Image Processing for Windows® and macOS®

Version 24

Computerinsel GmbH
Zur Limestherme 4
93333 Bad Gögging
Germany
www.pl32.com

Table of Contents

1. Introduction 24
1.1 The Distribution Concept of PhotoLine 24
1.2 Feature Overview 24
1.3 Software License 25
1.4 Setup 28
1.4.1 Windows Installation 28
1.4.2 macOS Installation 28
1.5 Starting and Terminating PhotoLine 29
1.5.1 Starting PhotoLine (Windows) 29
1.5.2 Registration of PhotoLine 29
1.5.3 Terminating PhotoLine 30
1.6 The Settings Folder of PhotoLine 30
2. Basics of Image Processing 31
2.1 Color Spaces 31
2.1.1 RGB 31
2.1.2 CMYK 31
2.1.3 HSV 32
2.1.4 CIE Lab 32
2.2 Picture Types 32
2.2.1 Basics 32
2.2.2 The Bitmap (Monochrome Image) 33
2.2.3 The Gray Image 33
2.2.4 The RGB Image 33
2.2.5 The CMYK Image 34
2.2.6 Vector Graphics 34
2.3 Layers 35
2.3.1 Introduction 35
2.3.2 Image Layer 36
2.3.3 Text Layers 36

2.3.4 Vector Layers 37
2.3.5 Groups 37
2.3.6 Virtual Copies 38
2.3.7 Placeholder Layers 38
2.3.8 Path Groups 39
2.3.9 Mesh Gradient 40
2.4 Basics for Image Layers 41
2.4.1 Lasso/Mask 41
2.4.2 Selection 41
2.4.3 Filters 41
2.5 Layer Style 42
2.6 Layer Distortions 42
2.7 Clipping Layers 43
2.8 Layer Masks 44
2.9 Adjustment Layers 45
2.10 Dynamic Filters 46
2.11 Document Mode And Picture Mode 47
2.12 Color Management and ICC Color Profiles 47
2.13 File Formats 49
2.14 Additional Information 54
2.14.1 IPTC Data 54
2.14.2 EXIF Data 54
2.14.3 XMP Data 55
2.15 Colors 55
3. Basics of PhotoLine 57
3.1 Text Styles in This Manual 57
3.2 Context Menu 57
3.3 User Interface Elements 57
3.3.1 Basics 57
3.3.2 The Color Field 58

3.3.3 The Brush Field 58
3.3.4 The Line Style Field 59
3.3.5 The Curve Field 59
3.3.6 The Shape Field 59
3.3.7 Unit Text Fields 60
3.3.8 Double Arrows 61
3.3.9 The Channel Control 61
3.3.10 Sliders 62
3.4 The Color Editor 62
3.4.1 Overview 62
3.4.2 The Tint Subdialog 63
3.4.3 The Pattern Subdialog 63
3.4.4 The Vector Pattern Subdialog 64
3.4.5 The Texture-Dialog 66
3.4.6 The Gradients-Subdialog 68
3.5 The Brush Editor 70
3.6 The Painting Matrix 71
3.7 The Curve Editor 74
3.8 The Line Style Editor 75
3.9 The Parts of a Typical Dialog 78
3.9.1 Basics 78
3.9.2 The Presets 79
3.9.3 The Preview 80
3.10 Dockable Dialogs 81
3.11 Document Windows 82
3.12 Multi-Touch Support 83
4. The Screen Setup of PhotoLine 84
4.1 Overview 84
4.2 The Most Important Dialogs 84
4.3 The Status Bar 85

4.4 The General Bar 86
4.5 The Toolbox 86
4.5.1 Overview 86
4.5.2 Settings Of The Image Toolbox 87
4.5.3 Settings Of The Text Toolbox 88
4.5.4 Settings Of The Vector Toolbox 89
4.6 The Tool Settings 90
4.7 The Layer List 91
4.8 The Channel List 96
4.9 The Document Attributes 97
4.10 The Page Attributes 98
4.11 The Layer Attributes 99
4.12 The Export Attributes 105
4.13 The Undo List 107
4.14 The Color List, the Pattern List, the Texture List and the Gradient List 108
4.15 The Color Editor 110
4.16 The Document Color List 110
4.17 The Brush List 111
4.18 The Brush Editor 111
4.19 The Curve List 112
4.20 Simple Layer Styles, Extended Layer Styles 112
4.21 The Shape List, the Outline List, the Clipart List 113
4.22 The Line Style List 114
4.23 The Line Style Editor and Line Pattern Editor 114
4.24 The Picture Info 114
4.25 Contrast/Brightness 115
4.26 The Gallery 115
4.27 Actions 117
4.28 The Map 119

4.29 The Magnifier 119
4.30 Animate 119
4.31 The Document List 120
4.32 The Page List 121
4.33 The Histogram 121
4.34 The Text Styles 122
4.35 Layer Compositions/Layer Comps 124
4.36 Adjustment Layer 125
4.37 The Color Select Field 126
4.38 Simple Browse 126
4.39 Guides 126
4.39.1 Move All 127
4.39.2 Create Guides 127
5. Working with PhotoLine 128
5.1 Introduction 128
5.2 How to Configure PhotoLine 128
5.3 Create Your First Image 129
5.4 Browse 130
5.4.1 Basics 130
5.4.2 Create Picture Catalog 132
5.4.3 Create HTML File 134
5.4.4 Show Image 136
5.4.5 Select all Files 137
5.4.6 Load Selected Images 137
5.4.7 Apply Action 137
5.4.8 Batch Rename 137
5.4.9 Filename to XMP 139
5.4.10 Locate in Browser Map 139
5.4.11 Rotate Images Automatically 139
5.4.12 Browse Settings 139

5.4.13 Update 139
5.4.14 Rotate 90°, Rotate 180°, Rotate 270° 139
5.4.15 Add to Favourites, Edit Favourites 140
5.4.16 New Keyword 140
5.4.17 Create Folder 140
5.4.18 Delete Folder 140
5.4.19 Search Pictures 141
5.4.20 Delete File(s) 141
5.4.21 Properties 141
5.4.22 EXIF Date To File Date 141
5.4.23 Change EXIF Date 142
5.4.24 Load EXIF Data/Save EXIF Data 142
5.4.25 Load XMP Data/Save XMP Data 142
5.4.26 Filename to XMP 142
5.4.27 Load IPTC Data/Save IPTC Data 142
5.5 Working With JPEG-Files 142
5.5.1 Basics 142
5.5.2 JPEG-Images In PhotoLine 143
5.5.3 JPEG-Images In The PLD-Format 144
5.5.4 JPEG-Images In The SVG- And The PDF-Format 145
5.5.5 JPEG-Images With Clipping 145
5.6 Scanning 145
5.6.1 Introduction 145
5.6.2 TWAIN 146
5.6.3 Resolution, Bit Depth, Document Size 146
5.6.4 The Scan Result is Always An Image 147
5.6.5 Descreen Scanned Originals 147
5.6.6 Straighten Scans 148
5.6.7 Brightness/Contrast 148
5.7 Creating Images For The Web 149

5.7.1 Basics 149
5.7.2 Reduce Colors 149
5.7.3 File Formats for the Web 152
5.7.4 Animated GIFs 153
5.8 Printing 154
6. The Tools in the Toolbox 156
6.1 Basics 156
6.2 Tools for All Kind of Layers 156
6.2.1 The Layer Tool 156
6.2.2 The Rotate Tool 160
6.2.3 The Magnifier 161
6.2.4 The Measurement Tool 161
6.2.5 The Moving Hand 162
6.2.6 Rotate View 162
6.2.7 Liquify 162
6.2.8 Distort 164
6.2.9 Circle/Ellipse, Square/Rectangle, Rounded Square/Rectangle, Polygon, Rhomb, Parallelogram, Free Style Stars, Flowers, Grid, Spiral, Vector Object, Ruler, Rays 165
6.2.10 Charts and “Show Chart Settings” 165
6.2.11 Placeholder Layer 166
6.2.12 The Mesh Gradient Tool 166
6.2.13 The Text Tool 167
6.2.14 Vector Drawing 176
6.2.15 Curve Creation 177
6.2.16 Create Line 177
6.2.17 The Crop Tool 178
6.2.18 The Straighten Tool 179

6.2.19 The Color Picker 179
6.2.20 The Color Position Tool 179
6.2.21 Free Lasso, Rectangle Lasso, Circle Lasso, Horizontal Lasso Line, Vertical Lasso Column 180
6.2.22 The Automatic Lasso 182
6.2.23 The Vector Lasso 182
6.3 Tools for Image Layers 183
6.3.1 Painting, Pencil, Chalk, Coal 183
6.3.2 The Eraser 183
6.3.3 The Auto Eraser 184
6.3.4 The Auto Transparency 184
6.3.5 The Wand/the Auto Mask 184
6.3.6 The Mask Brush 185
6.3.7 The Quick Selection Tool 185
6.3.8 The Border Matting Tool 187
6.3.9 The Airbrush/Spray 188
6.3.10 The Color Gradient 189
6.3.11 Flood Fill 191
6.3.12 The Stamp 191
6.3.13 The Copy Brush 192
6.3.14 The Healing Brush 193
6.3.15 The Patch Tool 193
6.3.16 The Remove Brush 194
6.3.17 The Red Eye Brush 194
6.3.18 The Finger 195
6.3.19 The Water 195
6.3.20 The Filter Brush 195
6.3.21 The Replace Color Brush 195

6.3.22 The Brighter Tool 196
6.3.23 The Darker Tool 196
6.4 Tools for Vector Layers 196
6.4.1 Edit Vector Points 196
6.4.2 Transform Vector Points 199
6.4.3 Insert Vector Points 199
6.4.4 Delete Vector Points 199
6.4.5 Cut Vector Path 200
6.4.6 Connect Vector Paths 200
6.4.7 Convert Vector Points 200
6.5 Tools for Text Layers 200
6.5.1 The Tool “Text Shape Flow Inside” 200
6.5.2 The Tool “Text Shape Flow Outside” 201
6.5.3 The Textflow Tool 201
7. The Menus 202
7.1 The File Menu 202
7.1.1 New/New Document 202
7.1.2 New/New Image 202
7.1.3 New/Create Calendar 202
7.1.4 New/Document Templates 204
7.1.5 Open 204
7.1.6 Open as Placeholder 204
7.1.7 Close 204
7.1.8 Close All 204
7.1.9 Save /Save as 205
7.1.10 Save All 205
7.1.11 Reload Document 205
7.1.12 Browse 206

7.1.13 Functions/Batch Converting 206
7.1.14 Functions/Slideshow 207
7.1.15 Functions/Next Picture 208
7.1.16 Functions/Previous Picture 208
7.1.17 Functions/Delete Picture 209
7.1.18 Functions/Copy Picture 209
7.1.19 Functions/Move Picture 209
7.1.20 Functions/1 Star, 2 Stars, 3 Stars, 4 Stars, 5 Stars, No Stars 209
7.1.21 Functions/New Keyword 210
7.1.22 Import/Open in Explorer or Open in Finder 210
7.1.23 Import/From Scanner or Camera (only Windows) 210
7.1.24 Import/Image Capture (only macOS) 210
7.1.25 Import/Select Scanner 210
7.1.26 Import/Scan 210
7.1.27 Import/Raw Image Data 211
7.1.28 Import/Image Into Active Layer 211
7.1.29 Import/Wallpaper (only Windows) 211
7.1.30 Export/PDF: Portable Document Format (*.pdf) 212
7.1.31 Export/Wallpaper... (only Windows) 212
7.1.32 Print 212
7.1.33 Print Options 212
7.2 The Edit Menu 213
7.2.1 Undo 213
7.2.2 Redo 213
7.2.3 Find 213
7.2.4 Find Next 213
7.2.5 Find/Replace 213
7.2.6 Cut 213
7.2.7 Copy 213

7.2.8 Merged Copy 213
7.2.9 Copy Without Colored Edge 214
7.2.10 Paste 214
7.2.11 Paste as Document 214
7.2.12 Paste as Virtual Copy 214
7.2.13 Delete 214
7.2.14 Select All 214
7.2.15 Deselect 214
7.2.16 Antialias 215
7.3 Functions in the View Menu 215
7.3.1 Panel Layout/Save Panel Layout 215
7.3.2 Panel Layout/Edit Panel Layouts 215
7.3.3 Panel Layout/Reset Panel Layout 215
7.3.4 Panel Layout/Lock Panel Layout 215
7.3.5 Hide Panels/Show Panels 216
7.3.6 Zoom In 216
7.3.7 Zoom Out 216
7.3.8 Full View 216
7.3.9 Fit to Selection 216
7.3.10 Full Width 217
7.3.11 Fit to Selection Width 217
7.3.12 View 100% 217
7.3.13 Original Size 217
7.3.14 Pixel Mode 217
7.3.15 Proof Mode 218
7.3.16 PDF Proof Mode 218
7.3.17 Show PDF Bleed Border 218
7.3.18 Mark Extreme Values 218

7.3.19 Show Lines for Text Register 219
7.3.20 Show Formatting Marks 219
7.3.21 Show Layer Frames 219
7.3.22 Show Print Border 219
7.3.23 Show Layer Handles 220
7.3.24 Hide Border Content 220
7.3.25 Full Screen Mode 220
7.3.26 Pattern Mode 220
7.3.27 Alignment Helpers/Show Ruler 220
7.3.28 Alignment Helpers/Show Text Ruler 221
7.3.29 Alignment Helpers/Show Grid 221
7.3.30 Alignment Helpers/Align to Grid 221
7.3.31 Alignment Helpers/Show Pixel Grid 221
7.3.32 Alignment Helpers/Align to Pixel Grid 221
7.3.33 Alignment Helpers/Show Guides 222
7.3.34 Alignment Helpers/Align to Guides 222
7.3.35 Alignment Helpers/Align to Auto Guides 222
7.4 The Layout Menu 222
7.4.1 Document/Scale Document 222
7.4.2 Document/Rotate Document 222
7.4.3 Document/Trim Document 222
7.4.4 Document/Change Document Size 223
7.4.5 Document/Duplicate Document 223
7.4.6 Document/Vector Pattern From Document 223
7.4.7 Page/Previous Page 223
7.4.8 Page/Next Page 223
7.4.9 Page/New Page(s) 223
7.4.10 Page/Copy Page(s) 223
7.4.11 Page/Delete Page(s) 224

7.4.12 Page/Scale Page 224
7.4.13 Page/Rotate Page 224
7.4.14 Page/Change Page Size 224
7.4.15 Page/Load Page(s) 224
7.4.16 Page/Save Page(s) 224
7.4.17 Text/Font 224
7.4.18 Text/Increase Font Size 224
7.4.19 Text/Decrease Font Size 225
7.4.20 Text/Fit in Text Layer 225
7.4.21 Text/Optimize Text Layer Size 225
7.4.22 Text/Text on Path 225
7.4.23 Text/Text in Path 227
7.4.24 Text/Insert Text Field 227
7.4.25 Text/Update Date 227
7.4.26 Text/Copy Character Settings 228
7.4.27 Text/Paste Character Settings 228
7.4.28 Text/Copy Ruler Settings 228
7.4.29 Text/Paste Ruler Settings 228
7.4.30 Text/Merge Marked Text Layers 228
7.4.31 Text/Crop Text Flow 229
7.4.32 Text/Font Overview 229
7.4.33 Text/Serial Document 229
7.4.34 Table Of Contents 230
7.4.35 Text/Form Field 230
7.4.36 Text/Edit Text Shortcuts and Activate Text Shortcuts 231
7.4.37 Text/Spell Checker 231
7.4.38 Vector/Fit in Vector Layer 231
7.4.39 Vector/Vector Outline 232
7.4.40 Vector/Optimize Vector Layer... 232
7.4.41 Vector/Split Vector Layer 232

7.4.42 Vector/Merge Marked Vector Layers 232
7.4.43 Vector/Union 232
7.4.44 Vector/Intersection 233
7.4.45 Vector/Difference 233
7.4.46 Vector/Exclusion (XOR) 234
7.4.47 Vector/Cut 234
7.4.48 Vector/Morph Marked Vector Layers 235
7.4.49 Image/JPEG Compression 236
7.4.50 Image/Extract Appended Image Data 236
7.4.51 Image/Bring to Document Size 236
7.4.52 Image/Trim Image 236
7.4.53 Image/Straighten and Crop Image 236
7.4.54 Image/Path Painting 237
7.4.55 Image/Set Hotspot 238
7.4.56 Image/Benchmark 238
7.4.57 Virtual Copy/Show Source Layer 238
7.4.58 Virtual Copy/Create Real Layer 238
7.4.59 Placeholder/Create From Layer 238
7.4.60 Placeholder/Edit 239
7.4.61 Placeholder/Embed 239
7.4.62 Placeholder/Export 239
7.4.63 Alignment/Align To Pixels 239
7.4.64 Alignment/Left Align 239
7.4.65 Alignment /Horizontal Center Align 240
7.4.66 Alignment /Right Align 240
7.4.67 Alignment /Top Align 240
7.4.68 Alignment /Vertical Center Align 240
7.4.69 Alignment /Bottom Align 240
7.4.70 Alignment/Layer Align Left 240

7.4.71 Alignment/Layer Align Hor. Center 240
7.4.72 Alignment/Layer Align Right 241
7.4.73 Alignment/Layer Align Top 241
7.4.74 Alignment/Layer Align Ver. Center 241
7.4.75 Alignment/Layer Align Bottom 241
7.4.76 Alignment/Layer Align Center 241
7.4.77 Alignment/Move Layer(s) to Right Border 241
7.4.78 Alignment/Move Layer(s) to Left Border 241
7.4.79 Alignment/Move Layer(s) to Bottom Border 242
7.4.80 Alignment/Move Layer(s) to Top Border 242
7.4.81 Alignment/Distribute Layers Horizontally 242
7.4.82 Alignment/Distribute Layers Vertically 242
7.4.83 Alignment/Distribute Layers Equally Hor. 242
7.4.84 Alignment/Distribute Layers Equally Vert. 242
7.4.85 Arrange/Bring to Front 243
7.4.86 Arrange/Bring Forward 243
7.4.87 Arrange/Send Backward 243
7.4.88 Arrange/Send to Back 243
7.4.89 Barcode 243
7.4.90 Text to Picture 244
7.4.91 Print Markers 244
7.4.92 Create Multipage Document 245
7.4.93 Create Print Document 245
7.4.94 Document Information 246
7.5 The Layer Menu 246
7.5.1 New Layer 246
7.5.2 Convert Layer Type 246

7.5.3 Scale Layer 247
7.5.4 Change Layer Size 249
7.5.5 Rotate Layer 250
7.5.6 Rotate/Mirror Layer/Rotate right 250
7.5.7 Rotate/Mirror Layer/Rotate 180° 250
7.5.8 Rotate/Mirror Layer/Rotate left 251
7.5.9 Rotate/Mirror Layer/Flip Horizontal 251
7.5.10 Rotate/Mirror Layer/Flip Vertical 251
7.5.11 New Adjustment Layer 251
7.5.12 New Adjustment Layer/Correct Highlights 252
7.5.13 Modify Adjustment Layer 253
7.5.14 Layer Mask/Convert for Previous 253
7.5.15 Layer Mask/Create 253
7.5.16 Layer Mask/Apply 253
7.5.17 Layer Mask/Create from Alpha 253
7.5.18 Layer Mask/Create from Mask 254
7.5.19 Layer Mask/Apply to Mask 254
7.5.20 Layer Mask/Layer Mask 254
7.5.21 Clipping Layer/Clip Previous 254
7.5.22 Clipping Layer/Clipping Width 254
7.5.23 Clipping Layer/Delete Clipped Layers 255
7.5.24 Merge Down 255
7.5.25 Flatten Image 255
7.5.26 Merge Layers 255
7.5.27 Fix Layer 255
7.5.28 Display/Color Filter 256
7.5.29 Display/Show All Layers 256
7.5.30 Display/Show Only Active Layer 256
7.5.31 Display/Single Step 256
7.5.32 Display/Show Layer 257

7.5.33 Display/Print Layer 257
7.5.34 Navigation/Activate Last Layer 257
7.5.35 Navigation/Activate First Layer 257
7.5.36 Navigation /Activate Next Layer 257
7.5.37 Navigation/Activate Previous Layer 257
7.5.38 Management/Load Layer 257
7.5.39 Management/Save Layer 258
7.5.40 Management/Delete Layer 258
7.5.41 Management/Duplicate Layer 258
7.5.42 Management/Duplicate Layer Virtually 258
7.5.43 Management/Enter Group 258
7.5.44 Management/Leave Group 258
7.5.45 Management/Group Marked Layers 258
7.5.46 Management/Ungroup 258
7.5.47 Management/Mark All Layers 259
7.5.48 Management/Unmark All Layers 259
7.5.49 Management/Add Next Layer To Selection 259
7.5.50 Management/Copy Group Reverse 259
7.5.51 Management/Copy Layer Style(s) 259
7.5.52 Management/Paste Layer Style(s) 259
7.5.53 Management/Copy Layer Attributes 259
7.5.54 Management/Paste Layer Attributes 260
7.6 The Tool Menu 260
7.6.1 Color/Invert 260
7.6.2 Color/Count Colors 260
7.6.3 Color/Replace Colors 261
7.6.4 Color/Hue/Saturation 262
7.6.5 Color/Hue Editor 262
7.6.6 Color/Color Balance 263
7.6.7 Color/False Color 263

7.6.8 Color/Reduce Colors 264
7.6.9 Color/Select Colors 265
7.6.10 Color/Color To Transparency 266
7.6.11 Color/Color Lookup 266
7.6.12 Color/Selective Color Correction 267
7.6.13 Color/Threshold 267
7.6.14 Color/Match Colors 267
7.6.15 Color/Set Color Profile 268
7.6.16 Color/Convert With Color Profile 269
7.6.17 Color/Export Color Profile 269
7.6.18 Mask/Delete Mask 269
7.6.19 Mask/Invert Mask 269
7.6.20 Mask/Mask from Alpha 269
7.6.21 Mask/Mask to Alpha 269
7.6.22 Mask/Mask Add to Alpha 270
7.6.23 Mask/Border Mask 270
7.6.24 Mask/Expand Mask 270
7.6.25 Mask/Contract Mask 270
7.6.26 Mask/Load Mask... 270
7.6.27 Mask/Save Mask... 270
7.6.28 Lasso/Form Lasso 271
7.6.29 Lasso/Fill With Foreground 271
7.6.30 Lasso/Fill With Background 271
7.6.31 Lasso/Extract Selection 272
7.6.32 Lasso/Redo Last Lasso 272
7.6.33 Lasso/Crop 272
7.6.34 Lasso/Convert Layer to Lasso 272
7.6.35 Lasso/Convert Lasso to Layer 272
7.6.36 Lasso/Convert Selection to Layer 272
7.6.37 Lasso/Convert To Clipping Layer 273

7.6.38 Levels 273
7.6.39 Curves 274
7.6.40 Change Channels 275
7.6.41 Channel Mixer 276
7.6.42 The Gray Mixer 276
7.6.43 Optimize HDR 277
7.7 The Filter Menu 277
7.7.1 Basics 277
7.7.2 Automatic/Correction Wizard 278
7.7.3 Automatic/Automatic Correction 278
7.7.4 Automatic/Whitepoint Correction 278
7.7.5 Automatic/Brightness Correction 278
7.7.6 Automatic/Color Correction 279
7.7.7 Sharpen/Sharpen 279
7.7.8 Sharpen/Unsharp Masking 279
7.7.9 Sharpen/Adaptive Sharpen 279
7.7.10 Blur/Soften 280
7.7.11 Blur/Gaussian Blur 280
7.7.12 Blur/Adaptive Soften 280
7.7.13 Blur/Motion Blur 280
7.7.14 Blur/Radial Blur 280
7.7.15 Blur/Calculate Average 281
7.7.16 Blur/Variable Blur 281
7.7.17 Context Blur 281
7.7.18 Blur/Shake 282
7.7.19 Blur/Wipe Effect 282
7.7.20 Quality/Dehaze 282
7.7.21 Quality/Optimize Contrast 283
7.7.22 Quality/Exposure 283
7.7.23 Quality/Vibrance 283

