

Table of Contents



Chapter 1

Basics	3
1.1 Preface to the Extended Second Edition	4
1.2 Introduction	5
1.2.1 Using GIMP 2.6 – About This Book	5
1.2.2 About GIMP 2.6	6
1.3 Introduction to Digital Image Editing	7
1.3.1 Characteristics of Pixel Images	7
1.3.2 Resolution	9
1.3.3 Screen Colors – Color Models and GEGL, the New Graphics Library	10
1.3.4 Important File Formats for Practical Work	14
1.4 Loading and Managing Digital Photos on the Computer	18
1.4.1 Using the Operating System’s File Management Tools to Import Images from a Camera	18
1.4.2 Using Wizards to Import Images	21
1.4.3 Using the Operating System’s File Management to Organize Photo Collections	22
1.4.4 Helpers: Image Management Programs for Windows, Mac OS X, and Linux	23
1.4.5 Converting Camera RAW Image Formats under Windows, Mac OS X, and Linux: Freeware and Plug-Ins	24

1.5	Get GIMP Running	28
1.5.1	Where Can I Get GIMP?.....	28
1.5.2	Installing GIMP and Plug-Ins.....	29
1.5.3	Starting GIMP for the First Time.....	34
1.5.4	Is GIMP Insecure? Some Comments and Tips	35
1.5.5	GIMP's Program Windows	36
1.5.6	The Image Window, the Main GIMP Interface	41
1.5.7	Real Help – GIMP's Help Function.....	47

Chapter 2

Using GIMP: Correcting and Touching Up

Your Images..... 51

2.1 JPEG versus RAW.....52

2.2 Opening and Developing a RAW Format, or Digital Negative, with GIMP.....53

2.2.1 Opening an Image in UFRaw

2.2.2 Features and Elements of UFRaw's Main Window.....57

2.2.3 RawTherapee for Developing Raw Images

2.3 Editing Images in GIMP.....77

2.3.1 Opening, Setting, and Storing an Image—the Steps

2.3.2 Opening an Image.....78

2.3.3 The Image Window – Your Workspace

2.3.4 Rotating an Image by Fixed Values.....85

2.3.5 Changing the Image View Size (Zooming)

2.3.6 Setting the Image Size and Resolution.....88

2.3.7 Scaling the Print Size of Images – An Example for Converting Resolution and Size.....90





2.3.8	Cropping (Clipping) an Image	92
2.3.9	Saving Your Image	96
2.3.10	Before Printing – Calibrating Monitors and Color Management	99
2.3.11	Printing Images.....	103
2.4	Working with Scanned Images	105
2.4.1	Prerequisites for Scanning.....	105
2.4.2	How Scanners Work.....	106
2.4.3	Problems When Scanning Printed Originals— the Moiré Effect.....	107
2.4.4	Calculations to Consider before Scanning.....	107
2.5	Scanning and Editing an Image.....	110
2.5.1	The Procedure	110
2.5.2	Scanning Your Image	110
2.5.3	Editing a Scanned Image.....	113
2.5.4	Setting the Image and Determining the Angle – Measuring.....	114
2.5.5	Rotating an Image – Using the Rotate Tool.....	115
2.5.6	Cropping an Image – The Crop Tool	117
2.5.7	Using the Gaussian Blur Filter to Remove the Moiré Effect ...	118
2.5.8	Setting the Contrast and Color— Levels (Tonality Correction)	120
2.5.9	Setting the Contrast, Brightness and Color Intensity – Curves.....	123
2.5.10	Adjusting Hue and Saturation.....	128
2.5.11	Overview of some of the Functions in the Colors Menu	130
2.5.12	Saving an Image in Compressed Format (JPG/JPEG) f or the Internet	132

