

DAVID BUSCH'S MASTERING DIGITAL SLR PHOTOGRAPHY

THIRD EDITION

David D. Busch

Course Technology PTR

A part of Cengage Learning



Australia, Brazil, Japan, Korea, Mexico, Singapore, Spain, United Kingdom, United States

Contents

Preface	xiv
Introduction	xv

PART I: BASIC DIGITAL SLR TECHNOLOGY

Chapter 1 The Incredible Transformation of the Digital SLR 3

Amazing New Features	4
Sensor Sensations	5
Other Camera Hardware Improvements	7
Software Innovations	9
Inside Your Digital SLR	10
Key Components of Your dSLR	12
Sensors Up Close	14
Capturing Light	15
Noise and Sensitivity	17
Dynamic Range	18
Controlling Exposure Time	21
How We Get Color	22
Infrared Sensitivity	25
Using Interchangeable Lenses	26
Lens Interchangeability	26
Viewfinders	28
Storage	31
Choosing the dSLR That's Right for You	32
Questions to Ask Yourself	34

Chapter 2	
Mastering Your Exposure Controls	41
<hr/>	
Exposure Basics	42
Tonal Range	44
Histogram Basics	46
Understanding Histograms	48
What Affects Exposure	51
Choosing an Exposure Mode	52
Programmed and Full Auto Exposures	52
Adjusting Exposure with ISO Settings	56
Semi-Automatic and Manual Exposure Modes	57
Aperture-Priority	57
Shutter-Priority	59
Manual Exposure	60
Exposure Metering	62
Bracketing	65
Bracketing and Merge to HDR	67
Chapter 3	
Mastering the Mysteries of Focus	69
<hr/>	
Manual Focus	70
Autofocus	71
Autofocus Considerations	71
Autofocus Modes	72
How Focus Works	76
Phase Detection	76
Contrast Detection	79
Other AF Options	81
Fine-Tuning the Focus of Your Lenses	82
Chapter 4	
dSLR Quirks and Strengths	83
<hr/>	
It's Done with Mirrors	83
Mirror Bounce	84
Mirror Size and Design	87
Focus Screen	88
Pentaprism/Pentamirrors and So Forth	90
Eyepiece	90

Protecting the Sensor from Dust	92
Whither Dust	93
Dust vs. Dead Pixels	94
Protecting Sensors from Dust	99
Fixing Dusty Images	100
Cleaning the Sensor.	100
Secrets of dSLR Image Storage	104
One Slot or Two?	105
Key Considerations for Choosing a Card	110
Working with RAW and Other File Formats	111
Format Proliferation	112
JPEG	114
TIFF	115
RAW	115
Image Size, File Size, Image Quality, and File Compression.	116
Use JPEG, RAW, or TIFF?	119
Advantages of Shooting RAW+JPEG.	120
Advantages of Shooting RAW Only	121
Advantages of Shooting JPEG Only	121

Chapter 5

Working with Lenses

123

Lenses and dSLRs	124
Digital Differences	126
Lens Designs	131
If It Ain't Bokeh, Don't Fix It	134
Understanding Lens Requirements	135
Typical Upgrade Paths	140
Image Stabilization	142
The Bane of Image Blur.	144
Causes of Camera Shake	146
Diagnosing Camera Shake	147
Preventing Camera Shake	150
Using Image Stabilization	152

Chapter 6	
Working with Light	157
<hr/>	
Two Types of Light	157
Continuous Lighting Essentials	157
Electronic Flash Essentials	162
Understanding Flash Sync	162
Lighting Equipment	167
Working with Existing Light	167
Working with Electronic Flash	170
Painting with Light	172

PART II: EXPLORING NEW TOOLS

Chapter 7	
Live View and Movies	177
<hr/>	
Working with Live View	177
Live View Features	179
Shooting Movies	179
Capturing Video/Sound	180
Tips for Shooting Better Video	182
Shooting Script/Storyboards	182
Storytelling in Video	182
Composition	183
Lighting for Video	185
Recording Audio	186
Tips for Better Audio	187

Chapter 8	
Exploring GPS and WiFi	189
<hr/>	
What's Geotagging?	189
Nikon Leads the Way	190
Eye-Fi Upload	193

Chapter 9 **Using Apps** **197**

The Platforms	197
What Can They Do?	199

PART III: EXPAND YOUR SHOOTING WORLD

Chapter 10 **Travel Photography** **205**

Foreign Photography Field Trips—Fun and Affordable	205
What to Take	208
My Overseas Kit	208
The Backup Question	213
Tips for Getting Great Travel Images	215
Photographing People	219
Photographing Monuments and Architecture	221
Getting Permission	225
Have Fun!	226

Chapter 11 **People Photography** **227**

Home Studio—or Nature's Studio?	228
Setting Up Your Studio	231
What You Need	231
Your Portrait Camera	232
Backgrounds	233
Visible Means of Support	234
Make Light Work for You	236
Gadgets	239
Portrait Lighting Basics	241
The Nature of Light	242
Direct versus Soft	243
Balancing Light	244

Using Multiple Light Sources	245
Main Light	246
Fill Light	248
Background Light	248
Hair Light	249
Lighting Techniques	249
Short Lighting	250
Broad Lighting	251
Butterfly Lighting	252
Rembrandt Lighting	252
Side Lighting	254
Outdoor Lighting	254
A Touch of Glamour	256

Chapter 12

Photographing Concerts and Performances 265

Brushes with Greatness	266
Arming for Battle	273
Getting into Position	276
Interesting People	280
Techniques	282

Chapter 13

Scenic, Wildlife, and Nature Photography 289

Scenic Photography	289
Scenic Essentials	290
Eight Simple Rules for Composing Your Landscapes	292
Simplicity	293
Front and Center	294
Landscape “Portraits”	296
Rule of Thirds	298
Using Lines	299
Balance	301
Framing	302
Fusion/Separation	303
Color and Texture	304

Key Types of Landscapes 305
 Mountains 305
 Sunsets/Sunrises/Dawn/Dusk 308
 Sea and Water Scenes 311
 Changing Seasons 313
Infrared Landscape Photography 315
 What You Need 316
 Taking IR Photos 316
Wildlife Photography 317
 Stalking Your Prey Made Easy 319

Chapter 14

Capturing Action 323

Sports in a Nutshell 324
 The Importance of Position 327
 Key Sports: Play by Play 327
Continuous Shooting Basics 333
Choosing Your Lenses 337
 Zoom or Prime Lens? 337
 Focal Lengths Needed 340
Action Exposure Concerns 342
Attaining Focus 343
Selecting an ISO Speed 345
Using a Tripod or Monopod 347
Basics of Freezing Action 348
 Motion and Direction 349
Action Stopping Techniques 351
 Stopping Action with Panning 351
 Freezing Action Head On 352
 Freezing Action with Your Shutter 352
 Freezing Action with Electronic Flash 353
 Freezing Action at Its Peak 355
 When Blur Is Better 356
Some Final Tips 357

Chapter 15	
Close-Up Photography	359
<hr/>	
Macro Terminology	359
Magnification	360
Perspective	363
Depth-of-Field.	365
Getting Practical	368
Macro or General Purpose Lens?	368
Close-Up Gear	370
Some Shooting Tips	378
Glossary	381
<hr/>	
Index	393
<hr/>	