7.7.24 Quality/Remove Dust/Scratches 284
7.7.25 Quality/Descreen 284
7.7.26 Quality/Remove Dirt 284
7.7.27 Quality/Sponge 284
7.7.28 Quality/Pixelize 284
7.7.29 Quality/Roughen 284
7.7.30 Quality/Grain 285
7.7.31 Digital Camera/Light/Shadow 285
7.7.32 Digital Camera/White Point 285
7.7.33 Digital Camera/Color Temperature 286
7.7.34 Digital Camera/Color Correction 286
7.7.35 Digital Camera/Create HDR-Image 286
7.7.36 Digital Camera/Stitch 287
7.7.37 Digital Camera/Focus Stacking 288
7.7.38 Digital Camera/Lens Correction 290
7.7.39 Digital Camera/Undistort Lens 291
7.7.40 Digital Camera/Chromatic Aberration 291
7.7.41 Digital Camera/Rectify 291
7.7.42 Digital Camera/Denoise 292
7.7.43 Stylize/Vertical Edge, Stylize/Horizontal Edge 292
7.7.44 Stylize/Outline Filter 292
7.7.45 Other/High Pass 292
7.7.46 Other/Minimum 293
7.7.47 Other/Minimum Round 293
7.7.48 Other/Median 293
7.7.49 Other/Maximum 293
7.7.50 Other/Maximum Round 293
7.7.51 Other/Move Layer Content 294
7.7.52 Other/Deinterlace 294
7.7.53 External Programs/Manage External Programs 294

7.7.54 Plug-In Modules 295
7.8 The Effects Menu 295
7.8.1 Frame 295
7.8.2 Effect Filters/Mosaic 297
7.8.3 Effect Filters/Lightning 298
7.8.4 Effect Filters/Lights 298
7.8.5 Effect Filters/Emboss Filter 299
7.8.6 Effect Filters/Projection 299
7.8.7 Effect Filters/Drawing Filter 300
7.8.8 Effect Filters/Custom 302
7.8.9 Effect Filters/Tear Paper 302
7.8.10 Special Tools/Clouds 304
7.8.11 Special Tools/Perturbation 304
7.8.12 Special Tools/Rasterize Image 304
7.8.13 Special Tools/Perspective Tiling 305
7.8.14 Special Tools/Lens Flares 305
7.8.15 Special Tools/Picture On Picture 306
7.8.16 Special Tools/Beautify 306
7.8.17 Special Tools/Swirl 307
7.8.18 Special Tools/Generate Pattern 307
7.8.19 Special Tools/Aquarelle 307
7.8.20 Special Tools/Texture Filter 307
7.8.21 Special Tools/Relief 307
7.8.22 Special Tools/Ripple 307
7.8.23 Shape Tools/Polar Coordinates 308
7.8.24 Shape Tools/Vault 308
7.8.25 Shape Tools/Waves 308
7.8.26 Shape Tools/Make Circular 308
7.8.27 Shape Tools/Distort Image with Image 309
7.8.28 Shape Tools/Distort With Arrows 309

7.8.29 Shape Tools/Distort Frame 310
7.8.30 Shape Tools/Distort Wavy 310
7.8.31 Shape Tools/Morph 310
7.8.32 Shape Tools/Page Curl 311
7.8.33 Shape Tools/Bend Image 311
7.8.34 Distort/Outline Warping 311
7.8.35 Distort/Free Roughen 313
7.8.36 Distort/Angled Roughen 314
7.8.37 Distort/Central Roughen 314
7.8.38 Distort/Zig Zag 315
7.8.39 Distort/Twist 315
7.8.40 Effects/Layer Style 315
7.8.41 Layer Style/Layer Shadow outside 316
7.8.42 Layer Style/Layer Shadow Inside 316
7.8.43 Layer Style/Layer Glowing Outside 316
7.8.44 Layer Style/Layer Glowing Inside 316
7.8.45 Layer Style/3D-Shadow 317
7.8.46 Layer Style/Outline Outside 317
7.8.47 Layer Style/Outline Inside 317
7.8.48 Layer Style/Outer Emboss 317
7.8.49 Layer Style/Inner Emboss 317
7.8.50 Layer Style/Special Emboss 318
7.8.51 Layer Style/Stripes 319
7.8.52 Layer Style/Inner Gradient 319
7.8.53 Layer Style/Color Overlay 319
7.8.54 Layer Style/Create Texture 320
7.8.55 Layer Style/Window Shades/Tubes 320
7.8.56 Layer Style/Magnifier Effect 321
7.8.57 3D Body 322
7.9 The Web Menu 324

7.9.1 The Dynamic Animation 324
7.9.2 Export Single Frames 333
7.9.3 Tile Image 333
7.9.4 Raster Transparency 333
7.9.5 Image Map/Assign Command 334
7.9.6 Image Map/Image Map Export 334
7.9.7 Web Export 335
7.10 Miscellaneous Functions 336
7.10.1 Options 336
7.10.2 Register 358
7.10.3 Search for Update 359
7.10.4 Window/Align All 359
7.10.5 Action to Gallery 359
7.10.6 Harmony 360
8. Frequently Asked Questions 362
8.1 A Tool Is Missing 362
8.2 Tools are missing 362
8.3 Setting Up Units 362
8.4 Crop An Image 363
8.5 Starting PhotoLine From An USB-Stick 363
8.6 Clear An Image 363
8.7 Create An Alpha Channel/Transparency 363
8.8 Drawing Lines 364
8.9 Rotating Layers 364
8.10 Changing the Size of An Image 364
8.11 My Plug-In Filters Don’t Appear 364
8.12 Create A Screen Snapshot 365
8.13 Red Frame and Sound Using Text Layers 365
8.14 How To Use The Functions 365
9. Index 366

1. Introduction

1.1 The Distribution Concept of PhotoLine

Digital image processing with PhotoLine enables the user to modify pictures in a quick and easy way.
PhotoLine is distributed as shareware. You can therefore, download a test version from our homepage

http://www.pl32.com

This version may be tested for 30 days for evaluation purposes only. The restrictions during the testing period, are that the splash screen at program start is displayed longer as usual. After the 30 days testing period you will have to register PhotoLine, if you want to use it any longer. On registration, you get a registration number that converts the test version to a full version.
If you don't register PhotoLine after 30 days, it will still work, but the splash screen will appear during work. Nevertheless, it is not allowed to work with the test version after the 30 days testing period.

1.2 Feature Overview

The image processing part of PhotoLine contains all standard features like painting, copying, filtering, color gradients and fill functions. In order to eliminate interfering background in pictures, PhotoLine offers various lasso functions, a flexible mask handling and a magic wand function.
Layers are an important feature for professional usage. The number of layers is only limited by the available memory.
The number of undo and redo steps can be set in a range from 0 to 500.
In PhotoLine you can create, load, edit and save CMYK pictures.
The filter section contains a large quantity of features: sharpen, unsharp masking, soften, outline, video for correcting interlaced pictures, relief, glow, shadow, ...

Morphing and distortion functionality is already integrated.
If that is not enough, PhotoLine is extendable through plug-in modules in the 8BF format.
PhotoLine supports numerous import file formats like PLD, PDF, TIF, BMP, GIF, JPEG, JPEG2000, JPEG XR, EXR, WebP, CMX, PCD, PCX, PNG, PSD, PSP, PICT, TGA, IMG, ICO, ANI, XBM, IFF, CGM, PIC, SVG, CVG, GEM, WMF, EMF and digital camera raw data.
PhotoLine has special functions for saving web graphics. It can create, import, edit, show and save transparent and animated GIF files. To save valuable webspace and bandwidth, GIFs can be saved highly optimized and interlaced. Saving of progressive JPEGs is supported, too.
Due to the various import and export drivers and its integrated batch function, PhotoLine is well suited as a file format converter. In combination with the action recorder, the batch function is a very powerful tool. For example, with one mouse click it is possible to read all pictures from a directory, reduce them to 256 colors for usage on the web and save the pictures to a different directory.
Pressure sensitive graphic tablets are supported, too.

1.3 Software License

By installing PhotoLine you indicate your acceptance of this license agreement. PhotoLine is protected by the United States and International copyright laws. Computerinsel GmbH grants you a non-exclusive license to use one copy of PhotoLine on a single computer display device. You may not duplicate the software, except to make a single backup copy or to install on a hard disk. You may transfer the PhotoLine to another person only if you retain no copies of the software, and the new owner agrees to this license agreement. The software contains copyrighted material, trade secrets and other proprietary material. You may not decompile, reverse engineer, disassemble or otherwise reduce the software to any human-readable or usable form. You may not modify or create any derivative works based on the software. This license is in effect until termination. You may terminate this license by destroying all copies of the software and documentation.

Computerinsel GmbH may terminate this license if you fail to comply with any of the provisions of this agreement.

Computerinsel GmbH Limited Warranty

Computerinsel GmbH warrants that (a) the Software will perform substantially in accordance with the accompanying written materials for a period of ninety (90) days from the date of receipt, and (b) any Support Services provided by Portrait shall be substantially as described in applicable written materials provided to you by Computerinsel GmbH. Some states and jurisdictions do not allow limitations on duration of an implied warranty, so the above limitation may not apply to you. To the extent allowed by applicable law, implied warranties on the Software, if any, are limited to ninety (90) days.

Customer remedies.

Computerinsel GmbH and its suppliers‘ entire liability and your exclusive remedy shall be, at Computerinsel GmbH’s option, either (a) return of the price paid, if any, or (b) repair or replacement of the Software or media which does not meet Computerinsel GmbH’s Limited Warranty and which is returned to Computerinsel GmbH with a copy of your receipt. This Limited Warranty is void if failure of the Software has resulted from accident, abuse, or misapplication. Any replacement Software will be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer.

No other warranties.

To the maximum extent permitted by applicable law, Computerinsel GmbH and its suppliers disclaim all other warranties and conditions, either express or implied, including, but not limited to, implied warranties of merchantability, fitness for a particular purpose, title, and non-infringement, with regard to the software, and the provision of or failure to provide support services. This limited warranty gives you specific legal rights. You may have others, which vary from state/jusidiction to state/jurisdiction .

Limitation of liability.

To the maximum extent permitted by applicable lay, in no event shall Computerinsel GmbH or its suppliers be liable for any special, incidental, indirect, or consequential damages whatsoever (indirect, or consequential damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the software or the revision of or failure to provide support services, even if Computerinsel GmbH has been advised of the possibility of such damages.

In any case, Computerinsel GmbH's entire liability and any provision of the end user license agreement shall be limited to the lesser of the amount actually paid by you for the software product or USD$5.00. Because some states and jurisdictions do not allow the exclusion of limitation of liability, the above limitation may not apply to you.

Impress:
Copyright:
Computerinsel GmbH
Zur Limestherme 4
D 93333 Bad Gögging
Our e-mail-address is:

support@pl32.com

1.4 Setup

1.4.1 Windows Installation

Hardware and software requirements:

- at least 100 MB free hard disk space
- Microsoft Windows 7 or higher

You can download PhotoLine from www.pl32.com.

If you have downloaded the ZIP-version, you must decompress it first. After that, start the guided installation by double-clicking the EXE-file.

Of course, PhotoLine installs an uninstallation application for the unlikely case that you want to remove PhotoLine.

1.4.2 macOS Installation

Hardware and software requirements

- At least 120 MB free hard disk space
- macOS 10.13 or better

You can download PhotoLine from www.pl32.com.

After downloading, you have a ZIP-file which has to be decompressed. In the resulting folder, there is the application PhotoLine. Simply copy it to one of the default Applications folders on the boot volume or in your home directory.

1.5 Starting and Terminating PhotoLine

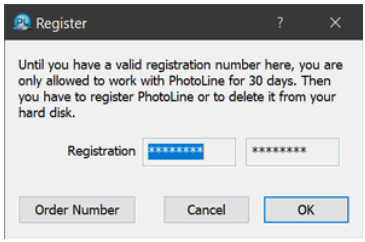
1.5.1 Starting PhotoLine (Windows)

Start PhotoLine from the Start menu or from Explorer.

1.5.2 Registration of PhotoLine

After the first start of PhotoLine you have to wait a few seconds because your PhotoLine isn't registered yet. Therefore, you should enter your registration number first.

The easiest way to do this is to press the button "Register..." in the splash screen. Alternatively, you can wait, until the splash screen removes. After that, select ***?/Register...*** (on Windows) or ***PhotoLine/Register...*** (on macOS). Now the following dialog appears:



In this dialog, you can enter your registration number. A more detailed description you can find in chapter 7.10.2 “Register”.

1.5.3 Terminating PhotoLine

On Windows, you can click on the closer in the upper right corner of the main window in order to quit PhotoLine.
Alternatively, you can use the command ***File/Quit*** with the shortcut Alt+F4 (on Windows) or Cmd+Q (on macOS).

1.6 The Settings Folder of PhotoLine

The Settings Folder on Windows
By default, PhotoLine under Windows saves its settings in the directory that the operating system has designated for it. The location of this directory depends on the operating system version, but if you enter “%appdata%/PhotoLine” in the address bar of a Windows Explorer window, you will get there.
Alternatively, you can create a “PhotoLineSettings” folder in the PhotoLine application directory. If this folder exists, PhotoLine will load and save all settings there. Please note: of course, this folder may not be write-protected.

The Settings Folder on macOS
On macOS, all settings are written to “<user folder>/Library/Preferences/PhotoLine”.
You can create a “PhotoLineSettings” folder on macOS, too, in order to store all settings there. “PhotoLineSettings” must be in the same folder as the PhotoLine application. Please note here, too: this folder must not be write-proteced.

2. Basics of Image Processing

2.1 Color Spaces

2.1.1 RGB

These three letters stand for the RGB color space typical used in computer graphics. R means red, G means green and B means blue. This color space is typically used in computer graphics because a color monitor creates its colors out of these three components. A monitor is built-up by an ordered pattern of small red, green and blue colored segments. If these segments have a different brightness, different colors are resulting. For example, if blue is dark and red and green are shining, the result will be yellow. Because adding the base colors creates the various colors, the RGB color space is called “additive”.

With the RGB color space, you can display 16.777.216 distinct colors. This value results from the fact, that one Byte is used for each color component (red, green, blue). One Byte is a basic memory unit of the computer and can contain values from 0 to 255. To calculate the maximum number of colors, you have to use the term:

256 x 256 x 256 = 16.7 mio. colors

2.1.2 CMYK

The creation of colors with red, green and blue works quite well with screens. But on paper, this system can’t be used. On paper, the subtractive color space CMY is needed. It uses the color components cyan (a kind of light-blue), magenta and yellow. Printing these colors reveals a problem: mixing the three components can’t create a pure black. The result is more a dirty brown. As a result, a fourth component was added: K, which stands for black.

2.1.3 HSV

The RGB color space has a fundamental disadvantage. It is not easy for a normal user to define a color in the terms of red, green and blue.
HSV helps here a bit. It contains the components hue, saturation and value. Hue defines which color to use: red, yellow, green, blue, ... Saturation defines the pureness of the color: less saturation results in a more grayish color. Value defines the brightness of the color.

2.1.4 CIE Lab

In 1976 the CIE (“Commission Internationale de l'Éclairage”, in English “International Commission on Illumination”) created an exactly defined color space, the Lab color space. Exactly defined means, that the visual appearance of every color value is defined. Therefore, every Lab color value should look the same on every device, if the device is able to display the given Lab value at all. But there is no computer device that can display all Lab values, because the Lab color space is much larger than the RGB and CMYK color space, which cover only a part of Lab.
The single components of Lab are L (lightness), a and b. The smaller ‚a‘ is, the more green a color is getting, the larger it is, the more red. The smaller ‚b‘ is, the more blue a color is getting, the larger it is, the more yellow.

2.2 Picture Types

2.2.1 Basics

The user usually works with several picture types: bitmaps or monochrome pictures, gray pictures, RGB pictures, CMYK pictures and vector graphics.
Bitmaps, gray pictures, RGB pictures and CMYK pictures are called pixel or raster graphics. Every picture consists of little dots (called pixels), which are arranged in a raster, like on a computer monitor. These four picture types differ considerable in the number of usable colors and the amount of needed memory.

Pixel images - with the exception of bitmaps, which always occupy 1 Bit per pixel - can have different color depths. Most common is a color depth of 8 Bit. This means that every channel of the image needs 8 Bit or 1 Byte. Some devices like scanners or digital cameras are able to create pictures with a higher color depth. Therefore, PhotoLine supports a color depth of 16 Bit, 2 Bytes, per color channel, too. Additionally, PhotoLine can handle 32 bits per color channel. This format is mostly used with HDR (High Dynamic Range) images. HDR images can contain color values, that are smaller than 0% or larger than 100%, but only the range from 0% to 100% is visible. On displaying values outside that range will be reduced to that range.

2.2.2 The Bitmap (Monochrome Image)

The simplest picture type is the bitmap. Every pixel uses only 1 Bit, because the pixel can only be set or cleared. The depth is therefore 1 Bit. PhotoLine uses black for set pixels and white for cleared.

Consequently, a bitmap doesn't use much memory, but offers only limited picture quality.

A bitmap, which is 1024 pixels wide, uses 128 Byte per line. A bitmap with a size 1024 x 1024 consumes therefore 128 KBytes.

2.2.3 The Gray Image

A gray image uses - depending on the color depth - 1 or 2 Bytes for every pixel. 1 Byte per pixel results in 8 Bit depths, 2 Bytes in 16 Bit. Therefore, a gray image with 8-Bit-depth offers 256 shades of gray and every pixel can have any of these shades.

A gray image (8 Bit) with a size of 1024 x 1024 pixels occupies 1024 * 1024 Byte- 1 MByte - memory.

2.2.4 The RGB Image

RGB images are based on the RGB color space. Each of the three components red, green and blue uses 1 or 2 Bytes per pixel. Using 8-Bit-depth, each pixel can display 256 * 256 * 256 = 16.777.216 distinct colors.

An RGB image (8 Bit) with a size of 1024 x 1024 pixels occupies 3 * 1024 * 1024 Byte - 3 MBytes - memory.

2.2.5 The CMYK Image

The CMYK image is typically used in the printing industry. Its name shows that it is based on the CMYK color space.

Each of the four color components uses 1 or 2 Bytes per pixel.

A CMYK (8 Bit) image with a size of 1024 x 1024 pixels needs 4 * 1024 * 1024 Byte - 4 MBytes - memory.

The conversion from RGB images to CMYK is lossy. Therefore, conversions should only take place, if the whole picture is finished.

The typical home user shouldn't use CMYK at all, because standard ink jet printers are able to print RGB images.

2.2.6 Vector Graphics

Vector graphics doesn't consist of separate pixels but of vector objects. Vector objects are a description of the picture. They specify, for example, that there is a circle with radius 50 at the position (100; 100) and a line should be drawn from (10; 10) to (100; 50). These line strokes, that build up a vector graphic, are called path. Each part of the path, that has a starting point of its own, is called subpath. I.e. a vector object, that consists of two rectangles, has two subpaths.

Each of these objects can be assigned a line style, a line color and a fill color.

Vector graphics is well suited for diagrams and for stylized graphics like pictograms.

Vector graphics has the advantage that it is easily resizable without loosing quality. Furthermore, non-complex pictures need significant less memory if stored as vector graphics.

The disadvantages are that complex vector graphics is harder to create and that vector graphics is slower to draw, because the computer has to calculate its look.

2.3 Layers

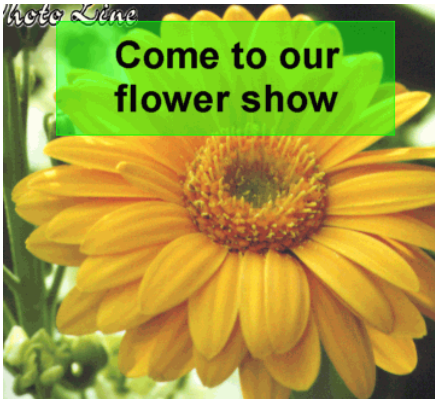
2.3.1 Introduction

Layers are used in modern image processing to simplify work. Layers can be thought of as transparent foils, each containing a part of the resulting picture.

This technique has several advantages. A layer can always be moved without modifying the rest of the picture, and painting on a layer doesn't affect other layers.

But layers offer more than foils in conventional work. A layer laying on another can be made transparent in nearly infinitely variable steps. It is even possible that an underlying layer is not simply replaced but combined in various ways by using a blend mode.

There are several kinds of layer: image layers, vector layers, text layers and groups. All kind of layers have advantages and disadvantages, therefore it is usually efficient to use not only one kind in a picture. For example, it is possible to set a text layer on an image layer. Possibly it is nice to have a colored rectangle, which is a vector layer, behind the text to make it more readable:



By using various kinds of layers, it is possible to do more than simple image processing. You can rather accomplish all kind of design work like greeting cards, business cards, CD labels and much more.

2.3.2 Image Layer

An image layer contains a raster image.

Image layers are split into color channels. Color channels are logical collections of all pixel parts of the same kind. Bitmaps and gray images therefore consist of only one color channel, the K-channel. “K” means - as in CMYK - “Black”.

RGB images consist of 3-color channel, which correspond to the color components of the RGB color space: the R-channel for the red component, the G-channel for the green component and the B-channel for the blue component.

CMYK images have accordingly 4 color channels: the C-, the M-, the Y- and the K-channel.

All kind of images in image layers may (but may not) have an additional channel: the alpha channel, which is also called transparency. The alpha channel determines, how transparent a given pixel is. The alpha channel has the same color depth as the accompanying image: 1 or 2 Bytes per pixel. With 1 Byte the transparency can be controlled in 256 steps. A transparency value of 0 declares a pixel to be complete invisible, and a value of 255 declares a pixel to be complete opaque.

Some functions automatically create an alpha channel (how to create an alpha channel manually, see chapter 4.11). This can increase the memory usage for a bitmap dramatically, because bitmaps only use 1 Bit per pixel, but alpha information 8 Bit in this case. This means: if an alpha channel is created for a bitmap, the image layer will need 9 times the memory it needed before.

2.3.3 Text Layers

Text layers are useful for adding text to a picture.

Most image processing application are able to set text into a picture in some way. This has the disadvantage that the text is no longer editable afterward.

Against that, text layers stay editable. You can change the font or the size afterward, or fix a spelling error.
Text layers are very flexible. Not only one-line-text is possible but whole paragraphs. These paragraphs can - similar to a word processor - be left aligned, right aligned, centered, justified or forced justified. By using forced justified, all lines of a paragraph - including the last one - are stretched in order to fill the line space.
A text layer can contain fonts in any number, the user is not limited to just one font.
PhotoLine offers another text option: path text. Path text is a text layer whose text isn't displayed inside a rectangle, but that is running along a vector path. Each subpath is used as separate line for path text (see chapter 6.2.12).
PhotoLine supports spell checking in text layers (see chapter 6.2.13). On macOS and Windows 10 (or better) the built-in spell checker is used.

2.3.4 Vector Layers

Vector layers contain vector graphics (see chapter 2.2.6). Vector layers are mostly used to underlay text with a colored background or to add pictures from a clip art gallery.
Note, that you can assign more than one fill and line style to a vector layer (see chapter 4.11 "The Layer Attributes").

2.3.5 Groups

Groups are a union of several layers. The advantage of a group is, that all layers in-group can be moved or scaled at once. Also, groups are helping to keep the structure of a document simple, because fewer layers have to be considered.
The layers inside a group are also named "children". The children of a group are not directly accessible. In order to edit them, the group has to be entered (see chapter 4.7, chapter 6.2.1 and chapter 7.5.43). After that, the layers inside this group are accessible. If you have finished your work inside the group, you have to leave the group afterward (see chapter 7.5.44).
Groups can contain other groups, too.

2.3.6 Virtual Copies

Quite often a graphic - for example, the logo of a company - has to be used several times in a document. Therefore, the graphic is usually copied each time. If a part of the graphic has to be changed later, all copies have to be modified, too. But this is a cumbersome and error-prone work.
This is the reason for virtual copies. A virtual copy is not a real copy but only a reference to the original layer.
Virtual copies inherit most properties of their original. These are:

- the layer content
- the effects
  This includes all kind of effects of PhotoLine: the layer style, layer distortions and 3D bodies.

