

# Table of Contents

<b>ACKNOWLEDGEMENTS</b> .....	<b>3</b>
<b>ABOUT THIS EBOOK</b> .....	<b>4</b>
YOUR RIGHTS VERSUS MINE.....	4
PRINTING THE EBOOK .....	6
<b>NOTE ON THE FIRST EDITION</b> .....	<b>9</b>
<b>TABLE OF CONTENTS</b> .....	<b>12</b>
<b>CONVENTIONS USED IN THIS EBOOK</b> .....	<b>20</b>
<b>INTRODUCTION</b> .....	<b>22</b>
<b>BEFORE YOU TAKE PICTURES</b> .....	<b>27</b>
WHAT'S AN SLR? .....	27
PHOTOGRAPHIC TERMS THAT ARE IMPORTANT TO KNOW .....	37
THE D80'S HISTORY .....	40
AN ASIDE ABOUT LENSES .....	42
BACK TO THE D80 BODY .....	44
BUT WHAT ABOUT FILM? .....	46
DEBUNKING SOME MYTHS.....	51
D80 BASICS .....	56
<i>D80 Design</i> .....	56
<i>The D80's Sensor</i> .....	62
Sensor Specifications (Size) .....	64
Sensor Specifications (Pixels) .....	64
<i>Sensor Filtration</i> .....	65
<i>Tonal Range</i> .....	71
<i>Brightness v. Darkness</i> .....	73
<i>Spectral Characteristics</i> .....	75
<i>Noise</i> .....	75
<i>Sensors and Light Alignment</i> .....	82
<i>Sensor Longevity</i> .....	84
<i>Sensor Wrap-up</i> .....	84
POWER.....	85
<i>Changing Batteries</i> .....	88
<i>Charging Batteries</i> .....	89
<i>Battery Storage</i> .....	90
<i>Clock Battery</i> .....	91
<i>Alternate Power Sources</i> .....	91
<i>Battery Life</i> .....	97
<i>Battery Notes</i> .....	103
IMAGE STORAGE .....	104
<i>Buffer Sizes</i> .....	107
<i>Secure Digital</i> .....	108
<i>Solid State Memory</i> .....	109
<i>Using Secure Digital</i> .....	112

---

<i>Nikon-Approved Secure Digital Cards</i> .....	114
<i>Formatting Cards with the Camera</i> .....	115
<i>Secure Digital Troubleshooting</i> .....	117
<b>Image Formats</b> .....	<b>119</b>
<i>Pixels</i> .....	122
<i>JPEG</i> .....	124
Setting JPEG	126
JPEG Rendering	131
JPEG Artifacts	132
<i>NEF Format</i> .....	137
D80 File Sizes	139
Compressed NEFs	140
Why NEF?	141
The NEF White Balance Controversy	143
Setting NEF	146
<i>EXIF</i> .....	147
<i>IPTC</i> .....	150
<i>DPOF and PictBridge</i> .....	152
<b>File Names and Folders</b> .....	<b>153</b>
<i>Folders</i> .....	153
<i>File Names</i> .....	163
<i>File Numbering Sequence</i> .....	169
<b>CAMERA SETUP</b> .....	<b>170</b>
<i>How Menus Work</i> .....	170
<i>The SET UP Menu</i> .....	173
<i>Setting the Menu Options that are Visible</i> .....	176
<i>Date, Time, and Language</i> .....	180
Setting Date and Time	180
Setting Language	185
<i>Programming a Comment</i> .....	186
<i>Setting the LCD Brightness</i> .....	189
<i>Setting the File Numbering Sequence</i> .....	191
<i>Set Up Recommendations Summary</i> .....	192
<i>Image Quality</i> .....	193
Approximate Images Per Card	195
<i>Viewfinder Adjustment</i> .....	197
Focus Screens.....	199
<i>Resetting the Camera</i> .....	199
<i>Resetting Basic Settings</i> .....	199
Settings after Reset	200
<i>Resetting Other Settings</i> .....	200
<i>The Last Resort Reset</i> .....	200
<i>Firmware Version</i> .....	201
<b>SHOOTING PICTURES WITH THE D80</b> .....	<b>205</b>
<b>CAMERA AND SHOOTING CONTROLS</b> .....	<b>205</b>
<i>D80 Controls</i> .....	205
<i>Front View</i> .....	206
<i>Top View</i> .....	207

