THE ADOBE PHOTOSHOP LIGHTROOM CLASSIC CC BOOK

Plus an essential guide to Adobe Photoshop Lightroom CC (2019 release) across desktop, web, and mobile

Martin Evening

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The Adobe Photoshop
Lightroom Classic CC
Book

Plus an essential guide to
Adobe Photoshop Lightroom CC (2019 release)
across desktop, web, and mobile

Martin Evening
Dedicated in memory of Bruce Fraser
INTRODUCTION

Work on the Adobe® Photoshop® Lightroom® program began toward the end of 2003 when a small group of Adobe people, headed by Mark Hamburg, met up at photographer Jeff Schewe’s studio in Chicago to discuss a new approach to raw image editing and image management. What would it take to meet the specific needs of those photographers who were now starting to shoot digitally? More specifically, what would be the best way to help photographers manage their ever-growing libraries of images? It was shortly after this that I was invited to join an early group of alpha testers and help work out what sort of program Lightroom should become. As we began to discuss our different digital photography workflows, it became increasingly obvious why we all needed a better way to manage and process our digital photos. Lightroom underwent some pretty major changes in those early stages as the team tried out different workflow ideas, until eventually we ended up with the Lightroom program you see now.

The Adobe Photoshop Lightroom Classic CC Book is intended to be the ultimate reference guide to Lightroom and designed to help you get the maximum benefit out of the program. In writing this book, I have had in mind both amateur and professional photographers and have aimed to provide what I believe is the most detailed book available on this subject. I also wanted to make sure space was given to explaining the background to some of the features. The feedback I have had for previous editions of this book has been encouraging. Newbies to Lightroom have found it easy to access and understand all the basics, while advanced professional users appreciate the background detail that’s provided. I have to confess, when I first started work on this project, I never imagined the book would end up being over 760 pages long. Mark Hamburg once joked that he must have failed in his mission to make Lightroom “unreasonably simple” if you needed a book as thick as mine in order to understand it!

So many changes have taken place since version 1.0 was released. As a result, not only has the book ended up being bigger, but I have also had to rewrite almost everything that was in the original edition. As always, I suggest you approach the book by reading it in chapter order, starting with Chapter 1: Introducing Adobe Photoshop Lightroom. This chapter explains some of the fundamental principles behind Lightroom and in particular, the rationale behind the new naming which has resulted in Lightroom desktop now becoming known as Lightroom Classic CC.

The Lightroom catalog is a major feature of the program, which is why I have devoted more than 200 pages of the book to providing in-depth advice on how to work with the Library module, including how to import photos and manage your photos through the use of keywords and metadata. Even more space is devoted to image processing and how to make use of all the Develop module controls. Here you will find some great picture examples, which show how Lightroom can help you unleash your creativity.
This edition of the book has a companion website: thelightroombook.com. It contains additional resource material in the form of Lightroom movie tutorials, templates, and PDF downloads. I know a lot of readers like having access to the images that appear in the book. Therefore, I have created a downloadable Lightroom catalog that contains nearly all the photos that appear here. Full instructions on how to install the catalog once you have downloaded it are available on the website.

Overall, I am still as excited about Lightroom as I was at the beginning of the program’s development, and I hope the book provides the inspiration and insights to help you get the most out of the program, too.

Martin Evening, December 2018

LIGHTROOM BOOK UPDATES
Adobe has been known to release interim updates for the Lightroom program in which new features are added. To keep readers updated, I aim to keep the book website updated, adding PDFs or movies whenever significant new features are added. So when this happens, do remember to check the book website. I also have a Facebook page where readers can keep up to date: facebook.com/MartinEveningPhotoshopAndPhotography.

ACKNOWLEDGMENTS
I would like to thank Pamela Pfiffner, for prompting me to get started on this project and for her advice and help during the planning stage of this book series. For this particular edition, my editor, Laura Norman, has done a wonderful job making sure everything has come together smoothly. Other members of the publishing team included senior production editor Tracey Croom; copyeditor Linda Laflamme; proofreader Patricia J. Pane; indexer James Minkin; and additional compositing and corrections by David Van Ness. I would also like to thank Charlene Charles-Will for the original cover design, as well as the Adobe Press marketing team.

Lightroom is really the brainchild of Mark Hamburg, without whom none of this would have happened. Since the inception of Lightroom, I have been helped a lot by the various Lightroom engineers and other members of the team. It is all thanks to them that I have managed to gather the background technical knowledge required to write this book. In particular, I would like to thank Thomas Knoll, Eric Chan, Max Wendt, and Joshua Bury (who work on the Camera Raw engineering). I would also like to thank Benjamin Warde, product managers Sharad Mangalick and Tom Hogarty, plus product evangelist Julieanne Kost, for the support and help they have given me over the years. I would especially like to thank Ian Lyons, who tech edited the book. Thank you, Ian, for clarifying all the
many technical points and providing additional insights. Thanks also go to Sean McCormack, who provided me with valuable feedback and assistance.

A number of photographic shoots have been carried out specifically for this book. I would like to thank the models, Jagna Szaykowska at Profile models, Lucy Edwards and Veronica at M&P, and Kelly from Nevs; Camilla Pascucci for makeup; Terry Calvert, James Pearce, and Nadia Foster for hair; Harriet Cotterill for the clothes styling; Neil Soni and the late Stuart Weston for the use of their studios; and Harry Dutton and Rob Cadman for assisting me. Also a big thank you to Jeff Schewe and George Jardine for documenting the shoots with stills and video.

It has been an interesting experience to see a new program emerge from scratch and has been a pleasure to share the development process in the company of a great group of Lightroom experts and fellow authors, who were all willing to share their knowledge about the program with one another. You will notice that this book is dedicated to the memory of Bruce Fraser, who sadly passed away in December 2006. Bruce was one of the original core group of Lightroom experts who helped shape the program. The Lightroom capture and output sharpening features are both based on Bruce’s original work on Photoshop sharpening techniques. Bruce was a true genius and is deeply missed by all those who knew and worked with him.

A book like this would be rather boring to read through without having some decent photographs to illustrate it with. For supplementing my own photography, I would, therefore, like to thank Sean McCormack, Eric Richmond, and Jeff Schewe, all of whom are individually credited throughout this book. And lastly, I would like to thank my wife Camilla and daughter Angelica for yet again being so understanding and patient while I was glued to the computer!
CONTENTS

1 Introducing Adobe Photoshop Lightroom ..... 1
   What is Lightroom? .................................................. 2
   Keeping things simple ............................................. 2
   Modular design ....................................................... 2
   Lightroom performance ......................................... 4
      Adobe Camera Raw processing .............................. 5
      Color controls .................................................. 5
      Managing the image library .................................. 6
      Where does Photoshop fit in? .............................. 6
      Integrating Lightroom with Photoshop .................... 7
      If your Lightroom subscription should come to an end ... 8
   What you need ........................................................ 8
   Installing Lightroom ................................................ 9
      Sleep protection .................................................. 10
      Upgrading from an older catalog ............................. 10
      Using Lightroom for the first time ......................... 11
      Lightroom preferences ......................................... 11
      Performance preferences ....................................... 16
         Graphics card compatibility ............................... 17
         Smart previews option ....................................... 17
      Lightroom Sync (mobile) preferences ....................... 18
      History panel ..................................................... 19
      Customizing the interface .................................... 20
   Getting help .......................................................... 22
   The Lightroom interface .......................................... 23
   Working through the book ....................................... 25

2 Importing photos ............................................ 27
   The main Import dialog ........................................... 28
      Copy as DNG, Copy, Move, or Add? ....................... 30
      DNG benefits ..................................................... 31
      Converting to DNG after import ........................... 31
   Import and Library module previews ......................... 32
   Import options preferences .................................... 32
   Importing files from a card ..................................... 33
   Activity Center .................................................... 37
   Source panel ....................................................... 39
3 The Library module ........................................ 67