2.6	Touchup Work 1—Removing Color Cast.....	136
2.6.1	What Is Touchup Work?	136
2.6.2	Color Correcting Options.....	136
2.6.3	Using the Levels Function to Correct Color Cast	137
2.6.4	A Second Method to Remove Color Cast—Color Balance....	140
2.7	Touchup Work 2—Removing Spots, Dust, and Scratches.....	142
2.7.1	Why You Need Smooth Brushes—the Clone Tool.....	142
2.7.2	Creating New Brush Pointers in GIMP and Importing Adobe Photoshop Brushes	143
2.7.3	Preparing the Clone Tool Options.....	145
2.7.4	Using the Clone Tool for Touchup Work	146
2.7.5	The Healing Tool	149
2.8	Performing Magic – Editing Photographs with Graphic Filters	150
2.8.1	Sharpening Images and Image Elements	151
2.8.2	Noise Reduction and “Smoothing” Images.....	154
2.8.3	Simulating Film Grain – Covering Up Blemishes with Noise and Pixels	161



Chapter 3

Using Masks and Layers—Painting, Filling, and Color Tools 167

3.1 Introduction to Masks and Selections 168

3.1.1 Overview of Select Tools in the Toolbox 169

3.1.2 Tips for Handling Select Tools 170

3.1.3 The Select Menu 171

3.1.4 The Edit Menu 173

3.2 Touchup Work 3—Removing Red Eyes 175

3.2.1 Avoiding Red Eyes—Using the Flash Correctly 175

3.2.2 Eliminating the Red-Eye Effect 176

3.3 Introduction to Working with Layers 178

3.3.1 The Layers Dialog 180

3.3.2 The Context Menu in the Layers Dialog 182

3.3.3 Background or Layer with an Alpha Channel 184

3.3.4 Working with Several Images—
Inserting Layers from Another Image 185

3.4 Touchup Work 4—Correcting Overexposed or Underexposed Images 186

3.4.1 The Mode Settings in the Layers Dialog 186

3.4.2 Editing Overexposed Images 186

3.4.3 Editing Underexposed Images 188

3.5	Touchup Work 5—Using Perspective Correction to Remove Converging Verticals	189
3.5.1	Trying to Avoid Converging Verticals When Taking Shots	189
3.5.2	Steps Involved and Description of Work	190
3.5.3	Removing Converging Verticals from an Image	190
3.5.4	Transform Tool Options	192
3.5.5	Removing Lens Distortion, Making Perspective Corrections, and Reducing Vignetting	193
3.5.6	The Perspective Clone Tool	196
3.6	Touchup Work 5—Freshening Up a “Dull Sky”	201
3.6.1	Steps Involved and Description of Work	201
3.6.2	Step 1: Selecting an Area by Color, Deleting It, and Replacing It by Color Fill	201
3.6.3	Step 2: Creating and Positioning an Image Object on a New Layer	211
3.6.4	Step 3: Creating a Multicolor Sky—the Blend Tool	212
3.6.5	Step 4: Adding a New Object or Layer (Sky) to an Image	218
3.7	Typing in GIMP—Adding Text to an Image	223
3.7.1	Introduction to Fonts	223
3.7.2	Typing in GIMP—the Text Tool	224
3.7.3	Typing Text and Defining the Text Attributes	225
3.7.4	Creating Three-Dimensional Text and a Drop Shadow	228
3.8	Creating Your Own Image Frames and Vignettes	231
3.8.1	Single-Color Image Frames	231
3.8.2	Creating a Frame with Pattern	234
3.8.3	Vignettes for Images	236



3.9 Creating and Editing Image Elements—

Lighting Effects and Shadow Layers..... 237

- 3.9.1 Overview of Part 1—Creating a New Image and
New Image Objects 237
- 3.9.2 Creating a New Image 238
- 3.9.3 Transforming a Selection..... 239
- 3.9.4 Using the Paintbrush Tool to Create Lighting and
Shadow Effects—Painting in Glazing Technique 240
- 3.9.5 Overview of Part 2—Inserting, Duplicating, and
Colorizing Image Objects 241
- 3.9.6 Changing the Color of an Image Object—
the Hue-Saturation Function 243

3.10 Extracting Image Objects with Select and

Masking Tools..... 244

- 3.10.1 The Free Select Tool (Polygon Lasso) as a Select Tool 245
- 3.10.2 Extracting a Wine Glass with the Polygon Lasso 245
- 3.10.3 Creating a Selection with the Polygon Lasso,
Following a Contour 246