---

<i>Back View</i> .....	208
<i>Side Views</i> .....	209
<i>D80 Displays</i> .....	210
<i>D80 Top LCD</i> .....	210
<i>D80 Color LCD</i> .....	212
<i>D80 Viewfinder</i> .....	213
METERING AND EXPOSURE .....	215
<i>Metering Methods</i> .....	215
<i>Matrix</i> .....	215
<i>Center-weighted</i> .....	219
<i>Spot</i> .....	220
Spot Meter Point .....	222
Metering Compatibility .....	222
<i>Setting the Metering Method</i> .....	222
<i>So Which Metering System Should You Use?</i> .....	223
<i>Metering with Digital Requires Care</i> .....	225
<i>Options for Evaluating Exposure</i> .....	228
<i>How to Interpret Histograms</i> .....	230
<i>Exposure Modes</i> .....	236
<i>Flexible Program exposure mode</i> .....	238
Program Exposure Table .....	239
<i>Scene Exposure Modes</i> .....	240
Things You Can't Set with Scene Exposure Modes .....	243
<i>The Bottom Line on Scene Exposure Modes</i> .....	243
<i>ISO Sensitivity</i> .....	245
<i>Noise Reduction Settings</i> .....	254
<i>Automatic ISO</i> .....	258
<i>How ISO Values are Created</i> .....	260
<i>ISO Operating Suggestions</i> .....	260
<i>Exposure Bracketing</i> .....	263
D80 Exposure Bracketing Values Table (Exposures) .....	264
<i>Exposure Compensation</i> .....	270
<i>White Balance</i> .....	272
D80 White Balance Settings .....	280
D80 White Balance Bracketing Values Table .....	288
<i>Changing Color Characteristics</i> .....	289
<i>Custom: Black and White</i> .....	292
<i>Custom: Tone Compensation</i> .....	298
<i>Custom: Hue</i> .....	300
<i>Custom: Saturation</i> .....	303
<i>Custom: Color Space and Color Mode</i> .....	304
<i>Custom: Setting Tone, Hue, Saturation, and Color Mode</i> .....	306
LENSES AND FOCUSING .....	308
<i>Focal Length Limitations</i> .....	309
Lens Differences When Used for 35mm film and D80 .....	313
Lens Angle of View .....	314
<i>Lens Compatibility</i> .....	316
<i>The Autofocus System</i> .....	319

Focus Type: Autofocus and Manual Focus.....	322
Focus Mode: Single Servo, Continuous Servo, and Auto Select.....	324
Autofocus Area Modes .....	327
Autofocus Summary .....	328
Autofocus Settings Summary .....	328
Autofocus Assist .....	329
Manual Focus .....	331
Sharpening.....	332
SHOOTING CONTROLS .....	340
Shutter Releases .....	340
Shutter Lag .....	341
Frame Advance.....	343
D80 Maximum Buffer Capacity .....	344
Frame Advance Troubleshooting .....	344
Self Timer.....	345
Remote Control.....	347
Depth of Field Preview.....	349
18mm Lens.....	351
20mm Lens.....	351
24mm Lens.....	351
28mm Lens.....	352
35mm Lens.....	352
50mm Lens.....	352
70mm Lens.....	353
Diffraction .....	353
Other DOF Theories .....	354
D80 Menus.....	356
PLAYBACK menu (▶ tab) .....	357
SHOOTING menu (📷 camera tab) .....	358
CSM (custom settings) menu (✎ pencil tab).....	361
SET UP menu (🔧 wrench icon).....	362
Retouch menu (Brush tab) .....	364
My Menu Option (Create your own menus) .....	365
Error Messages .....	367
IMAGE REVIEW AND PLAYBACK .....	373
Image Review .....	373
Image Review Options.....	374
Rotating Images.....	380
The PLAYBACK Menu.....	381
Deleting Images.....	382
Dealing with Folders.....	385
Hiding Images .....	390
Other PLAYBACK Menu Options .....	392
CUSTOM SETTINGS.....	393
Custom Setting #R Custom Settings Reset .....	396
Custom Setting #1 Sound Feedback Setting .....	399
Custom Setting #2 Autofocus Area Mode Setting .....	399