About Lightroom catalogs ........................................ 68
  Backing up the catalog file ..................................... 70
  Backup strategies .............................................. 71
  Backup software .............................................. 72
  Time Machine and the Lightroom catalog ...................... 72
  Catalog corruption ............................................ 72
  Sync catalog disaster recovery ................................. 73
Creating and opening catalogs .................................... 74
  Creating a new catalog ......................................... 74
  Opening an existing catalog .................................... 75
The Library Module panels ........................................ 76
  Making the interface more compact ............................. 78
  The Navigator panel ........................................... 78
  The Catalog panel ............................................. 78
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Library module Toolbar</td>
<td>78</td>
</tr>
<tr>
<td>The Folders panel</td>
<td>79</td>
</tr>
<tr>
<td>Parent folders and subfolders</td>
<td>79</td>
</tr>
<tr>
<td>Show Photos in Subfolders</td>
<td>81</td>
</tr>
<tr>
<td>Locating a folder at the system level</td>
<td>82</td>
</tr>
<tr>
<td>The Folders panel/system folders relationship</td>
<td>84</td>
</tr>
<tr>
<td>Maintaining folder links</td>
<td>84</td>
</tr>
<tr>
<td>Maintaining volume links</td>
<td>85</td>
</tr>
<tr>
<td>Managing Folders and Collections</td>
<td>86</td>
</tr>
<tr>
<td>Folders panel search field</td>
<td>86</td>
</tr>
<tr>
<td>Marking folders as favorites</td>
<td>86</td>
</tr>
<tr>
<td>Adding Color Labels to Folders</td>
<td>87</td>
</tr>
<tr>
<td>Synchronizing folders</td>
<td>88</td>
</tr>
<tr>
<td>Finding the link from the catalog to a folder</td>
<td>90</td>
</tr>
<tr>
<td>How to organize your folders</td>
<td>92</td>
</tr>
<tr>
<td>The Filter bar</td>
<td>94</td>
</tr>
<tr>
<td>Exploring the Library module</td>
<td>95</td>
</tr>
<tr>
<td>Grid view options</td>
<td>95</td>
</tr>
<tr>
<td>Library Grid navigation</td>
<td>97</td>
</tr>
<tr>
<td>Working in Loupe view</td>
<td>98</td>
</tr>
<tr>
<td>Loupe preview updates in Library module</td>
<td>99</td>
</tr>
<tr>
<td>Loupe view options</td>
<td>100</td>
</tr>
<tr>
<td>Draw face region overlay</td>
<td>101</td>
</tr>
<tr>
<td>Working with photos in both Grid and Loupe view</td>
<td>102</td>
</tr>
<tr>
<td>Loupe view navigation</td>
<td>104</td>
</tr>
<tr>
<td>Loupe zoom views</td>
<td>105</td>
</tr>
<tr>
<td>Loupe view shortcuts</td>
<td>105</td>
</tr>
<tr>
<td>Loupe Overlay view</td>
<td>106</td>
</tr>
<tr>
<td>Grid and Guides</td>
<td>106</td>
</tr>
<tr>
<td>Layout Image</td>
<td>108</td>
</tr>
<tr>
<td>The Layout Overlay feature in use</td>
<td>108</td>
</tr>
<tr>
<td>Previews and preview appearance</td>
<td>110</td>
</tr>
<tr>
<td>Initial Import Photos dialog preview-building options</td>
<td>110</td>
</tr>
<tr>
<td>How Lightroom previews are generated</td>
<td>111</td>
</tr>
<tr>
<td>Camera-embedded previews vs. Lightroom previews</td>
<td>112</td>
</tr>
<tr>
<td>Missing previews</td>
<td>113</td>
</tr>
<tr>
<td>Preview size and quality</td>
<td>113</td>
</tr>
<tr>
<td>Working in Survey view</td>
<td>114</td>
</tr>
<tr>
<td>Working in Compare view</td>
<td>116</td>
</tr>
<tr>
<td>Compare view mode in action</td>
<td>118</td>
</tr>
<tr>
<td>Navigating photos via the Filmstrip</td>
<td>120</td>
</tr>
<tr>
<td>Working with a dual-display setup</td>
<td>122</td>
</tr>
<tr>
<td>Working with two displays</td>
<td>124</td>
</tr>
<tr>
<td>Rating images using flags</td>
<td>126</td>
</tr>
<tr>
<td>Refine Photos command</td>
<td>126</td>
</tr>
</tbody>
</table>
Rating images using numbered star ratings .......................... 128
Rating images using color labels ........................................ 130
Color label sets ............................................................... 131
Other ways you can use color labels .................................. 131
Grouping photos into stacks .............................................. 132
Automatic stacking ......................................................... 132
Making image selections .................................................. 134
Quick Collections ........................................................... 135
Collections ........................................................................... 136
  Module collections ........................................................... 137
  Collection badge icons .................................................... 139
  The module collections in use .......................................... 140
  Editing collections .......................................................... 140
  Target collection ............................................................ 141
Collection sets ..................................................................... 142
  Smart Collections ............................................................ 142
  Create collections from folders ....................................... 144
  Create collections from a map pin in the Map module ....... 144
Library Edit Filter ............................................................... 145
Smart Collections based on Adjustments ............................... 145
Removing and deleting photos ............................................. 146
Exporting catalogs ............................................................ 147
  Exporting with negatives ............................................... 147
  Including Smart Previews .............................................. 148
  Including available previews ......................................... 148
  Exporting without negatives ......................................... 149
Opening and importing catalogs ......................................... 149
  New photos section ....................................................... 150
  Changed Existing Photos section ................................. 150
  Limitations when excluding negatives ............................ 151
Export and import summary ............................................... 151
Working with Smart Previews ............................................ 151
  How to create Smart Previews ....................................... 152
  Making the catalog portable ......................................... 153

4 Develop module image editing ......................... 157

  Smarter image processing ............................................. 158
  Steps to get accurate color ............................................ 159
    Choosing a display ................................................... 159
    Calibrating and profiling the display ........................... 159
    White point and gamma ............................................ 160
      Matching white balances ....................................... 160
    Calibration and profiling ......................................... 161
Histogram panel .................................................. 202
  The Histogram panel and image adjustments .......... 204
Navigating the Basic panel via the keyboard ............. 205
Correcting overexposed images ................................ 206
Correcting underexposed images ............................... 208
Match Total Exposures ........................................... 210
Highlight clipping and Exposure settings ............... 212
Clipping the blacks ............................................ 212
Creating HDR photos using Photo Merge .................. 214
  Deghost Amount options ................................... 215
Creating Photo Merge panoramas ............................ 218
  Panorama projection options ............................... 219
  Boundary Warp slider ...................................... 222
  Panorama Photo Merge performance ..................... 222
  Combined HDR Panorama Photo Merge .................... 222
Clarity slider .................................................... 224
  Images that benefit most from adding Clarity .......... 225
  Negative Clarity adjustments ............................. 226
Dehaze slider ................................................... 228
  Dehaze adjustments ....................................... 228
  Dehaze as a localized adjustment ......................... 228
  Negative Dehaze adjustments .............................. 228
Vibrance and Saturation ........................................ 230
Quick Develop panel tone adjustments .................... 232
  Process version conflicts .................................. 233
  The tone and color controls .............................. 233
  A typical Quick Develop workflow ....................... 234
Editing video files in Quick Develop ...................... 237
  Loupe view video-editing options ....................... 237
The Tone Curve panel .......................................... 242
  Point Curve editing mode .................................. 244
RGB curves ...................................................... 246
The Tone Curve regions ....................................... 248
Combining Basic and Tone Curve adjustments ............. 250
  Tone range split point adjustments ..................... 254
  Refining the tone curve contrast ......................... 255
HSL/Color panel ............................................... 256
  Selective color darkening .................................. 258
  False color hue adjustments ............................. 259
  Using the HSL controls to reduce gamut clipping ..... 260
Lens Corrections panel Profile mode ....................... 262
  Lens profile corrections .................................. 262
  Accessing and creating custom camera lens profiles .. 263
  Profile lens corrections in use ........................... 264
In-camera lens corrections ........................................ 266
Removing chromatic aberration ................................ 266
Lens Corrections panel Manual mode ............................. 268
Defringe adjustments .............................................. 268
The Defringe controls in use ..................................... 269
Eyedropper tool .................................................... 269
Applying a global Defringe adjustment ....................... 270
Applying a localized Defringe adjustment ...................... 273
Vignetting sliders .................................................. 273
Transform panel ..................................................... 275
Upright adjustments .............................................. 275
How Upright adjustments work .................................. 275
Upright corrections and transparency ......................... 276
Suggested order for Upright adjustments ..................... 276
Synchronizing Upright settings .................................. 277
Guided Upright adjustments ..................................... 281
The Transform sliders ............................................ 283
Effects panel ........................................................ 284
Post-Crop vignettes ............................................... 284
Post-Crop vignette options ...................................... 284
Assessing your images ............................................ 288
Comparing before and after versions ......................... 288
Managing the Before and After previews .................... 290
Reference View .................................................... 294
Image retouching .................................................... 296
Spot Removal tool ................................................ 296
Visualizing spots .................................................. 298
Creating brush spots ............................................. 299
Retouching example using brush spots ....................... 300
Editing circle and brush spots summary ....................... 303
Tool Overlay options ............................................. 303
Undoing/deleting spots ......................................... 303
Auto-calculate behavior ......................................... 304
Spot Removal tool feathering .................................... 304
Synchronized spotting .......................................... 304
Synchronized settings spot removal ......................... 305
Auto Sync spot removal ......................................... 306
Red Eye Correction tool ......................................... 307
Pet Eye mode ....................................................... 309
Localized adjustments ........................................... 310
Initial Adjustment Brush options ............................. 310
Editing the Adjustment Brush strokes ....................... 312
Saving effect settings ............................................ 312
Localized adjustment position and editing ................. 312
Exposure dodging with the Adjustment Brush ............ 313
Auto Mask .................................................. 314
Previewing the brush stroke areas ......................... 316
Beauty retouching using negative clarity ............... 316
Hand-coloring using a Color effect ...................... 318
Localized Temperature slider adjustments ............ 320
Localized Shadows adjustments ......................... 322
Clarity and Sharpness adjustments ..................... 324
Graduated Filter tool ....................................... 326
Brush editing a Graduated Filter effect ............... 329
Radial Filter tool ............................................ 331
Correcting edge sharpness with the Radial Filter .... 333
Adding light flare effects ................................. 333
Color Range Masking ....................................... 335
Luminance Range Masking ................................. 338
Depth Range Masking ....................................... 342
History panel ................................................. 345
Snapshots panel .............................................. 346
How to synchronize snapshots ............................ 348
Easing the workflow ......................................... 350
Making virtual copies ....................................... 350
Making a virtual copy the new master ................ 350
Synchronizing Develop settings ......................... 352
Auto Sync mode ............................................. 352
Copying and pasting Develop settings ................. 354
Applying a previous Develop setting .................. 354
Lightroom and Camera Raw compatibility ............. 356
Making Camera Raw edits accessible in Lightroom .. 356
Making Lightroom edits accessible in Camera Raw ... 357
Keeping Lightroom edits in sync ...................... 357
Synchronizing Lightroom with Camera Raw ........... 358
Saving Develop settings as presets ..................... 360
Updating older presets ..................................... 361
Managing presets .......................................... 362
Auto Settings preset adjustments ....................... 362
Creating a new Develop preset .......................... 363
The art of creating Develop presets .................... 364
Understanding how presets work ....................... 365
How to prevent preset contamination ................. 366
Creating default Develop camera settings ............ 370
5 The art of black and white ................. 373
Black-and-white conversions .......................... 374
Black-and-white conversion options ................. 376
How not to convert .................................. 376
Temperature slider conversions ..................... 378
Black-and-white profiles ............................ 380
Manual black-and-white adjustments .............. 382
Black-and-white infrared effect .................... 385
Refining black-and-white conversions ............. 388
Split Toning panel ................................ 388
Split-toning a color image ......................... 390
Desaturated color adjustments .................... 392
The HSL black-and-white method in detail ....... 392
Calibration panel adjustments ..................... 393