But the following data can be different:

- the position
  This includes rotations, scaling and perspective distortions.
- the intensity
- the blend mode

A virtual copy can be created by two means. The original layer can be copied and then be pasted as a virtual layer (see chapter 7.2.12), and it can be duplicated as virtual layer by using the context menu of the Layer List (see chapter 4.7). Additionally, the context menu is a fast way to show the source of a virtual copy (see chapter 7.4.56) and to make a virtual copy be a real copy (see chapter 7.4.57).
A virtual copy has to be in the document of its original layer.

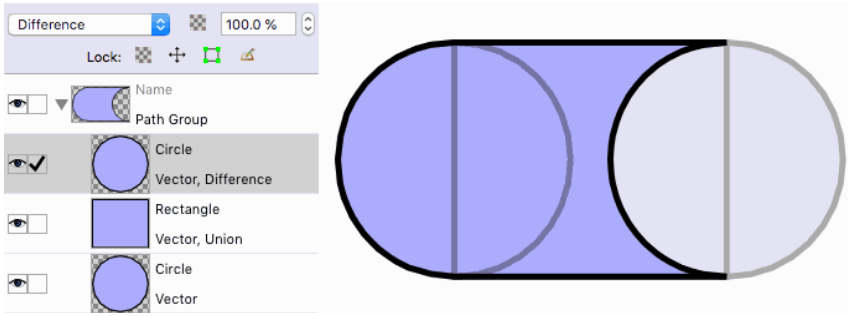
2.3.7 Placeholder Layers

Placeholder layers have no own content, but show the content of an external file. This way, a document always contains the current version of a picture file - i.e. a JPEG file. Optionally, you can embed the file in the document (see chapter 7.4.60).
You can’t directly manipulate the data of a placeholder. If you want to change its appearance, you have to modify the original file. Alternatively, you can apply adjustment layers (see chapter 2.9) and dynamic filters (see chapter 2.10) to the placeholder.

The easiest way for creating a placeholder is using the Placeholder Layer tool (see chapter 6.2.11). You can also drag & drop a file to a document while holding Alt (on Windows) or Alt+Command (macOS). And the function ***Open as Placeholder*** (chapter 7.1.6) will create a new document that contains the selected file as placeholder. Furthermore, raw files can optionally (chapter 7.10.1.16) be imported as placeholders by default.
By dragging a file to an already existing placeholder, you can replace its content. If you do not want this in the current situation, you can prevent it by pressing ***Shift***. A new layer will then be created.
Furthermore, you can adjust its properties by using the Layer Attributes (see chapter 4.11). The Layer Attributes also allow you to control, how to fit the file into the frame of the placeholder layer. For example, using the mode ***Clipping***, PhotoLine will automatically create a clipping layer (see chapter 2.7) for the placeholder. This way you can define the visible part of the placeholder layer by moving, rotating or scaling it using the ***Layer Tool*** (see chapter 6.2.1).
When you are saving a document as PLD, placeholder layers will store a preview image in the resulting file by default. If the source file no longer exists, this preview image will be displayed with reduced intensity.
The Layer Attributes (see chapter 4.11) allow you to modify the properties of placeholder layers.

2.3.8 Path Groups

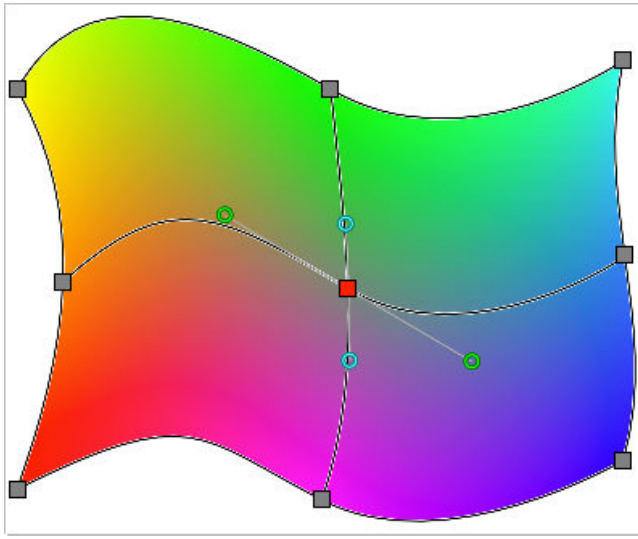
If you apply operations such as union or difference on vector layers (see chapter 7.4.43 ff.), the result is a path group.
A path group is a mixture of a group (see chapter 2.3.5) and a vector layer. It contains all vector layers involved, but you can also assign a fill color and an outline style.
The vector layers in the group can be edited later, and the result of the vector operation is automatically updated.
You can also drag additional vector layers into the path group and assign an operation to them via the layer list (see chapter 4.7).
The following example shows a path group with two circles and a rectangle in between. The left circle and the rectangle were merged, and the right circle was subtracted from the result. The original vector layers are drawn with reduced intensity:



If you want a normal vector layer instead of a path group, you can use either the menu commands “Layer > Fix Layer” or “Layer > Convert Layer Type”. Tip: Path groups also support virtual copies (see chapter 2.3.6) of vector layers.

2.3.9 Mesh Gradient

The mesh gradient is quite similar to a color gradient, but while in a color gradient all the colors are on one line, in a mesh gradient they are arranged in a mesh:



Mesh gradients are created and edited with the Mesh Gradient tool (see chapter 6.2.12).

2.4 Basics for Image Layers

2.4.1 Lasso/Mask

The mask is a gray image with the same size as the corresponding image layer. Each image pixel corresponds with one mask pixel. Like the transparency controls, how transparent a pixel is, the mask controls, how strong a pixel will be affected by an image operation. A value of 0 in the mask protects a pixel from being changed, a value of 255 offers no protection. As the mask is a gray image, it can be edited with nearly all image tools.

The lasso is a vector object, that - similar to the mask - controls which parts of an image layer can be edited. There are special lasso tools for the creation of a lasso: the rectangular lasso tool, the circle lasso tool and the free lasso tool (see chapter 6.2.21 and chapter 6.2.22).

You may ask now why there are two ways to protect parts of an image from editing. The answer is quite simple: there are not two ways. Every time a lasso is created or changed, the mask is changed automatically, too. And every time the mask is changed, the lasso is changed accordingly. Therefore, the terms “mask” and “lasso” only describe different points of view of the same thing.

2.4.2 Selection

The part of an image layer, which is not protected by the lasso/mask (see chapter 2.4.1), is called selection.

2.4.3 Filters

Filters are special image layer tools. Filters are testing each pixel of an image and are replacing it depending on its neighbors. Using different rules for replacing affects the result: the image gets sharper or softer. There are also filters, which enhance the contour of the image content, others create a relief. Those were just a few examples. Enumerating all kind of filters is a nearly endless story.

2.5 Layer Style

Layer styles are not tools in the common sense, because they don't modify the content of a layer. Layer styles are more like attributes, which are assigned to a layer in order to modify its appearance. PhotoLine offers many different styles like shadows, glowing, lighting styles and pattern overlay (see chapter 7.8.40).

Here is a small example to demonstrate the advantage of this technique:

Many image-processing applications have a shadow feature. It creates a shadow behind the active layer, so that the layer seems to float over the background. This is achieved by drawing the shadow in the layer itself or by creating an additional layer lying behind the active layer. Both ways work quite well. But it is awkward, if you have to change your layer later, because the shadow is not changed accordingly.

With the shadow being a layer style, the situation is different. Every time a layer is changed, the shadow is adjusted automatically.

Of course, layer styles can be drawn directly into a layer (see chapter 7.5.27). But then they won't adjust to the layer content any longer.

2.6 Layer Distortions

Layer distortions modify the shape of layers. Most layer distortions can only operate on text or vector layers. To be exact, at the moment there is only one layer distortion that can operate on images, too: the outline warping (see chapter 7.8.34).

Similar to layer styles (see chapter 2.5) the layer itself keeps unchanged. Only the appearance of the layer changes.

Layer distortions can be applied on groups, too. In this case, they affect all layers inside the group.

You can delete Layer Distortions by using the Layer Attributes dialog (see chapter 4.11).

2.7 Clipping Layers

Clipping layers are clipping other layers. Those layers are clipped that are in the same group and are drawn before the clipping layer. The clipped layers are not modified, they are only drawn differently.
A simple example illustrates this behavior:

If the text layer is made a clipping layer, the result will look like this:

So the flower is only visible, where text is displayed. But no part of the flower is deleted, it is still complete.
Every layer type - this means groups, too - can be made a clipping layer (see chapter 4.7 and chapter 7.5.21), but best suited are vector layers, text layer and gray images without transparency. Color images or gray images with transparency should only be used if really necessary, because they are displayed noticeably slower.
The following example shows a flower clipped by a gray image containing a gradient from black to white:

The edge of clipping layers can be softened (see chapter 7.5.22). This way, an image masked by a vector layer can be inserted more smoothly in a given background.
If you are creating a clipping layer, you have to pay attention that it may be necessary to hide the clipping layer (see chapter 4.7), because it may cover the expected result. In our examples, the clipping layers are hidden, too, because otherwise there would have been nothing visible except them.
A clipping layer can be blurred and inverted using the Layer Attributes (chapter 4.11).

2.8 Layer Masks

Layer masks are a special kind of clipping layer (see chapter 2.7). While a clipping layer is clipping all its predecessor layers, a layer mask is clipping its parent layer. Therefore, a layer mask is always the child (see chapter 2.3.5) of the layer it is clipping. Layer masks are used, if only one layer has to be clipped. The text example of chapter 2.7 is a typical example of a layer mask. Furthermore, layer masks are used in traditional image processing to hide unwanted parts of images on the layer stack.
If layer masks are used on image layers, they offer several helping functions in order to combine them with or create them from an alpha channel or a mask (see chapter 7.5.17 and following).
A layer mask can be blurred and inverted using the Layer Attributes (chapter 4.11).

2.9 Adjustment Layers

Adjustment layers modify - similar to clipping layers - the appearance of the layers drawn before the adjustment layer. In order to do this one or more adjustments are assigned to the adjustment layer (see chapter 4.36, chapter 7.5.11 and chapter 7.5.13), and the layer content is used as a mask, the so-called adjustment mask. These adjustments can be a histogram correction (levels), a color adjustment or even a filter.

The following example shows a text layer containing the text “Working Layer” placed on an image. The assigned adjustment inverts the image everywhere the text is drawn:

If a gray image is used as an adjustment layer, only parts of an image can be color adjusted without modifying the original. By using a color filter (see chapter 7.5.28) you can restrict the effect of an adjustment layer to areas with a given brightness and/or color.

Every layer type, including groups can be made an adjustment layer. Best suited are vector layers, text layers and gray images without transparency. Color images or gray images with transparency should only be used if really necessary, because they are displayed noticeably slower.

If you want to edit an adjustment layer, this may be a bit troublesome, because the real layer is not visible, just the effect of the adjustment assigned to it. Therefore, you can turn off the adjustment temporarily by using the Layer Attributes dialog (see chapter 4.11). Another possibility is to click on the layer’s thumbnail in the Layer List (see chapter 4.7) while

holding Alt. If you do so, the mask of the adjustment layer will be shown like a simply gray image.
As said before, adjustment layers are similarly compared to clipping layers, but there is a significant difference: clipping layers are only affecting the layers inside their group, and adjustment layers are affecting the whole document. So if you want to restrict an adjustment layer to a group, you have to turn on the attribute “draw isolated”. An isolated group is draw as a unity (see also chapter 4.11). If you want to restrict the effect of an adjustment layer to a single image, you can group it with that image layer. The easiest way to do that is either on creation or by dragging the adjustment layer onto the image layer in the Layer List (see chapter 4.7).
The mask of an adjustment layer can be blurred and inverted using the Layer Attributes (chapter 4.11).

2.10 Dynamic Filters

You usually use adjustment layers (chapter 2.9) for lossless image editing in PhotoLine. Unfortunately, not all functions are available there.
As a substitute you can often use Dynamic Filters: When you apply a function that can not be used as an adjustment layer to a placeholder layer (chapter 2.3.7), the placeholder layer is not edited directly, but PhotoLine creates a child layer, that executes the function dynamically on the placeholder layer. So if you change the content of the placeholder layer later, the assigned dynamic filter is executed automatically. The content of this newly created layer is used as mask: white areas allow editing, black ones forbid it.
A Dynamic Filter layer can contain more than one function. To add a new function, you must activate the layer and simply apply another function on the layer. Using the Layer Attributes (chapter 4.11), you can change the order of the assigned functions, or you can delete individual functions.
Dynamic Filters have an additional blend mode (Section 4.7): Replace. In this mode, the placeholder layer, which the dynamic filter is assigned to, will not be shown and only the result of the dynamic filter is visible. This is useful when the dynamic filter makes parts of the placeholder transparent.

Dynamic filters are very similar to smart filters, which you may know from other applications.

The mask of a Dynamic Filter can be blurred and inverted using the Layer Attributes (chapter 4.11).

2.11 Document Mode And Picture Mode

PhotoLine has two basic working modes: the document and the picture mode.

Documents are used for creating greeting cards, labels and things like that. Pictures are used for web graphics or if the result will be used in another application.

Nevertheless, documents and pictures are very similar. Both consist of layers, and nearly all functions can be used on both.

The main differences are:

- In picture mode, the first layer is always an image layer. This image layer is called background layer. There is no such layer in document mode.
- The background layer defines the size of the picture. If the background layer gets smaller, the whole picture gets smaller. Documents behave differently. On creation, their size is defined. After that, a document containing a single page is created without any layer.
- In picture mode the background layer defines the color space, in document mode the color space is defined by the ICC color profile of the document (see chapter 4.9 and 7.6.12).
- Documents can contain several pages, pictures can’t.

In this manual, both terms are used synonymously. If documents and pictures behave differently, it is explicitly written.

To change the working mode of an existing document or picture, see chapter 4.9 “The Document Attributes”.

2.12 Color Management and ICC Color Profiles

An old problem when processing images is, that a print-out often looks completely different to the on-screen display. This is due to the fact, that printers usually are not able to print as many colors as a computer monitor.

Therefore, several hardware and software companies have founded the ICC (International Color Consortium). The goal of the ICC was and is to define a standardized way for a uniform appearance of images and graphics and different output devices (printer, screens, ...).

The solution of the ICC are color profiles. In the ideal case, every device reading or displaying an image should have an associated color profile. The color profiles are describing how a certain device interprets a given color.

Usually you proceed like this:

- A color profile provided by the monitor manufacturer is assigned to the monitor.
- A color profile provided by the printer manufacturer is assigned to the printer.
- If an image is scanned, the color profile of the scanner is assigned to this image.

If all 3 points are fulfilled, a scanned image printed or displayed on-screen looks like the original - at least in theory. In practice there are two problems:

- By using the brightness and contrast controls, the monitor can be adjusted differently as expected by the color profile. Only test print-outs and accordingly made changes to the contrast and brightness of the monitor can solve this problem.
- As mentioned above, different devices and thus different color profiles have a different color gamut. As a rule, printers cannot display as many colors as monitors. For example, a very bright cyan is nearly never correctly reproduced. Using a color profile can‘t extend the capabilities of a given device. But it is possible to simulate a printer on-screen (see chapter 7.10.1.37). This way, you get at least an impression of what the print will look like.

To at least reduce the problem with the different color gamut, the ICC has introduced the rendition type. There are four rendering intents:

- Perceptual

  With ***Perceptual***, the color gamut of the source profile is reduced to fit the color gamut of the destination profile. So no colors are lost, but the source colors may be rendered slightly differently. This mode takes advantage of the fact that the human eye does not recognize absolute color values very well, but reacts better to color differences.

- Relative colorimetric
  Relative colorimetric leaves the colors of the source profile unchanged. Colors that the target profile cannot represent are replaced by the most similar possible color.
- Absolute colorimetric
  Here, the approach is similar to Relative colorimetric, except that the white point of the color profiles is also taken into account during the color conversion. This can result in white becoming a shade of yellow or blue. This mode is mainly used to simulate the output of one device on another.
- Saturation
  This mode does not emphasize true color reproduction. Instead, it tries to reproduce colorful colors as colorfully as possible. It is, therefore, most suitable for diagrams or striking graphics.

Usually, only ***Perceptual*** and ***Relative colorimetric*** are used, as they provide the best results for normal work.

Also note that color profiles do not have to support different rendering modes. It may be that a color profile can only support one rendering mode.

The support of color profiles in PhotoLine is described in chapter 7.6.15 “Set Color Profile”, chapter 7.6.16 “Convert With Color Profile” and in chapter 7.10.1.37 “Color Management”.

2.13 File Formats

Picture file formats are an unpleasant topic in image processing. There exists an enormous amount of formats and each format has its weaknesses. No format (with the exception of the PhotoLine format PLD) is able to store all things that can be done with PhotoLine.

There is another problem. Standard file formats are by far not as “standard” as their name may sound. And many formats are simply too complex, so there is no application that is able to load all possible variations.

Now we will show the most important file formats.

PLD

PLD is the PhotoLine defined file format. It is able to store all kind of information in a document such as pages, image layers, vector layers, text

layers and groups. Aside from this, special information like printer settings, animation data and so on is stored, too. It is recommended to save pictures created with PhotoLine as long as possible as PLD file. You should only save in a different file format if you plan to use the picture with another application because saving in another format nearly always goes hand in hand with a loss of information.

PDF

PDF has become the standard format for exchanging multipage documents. One of the advantages of PDF is its ability to contain text, images and vector graphics. PDF files are usually viewed and printed with Adobe Reader™ from Adobe®.

PhotoLine can read and write PDF files, but there are some restrictions on reading: due to the many features of PDF, PDF files are not always read correctly.

PDF files are well suited to exchange documents containing text and vector graphics.

TIFF

TIFF is a very common file format with the advantage to be used on different hardware platforms. TIFF offers some advantages like storing of bitmaps, gray images, RGB images and CMYK images. It is able to store transparency, too. It is possible to save several image layers to a TIFF file, but only few applications are supporting this.

Bitmaps can be compressed at a high rate by using TIFF Fax4.

You shouldn't use the compression TIF-JPEG because many applications can't read this compression.

If you have problems reading TIFF files with other applications, you should set the compression in ***Options/File/TIF*** to ***TIF-uncompressed***.

We recommend the TIFF file format for the data exchange between different applications.

GIF

GIF has got undeserved fame through its use in the internet area. GIF is able to store images with up to 256 colors. One of these colors can be defined to be transparent.

GIF stores image data with LZW compression. This compression method achieves only mediocre results.
It is possible to save several images to one file. Therefore, GIF can be used for small animations.
GIF should only- if ever - be used for web graphics.

BMP

BMP is the standard image file format for Windows. But it can store neither layers nor transparency. Compression is low, with run length encoding (RLE) or not existent.
BMP is well suited for data exchange with Windows applications.

JPEG

JPEG is a commonly used format. It is able to store gray, RGB and CMYK images. Unfortunately, transparency and layers are not supported.
The largest advantage of JPEG is it high compression of image data.
But this compression is lossy, therefore, you should avoid to process JPEG saved images any further.
PhotoLine is able to read ICC color profiles, that are embedded in an JPEG, and to export them again. Additionally, it can read and write clipping paths (see chapter 5.5.5).
Because of the high compression rates, JPEG should be used for web graphics and for archiving images.

JPEG 2000

JPEG 2000 was designed as successor of JPEG, but until now it hasn‘t been able to succeed. JPEG 2000 main goal was to create smaller files while getting the same quality compared to JPEG. But in reality, this goal hasn‘t been fully met. Depending on the theme, it‘s possible to get smaller files, but most of the time the resulting files are not significantly smaller. If you additionally take the minor support compared to JPEG into consideration, JPEG 2000 can not be recommended.

JPEG XR

JPEG XR was also developed as a successor to JPEG. However, it could not become generally accepted until today. Compared to JPEG, this should also allow smaller files with the same quality.

JPEG XL

JPEG XL is another format developed as a successor to JPEG. It can store 8-, 16- and 32-bit images. Whether it will achieve any significance remains to be seen.

PNG

PNG is a format, which was invented for replacing GIF on the internet. It offers some advantages like a very good compression and the ability to store full transparency. It doesn't store layers.

Raw: Digital Camera Raw Format

Many digital cameras can save a so-called Raw format. This format saves the raw data that come "directly" from the sensor of the camera. This format has some advantages and disadvantages compared to other file formats. The main advantage is, that the images are relatively small and there are no compression problems. You avoid problems with the automatic color correction of the camera, too. The disadvantage is that every camera has its own raw format. So you have to search for an application, that can read the format of your camera. If you have such a software, you will see, that you have to spend some time to get a perfect image from your raw data.

PCD/Photo CD

PCD was developed to save color photos on CD. One file contains the photo in several sizes: Base/16, Base/4, Base, Base*4, Base*16 and sometimes Base*64.

PCX

PCX is an old file format and no longer widely used. You should use PCX only in special cases.

WMF

WMF is a Windows specific file format. It is able to store images, vector objects and text. Because of the complexity of WMF reading and writing is error-prone. Therefore, you should avoid this format.

EMF

EMF is the successor of WMF. It offers the advantage of being able to use a larger coordinate system and storing curves.

PICT

PICT was the macOS counterpart to WMF. It is able to store images, vector objects and text. With macOS, PICT was replaced by PDF and TIFF, so that PICT isn't important anymore.

SVG (Scalable Vector Graphics)

The capabilities of SVG are similar to those of PDF. An SVG file can contain text, vector graphics and raster images. It is mainly used for web pages.

PhotoLine can read and write SVG files.

OpenEXR

OpenEXR is an HDR (High Dynamic Range) file format and intended for saving images with 32 bits per color channel. OpenEXR files can contain several layers.

PhotoLine can read and write Open EXR files.

PS and EPS

PS and EPS are file formats, that were commonly used in the printing industries. For many years now, they have been replaced by PDF.

On Windows PhotoLine doesn't support EPS and PS directly, on macOS the OS is used for importing them.

In order to enhance the import, you can use the open source software Ghostscript.

On Windows, Ghostscript has a DLL (Dynamic Link Library). If you place this DLL in the Hlp-directory of PhotoLine, PhotoLine will use it for

importing. The 32-bit version of the DLL must be named “gsdll32.dll” and the 64-bit version “gsdll64.dll”.
On macOS, PhotoLine uses the command line version of Ghostscript.

FITS (flexible Image Transport System)
FITS is a file format used for scientific data and astronomy. PhotoLine can read FITS.

SER
SER is a simple video format used in astrophotography. PhotoLine can read SER.

2.14 Additional Information

2.14.1 IPTC Data

The IPTC (IPTC: International Press Telecommunications Council) wanted to create a standard to save common information along with an image platform and application independently. This standard is the IPTC-data or IPTC-format respectively. The most important data are the title, the author, the copyright, an internet URL and the picture comment. Aside from this, the IPTC-data can contain keywords
Not all file formats can save this information. All information can be saved by using the PLD, the JPEG, the TIFF- and the PSD format. Some information is saved by using PDF, GIF and ANI.
Nowadays, IPTC data are often embedded in the XMP data and not stored separately.

2.14.2 EXIF Data

EXIF data (EXIF: Exchangeable Image File Format) describe which device and which settings were used for creating an image. Usually, JPEG-files created by digital cameras are containing this kind of data. Please note, that EXIF-data can only be saved with the following file formats:

- JPEG
- JPEG XR
- PLD
- PNG
- PSD
- TIFF
- WebP

2.14.3 XMP Data

XMP data are a quite new solution to combine all metadata (like IPTC, EXIF and so on) in one place.

2.15 Colors

There are several types of colors in PhotoLine with or without transparency. Depending on the field of application, you may not use all types or may not use transparency.
Colors are usually set using in a color field (chapter 3.3.2). You can edit all types of color in the Color Editor (chapter 3.4).
Patterns, vector patterns, textures and gradients can optionally be transformed along with the layer they are used in. You can activate that in the Layer Attributes (chapter 4.7).