3.11 Using the Paths Tool as a Masking Tool—

Using Filters for Light Effects..... 249

- 3.11.1 Copying a Wine Glass and Creating a
Drop Shadow—Overview of the Steps Involved..... 249
- 3.11.2 Creating and Editing a Path—the Design Editing Mode 250
- 3.11.3 The Path Editing Mode..... 251
- 3.11.4 The Paths Dialog..... 253
- 3.11.5 Transforming Paths—the Shear Tool 253
- 3.11.6 Lighting Effects—Creating Light Reflections with Paths,
Paintbrushes, or Filters 256
- 3.11.7 Paths and Text 258

3.12 Using Layers, Masks, and Paths to Create Three-Dimensional Objects—Shadow Layers	261
3.12.1 Creating and Transforming Image Objects.....	261
3.12.2 Aligning Images—the Alignment Tool.....	271
3.13 Cross-Fading with Masks and Selections	273
3.13.1 Cross-Fading Part 1—Cross-Fading Two Images with Two Different Motifs	273
3.13.2 Cross-Fading Part 2—Assembling Panoramic Images.....	276
3.13.3 Programs for Creating Panoramas Automatically.....	281
3.14 Collages—Using Masks and Selections to Cut and Paste Image Objects	282
3.14.1 Copying an Image Object with the Help of a Selection and Inserting It into Another Image—the Procedure	282
3.14.2 The Mode Options in the Layers Dialog	284
3.14.3 The Foreground Select Tool— Extracting Images Automatically.....	285
3.14.4 Drawing a Mask Using Paint Tools with Various Edge Attributes	290
3.15 GIMP and HDR	296
3.15.1 What Is HDR?	296
3.15.2 HDR Software.....	297
3.15.3 Cross-Fading Part 3—Merging Images into one Pseudo HDR	298
3.15.5 Creating an HDR Image with the Appropriate Software.....	305



Chapter 4

Working with Black-and-White and Color Images 313

- 4.1 Converting Color Images Partly or Entirely into Grayscale Images 314
 - 4.1.1 Hints for Working in Grayscale and RGB Modes 314
 - 4.1.2 Removing Color Partly or Entirely 315
 - 4.1.3 Developing Black-and-White Images with the Channel Mixer 316
 - 4.1.4 The Graphical Library GEGL—Developing Black-and-White Images with GEGL Operations 318
 - 4.1.5 Converting Images into Black-and-White Graphics 320
 - 4.1.6 Graphic Effects with Gray Levels—an Example 321

- 4.2 Touching Up Black-and-White Images—Levels, Brightness, Contrast 323

- 4.3 Extracting Hair from the Background—a Tricky Task ... 324
 - 4.3.1 The Threshold Function 324
 - 4.3.2 Using the Threshold Function to Extract Hair—the Task 325
 - 4.3.3 Using Channels to Extract an Object from the Background 328

- 4.4 Coloring Grayscale Images 335
 - 4.4.1 Using the Colorize Function to Color an Image 335
 - 4.4.2 Using the Levels Function to Color an Image 336
 - 4.4.3 Using the Curves Function to Color an Image with One or More Colors 337

4.4.4 Using the Colorify Filter to Color an Image338

4.4.5 Using Transparency
and the Colorize Filter to Color
Image Areas by Brightness339

4.4.6 Using the Sample Colorize Function to Color an Image340

4.4.7 Using Filters to Color and Bleach an Image.....342

4.5 “Hand-Colored” Collages from
Black-and-White Photos 344

Chapter 5

Appendix 349

5.1 The IWarp Filter— a Closing Comment 350

5.2 So Far, So Good—How to Proceed from Here:
Tips and References 351

5.3 A Forecast on GIMP 2.8 351

5.3.1 Changes in GIMP 2.8352

5.3.2 Downloading and Installing GIMP 2.7.....353

5.4 Thank You! 353

5.5 Further Reading on GIMP: References 354

5.6 What’s on the DVD 354

5.7 Native GIMP File Formats 356