6 Sharpening and noise reduction ............. 397
Capture sharpen for a sharp start .................. 398
Improved Lightroom raw image processing ....... 400
Output sharpening ................................ 400
Default Detail panel settings ..................... 401
Sharpen preset settings ............................ 401
  Sharpening portraits ............................. 402
  Sharpening landscapes ......................... 403
Sample sharpening image ......................... 404
Evaluate at a 1:1 view ............................. 405
Luminance-targeted sharpening ................... 405
The sharpening effect sliders ....................... 405
  Amount slider .................................. 406
  Radius slider .................................. 408
The modifying controls ......................... 410
  Detail slider .................................. 410
  Interpreting the grayscale sharpening preview 413
  Masking slider ................................ 413
  Masking slider preview mode ................... 414
Applying custom sharpening adjustments ....... 416
Creative sharpening using the adjustment tools 418
  Adding localized blurring ..................... 420
Noise reduction ................................ 422
  Luminance noise reduction .................... 423
  Color noise reduction ......................... 424
  Noise-reduction tips ......................... 424
Color noise corrections ........................................... 425
Color Smoothness slider ......................................... 426
Selective noise reduction ....................................... 428
Selective moiré reduction ...................................... 429
Moiré removal on non-raw images ......................... 431

7 Exporting from Lightroom ......................... 433

Opening images in Photoshop ................................. 434
The External editing options .................................. 434
  Edit in Adobe Photoshop ................................. 435
  Edit in additional external editing program .......... 436
  Opening non-raw images in an external editing program 437
  Creating additional external editor presets .......... 437
  External editing file-naming options .................... 438
  The file format and other file settings options .... 438
  Camera Raw compatibility ................................ 439
  How to use the external edit feature .................. 440
From Lightroom to Photoshop to Lightroom .............. 442
Extended editing in Photoshop .............................. 446
  Linking Lightroom photos as Smart Objects ........ 449
Exporting from Lightroom .................................. 451
Export presets ..................................................... 451
Export Location ................................................... 451
  Exporting to the same folder ......................... 452
File Naming ......................................................... 454
File Settings ....................................................... 454
  DNG export options ...................................... 456
Image Sizing ......................................................... 457
  When to interpolate ....................................... 457
Output Sharpening ............................................... 458
Metadata ............................................................. 458
Watermarking ....................................................... 459
  Creating watermark settings ......................... 460
Post-Processing .................................................... 461
Adding export actions in Lightroom ..................... 462
Exporting catalog images to a CD or DVD ............. 465
Exporting photos as email attachments ................ 466
Third-party Export plug-ins ................................. 468
Exporting video files .......................................... 469
8 Printing ................................................................. 471

The Print module ..................................................... 473
  Layout Style panel ................................................ 474
  Image Settings panel ............................................. 474
  Layout panel ........................................................ 475
    Margins and Page Grid ......................................... 476
  Guides panel ...................................................... 477
  Multiple cell printing .......................................... 478
  Page panel ......................................................... 480
    Adding a photographic border to a print .................. 482
    Page Options .................................................. 484
    Photo Info ..................................................... 485
  Picture Package .................................................. 486
    Image Settings panel ......................................... 486
    Rulers, Grid & Guides panel ................................. 486
    Cells panel .................................................... 486
  Custom Package .................................................. 488
    Picture Package/Custom Package Page panel .............. 489
  Page Setup ........................................................ 490
    Print resolution ................................................ 491
  Print Job panel .................................................... 492
    Print Job panel color management ......................... 492
    The Lightroom printing procedure ......................... 492
    Managed by Printer print settings (Mac) ................ 493
    Managed by Printer print settings (PC) .................. 494
    Printer profiles ............................................... 495
    Print Adjustment controls .................................. 495
    Print .......................................................... 496
    Printing modes ............................................... 497
    Print sharpening .............................................. 497
  16-bit output ..................................................... 498
  Print to JPEG File ............................................... 498
  Custom profile printing ...................................... 499
    Managed by Lightroom print settings (Mac) .............. 500
    Managed by Lightroom print settings (PC) .............. 501
    Rendering intent ............................................. 502
  Soft proofing for print output ................................ 503
    Why what you see isn’t always what you get ............ 503
    Soft proofing in practice .................................. 505
    Before and Proof preview .................................. 506
    Before state options ....................................... 510
  Saving a custom template ..................................... 511
9 Presenting your work ........................................ 513

The Book module ........................................... 514
  Creating a new book ...................................... 515
  Book Settings panel ...................................... 516
  PDF and JPEG book export ................................. 517
  Preview panel ............................................. 518
  Toolbar ..................................................... 518
  Auto Layout panel ........................................ 518
    Auto Layout Preset Editor ............................... 518
  Editing the book pages ................................... 520
  Editing the cover pages .................................. 522
  Page panel ............................................... 524
    Marking page layouts as favorites ..................... 524
    Saving custom page layouts ............................ 524
  Guides panel ............................................. 525
  Cell panel ............................................... 526
  Customizing page layout cells ........................... 526
  Text panel ............................................... 528
    Text box layouts ....................................... 528
    Adding auto text ....................................... 528
  Type panel ............................................... 530
    Type panel Character controls ......................... 530
    Target Adjustment tool options ....................... 532
    Type panel Frame controls ............................. 532
  Background panel ........................................ 532
  Publishing your book ..................................... 533
  Pause and resume the upload of a book to Blurb .... 533

The Slideshow module ...................................... 534
  The Slide Editor view ................................... 536
  Layout panel ............................................. 537
  Options panel ........................................... 538
  Overlays panel .......................................... 540
    Creating a custom identity plate ....................... 541
    Adding custom text overlays ............................ 542
  Backdrop panel ......................................... 544
  Titles panel ............................................. 546
  Music panel ............................................. 547
  Playback panel .......................................... 548
    Pan and zoom options .................................. 548
    Manual mode ........................................... 549
    Playback screen and quality settings .................. 549
  Play and preview ........................................ 549
    Navigating slideshow photos ........................... 550
    Impromptu slideshows .................................... 550
### Slideshows and selections
- Creating a Slideshow collection
- Exporting a slideshow
  - Exporting slideshows to PDF
  - Exporting slideshows to JPEG
  - Exporting slideshows to video
- Exporting a timelapse video
- Licensing audio tracks