Normal Colors
You can define normal colors in all standard color spaces and using the HSV color model.

Spot Colors
A spot color is an additional color when printing documents. Print shops have lists of predefined spot colors and their corresponding CMYK values. Common spot color lists are HKS, Pantone and RAL.
Spot colors are used primarily for two reasons:

- A well-defined color is required (e.g. for a company color).
- You need a color, that can't be created by mixing the classic printing colors C, M, Y and K (e.g. gold or gloss paint).

In PhotoLine you can create spot colors by using the document color list (see chapter 4.16).

Process Colors
Process colors are the primary colors used in printing. These are the pure CMYK colors cyan, magenta, yellow and black.

Tint Colors
Tint colors are derived from a base color. The base color can be a normal color or a spot color. They are always a mix of the base color and white. A tint value of 100% results in the base color, a tint of 0% results in white.

Patterns And Vector Patterns
Patterns and vector patterns are both pattern colors. But while patterns are simple images, vector patterns may contain any kind of layer.
You can transform (scale, rotate, ...) these colors in the Pattern subdialog (chapter 3.4.3) of the Color Editor. With vector patterns, you have extended editing option in the Vector Pattern subdialog (chapter 3.4.4).
If you have assigned a pattern to a vector layer, you can use the ***Vector Edit*** tool (chapter 6.4.1) to change the size and position of this pattern in the document window.

Textures
Textures are similar to patterns, but they are not defined using an image. Instead, they are created using a texture generator (chapter 3.4.5).

Gradients
Gradients are created in the Gradient subdialog (chapter 3.4.6) of the Color Editor. They can be edited - similar to patterns - in the document window by using the ***Vector Edit*** tool (chapter 6.4.1).
There is also a special tool for applying gradients to images (chapter 6.3.10).

3. Basics of PhotoLine

3.1 Text Styles in This Manual

We use the following text styles in this manual:
Menu/Function: This text style refers to a menu command.
Element: This text style refers to a user interface element like a slider or a button. “Element” is the text inside or beside this element.
Dialog: This text style refers to a dialog with the title “Dialog”.

3.2 Context Menu

In order to ease work, PhotoLine offers so called “context menus” in many places. Context menus are small menus containing commands, that are useful in the current situation (the current “context”).
On Windows, context menus are shown by right-clicking the mouse. On macOS, they appear either with Ctrl+mouse click or also by right-clicking.
The most important context menus are in the document window and in the various list fields like curve list and so on. Especially, the content menu in the document window eases work enormously by saving long mouse movements to the menu bar.

3.3 User Interface Elements

3.3.1 Basics

PhotoLine uses some special user interface elements to show the user colors, brushes, line styles and curves. These are called color field, brush field, line style field and curve field. They have in common that:

- their content can be edited by double-clicking
- the content of the field can be dragged to a field with the same kind
- the context menu of many user interface elements allows copying and paste their content. This way you can transfer the value of one field to another where direct Drag & Drop is not possible (for example,

transferring the color of one layer to another). Often the context menu offers additional functionality.

3.3.2 The Color Field

In PhotoLine color fields look like this: . The term color field is not quite precise because a color field is usually able to contain a pattern or a gradient color, too.

Pattern colors (see chapter 2.15) consist of any type of layer. If you want to change the content of a pattern color, you can create a document with the content of the pattern using ***Create Document*** of the color field's context menu. When you have finished editing, the context menu command ***Vector Pattern from Document*** creates a new pattern color on the clipboard, which you can then paste back into the desired color field.

Whether a color field is able to contain a pattern, depends on its use. Usually, only user interface settings are not allowed to contain patterns.

If the color field contains a simple color, it shows the color model coded using the corners:

- RGB: all corners are there
- Gray: missing lower-left corner
- CMYK: missing lower-right corner
- Lab: missing upper-right corner

If there is a small point in the respective corner, the color is a spot color (see chapter 2.15). The point is in the lower-right corner for RGB colors.

A double click on a color field opens the Color Editor (see chapter 3.4), which can be used to edit the color.

By using the context menu of the color field, you can show the ***Harmony*** dialog. ***Harmony*** allows you to create a series of colors, that can be used in combination with each other. These series can be saved in the presets or can be copied to the colors list (see chapter 4.14) by using **to color list**.

3.3.3 The Brush Field

The brush field shows the brush, which will be used for drawing tools:

PhotoLine is distinguishing between 2 kinds of brushes:

- Geometric brushes
  Geometric Brushes are oval or rectangular. They can be edited very flexibly with the brush editor (see chapter 3.5).
- Free brushes
  Free brushes are normal gray images. Therefore, it is possible to drag any kind of layer onto a brush field to create a custom brush. The layer will be converted automatically to a gray picture. The inverse case is possible, too: On Windows, it can be dragged to a free part of the main window to create a document with the pattern. On macOS, you have to drag the pattern to a non-PhotoLine window and to hold Alt.

A double click allows editing the current brush.

3.3.4 The Line Style Field

The line style field shows how a vector line will look like: . Line styles are defining the width of a line, the kind of line join and the shape of the line ends. Setting a line width of 0 has a special meaning: it means that the line is a hair line. Hair lines are always exactly one pixel wide, regardless of the magnification of the output.

Line styles are edited with the line editor by double-clicking (see chapter 3.8).

3.3.5 The Curve Field

Every time a field like this appears, a curve can be used. The main use for curves is setting the brightness or contrast of image layers.

A curve can be edited with the curve editor (see chapter 3.7) by double-clicking.

3.3.6 The Shape Field

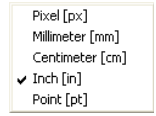
The shape field is used, if a shape or a clipart has to be used. A shape is a simple vector path, but a clipart can be any kind of layer, even a text layer, an image or a group.

By clicking on the arrow in the shape field, a predefined shape can be selected. You can edit the predefined shapes by using the shape list (see chapter 4.21).

3.3.7 Unit Text Fields

Unit text fields are used in PhotoLine, if you have to enter values, which allow different units. If there is an abbreviation behind a value, the text field is a unit text field:

Unit text field have some advantages:

- They show the current value in the desired unit.
- You are able to change the unit by right clicking with the mouse (or Ctrl+mouse click on macOS). After that, a menu appears with the available units: 

  The current unit is checked. Each unit shows its name and - in brackets - its abbreviation.
- You can always enter a value in one of the available units by appending the corresponding abbreviation. After finishing the input, PhotoLine converts the value into the current unit.
- Unit text fields can be used to calculate simple terms like “(3 + 4) * 5”. You can use several units in one term, like “12 in + 7 pt”, too.
  Some functions even allow calculations using variables. “Scale Layer” (see chapter 7.5.3) is using “w” as a substitution for the layer width and “h” for the layer height. In these cases, one of the predefined functions may be useful:
  - sin(radiant)
  - cos(radiant)
  - tan(radiant)
  - sqrt(value)
  - min(value1; value2[;...])
  - max(value1; value2 [;...])
  - if(condition;value1;value2)
  - floor(value): round down the value
  - ceil(value): round up the value
  - round(value): round the value

- abs(value): returns the absolute value of a number

Aside from that, the comparison operators “<”, “<=”, “=”, “>” and “>=” are supported.

- You can modify the value by using the mouse wheel. Holding ***Shift*** reduces the step size, holding ***Ctrl*** (Windows) or ***Command*** (macOS) enlarges it.
- If you hold the ***Ctrl key*** or press the middle mouse key (Windows) or the ***Command key*** (macOS), you can change the value of a unit text field by dragging.

3.3.8 Double Arrows

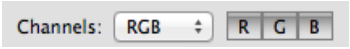
Often, double-arrow controls are placed at the right of a text field. The double-arrow allows to quickly increment or decrement the value of the text field. By holding ***Ctrl*** (Windows) or ***Command*** (macOS) while clicking on an arrow, the modification will be ten times larger. Holding ***Shift,*** the modification will be ten times smaller.

Usually, text fields with a double arrow can be modified using the mouse wheel. As usual: ***Shift*** reduces the step size, ***Ctrl*** (Windows) or ***Command*** (macOS) enlarges it.

If you hold the ***Ctrl key*** or press the middle mouse key (Windows) or the ***Command key*** (macOS), you can change the value of a text field with a double arrow by dragging.

3.3.9 The Channel Control

Many image tools (see chapter 6.3.1 and following) and filters allow you to limit their effect to certain color channels:



Here you can control which color model you want to use, usually the color space of the image, HIS or Lab.

You can also change the color channels affected. Clicking on a channel while holding down the Alt key has a special meaning. If other channels are active, they will be deactivated, making the clicked channel the only active one. If it was already the only active channel, all other channels will become active as well.

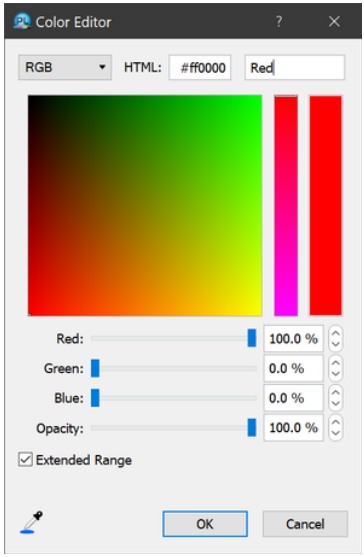
3.3.10 Sliders

Sliders are used in many places to enter values. If you change a value, you can reset it by double-clicking the slider button.

3.4 The Color Editor

3.4.1 Overview

Double-click on a color patch to edit the color with the Color Editor.
The Color Editor offers several ways of editing. The combo box in the upper left corner selects the method to be used. It offers the color spaces RGB, CMYK, Gray and HSV. There is also a list of predefined colors, a list of patterns and a way to create gradient colors.



The HTML code of the selected color is displayed in the middle of the top row. The text field in the upper right corner allows you to assign a name to the color. This name is displayed when the mouse cursor is over an entry in the color list (see chapter 4.14).

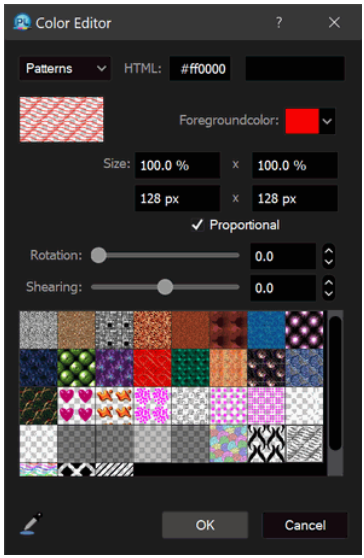
The sliders can be used to define the color. The result is shown in the color box on the right. You can also select the color by clicking and dragging in the large selection box.
Opacity controls the transparency of the color. This slider is only visible when opacity is used for the current setting.
For RGB and Gray, there is an **Extended Range** button. When enabled, you can enter color values less than 0 and greater than 1. This is especially useful for images with 32 bits per color channel.
If the current color is a spot color, the **Spot Color** button is located at the bottom. This button is only editable if the Color Editor has been called via the document color list (see chapter 4.16).
If you click into a document while the Color Editor is open, the color is picked from that location. Ctrl+drag (Windows) or Command+drag (MacOS) calculates the average value of the drawn area.
You can read a color from anywhere on the screen by clicking and dragging the dropper icon.

3.4.2 The Tint Subdialog

Tint colors are derived from a base color. The base color can be a normal color or a spot color (see chapter 2.15). They are always a mixture of the base color and white. A tint value of 100% results in the base color, a tint value of 0% results in white.

3.4.3 The Pattern Subdialog

The Pattern Colors subdialog allows you to modify the selected pattern or vector pattern:



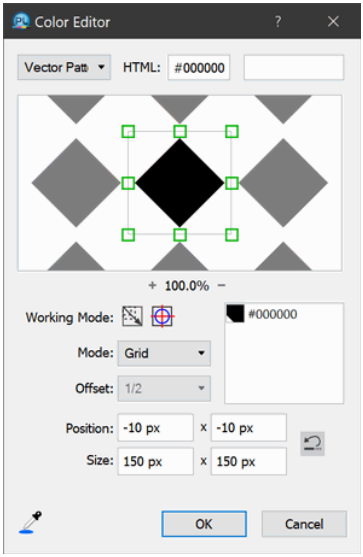
Here you can assign a foreground color to the (vector) pattern. This way you can quickly give hatchings a different color, for example.
The (vector) pattern can also be transformed. The new pattern size is specified either in percent or in a direct unit of measurement such as pixels. It is also possible to rotate the pattern with **Rotation** and to skew it with **Shear**. Both values are in degrees.
Tip: In the layer attributes there is the setting »Align pattern« (see chapter 4.11). If this setting is activated, the pattern is always aligned to the origin of its layer and transformed accordingly.

3.4.4 The Vector Pattern Subdialog

There are two types of pattern in PhotoLine:

- Image patterns that contain only a simple image
- Vector patterns that may contain any type of layer

Vector patterns also have extended settings:

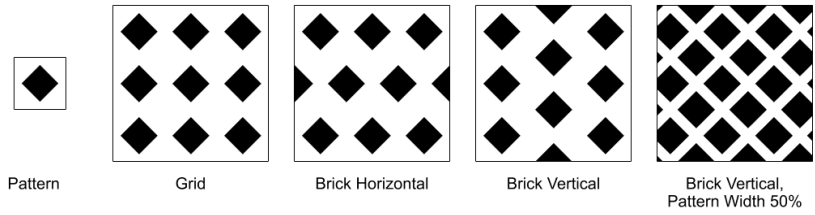


The big preview has two tasks:

- It serves as a preview of the result.
- The size and position of the pattern can be changed using the green rectangle. In most cases, however, it is better and more precise to use the text boxes at the bottom of the window.

Working mode affects both the preview image and the text boxes. When the proportional icon is active, the size ratio is maintained for all changes. When the center icon is active, the center of the pattern rectangle remains in the same position.

Mode controls the arrangement of the pattern tiles. The following modes are available:



Offset is only available for **Brick Horizontal** and **Brick Vertical**. It sets the offset of each tile row or column with respect to each other.

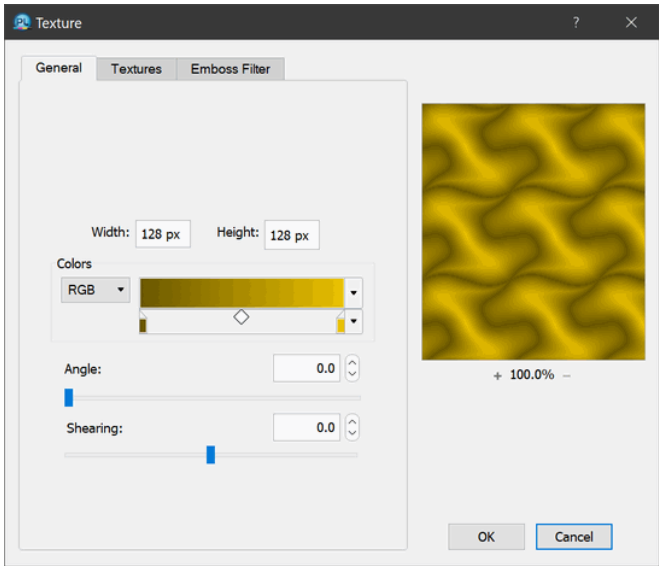
Position and **Size** specify the position of the pattern. The size can be smaller than the actual pattern content. As a result, successive pattern tiles overlap and you can create repeatable patterns more easily.

The colors of a vector pattern are displayed in a color list and can also be changed there directly. This saves you the detour via ***Create Document*** and ***Vector Pattern from Document*** (see chapter 3.3.2).

Tip: You can also use the Pattern subdialog (chapter 3.4.3) to change the appearance of a vector pattern. There you can assign a foreground color to the vector pattern or scale and rotate it. If you edit a vector layer with the ***Vector Edit*** tool (chapter 6.4.1), you can also transform patterns directly in the document window.

3.4.5 The Texture-Dialog

The subdialog for editing texture colors can be used to modify the selected texture:



One thing has to be mentioned before explaining the dialog: creating textures is quite complicated. There are complete books discussing this topic, therefore, a detailed explanation is to large for this manual. At this

place it is only possible to give a short introduction, but - in combination with own experiments - it can lead to appealing results.

In PhotoLine a texture can consist of several texture parts. **New** allows to create a new texture part and **Delete** removes one. Every texture part is a 2-dimensional function. The results of the textures parts are added twice according to the settings of **Intensity**, **Use For Texture** and **Use for Emboss**. The first result is used to calculate the colors in the texture, the second one to lighten the texture by a light source.

Every texture part consists of three parts:

- a function generating random values, which can be controlled in the area **Noise**.
- a function, which uses the random values as input and which can be controlled in the area **Function**.
- a post-correction

Most complicated are the settings in the area **Noise**. There are four ways to create random numbers. **None** always generates the “random” number 0. The three remaining procedures are depending on the value **Detail**. Basically it can be said that low Detail-values are creating slow, smooth transitions in the texture, while high values are creating quick, hard changes. **Start X** and **Start Y** allow to modify the Detail-value of the x- or y-direction. For example: if **Detail** is 4 and **Start X** is 2, the x-direction uses a detail value of 8. This way it is possible to create fast changes in the x-direction, but slow ones in y.

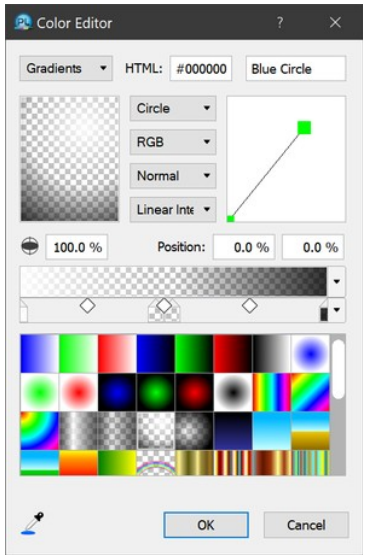
The random-**Kind** **Noise** is the simplest random function and doesn‘t depend on any other values. It is different to **Fractal** and **Turbulence**. Both are superimpositions of several **Noise**-functions. In doing so every superimposition has a raised **Detail**-value. The number of superimpositions is given by **Steps**. If **Steps** is 1, the result will be identical to **Noise**. **Frequency** defines the increase of the detail value of every step. **Amplitude** controls, how much every superimposition influences the result. A value of 200% means that the temporary result has a weight of 200%, the superimposition therefore, has a weight of 50%.

Function allows to modify result of the calculations above even further. **Kind** defines a function, which should be used with every noise value. The

function **Noise** means, that the random value will not be modified. Every other function allows to modify the strength of the noise value with the value **f**. **Oscillations** controls, how often the function is executed in the texture area. If the current function is **Brick**, with an oscillations value of 2 the result will contain twice as much bricks as with the value 1. If **Repetition** is larger than 1, the texture colors will repeat several times in the value range. The result can be seen best, if Repetition is changed on an existing texture.

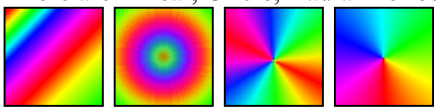
At last the values of a texture part can be modified with **Bias** and **Gain**. if **Bias** is smaller than 0.5, the texture part creates mostly small values, if it is larger than 0.5, it creates mostly large values. It is similar with **Gain**: if it is smaller than 0.5, mostly small and large values are created. If Gain is larger than 0.5, mostly middle values are created.

3.4.6 The Gradients-Subdialog



This subdialog of the Color Editor allows you to create and modify gradients. Furthermore, you can add colors to the gradient list by dragging and delete gradients from the list by using its context menu.

At the top left there is a color field that displays the active color. Right next to it are the gradient settings:

- the gradient type
  There are Linear, Circle, Radial Reflected and Radial.
  
  If the type is Circle, you can change the vertical scaling of the gradient via the text box below the color field. The circle will be transformed to an ellipse.
- The color model
  Gradients can be calculated in the color model of the document, in HIS and in Lab.
- The repetition mode
  Here you can control whether a gradient should stop at its endpoints or whether it should be repeated.
- The interpolation
  You can use Linear Interpolation and Cubic Interpolation. With cubic interpolation the color change is softer at the single color stops.

At the top right, there is a field that defines the position of the gradient. This position is relative to the layer to which the gradient will be applied. If you hold down the Alt key while moving a position, it will snap to the edges and center.

The color bar defines the colors of the gradient. The small color fields below the bar can be moved with the mouse. If a color field is dragged outside the bar, it will be deleted. By clicking at a location with no field a new one is created. If the ***Ctrl-key*** (Windows) or the ***Command-key*** (macOS) is pressed while clicking, the color field will get the corresponding color from the color bar. By ***double-clicking*** a color field, it can be edited with the Color Editor (see chapter 3.4). The Color Editor allows to modify the transparency of the given color, too.

The context menu of the color fields shows a list with predefined colors, the context menu of the whole bar offers additional functions, that are explained in the following.

3.4.6.1 Change Hue

Change Hue modifies all colors used in a gradient. The colors can be moved to the left or to the right on the color wheel.

3.4.6.2 Set Base Color

After selection this function a Color Editor appears allowing to choose a color. This color will be set in every color field of the current gradient, but the transparency of the colors fields doesn‘t change. This way it is possible to recolor a transparent gradient very quickly.

3.4.6.3 Speckle Gradient

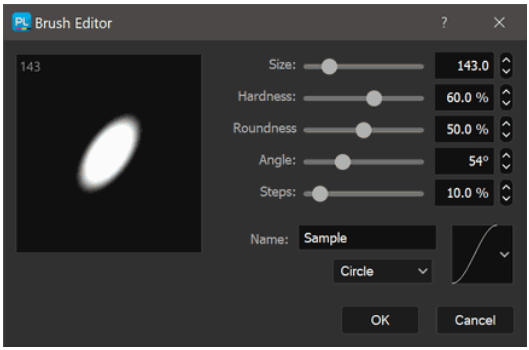
The Speckle Gradient-dialog allows to define a starting and an ending color and a number of steps. After that a gradient is created that changes its transparency with every step. In combination with the setting ***radial*** or ***radial reflected*** it is possible to create stroboscope-like effects.

3.4.6.4 Reset Gradient

A gradient consisting of very many colors can be very clumsy to delete. ***Reset Gradient*** replaces the current gradient by a standard one.

3.5 The Brush Editor

Brushes are edited with the brush editor. The brush editor appears by double clicking a brush field or by choosing ***Edit...*** in the context menu.
If the active brush is geometric, a combo box contains the kind of the brush: rectangular or round.



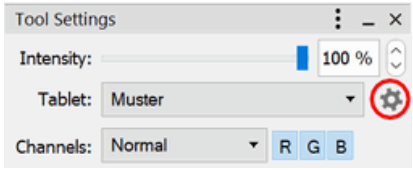
In the left top the result of the current settings is shown.
Size defines the size of the brush.
If **Hardness** is smaller than 100%, the brush has a corresponding soft edge. The curve field in the left bottom can modify this edge.
Roundness reduces the vertical size of the brush. A circle becomes an oval.
Angle rotates the brush. With circular brushes this setting has only a visible effect, if the roundness of the brush has been changed.
Steps specifies the distance between two brush points while drawing. The value is given in percent of the brush size. If the value is small (e.g. 10), the result is a continuous line:

If the value is large (e.g. 120), the result is a dotted line:

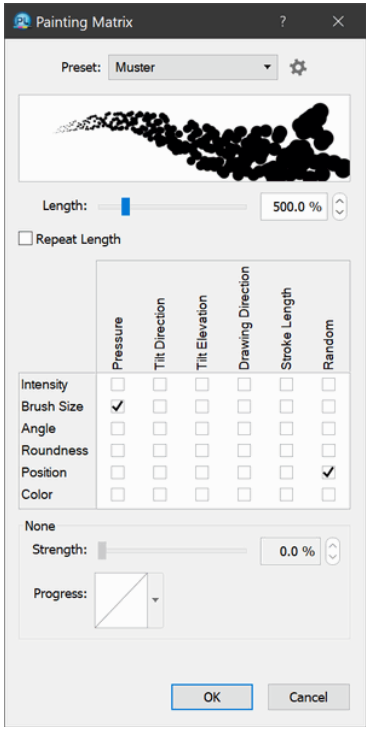
Values too small result in slow drawing.
You can set additional painting properties via the Painting Matrix (see chapter 3.6).