Custom Setting #3 Focus Area Size .....	401
Custom Setting #4 Autofocus Assist Illumination .....	402
Custom Setting #5 Lock Camera with No Secure Digital Card .....	403
Custom Setting #6 Immediate Image Review .....	404
Custom Setting #7 Automatic ISO Setting .....	405
Custom Setting #8 Grid Line Display in Viewfinder .....	409
Custom Setting #9 Viewfinder Warnings Display .....	410
Custom Setting #10 Exposure Control Increment .....	411
Custom Setting #11 Exposure Compensation Control.....	412
Custom Setting #12 Center-weight Circle Size.....	413
Custom Setting #13 Exposure Bracketing Method .....	415
Custom Setting #14 Bracketing Order .....	417
Custom Setting #15 Command Dial Functions .....	418
Custom Setting #16 FUNC Button Setting .....	419
Custom Setting #17 LCD Illumination Control.....	422
Custom Setting #18 AE-Lock Button Function .....	424
Custom Setting #19 AE Lock Behavior .....	426
Custom Setting #20 Focus Area Selection Wrap.....	427
Custom Setting #21 Focus Area Illumination .....	428
Custom Setting #22 Flash Mode for Internal Flash.....	429
Custom Setting #23 Flash Warning in Viewfinder .....	433
Custom Setting #24 Flash Shutter Speed Barrier.....	433
Custom Setting #25 FP Flash Activation .....	435
Custom Setting #26 DOF Preview Triggers Modeling Flash	436
Custom Setting #27 Color LCD Active Time.....	437
Custom Setting #28 Meter/Camera Active Time.....	438
Custom Setting #29 Self Timer Delay Setting.....	439
Custom Setting #30 Remote Control Activation Time.....	440
Custom Setting #31 Shutter Delay.....	441
Custom Setting #32 Battery Type in MB-D80.....	442
USING FLASH .....	444
What Happens When Flash is Used .....	444
Flash Basics.....	445
Digital Flash Differences.....	446
More Hidden Flash “Gotchas”.....	449
Allowable Apertures in Program and Scene Exposure Modes	449
D80 Safe Flash Head Focal Length Settings .....	450
Flash Modes.....	450
i-TTL Balanced Fill-Flash .....	451
Standard TTL .....	453
High-Speed TTL (TTL FP).....	453
Summary of i-TTL Flash Modes	454
Non-TTL Flash Modes.....	454
Setting Flash Options .....	458