### Managing your photos in Lightroom

#### 10 Managing your photos in Lightroom... 557

- Working with metadata
- The different types of metadata
  - A quick image search using metadata
- Metadata panel
- Metadata panel view modes
- General and EXIF metadata items
  - File Name
  - Sidecar Files
  - Copy Name
  - Metadata Status
  - Cropped photos
  - Date representation
  - Capture time editing
  - Camera model and serial number
- Artist EXIF metadata
- Custom information metadata
- Metadata presets
- Editing and deleting metadata presets
- IPTC metadata
- IPTC Extension metadata
- A more efficient way to add metadata
- Metadata editing and target photos
- Mail and web links
- Copyright status
- Keywording and Keyword List panels
- Keeping metadata private
- Synonyms: The hidden keywords
- Applying and managing existing keywords
- Auto-complete options
- Removing keywords
- Keyword hierarchy
- Keyword filtering
- Importing and exporting keyword hierarchies
Photo filtering and searches ........................................... 588
Keyword suggestions .................................................... 589
Keyword sets .............................................................. 590
Creating your own custom keyword sets ......................... 591
The Painter tool .......................................................... 592
People view mode ......................................................... 592
Find Faces Again ........................................................ 594
Displaying face regions ............................................... 599
Single Person view mode .............................................. 599
Expanding and collapsing stacks .................................... 599
People view mode Toolbar ............................................. 599
Person keywords ......................................................... 600
Exporting Person keywords ........................................... 602
Photo filtering and searches ........................................... 602
Filtering photos in the catalog ....................................... 604
Three ways you can filter the catalog ............................... 604
Filtering photos via the Filmstrip .................................. 605
Adding folders as favorites .......................................... 606
Flagged photos filter options ....................................... 606
Edited filter options .................................................. 606
Star rating filter options .............................................. 606
Creating refined selections via the Filmstrip .................... 606
Color label filter options ............................................ 607
Virtual copy and master copy filtering .............................. 609
Subfolder filtering ........................................................ 610
Making filtered image selections .................................... 611
Filter bar ................................................................. 612
The Filter bar layout .................................................... 613
Text filter searches ....................................................... 613
Search rules ............................................................. 614
Combined search rules ................................................. 615
Fine-tuned text searches .............................................. 615
Attribute filter searches .............................................. 616
Metadata filter searches .............................................. 616
Metadata filter options .............................................. 617
Metadata filter categories .......................................... 618
Locating missing photos .............................................. 619
Custom filter settings ................................................. 620
Empty field searches .................................................. 620
Advanced searches .................................................... 621
Publishing photos via Lightroom ..................................... 622
Saving and reading metadata ........................................ 626
Saving metadata to the file ......................................... 628
Tracking metadata changes ......................................... 629
XMP read/write options .............................................. 631
Where is the truth? ........................................... 634
Synchronizing metadata settings .......................... 635
Sorting images .............................................. 636
Sort functions .............................................. 637
Color label sorting ......................................... 637
Geotagging images ........................................ 638
GPS devices ............................................... 638
Embedding GPS metadata in a photo ...................... 639
Reverse-geocoding ........................................ 640
The Map module ........................................... 640
Navigation .................................................. 641
Location filter bar .......................................... 642
Loading GPX tracklogs ..................................... 642
Editing pins ................................................ 643
Matching photos to a recorded tracklog ................. 644
Manually geotagging photos in the Map module ......... 646
Saved Locations panel ..................................... 648
Exporting GPS-encoded files ............................... 648
Filtering geocoded images ................................. 649

11 Lightroom CC/mobile ................................. 651
Lightroom CC/mobile workflow .......................... 652
What Lightroom CC/mobile can and cannot do ....... 654
Lightroom CC for Apple TV ............................... 654
Setting up Lightroom CC/mobile ......................... 655
  How Lightroom CC edits are synchronized .......... 657
  Where Lightroom CC/mobile photos are kept ...... 658
  Creating a synchronized collection from Lightroom Classic CC .......................... 659
Working with Lightroom CC for mobile ................. 660
  Single image view ....................................... 661
  Edit menu settings ..................................... 665
  Manage and create presets ............................. 665
  Lightroom CC for mobile preferences ............... 667
  Album/folder options .................................. 667
Adding photos directly via a device ...................... 668
  Lightroom CC for mobile camera ...................... 668
  HDR and Long Exposure ................................ 669
Guided Tutorials ........................................ 670
Shared views ............................................. 670
Watermarking in Lightroom CC for iOS .................. 670
Lightroom CC for mobile searches ....................... 670
Lightroom CC for web view .............................. 672
12 Lightroom preferences and settings ... 705

General preferences .......................................................... 706
  Show splash screen ....................................................... 706
  Check for updates ......................................................... 706
  Catalog selection .......................................................... 707
  Import options ............................................................. 707
  Completion sounds and prompts ....................................... 708
Presets preferences .......................................................... 708
  Camera-linked settings .................................................. 709
  Location section .......................................................... 709
  Lightroom Defaults section ............................................ 709
One of the most powerful features in Lightroom is the image-processing engine, especially the way the image-adjustment processing is deferred until the time you choose to edit in Photoshop or export an image. This method of image processing actually originated in the early days of computer imaging, when deferred processing was adopted by such programs as Live Picture and xRes as a means to speed up the image editing. Computers were a lot slower back then, but it was possible to manipulate large image files in real time on relatively slow computers (with as little as 24 MB of RAM) and defer the image-rendering process to the end of a photo edit session.

Of course, these days, you can edit large images in no time at all in Photoshop. But one of the key advantages of Lightroom is that you can apply a crop, spot the image, make localized adjustments, tweak the color, do some more retouching, readjust the crop again, and so on, without ever touching the pixels in the original photograph. In a conventional pixel-editing workflow, the pixels are always modified in a consecutive sequence of steps. When you work in Lightroom, no restrictions are placed on the order in which you do things, and the edit changes you make in the Develop module are applied only when you output a photo as a rendered file, such as a PSD, TIFF, or JPEG.
SMARTER IMAGE PROCESSING

The Lightroom image-processing engine is notable for a number of reasons. First, the Adobe engineers have made Lightroom simple to use—there are no color management settings, color space issues, or profile warnings to worry about. But just because the image processing is simpler does not mean it is inferior, as these changes have been made without compromising on quality. The Lightroom image-processing engine ultimately reduces all of its pixel calculations into a single calculation, in which any image degradation is minimized. Another advantage of the Lightroom image-processing engine is that you have full access to all of the image controls when working with JPEG, PNG, HEIF, TIFF, and PSD images, just as you have when working with raw camera files. You can use any of the image controls available in the Lightroom Develop module.

Lightroom uses a single RGB workspace to carry out all its image calculations, which is similar to the ProPhoto RGB space that was originally specified by Kodak. It uses the same coordinates as ProPhoto RGB but has a gamma of 1.0 instead of 1.8. By using a 1.0 gamma, the Lightroom RGB workspace is able to match the native 1.0 gamma of raw camera files, and its wide gamut can therefore contain all the colors that any of today's digital cameras are capable of capturing. For these reasons, the Lightroom RGB workspace is ideally tailored to the task of processing the color data contained in the raw camera files. Concerns about banding in wide-gamut color spaces have perhaps been a little overrated, because it is really quite difficult to pull apart an image in ProPhoto RGB to the point where you see gaps appearing between the levels. Suffice it to say, the Lightroom RGB space uses a native bit depth of 16 bits per channel, which means that Lightroom is able to process up to 32,768 levels of tonal information per color channel. Because a typical digital camera will be capable of capturing only up to 4096 levels per color channel, it is probably true to say that the Lightroom RGB workspace can safely handle all of the tone and color information captured by any digital camera.

The Develop controls in Lightroom can be accessed as soon as a low-resolution preview has had a chance to load, instead of waiting for a full preview. For example, if a Smart Preview is available, Lightroom loads this first, before loading the full-sized image. When going to the Develop module, individual panels are not loaded into memory unless they are already open. This helps improve the initial launch speed of the Develop module. Lightroom Classic CC has fast switching from the Library to Develop modules. Furthermore, if you have 16 GB RAM or more, sequential navigation (using the keyboard arrows to move from one photo to the next) in Develop should be nice and fast. This is because Lightroom pre-caches upcoming photos, both before or after the direction you are navigating in. While you spend a few seconds on an image, Lightroom pre-loads the next two or three images to enable faster scrolling through these.
STEPS TO GET ACCURATE COLOR

The color management system in Lightroom requires no configuration, because Lightroom automatically manages the colors without your having to worry about profile mismatches, which color space the image is in, or what the default workspace is. There may be problems with missing profiles, but this applies only to imported files where a conscious decision has already been made not to color-manage an image. Apart from these rare instances, you can rely on Lightroom to manage the colors perfectly from import through to export and print. However, you do need to give special consideration to the computer display and ensure that it is properly calibrated and profiled before you can rely on it to judge the colors of your images. This is because you want the display to show as accurately as possible what you are likely to see in print. Calibrating and profiling the display is essential, but it does not have to be complicated or expensive. So if you want to get the colors right and avoid disappointments, you should regard the following pages as essential reading.

CHOOSING A DISPLAY

The choice of display essentially boils down to which type of liquid crystal display (LCD) you should buy. As with all things in life, you get what you pay for. Because the display is what you will spend all your time looking at when making critical image adjustments, it is pointless to cut corners, just as it is pointless to scrimp on buying anything but the best-quality lenses for your camera. There are different classes of LCDs, starting with the budget-priced screens (such as those used on laptop computers) to large professional LCD displays that offer a high degree of color accuracy and wide color gamut, such as the Eizo ColorEdge and the NEC SpectraView. Both these displays are easy to calibrate and profile, and the large screen size means they are comfortable to work with.

CALIBRATING AND PROFILING THE DISPLAY

The only truly effective way to calibrate and profile a display is to use a colorimeter or spectrophotometer. It is possible to buy a good device along with the necessary software package for under $250. You can spend up to $1000 on a good-quality display plus calibration package or spend even more on a professional calibration kit that also allows you to measure and build custom print profiles. But if all you want to do is calibrate and profile the display, these more expensive devices do not offer any significant advantages over what a basic colorimeter device can do. Having said that, some software packages can help you build better profiles using the same basic hardware-profiling kit.

NOTE

You do not need to be concerned with RGB workspaces or profiles when working in Lightroom. As for raw files, Lightroom automatically applies profiles for all the currently supported cameras.