3.6 The Painting Matrix

The Painting Matrix controls how the brush (Brush Editor see chapter 3.5) behaves when painting with tools. It is therefore, called via the Tool Settings:



Various painting properties are available, which can be changed depending on the graphics tablet or other values.



The lines are the painting properties:

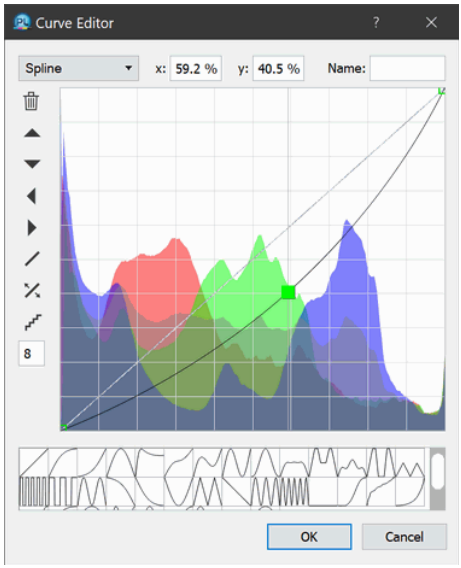
- **Intensity**: the tool intensity
- **Brush Size**
- **Angle**: the brush rotation
- **Roundness**: the roundness of the brush
- **Position**: Controls the deviation of the tool position from the drawing position. You can control whether it is changed in the painting direction (**x Direction**) or perpendicular to the painting direction (**y Direction**) or both.
- **Color**: The color of the tool is changed. If the foreground color is a "normal" color, a random intermediate color is determined from the foreground color and the background color. If the foreground color is a pattern or a gradient color, the used color is determined directly from the foreground color.
  This setting only has an effect if the current tool uses the foreground color.

The columns specify the input sources that can modify a painting property:

- **Pressure**: the pressure of a graphics tablet pen
- **Tilt Direction**: the direction of the pen (not for all graphics tablets)
- **Tilt Elevation**: the elevation of the pen (not for all graphics tablets)
- **Drawing Direction**
- **Stroke Length**: The painting property changes depending on the stroke length. **Length** indicates the maximum stroke length and is relative to the brush size. If **Repeat Length** is not activated, exceeding the maximum value will use the set length, otherwise it starts again at length 0.
- **Random**: A random value is used.

For each combination of painting property and input source a strength and a progress curve can be defined. The dialog will always show the values of the selected combination. You can select a combination by either clicking the checkbox or by clicking next to the check mark.

3.7 The Curve Editor



The curve editor opens after double clicking a curve field.
File in the top left loads or saves a curve.
Below that there is the field **Position** that shows the x- and y-position of the mouse if the mouse is over the editor field. Otherwise and if there is a point selected in the curve field, the position of this point is displayed. It can be edited by typing, too.
You can also select more than one point in the editor field. ***Ctrl*** (Windows) or ***Command*** (macOS) adds a single point to the selection, ***Shift*** selects ranges.
The buttons in **Actions** are offering the following functions:

Delete point: You can delete the selected curve point with this function. It is not allowed to delete the first or the last point of a curve.

Shift to the top, the bottom, the left and the right: The curve is shifted to the direction of the arrow.

Neutral: You get a standard curve with a 1:1 mapping.

Mirror: The curve is mirrored on the horizontal mid line.

Stairs: This button creates a stairs looking curve. The text field beside the button specifies the number of stairs.

The combo box in the bottom left specifies the editing mode. Possible values are **Manual**, **Line**, **Spline**, **Bezier, Bezier2** and **Lagrange**. With **Manual** you can simply draw the curve. With Line you can move the end points of lines, **Bezier** and **Lagrange** are curve types where you can move the control points. By holding the ***Shift*** key, you can restrain the movement to vertical. Additionally you can create new curve points in this modes by clicking on the curve line. You can see that it is possible to create points by watching the mouse cursor as it becomes a small cross.

There is a manual text input, too. Here you can enter the curve in 5% steps. These values define a manual curve.

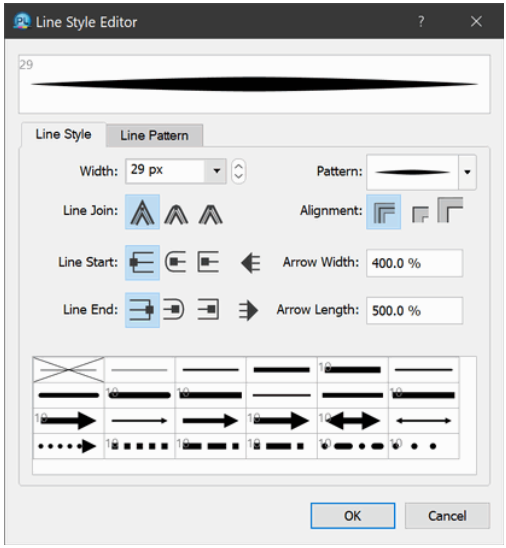
At the bottom edge of the curve editor is a list field which contains already predefined curves. You can drag curves from the large curve field to this list field. All curves in this list field are automatically in the curve list (see chapter 4.19).

3.8 The Line Style Editor

The Line Style Editor controls the appearance of lines. It has two subdialogs.

The Line Style Subdialog

The Line Style subdialog contains the basic properties of line styles.



The most common property is the **Width**. This value adjusts the thickness of a line. 0 represents a hair line. A hair line is - regardless of the current magnification - always exactly 1 pixel wide.

Using **Pattern** you have access to a predefined list of line patterns. You can edit this list via the ***Line Pattern*** subdialog.

Line Join defines how the strokes of a line are joined. You can choose between “pointed”, “round” and “flat”.

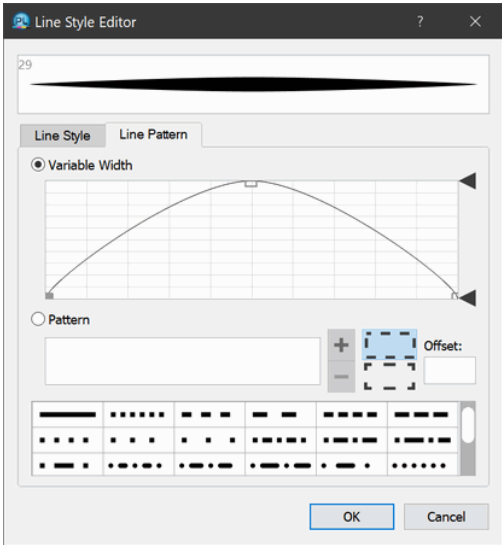
Alignment has an effect only when applied to closed vector paths. In this situation it can be set whether the line is on, inside or outside of the vector path.

The appearance of the line ends is controlled by **Line Start** and **Line End**. It can be square, round, square with offset and arrow. If you choose the arrow, you can change its **Width** and **Length** relative to the line width.

Often required line styles can be dragged to the list field at the bottom of the dialog. They can be reused by a simple mouse-click. This list field can be accessed via the Line Style List (see chapter 4.22) and the drop-down list of line style fields.

The Line Pattern Subdialog

The ***Line Pattern*** subdialog allows you to set advanced properties of a line style. All settings are relative to the line width, that was set in the ***Line Style*** subdialog.



Using **Variable Width** you can create a line style with a non-uniform width. The width of the curve field corresponds to the length of the vector path, the height corresponds to the line width. The two small triangles on the right side set the minimum and maximum line width.

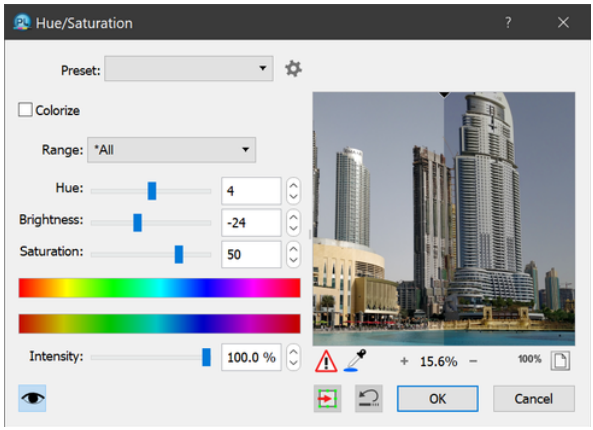
Pattern lets you define your own line patterns. The values for strokes and gaps are set alternately. If you are activating the alignment icon , the pattern will be scaled so that it fits between two corner points of your vector graphic.

Offset defines the start of the pattern. If you have a pattern with the widths “2 2” and use an offset value of 1, the pattern will start in the middle of the first stroke.

3.9 The Parts of a Typical Dialog

3.9.1 Basics

In PhotoLine all dialogs allowing editing of images have a common structure. They usually look like this:



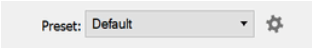
It contains the following parts:

- the management of the presets (see chapter 3.9.2)
- the settings of the given dialog
- the preview (see chapter 3.9.3)
- (optionally) the button for shrinking the dialog
  Modern computers are very fast, so often a small preview in a dialog is often no longer needed, because the full preview in the document window is fast enough. Therefore, the shrink-button allows to hide the dialog preview making the whole dialog smaller.
- (optionally) the split control
  Using the split control you can change the width of both the settings and the preview. If the width of the preview becomes too small, it will be hidden.
  If you only want to hide the preview, you can simply make the entire dialog smaller, too. To show the preview again, you may have to enlarge the dialog again and then use the split control to make the preview visible again.

- the switch for the full preview
  If the switch for the full preview is turned on, the result of the current dialog settings are shown in the document window immediately after a setting is modified. The full preview can also be turned on and off using the menu command “Layer > Display > Show Layer”. So by assigning a shortcut to this command you can control the full preview with that shortcut.
  Sometimes beside the full preview switch there is a button Proof. This button is used with functions, that perform rather long operations which may lead to an unacceptable slow recalculation of the full preview. In this case Proof can be used to manually create a preview after all settings have been made.
- the reset button
  Pushing the reset button will replace the current settings with the standard values of the active function. Holding the Shift-key while pushing Reset will enter the values, that were set when calling the function.
- the button “Create Adjustment Layer”
  Pushing Create Adjustment Layer doesn't modify the current image directly. Instead an adjustment layer (see chapter 2.9) is created equivalent to the active function. By holding Shift while pressing the button, the new adjustment layer will be grouped with the active image layer.
  Not every function can be used as an adjustment layer, too.

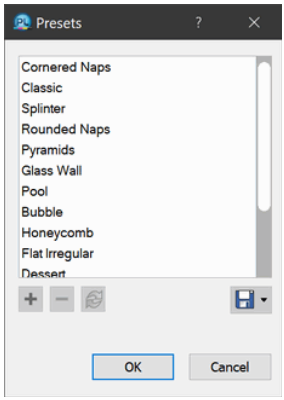
3.9.2 The Presets

Many dialogs with complex settings are containing the following controls:



These represent the presets. A preset is a collection of all settings of a dialog. Thereby it is possible to save these settings under a name and use them later by selecting them in the combo box.

By pressing Edit the control dialog for the presets is opened:



The symbol + creates a new entry with the current settings and the symbol − deletes the active entry.

The symbol transfers the current settings to the active entry.

Via **File** presets can be loaded or saved. **Load** loads presets and replaces the existing, **Save** saves the presets, **Merge** loads presets and adds them to current ones and **Save Active** saves the currently selected entry.

3.9.3 The Preview

In PhotoLine dialogs often contain an embedded preview showing the result of the current settings. The preview usually look like this:

There are two parts: the preview picture and an icon bar below it.

At the top of the preview picture there is a small triangle which allows to control the so-called curtain preview. To the left of the triangle there is the original picture, to the right the result. The triangle can be dragged freely. If it is at the left edge of the preview picture, only the result will be visible. In this situation a simple click on the preview picture will show the original, in order to allow a better rating of the result.

The icon bar contains - additionally to the standard entries for zooming in and out - two icons for switching fast to a 100% and a full image display. Selecting will mark extreme colors in the preview picture in order to recognize corrections, that are too strong. This function works the same as ***View/Mark Extreme Values*** (see chapter 7.3.18). If this function is activated while holding Shift, the dialog preview will show the differences between the edited and the original image. Unmodified parts are shown gray, the modified ones are lighter or darker depending on the modification.

The icon bar may contain - depending on the dialog - an extra icon:

: This icon is used for reading colors from the preview picture or from the document. If two different colors can be chosen, holding down the ***Shift-key*** will switch to the second one. If ***Ctrl*** (Windows) or ***Command*** (macOS) is pressed, it is possible to read from an area.

┼: If the current dialog needs a position, this icon can be used for setting it.

Especially the selection of a color takes place quite often and selecting the corresponding icon my be inconvenient. Therefore, these additional functions can be accessed by holding the ***Alt-key***, too.

3.10 Dockable Dialogs

Helper dialogs like the Tool Settings or the Color List are “dockable“ in PhotoLine. „Dockable“ means, that the dialog can be attached to another dockable dialog. These dialog stacks make the user interface tidier.

Furthermore on Windows dockable dialogs can be attached to the edges of the main window. By doing so they will automatically adjust to size changes of the main window.

On macOS dockable dialogs can be docked to the edges of the screen.

If you have docked dialogs to an edge, document windows will not be placed behind those dialogs. If, in addition, a dialog stack docked on the left or right also completely uses up the space available in height, expanding or collapsing a dialog automatically resizes the other dialogs in the stack. This ensures that the available space is always used optimally.

If a dialog should be placed at an edge without docking, you can do so by holding the ***Ctrl-key*** (Windows) or the ***Command-key*** (macOS) while dragging.

Different configurations of the dockable dialogs can be saved as dialog settings (see chapter 7.3.1 and chapter 7.3.2).

Dockable dialogs can have a helper menu with useful commands. This is indicated by 3 small dots in the upper-right corner and is called the ***window menu***.

The context menu of the titlebar of dockable dialogs offer a quick access to your dialog settings. Furthermore, you can use this menu to change the orientation of the dialog between horizontal (titlebar is at the left edge) and vertical (titlebar is at the top).

3.11 Document Windows

Document windows have a few special behaviors in PhotoLine that simplify the handling of multiple document windows:

- Moving and resizing
  When moving and resizing, documents snap to each other. This allows them to be easily aligned to each other.
- Resizing aligned document windows
  When document windows are aligned, you can resize them synchronously by holding down the ***Ctrl*** key (Windows) or ***Command*** key (macOS).
- Maximizing document windows
  When you maximize a document window, PhotoLine remembers this and newly opened documents will be maximized afterwards as well.
- Double-click on title bar
  If you double-click the title bar of a document window, the document window will be maximized. If you hold down the ***Ctrl*** key (Windows) or

Command key (macOS) while double-clicking, the window will not be maximized but placed as large as possible in the free area.

- Hiding/showing help dialogs
  If you hide or show the helper dialogs (see Chapter 7.3.5), the document windows are automatically enlarged or reduced accordingly.

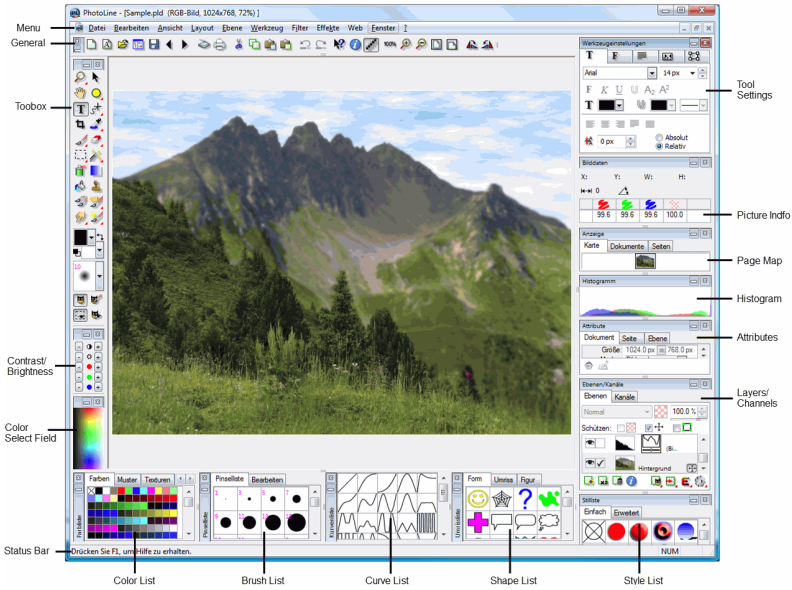
3.12 Multi-Touch Support

PhotoLine supports multi-touch gestures on Windows and macOS. Aside from the scrolling gesture these are:

- Rotate
  Rotate is supported by all tools. With tools, that don't have a special use for Rotate, you can rotate the document in 90° steps.
  The Crop tool (see chapter 6.2.17) and the Layer Tool (see chapter 6.2.1) use the Rotate gesture in their own way. The Crop tool allows you to rotate the picture behind the crop frame, the Layer Tool will rotate the active layer if possible. If not possible the document will be rotated in 90° steps as in any other tool.
- Pinch Open and Close
  All windows and controls allowing zooming Pinch Open and Close is supported. These are for example the document windows and the preview in filter panels.
- Swipe
  Swipe doesn't have a predefined meaning, but you can assign any of the Swipe gestures to a command by using “Preferences/Usage/Keyboard Layout” (see chapter 7.10.1.39) and use it as shortcut this way.

4. The Screen Setup of PhotoLine

4.1 Overview



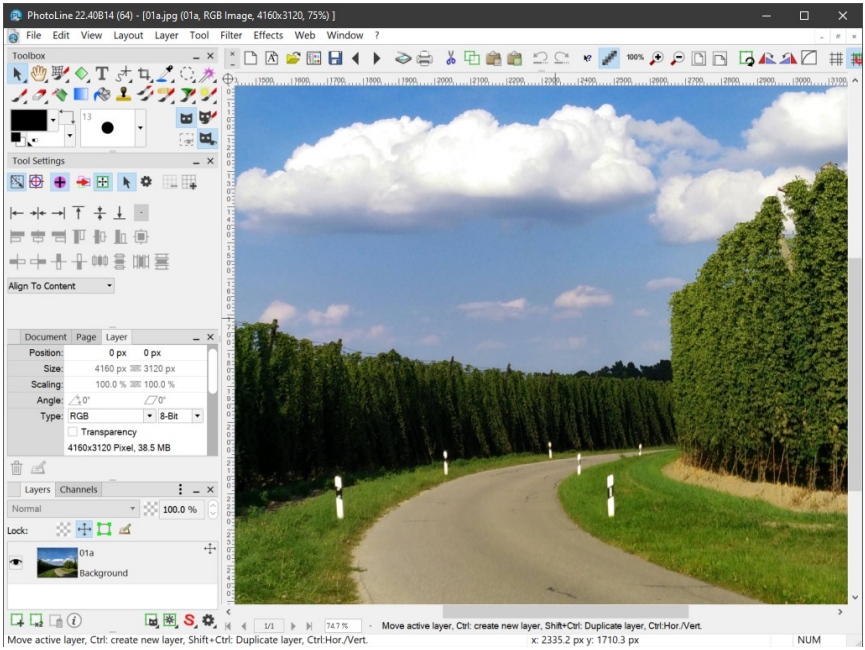
The ***View*** menu lists all dialogs that can be shown permanently on the screen. Only the menu bar is always onscreen.

4.2 The Most Important Dialogs

At the first sight the amount of dialogs may be overwhelming. But not all dialogs have to be always visible in order to use PhotoLine.

The really important dialogs - aside the menu bar - are the general bar, the toolbox, the tool settings and the layers. On Windows the inexperienced user should turn on the status bar, because it is showing help for the current tool. The experienced user should turn on the Attribute Dialog, because this is showing the most important settings and attributes of a layer.

You may not always turn on the many list, because they can be quickly accessed by clicking on the small arrow symbol of the corresponding field.
By arranging the dialogs correctly it is possible to work effectively with a screen resolution as low as 1024x768 pixels. The following screenshot is showing this:



The most important dialogs are on-screen and there is still room to turn on things like the card or some icon bars without reducing the document space.

4.3 The Status Bar

The status bar is showing help messages depending on the mouse position. The help messages explain the menu commands, user interface elements, and how to operate with toolbar functions.
On macOS the status bar is at the bottom of each document window.

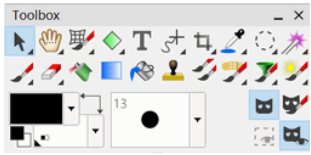
4.4 The General Bar

The general bar contains the most important commands of the ***File***- and of the ***Edit*** menu.

On Windows there is a symbol for context sensitive help, too: . If you choose this, you get the following mouse cursor: . Clicking with that mouse cursor on a tool or a menu command shows detailed information for the selected function. On Windows there is another way to get help: place your mouse over a function and press “F1”.

4.5 The Toolbox

4.5.1 Overview



The toolbar contains all tools, which can be used for editing a layer with the mouse. The exact description of the tools can be found in chapter 6 of this manual. The tools with the red triangle are multiple used. By clicking and holding the mouse button, a popup appears showing several tools. Now you can select one of them. The selected tool will be shown in the toolbar afterwards.

There are not always the same tools in the toolbar. The available tools depend on the kind of the selected layer. If the selected layer is an image layer, different tools are used compared to a text layer. If you are missing a tool that should be available, you have probably selected the wrong layer.

All kind of tools have tool settings (see chapter 4.6). You should always have the tool settings on screen.

If the active layer is an image layer, the toolbar contains not only tools, but basic settings for the tools, too. These settings are: the foreground and background color, the current brush and mask editing settings.

4.5.2 Settings Of The Image Toolbox

If the active layer is an image layer, the toolbox contains several settings, that are used by image tools.

4.5.2.1 The Foreground/Background Color

The color fields Foreground Color and Background Color are used for various tools.
Both colors can be exchanged by clicking the small double arrow. By clicking the two mini color fields the foreground color is set to black and the background color is set to white.
The foreground color is used by most drawing tools like painting, flood fill and so on. The eraser tool uses the background color.

4.5.2.2 The Active Brush

This brush field shows the current brush. It can be edited by double clicking. A double click in the brush list (see chapter 4.17) changes the active brush, too.
The brush is used by many tools of the toolbar, e.g. painting, eraser, spray, water, finger, ... Each of these tools has its own cursor. You can set different brushes for different tools.
If the active tool is a painting tool there is a fast way to change the brush size by using the arrow keys: arrow up enlarges the brush, arrow down reduces it. Additionally the arrow left rotates the brush left and the arrow right rotates it right. There is a second way to adjust the brush size by using the mouse: hold ***Ctrl*** (on Windows) or ***Command*** (on macOS) and drag the mouse until you got the wanted size. Additionally holding ***Shift*** will modify the width of the soft edge of the brush. ***Shift***+mouse wheel will change the brush size, too.

4.5.2.3 Use Mask

The icon “Use mask” forces all drawing tools, the gradient and many other functions to pay attention to the mask of the active layer (see chapter 2.4.1).

4.5.2.4 Edit Mask

“Edit mask” takes care, that all drawing tools modify the mask and not the image of a layer. You can paint in the mask, filter it, or work with the finger or the water tool. The mask is a normal gray image and can be edited the same way.

4.5.2.5 Show Mask

If this button is selected, PhotoLine shows the mask of an image. The mask is usually shown as a colored, transparent area.
The look of the mask can be modified in the mask parameters (see chapter 7.10.1.23).

4.5.2.6 Hide/Show Lasso

If this button is selected, PhotoLine shows the lasso, if there is one. On start up this button is selected.
Sometimes the visual appearance of the lasso is disturbing. Therefore, it is possible to turn it off.

4.5.3 Settings Of The Text Toolbox

If the active layer is a text layer, the toolbox contains several text settings.

4.5.3.1 Text And Outline Color

These color fields are used to change the text color and the color of the text outline. The outline color has only a visible effect, if the outline is turned on for the text.

