chapter 1: Printing Your Final Result

<u>Why Do You Need Prints?</u> <u>Evaluating Your Printing Options</u>

<u>Inkjet printers</u> <u>Laser printers</u> <u>Dye-sublimation printers</u>

Touring the Print Process

Preventing surprises with Print Preview Understanding your output options Printing your photos

Using Professional Printing Services

<u>Choosing a service bureau</u> <u>Tell them what you want, what you</u> <u>really, really want</u> Knowing when you need a service bureau

Book VII: Chapter 2: Sharing Pictures on the Web

<u>Appreciating the Advantages of Web</u> <u>Sharing</u>

Sharing personal photos with family and friends Sharing images with business associates

Choosing a Free Sharing System

<u>Using commercial sharing sites and</u> <u>services</u> <u>Displaying images on your Web space</u>

Cheat Sheet

Digital Photography All-In-One For Dummies[®], 4th Edition

by David D. Busch



Digital Photography All-In-One For Dummies[®], 4th Edition

Published by Wiley Publishing, Inc. 111 River St. Hoboken, NJ 07030-5774 www.wiley.com

Copyright $\[mathbb{C}\]$ 2009 by Wiley Publishing, Inc., Indianapolis, Indiana

Published by Wiley Publishing, Inc., Indianapolis, Indiana

Published simultaneously in Canada

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at <u>http://www.wiley.com/go/permissions</u>.

Trademarks: Wiley, the Wiley Publishing logo, For Dummies, the Dummies Man logo, A Reference for the Rest of Us!, The Dummies Way, Dummies Daily, The Fun and Easy Way, Dummies.com, Making Everything Easier, and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates in the United States and other countries, and may not be used without written permission. All other trademarks are the property of their respective owners. Wiley Publishing, Inc., is not associated with any product or vendor mentioned in this book.

Limit of Liability/Disclaimer of Warranty: The publisher and the author make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation warranties of fitness for a particular purpose. No warranty may be created or extended by sales or promotional materials. The advice and strategies contained herein may not be suitable for every situation. This work is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If professional assistance is required, the services of a competent professional person should be sought. Neither the publisher nor the author shall be liable for damages arising herefrom. The fact that an organization or Website is referred to in this work as a citation and/or a potential source of further information does not mean that the author or the publisher endorses the information the organization or Website may provide or recommendations it may make. Further, readers should be aware that Internet Websites listed in this work may have changed or disappeared between when this work was written and when it is read.

For general information on our other products and services, please contact our Customer Care Department within the U.S. at 877-762-2974, outside the U.S. at 317-572-3993, or fax 317-572-4002.

For technical support, please visit <u>www.wiley.com/techsupport</u>.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Library of Congress Control Number: 2008939186

ISBN: 978-0-470-40195-8

Manufactured in the United States of America

10987654321

۲

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 pursed 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 25year 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

We're proud of this book; please send us your comments through our online registration form located at <u>www.dummies.com/register/</u>.

Some of the people who helped bring this book to market include the following:

Acquisitions, Editorial, and Media Development

Project Editor: Pat O'Brien

Acquisitions Editor: Steve Hayes

Copy Editor: Heidi Unger

Technical Editor: Michael Sullivan

Editorial Manager: Kevin Kirschner

Editorial Assistant: Amanda Foxworth

Sr. Editorial Assistant: Cherie Case

Cartoons: Rich Tennant (<u>www.the5thwave.com</u>)

Composition Services

Project Coordinator: Erin Smith

Layout and Graphics: Stacie Brooks, Reuben W. Davis, Melissa K. Jester, Christin Swinford, Christine Williams

Proofreaders: Caitie Kelly, Linda Quigley

Indexer: Palmer Publishing Services

Publishing and Editorial for Technology Dummies

Richard Swadley, Vice President and Executive Group Publisher

Andy Cummings, Vice President and Publisher

Mary Bednarek, Executive Acquisitions Director

Mary C. Corder, Editorial Director

Publishing for Consumer Dummies

Diane Graves Steele, Vice President and Publisher

Joyce Pepple, Acquisitions Director

Composition Services

Gerry Fahey, Vice President of Production Services