In the case of pixel images that have been imported into Lightroom, the profile recognition is handled automatically. Image files in Lightroom can be in any color space and color-managed accordingly (provided the image has an embedded profile). Whenever Lightroom encounters a file with a missing profile, it assumes the image to be sRGB.
There are two stages to a profiling process. The first step is to calibrate the display to optimize the screen brightness and contrast, and to set the desired white point and gamma (Figure 4.1). The second step involves measuring various color patches on the screen; the measurements made from these patches provide the source data to build a profile. On some of the advanced displays, there may be controls that allow you to adjust the brightness and contrast of the display, as well as possibly some color controls for setting different white points and fine-tuning the color output. These settings can be adjusted during the calibration process to optimize the performance and neutralize the display before making the profile measurements. Most LCDs have only a brightness control that adjusts the luminance of the backlight on the screen. So when running through the preliminary calibration steps, there is often nothing you can adjust other than the brightness, and you simply skip the steps where you are unable to make any adjustments to the display.

**WHITE POINT AND GAMMA**

Apart from asking you to adjust the hardware settings, the calibration software will ask you to choose appropriate white point and gamma settings before you proceed to build the profile. On an LCD, it will not be possible to manually adjust the white point the way you could with a cathode ray tube (CRT) display. You can set a specific white point for an LCD, such as 6500 K, whereas some people may prefer to select the native white point for the LCD they are calibrating.

**Matching white balances**

People often assume that the goal should be to match the white balance between different displays and viewing light sources. For a side-by-side comparison using a light viewing box, this will be important. But the fact is, human vision is adaptive and our eyes always evaluate colors relative to what is perceived to be the whitest white. In reality, our eyes are constantly compensating and can accommodate changes in white balance from one light source to another. You can edit an image on a display using a white point of 6500 K and check the results with a viewing box that has a white balance of 5500 K, as long as the two are a distance apart.

Whether you are using a Mac or a PC, the gamma should ideally be set to 2.2. The 1.8-gamma Mac option is really only there for quaint historical reasons. In fact, the Mac 1.8 gamma dates back to the early days of Macintosh computers, long before color displays and ICC color management. Back then, it was found that the best way to get an image viewed on a Macintosh screen to match the output of an Apple black-and-white laser printer was to adjust the gamma of the monitor to 1.8. These days, Adobe programs such as Photoshop and Lightroom always compensate for whatever monitor gamma is used by the system to ensure that the images are displayed at the correct brightness regardless of the gamma that was selected when calibrating the display. Setting the gamma to 1.8 instead of 2.2
will have absolutely no impact on the lightness of the images that are displayed in Lightroom. These will be perceived as being displayed at the same brightness regardless of the monitor gamma. However, if you are mainly using your computer for image-editing work, it is best to use a gamma setting of 2.2, as the image tones will be more evenly distributed when previewed on the display. When using the basIICColor software described below, you can also select the L* option. The technical reason why this is recommended is because L* uses the luminance tone axis as prescribed in the Lab color space; it’s better because it more closely matches human perception and provides a more linear gray axis.

CALIBRATION AND PROFILING
The performance of your display will fluctuate, so it is advisable to update the display profile from time to time. LCDs vary in performance a lot less than CRT displays used to, so you will probably need to re-profile once every month or so only.

For accurate calibration, you first need to decide whether you want to buy a basic device for calibrating the display only or a more advanced device that allows you to create your own custom print profiles. The following steps show how the basIICColor software can be used to calibrate and profile a display using a display calibration device such as the X-Rite i1Photo. Other calibrating software will look different of course, but the underlying principles of calibration and profiling will be the same. Prior to doing a calibration, you should make sure the calibrator head is clean and also ensure that the screen surface is clean and free of dust before making any measurements.

1. To start with, I set the color temperature. Because you cannot physically adjust the white point of an LCD, it is usually best to select the Native White Point option. But with a good-quality LCD you can set this to a standard setting, such as D65.
2. Next, I went to the Tonal Response Curve section and selected the recommended L* option. When using other calibration software packages, I recommend selecting Gamma 2.2.

![Image of calibration software]

3. I then set the “Luminance/contrast ratio.” A maximum luminance of 110–140 candelas m² is ideal when calibrating and building profiles for a desktop LCD, but this is not an absolute figure and is dependent on the brightness of the ambient light where the display is located. You cannot always adjust the contrast on an LCD, but you can sometimes adjust the computer operating system brightness controls to adjust the luminance brightness of the display so that the measured brightness matches the desired target setting. Next, I was ready to place the calibrator on the screen and start the calibration process.

![Image of calibration software]
THE DEVELOP MODULE INTERFACE

The Develop module has everything photographers need to make adjustments and corrections to their images (Figure 4.7). The main controls are located in the right panel section, where the panels can be expanded by clicking the panel headers. If you [Alt]-click an individual panel header, you put the panels into “solo” mode, which means that as you click to select and expand a panel, this action simultaneously closes all the other panels. You can reset the individual Develop settings at any time by double-clicking the slider names. At the top are the Histogram panel and Develop Tools panel, and below that is the Basic panel, which is where you can make an initial profile selection and carry out all the main tone and color adjustments. This is followed by a Tone Curve panel, which provides you with a more advanced level of control over the image tones, letting you further fine-tune the tone settings after they have been adjusted in the Basic panel. The Tone Curve features a Target Adjustment tool, which when you click to activate it, allows you to click and drag on an area in the image itself to lighten or darken, instead of dragging the sliders. Similar Target mode controls are available when making HSL and B&W panel adjustments. The Tone Curve panel also features a Point Curve editing mode and the ability to edit individual RGB channels.

Below that is the HSL/Color panel. The HSL tab section provides similar controls to the Hue/Saturation adjustment in Photoshop, where you can separately adjust the hue, saturation, and luminance components of an image. The Color tab section is similar to HSL but with simpler controls (and no Target mode option). Converting an image to black and white changes this to a B&W panel and lets you make custom monochrome conversions, creatively blending the RGB color channels to produce different types of black-and-white outputs.

The Split Toning controls can be used to colorize the shadows and highlights separately (the Split Toning controls work quite nicely on color images, as well as on black-and-white photos). The Detail panel lets you adjust the sharpness for imported images and has controls for suppressing the color and luminance noise.

The Lens Corrections panel allows you to correct for global lens vignetting, as well as the chromatic aberrations responsible for color fringing. It also offers auto lens corrections, plus automatic perspective and manual transforms. The Effects panel includes post-crop vignette sliders for applying vignette effects to cropped images and Grain sliders for adding film grain effects.

The Calibration panel retains legacy manual calibration sliders and also is used to access a Process Version menu. Develop settings can be saved as custom presets. The left panel contains a selection of default presets to get you started, but it is easy to create your own presets using all, or partial combinations, of the Develop module settings. As you roll over the list in the Presets panel, you will see an instant preview in the Navigator panel, without having to click to apply the effect to an image.
Figure 4.7 The Develop module interface.
VIEW OPTIONS IN DEVELOP

If you go to the view menu and choose View Options (⌘J [Mac] or CtrlJ [PC]), you can access the dialog shown in Figure 4.8. This includes a “Show message when loading or rendering photos” option at the bottom; check it if you want a message to appear whenever the Develop module is processing a photo.

DEVELOP MODULE CROPPING

From any of the modules in Lightroom, you can use the R keyboard shortcut to switch directly to the Crop Overlay mode in the Develop module. Or, if you are already in the Develop module, you can also click the Crop Overlay mode button in the Tools panel. Figure 4.9 shows a close-up view of the Crop Overlay tool panel controls. Once you are in the Crop Overlay mode, a crop bounding box appears, initially selecting all of the image. As you drag the crop handles, the image and crop edges move relative to the center of the crop and the areas outside the crop bounding box appear shaded. In the Figure 4.10 example, as I dragged the top-right handle inward, the image shifted out of the way to accommodate the change made to the crop area, and the center crop handles (aligned to the green line) always remained in the center of the content area.

Dragging inside the crop bounding box lets you easily reposition the photograph relative to the crop bounding box. If you hold down the Alt key, you can resize the crop bounding box relative to the crop box center. You can also click the Crop Frame tool in the Tools panel (Figure 4.9) to activate it: Place the Crop Frame tool over the photograph, and then click and drag to make a free-form crop (as you would using the Crop tool in Photoshop). When you have finished defining a crop, the Crop Frame tool returns to its docked position in the Tools panel. Click the Close button to apply a crop and exit the Tools panel (or just press R). To reset the Crop Overlay, click the Reset button or use ⌘AltR (Mac) or CtrlAltR (PC). Whenever you drag one of the crop handles to make a non-rotational crop, you will see a dividing-thirds grid overlay the image (as in Figure 4.10). The dividing-thirds overlay lines can be useful as an aid to composition, though you can also choose from other custom overlay options. In the Toolbar, you can choose for the Tool overlay to always be on, off, or in Auto mode, when it will be visible only when you drag one of the crop handles.

Rotating a crop

To rotate and crop an image at the same time, move outside the crop bounding box, click, and drag. Alternatively, you can use the Straighten tool to do this, or use the Angle slider in the Crop Overlay panel to straighten a photograph. In either case, the image rotates relative to the crop bounding box (which always remains level).
Figure 4.9 A close-up view of the Crop Overlay tool panel controls.