Flash Option Interactions.....	460
Flash Exposure Compensation.....	461
Flash Features Available using a D80 with Speedlights.....	463
Controlled, Repeatable Flash Results.....	464
Third Party Flash Units.....	467
Studio Flash.....	468
D80 INTERNAL FLASH.....	468
Internal Flash Basics.....	470
To Set TTL on the Internal Flash.....	471
To Set Manual Flash.....	471
Internal Flash Guide Numbers (Feet).....	473
Internal Flash Guide Numbers (Meters).....	473
To Set Repeating Flash.....	473
Wireless Flash.....	476
EXTERNAL FLASH MODELS FOR THE D80.....	486
SB-600.....	486
Specifications.....	486
To Set TTL Flash.....	487
SB-600 Usable Apertures and Flash Range in TTL mode (Feet).....	488
To Set Manual Flash.....	489
SB-600 Guide Numbers at ISO 100 (feet).....	490
SB-600 Guide Numbers at ISO 100 (meters).....	490
To Manually Set the Zoom Head.....	490
To Set Flash Exposure Compensation.....	491
To Set Red-Eye Reduction.....	491
SB-600 Notes.....	492
SB-800.....	493
Specifications.....	494
To Set TTL Flash.....	494
SB-800 Usable Apertures and Flash Range in TTL mode (Feet).....	496
To Set Manual Flash.....	496
To Set Repeating Flash.....	498
Maximum Number of Repeating Flashes at Each Power Setting.....	499
To Manually Set the Zoom Head.....	500
To Set the Distance Scale to Feet or Meters.....	500
To Set Flash Exposure Compensation.....	501
To Set Red-Eye Reduction.....	502
SB-800 Notes.....	502
Flash Troubleshooting.....	503
USING A D80 IN THE FIELD.....	506
The “Routine”.....	506
General Settings You Make Once.....	506
Things to Do Before You Head Out on a Shoot.....	506
Check Each Time You Turn the Camera ON.....	508
Settings You Change Rarely (and then only for a reason).....	509
Settings You Change Often.....	510
Things to Do After Each Shooting Session.....	511
Keeping Track of Batteries.....	512

Maintaining Image Quality.....	514
Which Type of Photographer are You?.....	515
Dealing with JPEG.....	517
Custom Curves.....	519
Color Profiles, Color Spaces, and Color Modes.....	522
Setting Color Spaces (Color Modes) in the Camera.....	526
Setting Color Spaces and Profiles in Your Software.....	527
Fine Tuning the Color.....	529
Special Lighting Issues.....	531
UV and Infrared.....	531
Ultraviolet.....	532
Infrared.....	533
Shooting Under Fluorescent Lighting.....	535
Other Field Shooting Issues.....	538
Keeping the sensor Clean.....	538
Toppling a Myth.....	544
Worst Case Scenario.....	545
Panoramas.....	545
Temperature Considerations.....	546
Humidity.....	546
White Balance Settings.....	547
White Balance Color Temperatures.....	548
<b>AFTER YOU'VE TAKEN PICTURES WITH YOUR D80.....</b>	<b>551</b>
THINGS YOU DO AFTER THE SHOT IS TAKEN.....	551
THE RETOUCH MENU.....	552
D-lighting.....	553
Red-eye correction.....	555
Trim.....	557
Monochrome.....	560
Filter Effects.....	562
Small Picture.....	565
Image Overlays.....	568
TRANSFERRING YOUR IMAGES TO YOUR COMPUTER.....	573
Connecting to a Computer.....	575
PRINTING YOUR IMAGES.....	578
Selecting Images to Print.....	580
PictBridge Printing.....	582
Printing Resolution.....	587
Output on Commercial Printers.....	590
VIEWING YOUR IMAGES.....	591
Television Playback.....	591
Slide shows.....	593
DIGITAL WORKFLOW.....	600
D80-RELATED SOFTWARE.....	604
Nikon PictureProject.....	605
Nikon Capture NX.....	620

---

<i>Manipulating Images</i> .....	622
Individual Palette Tools .....	642
<i>One Image Processed by Capture</i> .....	654
<i>Nikon Camera Control Pro</i> .....	662
<i>Controlling the Camera</i> .....	662
Taking Pictures with Capture .....	664
<i>Making Settings with Capture</i> .....	668
<i>Photoshop NEF Filter</i> .....	672
<i>Other Useful Software</i> .....	675
<i>NEF Converters</i> .....	676
<i>Image Editors</i> .....	679
Manipulating Levels and Curves .....	681
<i>Catalog Programs</i> .....	684
<i>Other Manipulation Tools</i> .....	689
PHOTOSHOP ACTIONS .....	691
EXCEL WORKBOOKS .....	693
A WORD ABOUT COMPUTERS .....	694
<b>D80 ACCESSORIES</b> .....	<b>699</b>
<b>SPECIFICATIONS</b> .....	<b>701</b>
<b>GETTING SERVICE</b> .....	<b>704</b>
<b>QUESTIONS AND ANSWERS</b> .....	<b>709</b>