4.5.3.2 Outline Style

This line style field allows to adjust the appearance of the text outline. The outline style has only a visible effect, if the outline is turned on for the text.

4.5.3.3 Receive text from previous page

Text flows to next page

Both symbols are used for creating automatic text flow between pages. Automatic text flow is explained more detailed in chapter 6.2.13.

4.5.4 Settings Of The Vector Toolbox

If the active layer is a vector layer, the toolbox contains several vector settings.

4.5.4.1 Fill And Line Color

These color fields are used to change the fill and the line color of a vector layer.

4.5.4.2 Line Style

This line style field allows to adjust the appearance of a vector line.

4.5.4.3 Line Width

Changing Line Width modifies only the width of the line. The remaining line attributes stay the same.

4.5.4.4 Use "Even/Odd"-Fill Mode, Use "Non-Zero-Winding Number"-Fill Mode

These buttons define the way, how to fill vector layers. They should be used only by experienced users, because at least the “Non-Zero-Winding-Number”-rule is quite hard to understand.
This functionality is mainly used by importing PDF files which may contain both fill modes.

4.6 The Tool Settings

The tool settings contain extended settings for the tools in the toolbar. Most tools have a variable intensity. Sometimes color channels can be locked, e.g. it is possible to edit only the red channel.

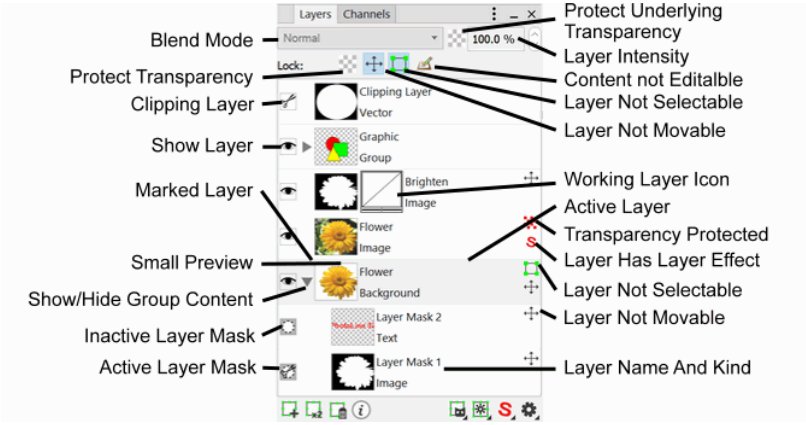
If there is an open document, many tools, that have a slider as main control, allow modifying that slider by using the keyboard. Typing only a single digit, uses this digit multiplied by 10 as percent value (i.e. “1” results in 10%), “0” is translated to 100%. Entering a longer number uses this number directly as percent value.

Image Tools often have an option to adjust the behavior of a graphics tablet. All available options are supporting the eraser of the graphics pen:

- Only Eraser
  PhotoLine doesn’t use the pressure sensitivity.
- Intensity
  The pen pressure controls the intensity.
- Brush Size
  The pen pressure controls the brush size of the tool.
- Size & Intensity
  The pen pressure controls both the intensity and the brush size.

Some tools are supporting presets (see chapter 3.9.2). You can access these presets by using the window menu available in the titlebar of the Tool Settings.

4.7 The Layer List



The Layer List is the center of editing large documents with many layers. It lists all layers in a document and allows to edit, copy or delete them.

Layers are always drawn from the bottom to the top. This means, layers in the background are displayed at the bottom of the layers dialog.

You can change the order of the layers by simply dragging a layer to a new position.

You can open groups by clicking on the arrow next to the thumbnail. Alt+click will open all subgroups as well.

The most important layer functions of the ***Layer*** menu are accessible through the context menu of the Layer List.

By default PhotoLine always selects the active layer in the Layer List. For complex documents with many groups that may be undesirable. Therefore, you can turn off this behavior via the window menu of the Layer List with the command ***Show Active Layer***. A new call of this command shows the active layer again.

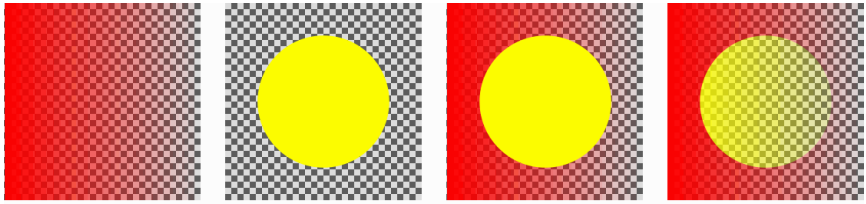
After selecting a layer or any other action, the layer list automatically activates the document. This prevents keyboard control, but if you prefer to have one, you can activate it in the preferences (chapter 7.10.1.17).

Common Options

Layer Intensity modifies the transparency of a layer.

The combo box **Blend Mode** controls, how a layer is combined with its background. There are various modes available therefore, you should try their effect with several examples in order to get used to them. In the options you can define a shortcut for switching to the next or previous blend mode (see chapter 7.10.1.38 “Usage > Keyboard Layout”).

If **Protect Underlying Transparency** is activated, the active layer will not modify the transparency built-up by the preceding layers. An example illustrates this:



Lock transparency can only be selected, if the active layer is an image and has an alpha channel (see chapter 2.3.2, creation of an alpha channel see chapter 4.11). If the switch is selected, the alpha channel will be protected and can not be modified by image operations like painting or like filters.

Layer Not Selectable defines, that the layer tool (see chapter 6.2.1) cannot select the layer. This ensures that you don’t select a layer by mistake. Layer **Not Movable** prohibits, that a layer can be moved. A perfectly placed layer is safe from being moved by mistake with this option. Last but not least, **Protect Content** avoids accidentally modifying the content of a layer.

Layer Visibility

If you deactivate **Show Layer**, the layer becomes invisible. Click+drag can show or hide following/previous layers.

Clicking while holding the ***Alt***-key has a special meaning. If other layers are visible, they will become invisible, so that the layer you clicked on will be the only visible layer. If it was already the only visible layer, all other layers will become visible, too.

Show Layer has a second meaning, too: if it is clicked while holding ***Shift***, the layer will be made a clipping layer (see chapter 2.7). This state is indicated by a pair of small scissors. Additionally the icon indicates whether a layer is a layer mask (see chapter 2.8). A layer can only be a layer mask, if it has a parent layer. The layer mask state can be modified by clicking while holding the ***Ctrl-key*** (Window) or ***Command-key*** (macOS).
The context menu of **Show Layer** offers quick access to all these options, too. Additionally you can select a color for marking the layer in the Layer List.

Layer Selection

For several functions such as grouping (see chapter 2.3.5) and aligning layers, several layers must be selected. In each layer selection, there is always one layer that is the active layer.
The active layer is displayed in the layer list with the normal selection color. If you select additional layers, they will be highlighted in a lighter color.
You can add more layers in two ways :

- Clicking while holding Ctrl (Windows) or Command (macOS) changes the selection of the clicked layer.
- Clicking while holding Shift selects all layers between the active layer and the clicked layer.

If you want to change the active layer of a selection, you have to click on this layer in the layer list while pressing the ***Alt*** key.
Optionally, you can also show a layer marker in the Layer List window menu. This shows as a check mark whether a layer is selected. Here you can also switch off that all selected layers are displayed in the selection color by deactivating ***Mark All Selected Layers***.

The Thumbnail

The little image shows the layer in order to ease recognition. The size of this thumbnail can be adjusted by using the menu of the title bar.
By clicking on the thumbnail while holding ***Shift***, you will create a mask based on the brightness of the layer.

If you click while holding ***Ctrl*** (Windows) or ***Command*** (macOS) the mask will be created based on the transparency of the layer. Holding additionally ***Shift*** will add to current mask, ***Alt*** will remove.

With image layers ***Alt+double click*** turns transparency on/off.

If a layer is an adjustment layer, clicking while holding ***Shift*** turns off the effect of the adjustment mask. ***Alt+click*** displays the mask as gray image allowing better editing.

With adjustment layers there is an additional small icon for the assigned adjustments next to the thumbnail. Double-clicking the icon allows to change the settings of the adjustment layer, and its context menu can be used to copy and paste adjustments.

The Layer Name

You are able to change the name of a layer by single clicking the name of the active layer.

If a layer is completely outside of the document area, its name is displayed red.

Under the layer name is the layer type. If the blend mode is not ***Normal*** or the layer intensity is not 100%, this will be shown there, too.

The Find Function

You can optionally filter the layers visible in the Layer List. In order to do so you must activate ***Find*** in the window menu of the Layer List.

There are three modes. The simplest one is **Type**. Here, you choose the layer types you want to see from a list of symbols. The second mode is **Virtual Copy**. This shows only the virtual copies (chapter 2.3.6) of a layer. By clicking **Apply**, the active layer is set as the original layer whose virtual copies will be searched.

Command is more powerful. Text commands are used to control, which layers are shown in the Layer List. There is no distinction between lower and uppercase. If a command or a search term contains a space, you must enclose it in quotation marks. Commands can be abbreviated as long as they are unambiguous.

There are 3 basic types of commands:

- the layer name
  You can just enter the part of a layer name and PhotoLine will show all layers containing this part. If you enter an “e”, all layers will be shown whose names contain an “e”.
- the layer type
  By prepending an “&” you can filter for layer types. “&image” will show only image layers. There are the following layer types: “image”, “vector”, “text”, “group”, “virtual” for virtual copies, “placeholder”, “pathgroup” and “meshgradient”.
- attribute comparisons
  Attribute comparisons are always start with an “&”. It follows the name of the attribute, a comparision operator and at last the comparison value. An attribute comparison may look like this: “&blendmode=normal” which can be shortend to “&blend=norm”. Some attributes just allow the comparison operators “=” (equality) and “!=” (inequality). Others additionally support “>”, “>=”, “<” and “<=”.

At the moment there are the following attribute comparisons:

- the blend mode: “blendmode”
  You can test the blend mode for equality and inequality. There are the following modes: “normal”, “dissolve”, “darken”, “multiply”, “colorburn”, “linearburn”, “darkercolor”, “lighten”, “screen”, “colordodge”, “lineardodge”, “lightercolor”, “overlay”, “softlight”, “hardlight”, “vividlight”, “linearlight”, “pinlight”, “hardmix”, “difference”, “exclusion”, “subtract”, “divide”, “remove”, “hue”, “saturation”, “color”, “luminance”.
- the layer intensity: “intensity”
  You can test the layer intensity with “&intensity=value”. Value is a number defining the intensity in percent.
- the line width: “linewidth”
  The line width is tested with “&linewidth=value”. Value can be a number giving the line width in pixels, or it can be a value including an unit in quotation marks, e.g. “&linewidth<"1 pt"”.
- the line color: “linecolor”
  The line color is tested with “&linecolor=color”. “color” is the color to be compared with. This color can be prefixed with “RGB”, “GRAY” or “CMYK” to specify the color model of the comparison color. This is

followed by the color values, which are specified as hexadecimal numbers, as in HTML. “RGBff0000” is therefore, an RGB red, “RGBff000080” is an RGB red with 50% transparency.

If no color model is specified, PhotoLine guesses the color model from the number of given color components.

- the fill color: “fillcolor”
  The fill color is tested with “&fillcolor=color”. “color” is set up in the same way as for “linecolor”.
- test for ICC profile: “ICC”
  “&ICC” is used to check whether a layer has an ICC profile.
- fonts: “font”
  With “&font=name” you can search for all text layers that contain the font “name”. The case does not matter and the font name does not have to be complete.
  So if you search for “&font=ar”, all text layers would be found in which the fonts “Arial” or “Argentum” are used.

You can invert the effect of a command by prepending a “-”, so “-&vector” will show all layers that are not vector.

Furthermore you can link several commands:

- By simply putting one command after the other, it will be sufficient to fulfill one of the commands in order to show a layer, e.g. “&image &vector” will show all layers that are either image or vector.
- By linking two commands with a “+” all commands have to be true in order to show a layer, “&vector + &blend=multiply” will show all vector layers whose blend mode is multiply.
- You can use “(” and “)” to bracket related commands. “&image (&vec + &blend=mul)” will show all layers that are either images or vectors with the blend mode multiply.

4.8 The Channel List

The Channel List shows all color channels of a document. By using the eyes the visibility of the single channels can be controlled. ***Alt+click*** on an eye makes that channel the only visible. The selection defines whether a channel can be edited or not. **Channel to Selection** copies the active channel to the mask and **Channel to Layer** creates a new layer based on the active

channel. These are only accessible, if there is either only one channel or all channels selected.
If the active layer is an adjustment layer, a special channel will also be listed. This special channel represents the mask of the adjustment layer. If the visibility of the special channel is turned on, it will be drawn the same way as a normal mask (see chapter 4.5.2.5 and chapter 7.10.1.24).
Clicking on the channel thumbnail while holding ***Ctrl*** (Window) or ***Command*** (macOS), creates a mask based on the channel data. Additionally holding ***Shift*** adds the channel to the current mask, ***Alt*** subtracts.
Using PhotoLine you usually don‘t need the Channel List, because every appropriate tool and filter has its own channel control.

4.9 The Document Attributes

The Document Attributes dialog is used to get a quick overview of the settings and attributes of the active document.
Most properties can be edited by double-clicking or by clicking the Edit-button and can be deleted by clicking the paper basket. But not all are editable or deletable. Some can only be edited and some can only be deleted.
The document tab shows always the following properties:

- the size
- the working mode (see chapter 2.11)
  The Attributes Dialog is the only way to switch from the picture mode to the document mode explicitly. The other way round from the document mode to the picture mode is only possible, if the first layer in the document is an image having the same size as the document.
- the ICC profile
  The ICC color profile is used to define the color space of the document (see chapter 7.6.15).
- Document Information and EXIF data
  These points give you access to most important metadata (XMP, IPTC and EXIF, see chapter 2.14). A double-click allows you to quickly access Document Information (see chapter 7.4.93).

- position and size of the lasso
  If there is a lasso, its size and position are shown. Double-clicking this entry allows to change the lasso size numerically.
- text register
  Text register allows to overlay the pages of the document with a line raster. A paragraph can be aligned to this raster by using “Text in Register“ (see chapter 6.2.13, “The Tool Settings Of The Text Tool“, subpoint “Paragraph Settings“). This results in a better looking text, if there are multiple columns or both sides of a sheet of paper are used for printing.
- Antialiasing
  Antialiasing sets the default antialiasing of a document’s layers when displaying, printing, or saving. If the value is set to **Default**, the global setting ***Antialias*** (see chapter 7.2.16) is used. Layers also have their own antialiasing setting (see chapter 4.11).

Beside that a document often contains ***print options*** (see chapter 5.8).
At the bottom of the dialog there is also an export and quick export function that exports all pages and the layers on them if necessary (see chapter 4.12).

4.10 The Page Attributes

The Page Attributes dialog is used to get a quick overview of the settings and attributes of the active page.
Most properties can be edited by double-clicking or by clicking the Edit-button and can be deleted by clicking the paper basket. But not all are editable or deletable. Some can only be edited and some can only be deleted.
The dialog always contains:

- the size
- the name
- export settings: You can assign export settings to pages, just as you can for layers in Export Attributes (chapter 4.12). Also, as there, there is an export and quick export function that exports the page and all layers on the page if necessary.

4.11 The Layer Attributes

The Layer Attributes dialog is used to get a quick overview of the settings and attributes of the active layer.

Most properties can be edited by double-clicking or by clicking the Edit-button and can be deleted by clicking the paper basket. But not all are editable or deletable. Some can only be edited and some can only be deleted.

Attributes Common To All Layer Types

- The Layer Position And Size
  The position and size can be edited directly.
- The Transformation
  The transformation includes scaling, rotation and shearing of the layer. The context menu of rotation and shearing can reset the transformation.
- The Layer Type
  By double-clicking Convert Layer Type (see chapter 7.5.2) is called.
- Channels
  Channels controls the visibility of the layer's color channels. For example, it can be specified that the layer only changes the red channel of the document or does not change the transparency of the document.
- ICC Color Profile
  If a color profile is assigned to a layer (see chapter 7.6.15), it will be listed. The color profile can be deleted here, too.
- Align Patterns
  This switch controls the behavior of pattern - these are pattern colors, gradient colors and texture colors-, if the layer is moved or scaled. Usually patterns are relative to the document, this means moving or scaling a layer doesn‘t affect the position and size of a pattern. If Align Patterns is turned on, the patterns are moved and scaled the same way as

the layer. Even rotations and perspective distortions influence the patterns.

- Print
  If you turn off this switch, the layer is still displayed onscreen but no longer printed. This option can affect exporting PDF files, too (see chapter 7.10.1.4).
  If a layer is made invisible by using the Layer List, the layer won‘t be printed, even if Print is turned on.
- Antialiasing
  Antialiasing defines whether layers will be antialiased/smoothed when displayed on-screen, when printed and when saved.
  Default means that a layer inherits the antialias setting of its document. If that is also **Default**, it will only be antialiased, if ***Antialias*** (see chapter 7.2.16) is turned on. On-Screen, the layer will only be antialiased, if it isn’t too time-consuming, on printing and saving will always antialias.
  Never means that the layer will never be antialiased, even if ***Antialias*** is turned on.
  When using **Always** it will always be antialiased, even if ***Antialias*** is turned off and even if displaying on-screen is slow.
  If the active layer is an image, you can additionally select a preferred interpolation method. The interpolation will only be used, if the scaling of an image is permanently fixed, e.g. by reducing a document to the background.
- Distortions and Layer Styles
  Any layer style (see chapter 2.5 and chapter 7.8.40) or layer distortion (see chapter 2.6) assigned to a layer is listed.
- Adjustment Layers
  Adjustment layers (see chapter 2.9) show the assigned work. This work can be turned off temporarily in order to edit the accompanying layer.
- Clipping/Masking Properties
  With layer masks, clipping layers, adjustment layers and dynamic filters you can blur and invert their area of effect.
  The blurring can be turned off temporarily by using a switch.
  For vector layers, you can also specify how the clipping is done. With **Path** the vector path is used for cropping, with **Shape** the outline of the

line style plus the inside of the path if the vector layer is filled. With **Brightness**, the brightness of the layer is used as the clipping. Partially transparent or dark areas of the layer have less effect than light, opaque ones:

Background

Vector layer used for clipping

Mode Path

Mode Shape

Mode Brightness

- Label
  The label color is used for marking the layer in the Layer List. If the color is completely transparent, the layer won't be marked.
- Pixel Snapping
  This attribute controls whether the layer will be aligned to the pixel grid of the document. **Default** inherits the behavior from the group or the the document. Aside from that you can permanently turn snapping on or off.
  If you want the apply the snapping permanently, you can use the menu command ***Layout/Alignment/Pixel Alignment*** (see chapter 7.4.62).
- Guides
  If the switch is turned on, the layer is used as an automatic guide. If you have many layers, you may have too many automatic guides, so you might want to turn that option off.
- Rotation Point
  Here you can enter the rotation point for the Layer Tool numerically.
- Overprint
  Overprinting is a property for printing documents in print shops.
  With overprinting a layer replaces only the color channels of the background, which are used by the layer.
  Using overprinting you need to consider some rules:
  - Overprinting is not allowed with groups, placeholder layers and virtual copies.
  - With images overprinting works only for gray images that have an assigned color. This color has to be a spot color or CMYK with a single color channel occupied (see ***Attributes Of Image Layers***).
  - Simulating overprint of CMYK colors on-screen only works if the document's color space is CMYK (see chapter 2.11).

- Simulating overprint of spot colors is only an estimate of the result.
- Overprint should not be used together with transparency, since most print shops don't allow transparency.
- Not all PDF viewers support overprinting.

Attributes Of Image Layers

- Image layers allow to control the type, the bit depth and whether there is transparency/an alpha channel.
- Appended Picture Data

  If a JPEG-file is opened, PhotoLine attaches the original JPEG-data to the newly created layer. If the layer is saved again as JPEG without being modified, the file will contain the original JPEG-data without new compression losses. This is useful, if the metadata of a JPEG-file - like the ICC color profile or metadata - have to be changed.

  The additional data will be automatically removed, if the image layer itself is modified.

  If an image layer has JPEG-data, these data will be used when saving as PLD-file. Therefore, PLD-files containing JPEG-images will be much smaller than in previous version of PhotoLine (see chapter 5.5 "Working With JPEG-Files" for more information). JPEG-data have an effect on creating PDF- and SVG--files, too.
- Color

  If the image is 8 bit gray, you can a assign one or more colors to the image. There are 3 basic modes:
  - The assigned color is a gradient: In this case, the gray values of the image are displayed using the corresponding gradient values.
  - The assigned color is an arbitrary color: In this case, a curve can be defined in addition to the color. Both together control the appearance of the image.
  - The assigned color is a process or spot color (see chapter 2.15): In this case, a curve allows you to control the ink coverage. Furthermore, one or more additional spot or process colors can be assigned via **Duplicate Property** . Please note, however, that each of these colors may occur only once per image. If you assign a spot color or process color (cyan, magenta, yellow, black) twice, you will hear an error sound and the new color is not applied.

This way you can create duotone images (monotone, duotone, tritone or more).

You can use the context menu of the Color entry to create and apply presets.

Attributes Of Vector Layers

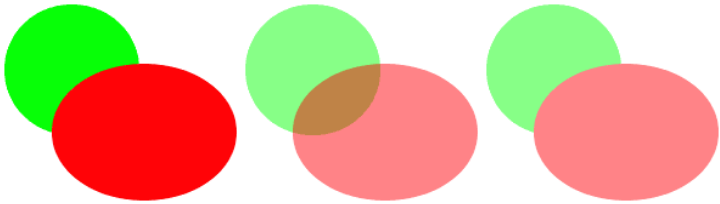
- Fill And Line Styles
  The fill and line styles are shown and can be edited.
  The Edit-button duplicates the active style. If there is more than one style, the active style can be deleted, too. The order of the styles can be changed by dragging.
- The Vector Attribute
  This attributes contains information which kind of geometric figure the vector layer is. The vector attribute can only be deleted.

Attributes Of Text Layers

- shape flow properties
  If a text layer flows around or inside another layer (see chapter 6.2.12), the shape layer is shown. Shape flow can be deleted here.

Attributes Of Groups

- Draw Isolated
  This entry is only used in combination with groups. If turned off - which is standard behavior - the blend mode of a group is ignored and its intensity is transferred to its children. But this may lead to unexpected results, if a group contains overlapping layers.
  An example may make this problem clearer. Let's use a group with two circles. The first image shows this group with 100% opacity, the second one with 50% opacity and the third one with 50% opacity, too, but also with “Draw Isolated” activated:



“Draw Isolated” gives the expected result.

Additionally isolated groups allow the creation of adjustment layers, that affect only the content of their group.

Aside from that advantages there are disadvantages, too. Drawing isolating groups is significantly slower. Furthermore no file format - with the exception of the native PhotoLine-format PLD - can save isolated groups. Therefore, they will be converted to images on export.

Attributes Of Placeholder Layers

- Transparency

  If the content of a placeholder doesn't have transparency, it can be enforced with this switch. Dynamic Filters (chapter 2.10), which are assigned to the placeholder, can thus optionally adjust the transparency.
- File

  File is an entry of Placeholder layers (see chapter 2.3.7). It displays the file that is assigned to the placeholder. If the text is gray, the source doesn't exist. A double-click allows you to use a different file. If the file data is embedded in the document, "embedded" is displayed.

  The context menu offers the possibility to convert an embedded placeholder into a file reference and vice versa.

  If the placeholder is still empty, ***File*** is a switch, and you can use it to specify whether a newly assigned file should be embedded or a reference to the file should be saved.

  The trash icon will delete the current data of the placeholder.

  If the file has layer compositions (see chapter 4.35), you can use a drop-down list to specify which version of the file to display.

  In addition, you can define via a list, how the associated file will be placed in the placeholder.
  - inside: The file is completely inside the placeholder.
  - outside: The file completely fills the placeholder. Parts of the file may be outside.
  - Clipping: The placeholder is grouped with a clipping layer. Thus, the visible part of the file can be changed later using the Layer Tool (see chapter 6.2.1).
- High Preview Quality

  Placeholder layers are displayed on the screen using a preview image. The preview quality controls whether the preview image is always

created in 8 bit or in bit depth of the original file. This may have an impact on the appearance of adjustment layers.