Figure 4.10 An example of a crop overlay being applied to an image.
1. I clicked to select the Crop Frame tool, then simply dragged to apply a free-form crop to the photograph. When I released the click, the Crop Frame tool returned to its usual location in the Crop Overlay panel.

2. First, I clicked the Constrain Aspect Ratio Lock button (circled) to unlock. This allowed me to then click a corner or side handle of the crop bounding box and drag to reposition the crop without restriction.
3. I then clicked to select the Straighten tool and dragged it across the image to define a straighten angle (you can also adjust the straighten angle by using the Angle slider in the Tools panel).

4. You can also straighten a photograph by clicking anywhere outside the crop bounding box and dragging. As you can see here, when I did so, a fine grid appeared. You can use the grid lines to help align the rotation to elements within the photograph.
Constrain to image cropping
Because Lightroom can apply lens profile corrections and transform adjustments, profile-corrected or transformed images can end up being distorted to some degree. For example, when you apply a lens profile correction, the crop is normally constrained to the warped image bounds. However, extreme Upright adjustments or manual transforms can result in white padded areas showing around the outer bounds of the image. Checking the Constrain to Image option ensures the crop bounds never exceed the image bounds (Figure 4.11).

![Figure 4.11](image)

**Figure 4.11** Checking the Constrain to Image box in the Crop Overlay and Lens Corrections panel settings automatically constrains the warp to the image bounds.

Auto straightening
The Crop Overlay tool panel options include an Auto button. This essentially provides the same function as a Level Upright adjustment applied via the Transform panel (which is discussed later in this chapter). The following steps demonstrate applying the Auto option being applied.
1. I began by selecting the Crop Overlay tool.

2. I then clicked the Auto button (circled) to auto straighten the photograph. This applied the same type of adjustment as a Level Upright adjustment in the Lens Corrections panel.
Crop aspect ratios

When the Constrain Aspect Ratio Lock is on ([A] toggles the lock closed/on and open/off), the current crop aspect ratio will be preserved as you apply a crop (Figure 4.12). If no crop has been applied yet, the aspect ratio will be locked to the current image proportions. So, if you click the crop bounding box and drag any of the handles, such as a corner handle, the crop area will match the exact proportions of the current image. In Crop Overlay mode, you can use the [X] key to rotate the aspect ratio (i.e., you can change a current landscape aspect ratio crop to a portrait crop). You can quite easily flip the aspect ratio from landscape to portrait (or vice versa) by dragging the corner handle in such a way as to force the aspect ratio to switch.

You can select an aspect ratio preset, such as 1x1 or 2x3, from the Aspect Ratio list. Hold down the [Alt] key when changing the aspect ratio to have the Crop Overlay fill the current image bounds. Or, you can choose Enter Custom, which opens the dialog shown in Figure 4.13. Here, you can enter settings for a new custom aspect ratio setting and click OK to add this setting to the Crop presets list.

![Figure 4.12](image)

**Figure 4.12** The Constrain Aspect Ratio Lock is closed (circled), which means the crop bounding box is locked to the current aspect ratio.

**NOTE**

Whenever you enter large numbers for a custom crop aspect ratio (anything greater than 20), you will notice that as these are entered, the decimal place will shift over to the left. So, for example, if you type in a screen display ratio of, say, 1675 x 1150, this will actually set a ratio of 16.75 x 11.5. When you enter crop ratio units, Lightroom always tries to reduce these to the simplest ratio expression possible.
Repositioning a crop
The Crop Overlay tool in Lightroom always restricts the cropping to within the boundary of the document. Unlike in Photoshop, you cannot drag the Crop tool outside the image document area to increase the canvas area. You can crop an image only within the confines of the photograph (plus padded areas). So, however you drag or rotate the crop, you will always be applying the crop to the inside of the picture. When you click inside the crop bounding box, the pointer changes to show the Hand tool, which lets you scroll the image relative to the crop. As you drag, the crop box remains static and the image moves behind the crop.

Crop guide overlays
When the Crop Overlay tool is active, you can choose from seven crop guide overlays in the Tools ➤ Crop Guide Overlay menu. These range from the simple grid crop guide overlay shown earlier, to other more exotic overlay designs, such as a Diagonal crop and an Aspect Ratios crop guide overlay. The Thirds overlay provides a standard reference that you may already be used to seeing in, say, a camera viewfinder screen, while the Golden Ratio and Golden Spiral crop overlays offer new ways to preview a photo as you compose a crop. With regards to the Aspect Ratios overlay appearance, you can go to the Tools ➤ Crop Guide Overlay menu and select Choose Aspect Ratios to open the dialog shown in Figure 4.14. This lets you select which aspect ratio options you want made visible. Regardless of which crop guide overlay you choose, the Grid overlay design shown in Step 4 on page 171 always appears whenever you rotate a crop by dragging outside the crop bounding box. The Grid overlay is useful in these instances because it can help you align the horizontal or vertical lines when straightening an image.

When working in Crop Overlay mode, you can use the ⌘ keyboard shortcut to cycle through the crop guide overlays and the ⌘-Shift- any keyboard shortcut to cycle through the crop guide orientation for the individual Triangle and Golden Spiral crop overlay modes. Triangle includes two modes and Golden Spiral has eight. The cycled overlay options can be accessed via the Tools ➤ Crop Guide Overlay ➤ Cycled Overlays options (Figure 4.15). You can use this to choose which options are available as you cycle through them using the ⌘ keyboard shortcut.

Figure 4.13  The Enter Custom Aspect Ratio dialog.

Figure 4.14  The Choose Aspect Ratios dialog.

Figure 4.15  The Tools ➤ Crop Guide Overlay ➤ Cycled Overlays options.
So, why should you want to use these different crop overlays? Cropping is partly about trimming away parts of the picture that are distracting and aligning straight edges, but it is also about creating a nice-looking, well-balanced visual composition of the picture content. These alternative crop overlays can, therefore, help you compose better when applying a crop.

Canceling a crop
You can use the Esc key to revert to a previously applied setting made during a crop session. Let’s say you have a photo that has been cropped and rotated slightly. If you were to alter the crop by adjusting the crop ratio or crop angle and then press the Esc key, you would be taken back to the original crop setting. If, on the other hand, you adjusted the crop, exited the crop mode for this photo, started editing photos in another folder, and returned later to this picture, the new crop setting would be the one Lightroom reverts back to if you readjusted the crop and pressed the Esc key. Essentially, canceling a crop is not the same as resetting the Crop Overlay. Canceling takes you back to how the image was before you edited it, which might include a previously applied crop adjustment.

Tool Overlay menu
The Tool Overlay options can be accessed via the Toolbar (T) at the bottom of the content area (see Figure 4.12) or the Tools menu (Figure 4.16). The Tool Overlay menu can be used to control the behavior of on-screen overlays. Different options appear when the Spot Removal, Red Eye, Graduated Filter, Radial Filter, or Adjustment Brush are made active. I will be covering these in more detail toward the end of the chapter. But for now let’s just look at the Tool Overlay menu options in the context of the Crop Overlay tool.

THE TOOL OVERLAY OPTIONS
The Tool Overlay options in Crop Overlay mode determine the visibility of the crop overlays. If you select the Always Show menu option, the crop overlay remains visible at all times. If you want to hide the crop overlays, select Never Show. The Auto Show mode makes the tool overlays visible only when you hover over the content area. In other words, the Crop Overlay guides will disappear from view whenever you roll the pointer outside the image area, such as to the top panel menu.

Another way to work with the tool overlay show/hide feature is to use the 38 Shift H (Mac) or Ctrl Shift H (PC) keyboard shortcut, which acts as a toggle for switching between the Always Show and Never Show options. An easier-to-remember (and more flexible) shortcut is to simply use the H key. This toggles between the Auto Show and Never Show modes. Or, it toggles between the Always Show and Never Show modes (depending on whether you had Auto Show or Always Show selected first).
QUICK DEVELOP CROPPING

The Crop Ratio menu options in the Library module Quick Develop panel (Figure 4.17) can be used to apply a preset crop ratio that trims the photo evenly on either side. Cropping is something you usually want to apply manually to each photo individually, but having a quick way to change the aspect ratio for a bunch of photos in one go might be quite useful for someone like a school portrait photographer who wants to quickly prepare a set of portraits using a fixed-aspect ratio setting. As with the Develop module Crop Overlay options, you can click the Enter Custom item in the Crop Ratio pop-up menu to create your own Custom Aspect Ratio crop settings for use in the Quick Develop panel (Figure 4.17). In the Figure 4.18 example below, I selected an 8.5 x 11 proportional crop and applied this to the selected photograph. The custom crop settings are also shared between the Develop module and the Quick Develop panel in the Library module.

Figure 4.17 The Quick Develop Crop Ratio menu contains a list of presets.

Figure 4.18 I applied an 8.5 x 11 proportional crop to this landscape image, which originally had a 2 x 3 aspect ratio.
When setting the white balance, as you zoom out, the magnified pixel view shows more and more of the image (this is good for averaging large areas for high-ISO images). As you zoom in, the magnified pixel view shows less and less of the image (which is good for picking out small, specific areas). In other words, the white balance sample area is zoom-level dependent.

THE BASIC PANEL

When working with the Basic panel tools, remember that you can click the inside panel edge and drag to adjust the width of the side panels. Figure 4.19 shows the Basic panel in normal and expanded form. A wider panel offers you more precision when dragging the sliders. If you also hold down the Alt key as you drag, you can drag the panel as wide as you like. (Incidentally, this width resizing is possible with all side panels.)

WHITE BALANCE TOOL

The Temp and Tint sliders in the White Balance (WB) section can be used to precisely adjust the white balance of a photograph. With these, you can color-correct most images or apply alternative white balances to your photos. There is also a White Balance tool ( ). You can activate this by clicking it or by using the W shortcut. This unlocks the tool from its docked location and lets you click anywhere in the image to set a new white balance (Figure 4.20). The floating loupe magnifier provides an extreme close-up of the pixels you are measuring, which can really help you select the correct pixel reading. As you hover over an image, you will also see the RGB readout values for the point immediately beneath the pointer (Figure 4.21), as well as at the bottom of the Histogram panel. These RGB readings are shown as percentage values and can help you locate and check the color readings (if the RGB values are all close enough to the same value, the color can be regarded as neutral). You can also use the Shift U (Mac) or Ctrl Shift U (PC) keyboard shortcut to apply Auto White Balance. If the Auto Dismiss option is disabled in the Toolbar (see Step 1), all you have to do is click W to activate the White Balance tool and continue clicking with the tool until you find the right setting. You can then use the Esc key or the W key again to cancel working with the White Balance tool and return it to its normal docked position in the Basic panel.
2. The Show Loupe check box allows you to toggle displaying the loupe that appears below the White Balance tool. You can adjust the loupe scale setting by dragging the slider next to the Show Loupe item in the Toolbar. This slider adjusts the sample grid pixel size, and dragging the slider to the right increases the number of pixels used when sampling a white balance point measurement. Increasing the pixel sample size can be beneficial if you want to aggregate the pixel readings more, such as when you are sampling a really noisy image and you do not want the white balance measurement to be unduly affected by the pixels that contain color noise or other artifacts.

**NOTE**

Do we still need the 0 to 255 scale in the readout section? I know some people say that they would like to see this as an option, but there are no real valid reasons for doing so. The 0 to 255 scale came into existence only because of the way the number of levels are calculated for pixel-rendered 8-bit images. The percentage scale (in my view) makes it easier to interpret what the Eyedropper readout numbers mean. Having said that, when you view a photo with Soft Proofing turned on, the RGB numbers in the Histogram display use the 0 to 255 scale (see pages 503 to 505).
White Balance corrections

In most shooting environments, once you have found the right white balance, all the other colors will tend to fit into place. You can help get the white balance right in-camera by choosing a fixed or Auto setting. Or, you can use a white balance or color checker chart (like the X-Rite ColorChecker Classic chart shown in Figure 4.22) as a preparatory step that will help you make a more accurate, measured reading later in Lightroom. A camera Auto White Balance setting may do a good job, but it really depends on the camera you are using, because even the best cameras will not know how to handle every lighting situation. Figure 4.23 shows a scene with mixed lighting conditions. This photograph could be processed for either the exterior daylight or the tungsten lighting indoors, and each could be said to be correct. In situations like this, you cannot always rely on the camera’s Auto White Balance setting; you have to decide for yourself which setting works best. This is where the White Balance tool can come in handy. The trick is to analyze the picture and look for an area in the scene that should be a neutral, nonspecular, textural highlight. Aim to select something that should be a neutral light gray. If you click on an area that is too bright, there may be some clipping in one or more of the color channels, which can result in a false white balance measurement and consequently make an inaccurate adjustment.

Figure 4.22  The X-Rite ColorChecker Classic chart. To take a white balance reading in Lightroom, click the light gray patch next to the white patch.

Figure 4.23  This image shows two possible white balances: one measured for the indoor lighting (left) and one measured for the outside daylight (right).
Creative white balance adjustments

Who is to say if a correct white balance is any better than an incorrect one? Before digital capture and the ability to set accurate white balances, photographers could only choose between shooting with daylight-balanced or tungsten-balanced film emulsions. Most would simply accept whatever colors the film produced. With digital cameras, it is easy to set the white balance precisely. There may be times, such as when shooting catalog work, when it is critical to get the color exactly right from camera to screen to print. But you do not always have to obsess over the color temperature at the capture stage on every type of image. You have the freedom to interpret a master raw file any way you like, and can change the mood in a photograph completely by setting the white balance to an alternative, incorrect setting (Figure 4.24). The key point to emphasize here is that the White Balance controls are used to assign the white point as opposed to creating a white balance. Dragging the Temp slider to the right makes an image warmer and dragging to the left makes it cooler.

Figure 4.24  Consider the same image processed using two different white balance settings. It is often largely a matter of personal judgment when deciding which version you prefer, because neither example has what could be described as a “correct” white balance.

TIP

Warning! If you shoot using a studio flash system (not with the built-in flash) and have the camera set to Auto White Balance, the white balance reading will be influenced by the ambient light, such as the tungsten modeling lights instead of the strobe flash.
White balance and localized adjustments

The Basic panel White Balance tool takes into account locally applied white balance adjustments. For example, if you use the Graduated Filter tool to apply a cooling white balance, when you then click with the White Balance tool, it ignores localized Temp or Tint adjustments to ensure the pixels where you click are neutralized.

1. Here, I applied a cooling Temp setting Graduated Filter to the sky in this image.

2. When I selected the White Balance tool and clicked the top half of the image, the new, calculated white balance adjustment ignored the locally applied Temp adjustment and applied a cooler white balance as if there were no filter effect.
Independent auto white balance adjustments

As well as selecting Auto from the White Balance menu, you can use the \text{Shift} key plus a double-click on the Temp and Tint sliders to set these independently.

1. I opened this image in Lightroom, which currently shows the As Shot white balance.

2. I held down the \text{Shift} key and double-clicked the Tint slider. This auto-set the Tint slider only to apply an auto-calculated “Tint only” White Balance setting.
Camera Matching 186–187
enhanced/creative 188
intensity adjustments 190
legacy and custom 187
lens 262–266
Lightroom CC 663, 694
managing in Profile Browser 191, 192
marking favorite 191
printer 495, 499
syncing 694
projection options 219, 220
promote subfolders dialog 80
proofing feature. See soft proofing
ProPhoto RGB color space 158, 203, 438, 454–455
PSD files 46, 437, 438, 631–634
public vs. private albums 672, 673
Publish Services panel 622–625
publishing
books via Blurb 533
photos via Lightroom 622–625
Q
Quick Collections 135–136, 141
Quick Develop panel (Library module) 232–241
cropping options 177
process versions and 164
synchronizing settings 236–237
tone and color adjustments 232–234
typical workflow 234–237
video file editing 237–241
R
Radial Filter tool 331–334
edge sharpness corrected with 333
light flare effects added with 333–334
Radius slider 408–409, 413
RAID systems 71, 728
RAM requirements 727
Range Masking 335–344
color 335–337
depth 342–344
luminance 335, 338–341
rating photos 126–131
color label use and 130–131
flagging picks/rejects 126–127
Lightroom CC/mobile for 661, 700
star ratings for 128–129
raw files
converting to DNG 30–32, 713
Detail panel adjustments 401
editing in Photoshop, 435, 439
external editor options 436–437
improved processing of 400
profiles for 185
XMP metadata and 626, 632, 634
See also Camera Raw
raw + JPEG files 48
Real World Image Sharpening with Adobe Photoshop, Camera Raw, and Lightroom (Fraser and Schewe) 413
Red Eye Correction tool 307–309
Redo command 346
Reference view mode 294–295
Refine Photos dialog 126, 127
reflective highlights 212
rejects and picks. See picks and rejects
Relative rendering intent 502
removing photos
from the catalog 146
from collections 140
from Lightroom CC 702
See also deleting
Rename Photos dialog 50
renaming. See naming/renaming
rendering intent options 502, 506
Repair Catalog option 627
residual mode 653, 688
Resize to Fit option 457
resizing. See sizing/resizing
Resnick, Seth 579, 587
resolution
image size and 457, 497
print reproduction and 477, 491, 497
resource info for book v
retouching photos 296–344
Adjustment brush for 310–325
Graduated Filter tool for 326–330
Radial Filter tool for 331–334
Range Mask options for 335–344
Red Eye Correction tool for 307–309
Spot Removal tool for 296–306
reverse geocoding 640
RGB curve editing mode 246–247
Richmond, Eric vi
Riecks, David 588
Rotate to Fit option 474, 486
rotating photos 168, 474
rulers and guides 477
Rulers, Grid & Guides panel (Print module) 486
S
Saturation adjustments
Basic panel 230–231, 392
HSL panel 256, 392, 393
Quick Develop panel 234
Split Toning panel 388
Saved Locations panel 648
saving
custom page layouts 524–525
Develop presets 360–361, 363
effect settings 312
metadata to files 626–628
print templates 511
slideshow templates 550–551
Schewe, Jeff iv, vi, 413, 423, 458
screen display. See display screen
searching
advanced or complex 621–622
attribute filter for 616
folder-specific 86
Lightroom CC for mobile 670, 671
Lightroom CC for web 675–676, 678
metadata used for 560–561, 616–619
for missing photos 619
INDEX