Keep in mind that this only affects the screen output. All other operations are using the full quality.

- Save Preview

  Here you can specify whether the preview of the placeholder is to be saved. This may save time, especially when using complex placeholder layers.

  If the high preview quality is turned off, the preview image will be saved lossy with JPEG compression, otherwise it's lossless.

4.12 The Export Attributes

The Export Attributes dialog contains SVG properties on the one hand and special export settings that can be assigned to layers on the other.

SVG Properties

The following SVG properties can be assigned:

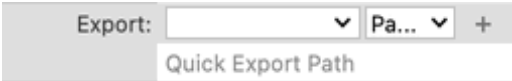
- Title: Sets the <title> element for the layer.
- Description: Sets the <desc> element for the layer
- CSS-Class: Sets the "class" attribute
- CSS-Style: Sets the "style"-attribute

Please note that PhotoLine uses these values unchanged when exporting SVG. So they must be syntactically correct, otherwise you will get a corrupted SVG file.

Export Settings

In PhotoLine you can assign export settings to individual layers - and also to pages (see chapter 4.10). Later you can export all layers with such settings in one go. This is useful, for example, if you manage several icons in one document or create a watch face for a smartwatch. A layer can have several export settings. In this case, several files will be created for this layer during the export.

By default, the export settings only show the following:



The first drop-down list gives you access to the presets. This allows you to save the current export settings of the layer as a preset, or apply previously saved settings to the active layer.

Next to this, you specify which area of the layer is to be exported:

- Page
  When exporting, a page-sized file is created, but of course only the current layer is visible. This is especially useful for icons.
- Children
  If the active layer is a group, the sum of the sizes of all children will be used as output size, including the invisible ones. So you can create an invisible rectangle in a group and use it to directly control the output size.
- Content
  The visible content of the layer determines the output size.

With the plus sign you can add a new export setting.

“Quick Export Path” is a destination directory used for the Quick Export function. This can be set by double-clicking on it, but more on that later.

If you create a new setting via the plus sign, an additional line will appear:

A file will be created for each setting later when exporting.

There are three input fields:

- the scaling
  This allows the layer to be exported scaled. “1x” means that the layer is exported in original size, “2x” accordingly in double size. You can also export the layer with a fixed width or height. “256w”, for example, exports with a width of 256 pixels, while “256h” exports with a height of 256 pixels. For scaling, you can use predefined values from the drop-down list and enter values yourself.
- the suffix and prefix
  When exporting a layer, the layer name is used as the basis for the file name. To ensure that a unique file name is still created with multiple export settings, you can define a suffix and a prefix.
  The suffix is appended to the layer name and adjusts to the scaling by default. For example, if the scaling is “2x”, “@2x” is set as the suffix; if the scaling is “256w”, it becomes “-256w”. However, you can also enter a different value.

The prefix is set before the layer name. If there is a "/" in the prefix, the created file will be placed in a subfolder, so for the prefix "Test/" it will be in the folder "Test". If the subfolder name is "+", the "+" is replaced by the name of the group in which the layer is located.

- the file format and file settings
  You can specify the desired file format and define the settings for it. For example, it is possible to export a layer both as a PNG with true colors, and as a PNG reduced to 256 colors.

In the Export Attributes there are three additional commands at the bottom of the dialog:

- Add Export Setting
  This allows you to create a new setting - as with the plus sign in the first export settings entry.
- Export
  Export exports the active layer and all child layers that have export settings.
  You will be asked for the name of a folder where the files will be created. After exporting, the folder name will be taken as the quick export path.
  The file name is formed from the previously set prefix, the layer name and the suffix. As with the prefix, a "+" in the layer name is replaced by the name of the group. If the filename already exists, a number is appended so that it becomes unique.
- Quick Export
  If you need to export frequently, the normal export has two disadvantages. First, you are always asked for a folder name, and second, when you save to the same folder several times, a number is appended to the file names so that they are unique.
  Both are omitted with ***Quick Export***. It uses the last used export folder or the one that was explicitly set before via "Quick Export Path". And it overwrites existing files.

4.13 The Undo List

The Undo List shows every operation made in a document. By clicking on an entry several operations can be undone or redone in a single step. A click

on the waste basket deletes all undo operations and frees the associated memory.

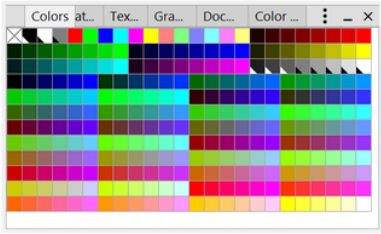
If operations can be redone, you can record them as an action with the **Record Actions** icon. If you are currently recording an action (see chapter 4.27), the operations will be added to this action. Otherwise you will be asked for the name of a new action under which they should be recorded. Since interactive operations like painting with the mouse cannot be saved as actions, you will be warned afterwards if such operation were found.

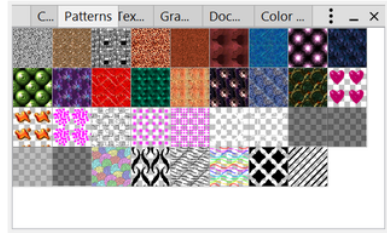
4.14 The Color List, the Pattern List, the Texture List and the Gradient List

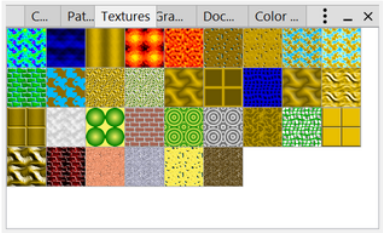
Colors are very important in the daily work with PhotoLine.

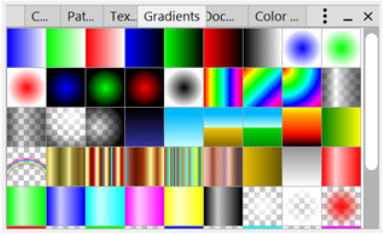
Therefore, PhotoLine offers several archives where you can deposit the most important colors:

- the Color List
  The Color List contains simple colors.
- the Pattern List
  The Pattern List contains colors, that are based on pixel or vector images.
- the Texture List
  The Texture List contains colors, that are based on user-defined values and rendered.
- the Gradient List
  The Gradient List contains color gradients.









Color, patterns, textures and gradients are treated equally in PhotoLine with the exception that some tools, for example the gradient tool, cannot work with all kind of colors. But those functions are a minority.

Colors can be dragged with the mouse. This way it is very easy to copy a color by dragging it to another color field. If the current layer is a text or a vector layer, the color can be dragged directly to that layer in order to set the color (pressing ***Shift*** sets the line color of vector layers).

In general colors can be edited using the Color Editor. This is true for textures and gradients, too. But there is no special editor for patterns, because you can use any pixel image. Therefore, on Windows a pattern can be dragged on a free part of the main window to create a document with the pattern. On macOS you have to drag the pattern to a non-PhotoLine window and to hold ***Alt***. Now you can modify the pattern, e.g. scale it or draw in it. After that you can drag the pattern back to the pattern list with the layer tool (see chapter 6.2.1).

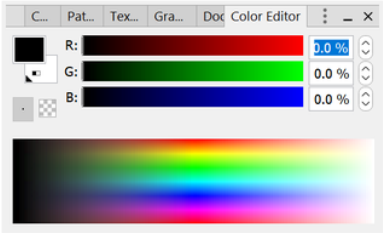
A single mouse click on one of the color or pattern fields sets the foreground color in the toolbar or the fill color, if a vector or text layer is active. By holding ***Shift*** you are able to set the background color or the line color of a vector layer.

The context menu of the color list enables you to save the current colors or patterns, and to load a new set. Many different file formats are supported, even those of other software. Furthermore the context menu shows a list of the recently loaded color lists.

The context menu allows to modify the appearance of the color list, to. In addition the standard mode there is a small and a large text mode and a large icon mode.

4.15 The Color Editor

The Color Editor is a small version of the Color Editor (see chapter 3.4):



The two color fields are controlling whether to modify the foreground or the background color. The combobox is used to choose a color space. The standard color space is the color space of the active color. The small checkered box nearby makes the current color completely transparent. This is especially useful in combination with vector layers.

4.16 The Document Color List

In the document color list, you can create colors and thus assign the active document. This color list is saved with the document and also reloaded. Each color in the document color list must have a unique name.

Also spot colors (see chapter 2.15) can be created in the document color list: after clicking on the “+” symbol the Color Editor appears with a “Spot Color” switch at the bottom. This switch is only available if you create a color from the document color list.

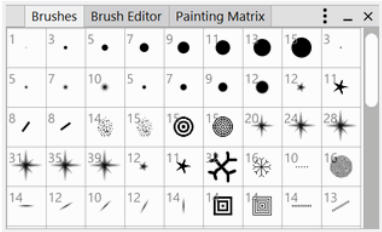
If you change an existing color in the document color list, all places where that color is used in the document, will be adjusted accordingly. It doesn't matter whether the color appears in a text layer, a gradient color or an effect. There are two possible ways to do this:

- The color from the document color list is transferred including the transparency.
- Only the actual color values are transferred, the transparency of the color in the document is retained.

Which of the two procedures is used can be determined when a color of the document color list is edited with the Color Editor. In this case there is a button “Apply Transparency” at the bottom of the Color Editor.

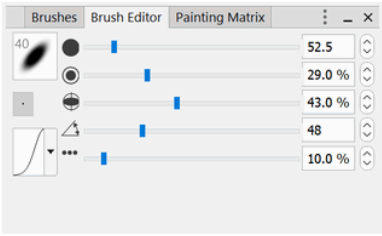
4.17 The Brush List

In order to have a quick access to the most important brushes, PhotoLine offers a brush list:



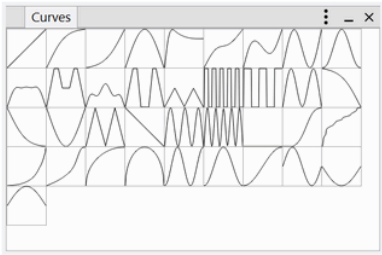
You can put the most frequently used brushes into the brush list. You can load and save complete lists by using the context menu.

4.18 The Brush Editor



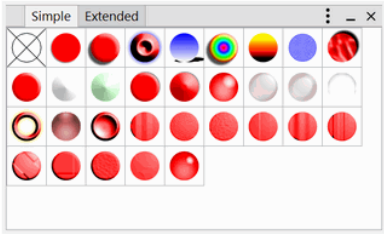
The small brush editor contains all the settings of the large brush editor (see chapter 3.5).

4.19 The Curve List



Many functions of PhotoLine use curves, sometimes to adjust the brightness of images, sometimes to change the look of effects. To avoid inputting the same curves over and over again, there is the curve list.
There are already all kinds of curves predefined in the curve list, but it is possible to create new curves. To do this the new curve only has to be dragged from a curve field to a free place in the curve list. But it is possible to drag a curve to the appended curve list in the curve editor, too. These curves appear automatically in the global curve list.

4.20 Simple Layer Styles, Extended Layer Styles



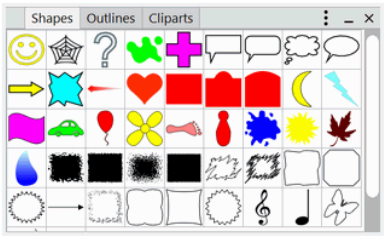
There are two kinds of layer styles: simple and extended styles. A simple style is a combination of different layer styles (see chapter 2.5 and chapter 7.8.40 and following). An extended style can have a layer style, too. Additionally it can contain layer distortions (see chapter 2.6 and chapter 7.8.34 and following), fill and line colors and line styles. The pictures in the list show a preview of the styles.

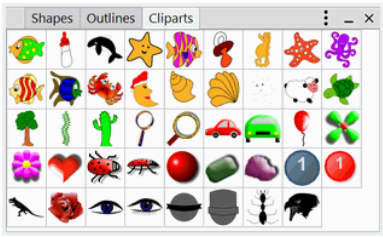
By double-clicking one of the pictures the corresponding style is assigned to the active layer. The stroked circle in the upper left corner has a special meaning: it symbolizes “No Style”, so choosing this one will remove the layer style of the active layer.

The context menu (see chapter 3.2) of the style list offers commands for management. ***New*** copies the style of the active layer and creates a new style based on them. ***Change*** replaces the clicked style with the styles of the current layer. ***Copy*** copies the clicked style and ***Delete*** deletes it. Beside that you can load or merge another style list and you can save the current list.

While using styles pay attention to the following fact: same layer styles consume an enormous amount of computing power. If you apply such an style on a large layer (i.e. 1500x1500 Pixel or more), the calculation of that style may last minutes on a slow computer.

4.21 The Shape List, the Outline List, the Clipart List





There are three list of predefined shapes:

- the Outline List
  The Outline list contains simple vector layers without any further attributes.
- the Shape List
  The Shape List contains vector layers with fill and line colors and with line styles.
- the Clipart List
  The Clipart List contains more complex objects, that may consist of more than one layer. These layers can have any kind of attribute like layer styles (see chapter 2.5).

These lists can be used by the tool ***Vector Object*** (see chapter 6.2.9). You can drag a shape to your document in order to create a new layer, too.
The context menu (see chapter 3.2) of the shape list offers commands for management. ***New*** is only available, if the active layer is a vector layer. In this case a copy of the active layer is added to the shape list. ***Copy*** copies the clicked shape and ***Delete*** deletes it. Beside that you can load or merge another shape list and you can save the shape list.

4.22 The Line Style List

You can use the ***Line Style List*** to store line style, that you need more often. This way you can access them quickly.

4.23 The Line Style Editor and Line Pattern Editor

The ***Line Style Editor*** and the ***Line Pattern Editor*** allow you to edit all properties of the active vector layer's line style. They are a small version of the large Line Style Editor (see chapter 3.8).

4.24 The Picture Info

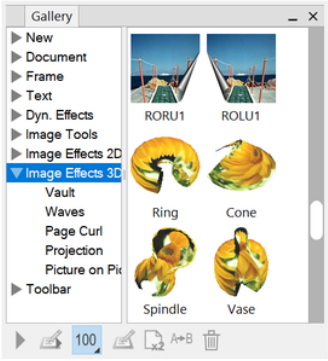
The Picture Info shows information for the current mouse position.
One of its tasks is to show the position of the mouse, if the mouse is inside a document window. If you are making a rubber box with the mouse, you will see additionally the size and the height. On creating a rubber line you will see its length and its angle.
Below that is a list of color information fields. This list has at least two fields showing the color at the mouse position. If you have created color positions in the active document (see chapter 6.2.20), the colors at that positions will be displayed, too.
You can control separately for each field, which color model should be used for showing the color values. Furthermore you can define, whether the color should be read from the active layer or from the full document. This setting is used for all fields.

4.25 Contrast/Brightness

Contrast/Brightness is a fast way to change the contrast and the brightness of an image. If used with RGB pictures it is possible to modify only the brightness of a single color channel allowing to remove a color touch.

4.26 The Gallery

In order the simplify the usage of the partly quite complex functions of PhotoLine, many dialogs contain a presets bar (see chapter 3.9.2). By using this bar quick access to predefined sets of options is possible. This is quite useful but there are still 2 disadvantages. First the preset bar contains only text and text is not always sufficiently meaningful. Second if you don't exactly know what kind of effect you want to use, you have to open various dialogs. These are the points where the Gallery can be used. The Gallery shows the presets of nearly every function in a single window. By using the presets the Gallery can be extended easily. Additionally you can add actions to the Gallery, too (see chapter 4.27).



On the left side the various functions are listed. On the right side the presets are shown, that are selected at the left. If a whole group is selected, all presets of this group are shown.

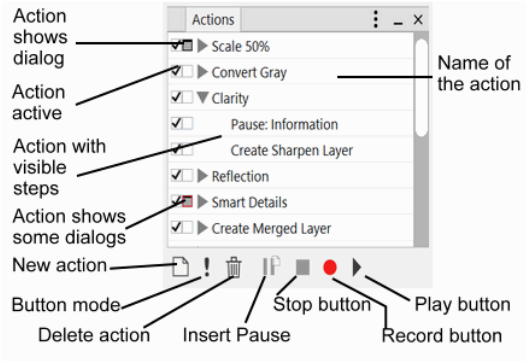
By double-clicking a preset it is executed. Depending on the kind of preset, the active layer will be modified, a new document is created or another tool is selected.

The context menu of a preset offers several commands:

- Apply
  The preset is applied. This has the same effect as double-clicking the preset.
- Edit and Apply
  The dialog of the preset is opened and its settings can be changed. After leaving the dialog with OK, the function will be applied by using the modified settings. The preset itself is not changed.
- Preview Size
  There are several predefined sizes for the previews in the Gallery. The larger the preview the better the effect of the preset is visible, but of course more screen space is consumed, too.
- Edit
  The settings of the preset are modified. The preset will not be applied.
- Copy
  The active preset will be copied. In combination with Edit Copy can be used to create a new preset based on an existing one.
- Rename
  The name of a preset can be changed.
- Delete
  The active preset will be deleted.

These functions are offered by an icon bar, too.

4.27 Actions



It is possible to record the operations that you use on a picture. This way you can later use the same actions on another picture automatically. These recorded operations are called actions.

The dialog for managing actions shows at the top the already existing actions. You can edit them with the context menu. At the bottom right there are the **Record**, the **Stop** and the **Play Button**.

At the bottom left there are the **New Action**, the **Button Mode** and the **Delete Action** button. **New Action** and **Delete Action** speak for themselves.

The button mode is a simplified mode of the action list. All actions are displayed as buttons and a single click on one of these buttons executes the corresponding action. You can only leave the button mode by using the context menu (see below).

Every action in the listing has a check mark at the left (or not). This check mark shows whether the action is enabled or not. This way you have the possibility to omit a working step when executing an action.

Beside the **active check** there is another field, which controls, whether the current working steps are executed with or without showing the corresponding dialog. If the dialog is not shown, the values will be used that were entered when recording the action.

You can edit this saved value by double clicking one of the steps. Leaving the following dialog with **OK** will store the new values. The step will not be executed.

A single working step can be moved with the mouse to change the succession.

In order to record/create an action you have to proceed like this:

- Click the **New Action** button. Now you can name your action.
- Select the newly created action by clicking.
- **Start recording** by clicking on the **Record button**
- Now you can do your work. You should - wherever possible - use relative values in the dialogs, if you intend to use the action with different sized pictures.
- If you have completed your work, press the **Stop** button.
- You can add steps to an existing action by restarting recording. PhotoLine will add the new steps to the end of the active action. Afterwards they can be dragged to the correct position by using the mouse.

While recording an action pressing **Insert Pause...** inserts a pause. You can give the pause a name and a description. Furthermore PhotoLine is recording the active tool. When PhotoLine sees the pause on playing the action, the action is stopped and the name and the description are shown in the Actions dialog. A **Cancel** and a **Continue button** are displayed, too. Additionally the recorded tool is selected. Now the user can make any modification to the document, that is needed in order to finish the action in a reasonable way. Afterwards the action can be continued.

By doing a ***right-click*** (Windows) or ***Command+click*** (macOS) the context menu of the action dialog appears. Beside standard operations for creating, copying and deleting actions it offers functions to load, save and merge actions. **Save active...** only saves the currently selected action. **Properties...** allows to change the settings of the active action or action step. With **Button Mode** the button mode is entered or left again. Furthermore the context menu contains the command **Action to Gallery** which adds the active action to the Gallery (see chapter 4.26 and chapter 7.10.5).

4.28 The Map

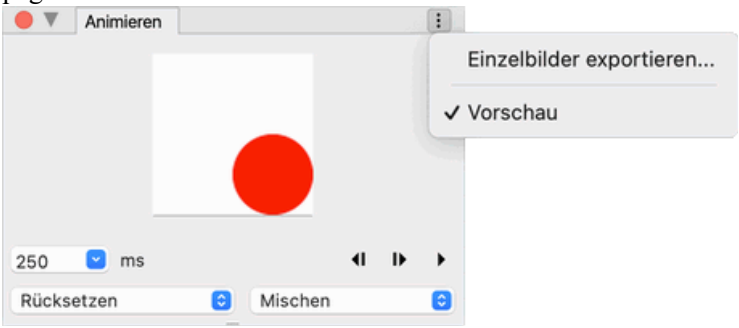
The Map contains a minimized view of the active document and is showing the visible area. You can change the visible area by clicking and dragging. If you drag a corner of the inverted area the zoom factor is changed. The map also has a context menu containing the most important zoom functions.
By the way: the card can be used with a modal dialog onscreen, too.

4.29 The Magnifier

The Magnifier shows an enlarged view of the piece of the document at the current mouse position. It has three working modes. **Document** shows the whole document, **Layer** the active layer and **Selection** only the current selection (see chapter 2.4.2). The modes **Layer** and **Selection** allow to define a background color. This is especially useful for **Selection**, because by choosing an appropriate background color you can control the quality of your selection more easily.

4.30 Animate

Animate can be used to create or edit classic image-based animations. In this type of animation, each layer of the document becomes a single frame of the animation, similar to a flip book
Such animations can be saved as GIF, PNG, or WebP and used on a web page.



By default PhotoLine shows a preview of the animation in the document window in addition to the preview in the animate dialog. If you don't want

this. you can turn off the document preview in the window menu. The window menu also allows you to export the frames of the animation as separate files.
The play buttons can be used to switch between the frames of the animation or to play the animation in real time.
There are three settings for each frame.
The first is the ***display duration*** of the current frame. It is specified in milliseconds (ms).
The second is the ***display mode***. This controls what happens to the animation after the duration of the current frame has expired. There are three options:

- Normal
  Nornal will leave the animation unchanged.
- Delete
  With **Delete**, the animation in the area of the frame is deleted. If the animation has transparency, the area is made transparent, otherwise it is deleted with the background color.
- Reset
  Reset resets the animation to the appearance it had before the frame was displayed.

The third setting is the mix mode. This controls how the current frame is displayed in the animation and has a similar meaning to the mix mode in PhotoLine layers. There are two possibilities. Because of the way they work, the mix only has an effect if the current frame has transparency.

- Replace
  The frame overwrites the existing animation in its area, including transparency.
- Mix
  The frame is output “normally”. Where it is transparent, it does not change the existing animation.

When multiple layers are selected, changes to the settings are applied to the entire selection.

4.31 The Document List

The Document List shows the currently opened documents. Using the context menu you can save, close or print the documents.

On Windows you can also close a document by clicking with the middle mouse button on the corresponding entry.

You can drag layers and files to the documents in the Document List in order to insert them in that document. This is mostly useful, if you are working with maximized document windows.

The Document List has two display modes:

- the standard mode with a thumbnail and the document name
- the tabbed mode
  The tabbed mode is used, if the Document List is oriented horizontally, this means the title bar is at the left side of the dialog, and the height of the dialog is so small, that there is no space left for a thumbnail.

4.32 The Page List

The Page List shows the pages of the active document. The context menu contains commands for creating new pages or managing the existing ones.

You can drag an entry to reorder the pages. Alternatively, you can select one or more of the page thumbnails and drag them.

4.33 The Histogram

The histogram shows the color distribution of the active picture. It has some settings, that are available through the context menu or the window menu of the dialog:

- Logarithmic and Linear
  These options are controlling the scaling of the y-axis.
- All Layers and Active Layer
  The histogram can be calculated based on the whole document and based on the active layer.
- Extended View
  The extended view shows some additional statistical information.

The calculation of the histogram may last a while when used on very large images or on documents containing many layers, and therefore, may be annoying. Simply turn it off in that rare cases.

Double-clicking the histogram calls the function ***Levels*** (see chapter 7.6.38).

4.34 The Text Styles

Text Styles are used to give long texts a uniform look.