searching (continued)
  rules defined for 614–615, 620
text filter for 613–615
second copy backups 47
Secondary Display submenu 122
Select Catalog dialog 12, 75
selections
  filtering photos using 606, 611
  instructions on making 134
  making in Lightroom CC 700
  saving as collections 136–137
  Slideshow module 550
Selective tool options 663
sets
  collection 142
  keyword 590–591
  profile 192
shadows
  clipping 202, 212–213
darkening 213, 250
lightening 201, 209
  localized adjustments 322–323
  noise problems 422, 423
Shadows adjustment
  Adjustments panel 322–323
  Basic panel 194–195, 201, 208, 209, 252
  Tone Curve panel 250
Shared to Web view 670
sharing
  catalogs 153–155
  collections/albums on the web 672–673
  from Lightroom CC 698
sharpening 397–421
  capture 398
  edges of photos 333
  effect sliders 405–409
  evaluating at 1:1 view 405
  examples of applying 416–417
  grayscale previews of 406, 413
  improved features for 400
  landscape 403
  localized 324–325, 418–419
  luminance-targeted 405
modifying controls 410–415
negative 420–421
output 400, 458
portrait 402
presets for 401–403
print 400, 458, 497
sample image for 404
Sharpening controls
  Adjustment brush 316, 324–325
  Amount slider 406–407
  Detail panel 398, 405–415
  Detail slider 398, 410–412, 413
  Masking slider 413–415
  Quick Develop panel 234
  Radius slider 408–409
  Sharpness slider 418–419
shortcuts, keyboard 2, 25, 166
shutter speed information 618
sidecar files 565
Simulate Paper & Ink option 505, 508
Single image view mode
  Lightroom CC for mobile 661–664
  Lightroom CC for web 676
Single Image/Contact Sheet layout
  474–485
Single Person view mode 599, 697
Size slider
  Adjustment brush 310
  Spot Removal tool 296
sizing/resizing
  images for exporting 457
  thumbnails 97–98
skin tone corrections 257
Skurski, Mike 458
sleep protection 10
Slide Editor view 536, 542
Slideshow module 534–555
  Backdrop panel 544–545
  interface overview 534–535
  Layout panel 537
  Music panel 547
  Options panel 538–539
  Overlays panel 540–543
  Playback panel 548–549
  Preview mode 549
Slide Editor view 536, 542
Template Browser panel 550–551
Titles panel 546
Toolbar 536, 550
slideshows 534–555
  backdrops for 544–545
  collection creation 551
  exporting 552–555
  identity plates 540, 541
  impromptu 550
  music for 547, 548, 555
  navigating 550
  PDF or JPEG 552–553
  playback options 548–549
  previewing 549
  selections for 550
  templates for 550–551
  text overlays 542–543
  titles for 546
  video 554–555
Smart Collections 10, 142–143, 145
Smart Objects 446–449
Smart Previews 4–5, 151–155
  benefits of 152
  creating 43, 152–153
  exporting catalogs with 148, 149
  face-recognition technology and 593
  Lightroom CC/mobile and 657, 658, 683
  Performance preference for 17
  sharing catalogs using 153–155
  size of data file for 153
  storage locations for 703
Snapshots panel (Develop module)
  346–349
  saving variations using 346, 347
  Sync Snapshots command 346, 348–349
soft proofing 503–510
  Before and After views 506–509
  Before State options 510
  display screen considerations 503–505
  practice guidelines 505–506

742  INDEX
Soft Proofing panel  505, 506
Soften Skin effect  316–317
solo mode  166
Soni, Neil vi
sorting photos  636–637
color label options for  637
tethered shooting and  65
sounds, completion/alert  708
soundtracks  547, 548, 555
Source panel (Import dialog)  39
splash screen options  706, 718
Split Toning panel (Develop module)
black-and-white conversions  374, 387, 388–391
color image adjustments  390–391
Split Toning panel (Lightroom CC)  692
Spot Removal tool  296–306
auto-calculate feature  304
brush spot adjustments  299–302
editing circle/brush spots  303
Feather slider  304
instructions for using  296–297
keyboard shortcuts  296, 297, 303
synchronized spotting  304–306
Tool Overlay options  303
undoing/deleting spots  303
Visualize Spots feature  298–299
sRGB color space  203, 438, 455
SSDs (solid-state drives)  153, 725
stacking photos  132–133, 699
star ratings  128–129, 606, 661
storage
cloud  658, 667
hard drive  727–728
straightening photos  171, 172–173
subfolders
filtering  610
importing  40, 56
organizing photos into  52, 53
showing photos in  81
See also folders
Survey view  114–115, 124, 125
Sync Snapshots command  346, 348–349
Synchronize Folder dialog  88–89
Synchronize Metadata dialog  635
Synchronize Settings dialog  237, 305, 352, 353
synchronizing
Auto Sync mode for  306, 352
with Camera Raw  358–359
collections  19, 659–660
Develop settings  237, 352–353
folders  88–89, 357
with Lightroom CC/mobile  19, 656–657
metadata settings  635
snapshots  346, 348–349
spot removal settings  304–306
Upright settings  277
synonyms, keyword  582–583
system folders  82–83, 84
System Info dialog  726
system recommendations  8, 726–728
Szaykowska, Jagna vi
T
Target Adjustment tool  242, 248, 256, 382, 532
target collections  141, 592
Technology Previews settings  669, 674
Temp slider
B&W conversions  378
independent adjustments  183
localized adjustments  182, 320–321
Template Browser panel
Print module  473, 511
Slideshow module  550–551
templates
file naming  48–49
Photo Info  485
print  494, 511
settings folder for  724–725
slideshow  550–551
Tethered Capture Settings dialog  63
Tethered Shoot control panel  64
tethered shooting  61–65
cable vs. wireless  61
camera software for  62
connecting cameras for  61, 62
Lightroom features for  62, 65
Sort option for  65
steps in process of  63–65
text
book  528–532
photo info  485
searching  613–615
slideshow  540, 542–543
Sort by Label option  637
text box layouts  528
Text panel (Book module)  514, 528–529
Text Template Editor  710
Print module  485
Slideshow module  542, 543
thelightroombook.com website  v, 25
thumbnails
badges displayed with  96, 139, 660
Library Grid view  97–98
Thumbnails slider  40, 97, 518
TIFF files  437, 438, 454, 631–634
Time Machine backups  72
time/date information  567–568, 618
time-lapse videos  554–555
Tint slider
B&W conversions  378
independent adjustments  183
localized adjustments  182, 320–321
Titles panel (Slideshow module)  534, 546
tone controls
Basic panel  193–202
Quick Develop panel  232–234
Tone Curve panel  242–255
Tone Curve panel (Develop module)  242–255
Basic panel adjustments and  194, 250–253
overview of controls in  242–243
Point Curve editing mode  244–245
RGB curve editing mode  246–247
Tone Curve Zones  248–250, 255
tone range split points  254
Tone Curve panel (Lightroom CC) 691
Tool Overlay options 176, 303
Tool bar 24
    Book module 518
    Develop module 303
Import dialog 40
Library module 78–79
People view mode 599
Slideshow module 536, 550
tracklogs 642–645
Transform panel (Develop module) 275–283
    Transform sliders 283
    Upright adjustments 275–283
    transparency preservation 276
Type panel (Book module) 530–532
typographic fractions 720

V
Valide DNG Files feature 715
Vibrance adjustments
    Basic panel 230–231, 393
    Quick Develop panel 234
video drivers 17
video files/clip
    editing 237–241
    exporting 469, 554
    importing 55
    presets for 241
    slideshows as 554–555
    time-lapse 554–555
view modes
    Before/After 288–293
    Lightroom CC for mobile 660–664
    Metadata panel 562–564
    Reference 294–295
View options (Library module)
    Compare view 116–119
    Grid view 40, 95–98, 102, 103
    Loupe Overlay view 106–109
    Loupe view 40, 98–105
    Survey view 114–115
vignetting
    applying to photos 284–287
    correcting for lens 273
virtual copies
    copy names for 565–566
    creating for photos 350–351
    external editing with 443–444
    filtering for 609
    snapshots vs. 350
    soft proofing and 507, 510
Visualize Spots feature 298–299
volume links 85

W
Warde, Benjamin v
watermarks 459–461, 480, 540, 670
web-based version of Lightroom. See
    Lightroom CC for web

website links 578
Wendt, Max v
Weston, Stuart vi
white balance 178–183
    Auto setting 180
    creative adjustments 181
    display screen calibration 160–161
    independent adjustments 183
    localized adjustments 182
    Quick Develop panel adjustments 233
White Balance tool 178–183, 199, 251
white point 160, 503
Whites adjustment
    auto calculation 195–196
    Basic panel 195–196,
    201–202, 253
Windows computers
    Lightroom preferences on 11, 723
    printer settings on 490, 494,
    496, 501
    system requirements for 8
    workflow in Lightroom 3, 6

X
XMP profiles 185
XMP space 626
    read/write options 631–634
    saving metadata to 628, 630
X-Rite ColorChecker Classic chart 180

Z
Zoom to Fill Frame option (Slideshow module) 538, 539
Zoom to Fill option (Print module) 474, 486
zooming
    clicked point to center option 104, 720
    magnification options for 104, 105