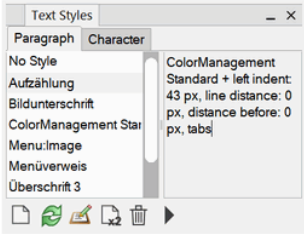
A text style stores the information how to format text. There are two types of text styles:

- Character Styles
  Character styles contain the settings defining the appearance of text like font, size, color and so on. Character styles can be applied to single characters and to text blocks.
- Paragraph Styles
  Paragraph styles contain all settings of character styles. Additionally they store the paragraph settings like line and paragraph distance, left and right edge and so on. Paragraph styles are always applied to whole paragraphs.

If a style was assigned to a text, the text stores the style name. Whenever the text style is modified later, every text with that style will automatically be modified, too.

Text styles can be created hierarchically. A new style can inherit most of properties of an existing one and differ only by some settings. If the base text style is modified, the inheriting text style will take all setting inherited from the base style.

Text styles are saved within the document file. Aside from the document text style list there is a global one which can be used with every new document. If a text style is used the first time in a new document, the global text style list will be copied to the document and future text style operations will work with the local copy.

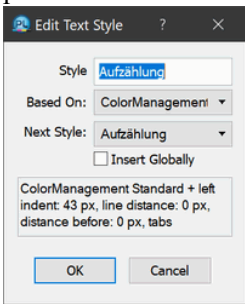


The text style dialog is structured in three parts. At the left there is a list of the existing text styles. The names of the styles are user-defined. The first style is always **No Style**. If you assign it to a text, a previous style assignment is cancelled.

Beside that there is a description of the active text style. Base styles, that don‘t inherit from any other style, show a complete description of all settings. Descended styles only show the name of the base style and the differing settings.

At the bottom there are available commands:

- New...
  New... creates a new text style using the text settings of the current text position.



  Style Name is the name of the new text style. Based On can be used to define a base text style. Next Style is the name of the text style, that will automatically be applied to a newly created paragraph. If Insert Globally is activated, the new text style will be inserted in the global text style list. At the bottom there is a description of the new text style.
- Update
  The settings of a style can’t be edited directly. Instead a text has to be formatted accordingly and then those settings can be copied to a text style by using Update.
- Edit
  Edit allows to modify the common information like style name, base style and the next style.

- Duplicate
  Duplicate creates a copy of the active text style.
- Delete
  Delete deletes the active text style. Any text using that style won‘t have a style afterwards.
- Apply
  Apply applies the active text style to the selected text. Double-clicking a style name has the same effect.
  By applying a style every custom formatting of the text is replaced by the settings of the text style. Holding the Shift-key while assigning the text will keep the current settings.

4.35 Layer Compositions/Layer Comps

When a layer composition is newly created, PhotoLine saves the visibility and appearance of all layers in the document. In detail, the following data is saved:

- the document color list (chapter 4.16)
- the text styles (chapter 4.34)
- the visibility, intensity and blend mode (chapter 4.7) of all layers.
- the layer effects (chapter 2.5)
- the position and size of the layers

For placeholder layers containing a document with its own layer compositions, the set layer composition (chapter 4.11) is saved.

The Layer Compositions dialog consists of a list of existing layer compositions. There is always the composition with the name “Current state”. Below that, the compositions that have been created are listed.

The active layer composition is indicated by a filled radio button next to its name. Only one layer composition can be active at a time.

By clicking on the name of a composition or its radio button, it becomes active and is applied to the document. The document will look the same as it did when the layer composition was created. By “Edit > Undo” or activating “Current State” the previous state is restored. If you change the document after activating a composition, the changed document automatically becomes the current state and this becomes active in the list.

If you click to the right of a layer composition name, it is not activated, but only selected. This allows you to modify a composition without activating it.

There are also the following functions at the bottom of the dialog:

- New Layer Composition
  This allows you to create a new layer composition. The current document state will be saved and you will be asked for the name and a description of the layer composition.
- Update Layer Composition
  The currently selected layer composition will be updated with the document state.
- Edit Layer Composition
  This allows you to change the name and description of the selected layer composition.
- Delete Layer Composition
  This deletes the selected layer composition.

4.36 Adjustment Layer

The ***Adjustment Layer*** panel is a non-modal panel for editing adjustment layers (see chapter 2.9). It can contain one or more subdialogs.

At the top there is always the **Background** subdialog. It is representing the picture, that is modified by the adjustments. The **Background** subdialog allows to save the current adjustments as preset or to apply a previously saved preset. If you are applying a preset, you can either create a new adjustment layer or attach the adjustments to the active layer.

The setting dialogs of the adjustments are following. The title bars of the subdialogs are containing various icons:

+: A new adjustment is assigned to the active layer.

−: The corresponding adjustment will be deleted.

▾: The appearing menu allows to reset the adjustment settings and to access presets.

: Selecting this icon allows to pick a color from the document. If you don't press the ***Alt*** key while clicking, color picking stops automatically. If you hold down ***Ctrl*** (Windows) or ***Command***

(macOS) while clicking, you can an draw area from which the color is read. This icon is not available with every adjustment.

The Background subdialog has an additional icon:

: A new adjustment layer will be created. If there is a mask, it will be reused as mask of the adjustment layer. Holding ***Shift*** while selecting the adjustment will group the new adjustment layer with the active layer.

: The active adjustment layer will be deleted.

All subdialogs with the exception of the **Background** can be moved inside the ***Adjustment Layer*** panel, thus changing the order of the adjustments.

4.37 The Color Select Field

The color select field is similar to the color list. With a simple mouse click you set the foreground color or fill color, if a vector or text layer is activated. By holding Shift while clicking, you are setting the background color and the line color of vector layers.

4.38 Simple Browse

Simple Browse is a simplified version of the normal Browse panel (see chapter 5.4). All parts with the exception of the file list have been omitted. The result is a space efficient panel which can stay open all the time.

In order to allow navigation, Simple Browse is listing folders in the file list, too. The folder ".." has a special meaning and is used for leaving the current directory. Furthermore the title bar of Simple Browse offers an expandable folder tree.

Additionally the context menu of the file list provides access to most important commands of the Browse panel. You can also change the sort order of the file list here.

4.39 Guides

This function allows to create guides by typing the position. Therefore, it is very precise way to place a guide.

In addition to numeric values you can use mathematical formulas to define a position (see also section 3.3.7 “Unit Text Fields”). Therefore, the constants “w” and “h” representing the document's width and height are predefined. If you create a vertical guide with a position of “w - 1 cm”, the guide will be placed 1 cm from the right edge of the document. They guides position is also stored as formula, so if you are changing the document’s size, the guide will still be placed 1 cm from the document’s right edge. Please note: Your input is saved as formula only if it contains a constant. So in order to define a guide, that has an offset of 1 cm to the left edge, you have to enter “w * 0 + 1 cm”.

Guides that are based on formulas are shown as grey text and can be converted to ordinary numbers by using the context menu command ***Fix*** of the position field.

Aside from creating and modifying guides, the switch **Protected** allows to disable editing of guide lines by using the layer tool (see chapter 6.2.1). But even if editing is disabled here, new guides can be created by dragging them out of the ruler.

4.39.1 Move All

Move All moves all guides by the values entered in the dialog.

4.39.2 Create Guides

Create Guides allows you to create a set of guidelines to define margins, rows and columns.

Under **Margins**, you can set size of the page margins. You can preset them with values of the page, the active layer or the lasso. In addition, you can set whether guides should be created for the margins.

Under **Create**, you can set how many rows and columns are to be created. If **Gap** is turned on, you can specify an additional space between the rows or between the columns. The **Create** settings take into account the **Borders** settings. So the rows and columns are created inside the margins defined there.

If **Create formulas** is turned on, the new guidelines are not defined as numbers, but as formulas relative to the document size.

5. Working with PhotoLine

5.1 Introduction

PhotoLine offers countless functions for editing images. Therefore, a beginner in image editing may have difficulties to always find the appropriate tool for a given task. In order to ease the use there are several built-in supporting tools.
Move the mouse over an icon and hold it still. After a while a small Rectangle with a description of the icon will appear.

At the same time a more explicit description is shown in the status bar. On Windows the status bar is at the bottom of the main windows, on macOS it is at the bottom of the document windows. The status bar also offers information about the menu entries.
You can call the PhotoLine online help by placing the mouse over a function and pressing “F1” or the Help-key (with previous Mac models), too. On macOS you can also use the menu command “Help/Context Help”.
If those information are not sufficient, on Windows the icon with the help mouse cursor can be selected. After that the mouse cursor has got an additional question mark . If you click on an icon or a menu entry now, you get the corresponding help text.

5.2 How to Configure PhotoLine

You can adjust PhotoLine very flexibly according to your preferences.
The menu command ***Options/File*** is used to configure loading and saving files.

Options/Display. allows you to change the appearance of several helping items: the grid, guide line, the mask and so on.

Options/Working. define the way how some tools are working. One of the options is the number of undo steps.

Options/Extended contain options, that are not used very often. The most important setting here are the plug in settings.

In order to allow quick working you can assign a keyboard shortcut to every menu function and every tool in the toolbox with ***Options/Keyboard Layout....***

You can show and hide the various icon bars and supporting dialogs of PhotoLine with the ***View*** menu (on Windows) and ***Windows*** menu (on macOS). For reasonable working the following items should be visible:

- the general bar
- the status bar (only on Windows)
- the toolbox
- the tool settings
- the layer dialog

If all these items are visible, you can be sure, that all relevant information is on screen.

5.3 Create Your First Image

For your first steps in PhotoLine you need a picture. You can create an image in several ways:

- The function ***File/New/New Image...*** creates a new, empty picture.
- ***File/Open...*** loads a picture from the hard disk, a CD-ROM or a flash-key.
- ***File/Import/Scan...*** reads an image from a scanner or a digital camera.
- ***Edit/Paste as Document*** reads an image from the clipboard.
- ***File/Browse...*** reads the content of a folder on your hard disk and shows a small preview of all images in this folder. By double-clicking one of these previews you can open the according image.
- You can drag an image file to the PhotoLine icon. On Windows it is possible to drag an image file to the main window, too.

5.4 Browse

5.4.1 Basics

PhotoLine offers the function ***File/Browse*** to give the user a fast ability to get an overview over his images.

On selecting that function the browse dialog appears. On the left side you can select the directory that you want to browse by clicking in the folder list, and on the right side there are small preview pictures of the files in the currently selected directory. In addition to the folder tree there is **Recent Files** at the left side which allows to access the recently loaded files. They are sorted the way they were loaded. **Favorites** is an entry, that you can fill with your own picture folders in order to open them quickly (see chapter 5.4.14).

Below the folder list there are tabs which show different information. **Prop** is showing common information about active picture. **IPTC** lists the corresponding IPTC-information, if there are any, and **EXIF** shows the EXIF-data of the selected file. **Keyword** is listing all keywords found in the files of the active folder. Behind every keyword a number is given. On clicking on a keyword, all files containing that keyword are selected. Selecting a file highlights the keywords of this file.

The size of the preview images can be adjusted with ***Options/Browse/Preview Images*** (see chapter 7.10.1.33). These preview images are decorated by small symbols to indicate special properties:

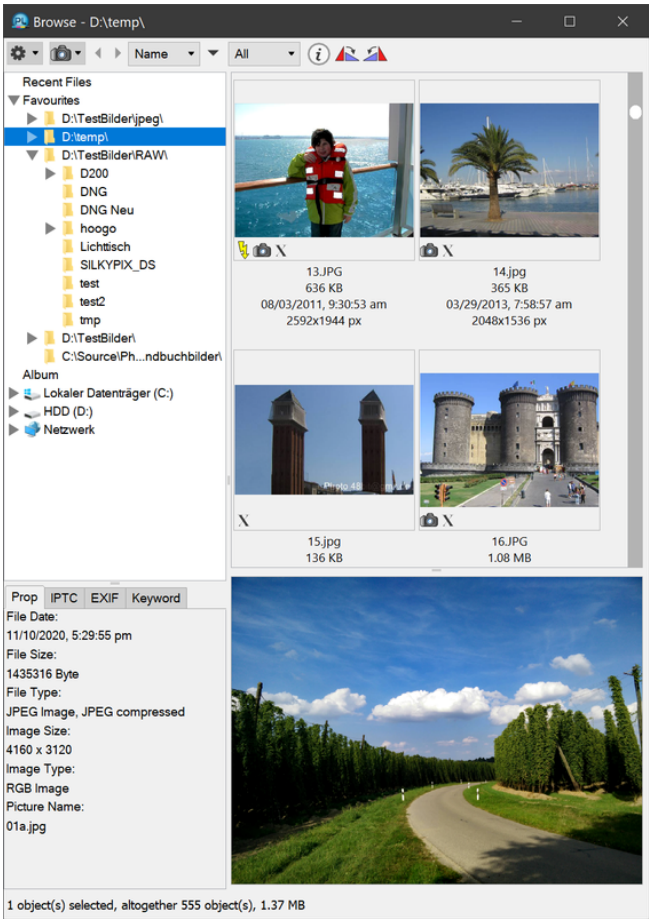
: The picture file is write-protected.

: The picture has metadata (XMP, EXIF).

: The picture is a Raw file.

: The picture has an ICC profile.

: The picture has GPS data.



By double clicking one of the preview images the corresponding image file will be opened. In this case it will only be included in the recent file list, if the corresponding option is turned on in ***Options/Browse/Options*** (see chapter 7.10.1.34). If you want the file to be included regardless of that option, on Windows you have to drag it to a screen space, that is not occupied by another PhotoLine window. On macOS you have to drag it onto the application icon of PhotoLine.

It is also possible to drag one of the previews into a document window. In this case a new layer containing the image is created.

If the current browse window contains textures, you can drag them to a color field or to the pattern color list, too.
If you are dragging a picture on a folder in folder list, the corresponding file will be copied. By holding the ***Shift-key*** the file will be moved.
Under the list with the preview pictures you can open a large file preview.
The function menus offer various commands for creating documents containing the browse information and for editing the files in the browse window. These will be discussed in the following sections (see chapter 5.4.2 and following).
The arrow-left-button and the arrow-right-button allow to switch between the previously browsed directories.
The combobox allows to change the way of sorting. You can sort by all important criteria. Additionally you can turn on a customizable sorting. Using that you can change the order of the files by dragging them to a different location.
Beneath the sorting criteria there is an icon bar. The content of this icon bar is freely configurable (see chapter 7.10.1.34).
The preview area offers two different context menus. The standard context menu shows entries of the function menus which can be applied to the currently selected images. But if the context menu is accessed while holding the ***Ctrl-key*** (Windows) or ***Command-key*** (macOS) respectively, you can quickly assign (IPTC) key words (see chapter 5.4.15). This context menu allows to assign a rating to picture files, too. This rating is shown as stars in the browse window.

5.4.2 Create Picture Catalog

The Functions menu of the browse window (see chapter 5.4 and chapter 7.1.12) offers the function ***Create Print Document***.
This function is used to create a - possibly multi-page - document containing all pictures of the current browse window. Create Picture Catalog can be useful in many ways: you can create catalogs of pictures or distribute pictures on the paper in order to print them.
The main dialog contains several subdialogs:

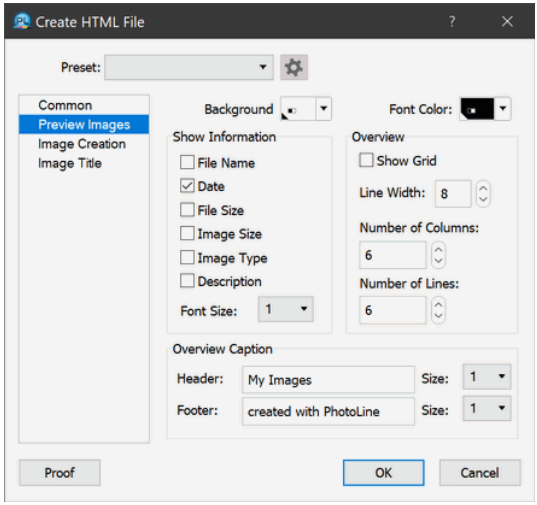
- Source
  Source controls whether to insert the Preview Images or the Original Images in the print document. The preview images are small and consume only few memory, but their quality is quite low. The original images offer a better quality but their memory consumption may be considerable higher.
  Additionally you can choose to add all pictures from the current folder or to add only those one that are selected.
- Page
  Page defines the page size of the resulting document. Optionally you can use a page template. This template will be used as a basis for every page.
- Size
  Size allows you to set the size of the pictures in the document. You can choose between Screen Size, Original Size and several fix sizes. Screen Size places the pictures fix with a resolution of 300 dpi in the document and Original Size keeps the size of the pictures which was set on creation. Using one of these two settings results in a document, in which the pictures are not placed regularly but in a space saving way. In contrast to those the fix modes are creating a document in which the pictures are positioned grid-like. Therefore, these modes are especially useful for picture catalogs.
  If Scale Pictures Physically is activated, the resolution of the inserted pictures will be reduced to 300 dpi. This operation limits the memory consumption of the resulting document.
  Rotate Pictures Appropriately rotates the pictures in order to increase the paper utilization.
- Place
  Place controls the size of the edges and the distance between rows and columns in the document.
- Text
  Text allows you to inscribe the pictures in the document. You can use all basic picture information like name, date of modification, file size and so on. You can add a continuous number, too. Additionally the text can have a background color to enhance readability.
  Usually the text is placed at the bottom of the picture, but with Position you can move it up or down.

Furthermore it is possible to add the browse path and the current page number to each page.

- Line
  Line controls whether every picture is outlined. In combination with the size mode Setup you can create a grid this way. Another option is to assign an effect to every image. A common effect is a light shadow.

5.4.3 Create HTML File

The **Functions** menu of the browse window (see chapter 5.4 and chapter 7.1.12) offers the function Create HTML File.



It allows you to create an image gallery for use in the WWW. The gallery consists of an overview with small preview images. By clicking one of the previews the real picture will be shown.

The main dialog is separated into several subdialogs:

- Common
  Use Images selects which images to incorporate in the gallery. You can select all files in the current directory or only those selected in the browse window.
  Image Size is the size of the preview images. You can use one of the predefined values or enter a new one.

Placement controls the way the preview images are shown. Using Overview shows them in a table. Using Left and Top the previews are listed at the left and top edge respectively.

Title is the title of the gallery usually displayed in the title bar of the web browser.

Name Of Index File can be used to control the name of the main page of the web gallery. This is the file that has to be opened with the web browser in order to view the gallery. If no name is entered “index.htm” will be used.

Destination Folder is the folder where the gallery will be saved. This has to be a valid path, otherwise no gallery will be created. In this destination folder PhotoLine saves the index file. Additionally the folders “small” and “image” will be created. “small” contains the previews and “image” the full views. When using the modes Left or Top a HTML file controlling the navigation is created, too.

- Preview Images

  Preview Images controls the appearance of the index page.

  Background Color is its background color.

  Show Information allows to display additional information under every preview image. All the available information should be self-explaining with the exception of Description: this is an IPTC-value, that can be modified in PhotoLine by using “Document/Document Information” (see chapter 7.4.93).

  If the selected mode in Common is Overview, Overview controls whether to show grid lines in the table and defines the thickness of those lines. Number of Columns and Number of Lines define the size of the table.

  Overview Caption allows to enter a headline and a footer for the index page. Size is the corresponding text size. The size isn’t given in pixels but is a HTML-specific value. A value of 3 is a normal text size.

- Image Creation

  The source folder can contain image files which can’t be used directly for the web gallery. The reason can be an inappropriate file format or the size of the files. Therefore, it is possible to recreate the files. This is done with Image Creation.

Size Of Full Image allows to lay down a maximum size. Images larger than those maximum size will be scaled down.

When the full-sized images are created, they will be converted to the JPEG-format by default. JPEG offers all parameters needed for the JPEG-creation. Compression controls the size of the resulting files (see chapter 7.10.1.5). Save IPTC Data and Save EXIF Data allow to embed the corresponding data, if they exist.

If Copy Original Images (JPEG/GIF/PNG) is turned on, all image files being JPEG, GIF or PNG will be simply copied to the newly created gallery. This avoids reducing the image quality by applying an additional compression.

If the pictures in the gallery contain only few colors (perhaps scanned text), it can be useful to activate Save in PNG-Format, because PNG allows to save those images more efficient and in a higher quality. In doubt you should simply try out which option produces better results.

- Image Title
  Image Title defines the appearance of the image subpages of the web gallery.

5.4.4 Show Image

Show Image allows to page through all images in a folder. You can use this function to get an overview over the pictures made with a digital camera and to do the first steps in editing them. Therefore, several tasks can be made directly in the Show image dialog:

- Bad pictures can be deleted.
- Pictures can be rotated in 90°-steps.
- Pictures which need to be edited can be opened.
- Filenames can be changed.
- You can add a description to every image. When using JPEG images the description is added without new compression of the image data. Therefore, there are no new losses.
- Pictures can be copied and moved.
- Actions can be executed.

By using **Auto**: it is possible to automatically switch to the next picture after a given time. **Auto**: defines this time in seconds.

On Windows you can switch the Show Image dialog to a full screen view.

5.4.5 Select all Files

This function selects all files that are displayed in the browse window (see chapter 5.4).

5.4.6 Load Selected Images

This function opens all files that are currently selected in the browse window.

5.4.7 Apply Action

This function allows to apply an action (see chapter 4.27) to all image files of the current folder or to the currently selected files.

5.4.8 Batch Rename

This function renames all image files of the current browse window (see chapter 5.4) according to given rules. You define the rules by entering a small command line. The command line consists of commands, which are enclosed in curled braces (i.e. "{EXIF Day}"), and fix parts of the new filename. For example if you are entering "Test{#3}", all filenames will start with "Test" and a continuous 3-digit number will be appended. There are two types of commands: short and long ones. The short form of the previously used "EXIF Day" is "ed".

Example shows how a resulting filename may look like. "PhotoLineTest" will be used as source filename.

Because there are many different commands, that can be used, the commands are separated in 3 parts and every part has its own command list to enter a command at the current cursor position in the command line. The 3 parts are **Variable Values**, **EXIF Values** and **IPTC Values** (see chapter 7.4.93).

Variable Values offer the following commands:

- "*": Original Filename
  "*" transfers parts of the original filename to the new one. The "*" may be followed by a number defining how many letters of the original filename will be transferred. If the number is -1, the whole filename will

be used. Additionally you can lay down a start position inside the original filename be appending a comma and a second number. If you enter "{*-1,5}", the original filename will be transferred from the fifth position to the end.

- "Day" or "d", "Month" or "m", "Year" or "y"
  These commands insert the current date. "Year" may be followed by "2" or "4" specifying whether the year should have 2 or 4 digits.
- "File Day" or "fd", "File Month" or "fm", "File Year" or "fy", "File Hour" or "fho", "File Minute" or "fmi", "File Second" or "fse"
  These command insert the current file date in the new filename. All values with the exception of the file year have 2 digits. The file year can have 2 or 4 digits.
- "#": Continuous Number
  "#" inserts a continuous number in the new filename. A number behind the "#" defines the number of digits. Additionally a starting index can be entered behind a comma. If absent the starting index will be 1. Therefore, "{#3,50}" inserts a 3-digit continuous number starting with "050".

EXIF Values has the following commands:

- "EXIF Day" or "ed", "EXIF Month" or "em", "EXIF Year" or "ey", "EXIF Hour" or "eho", "EXIF Minute" or "emi", "EXIF Second" or "ese"
  These inserts the recording date saved in the EXIF data. If there are no EXIF data, the file date will be used. All values with the exception of the year have 2 digits. The year can have 2 or 4 digits.
- "Manufacturer" or "ema", "Model" or "eo", "Flash" or "ef", "Exposure Time" or "ee", "Focal Length" or "efl", "Aperture" or "ea", "ISO Speed" or "ei"
  The corresponding EXIF data will be inserted in the new filename. "Flash" inserts "On" or "Off".

IPTC Values has the following commands:

- “Picture Name” or “idn”, “Creator” or “ic”, “Author” or “ia”, “Author Title” or “iat”, “Headline” or “ihl”, “Source” or “isrc”, “Date” or “idt”, “City” or “ict”, “State” or “ist”, “Land” or “ild”, “Reference” or “irf”

5.4.9 Filename to XMP

Filename to XMP transfers the current filename to the XMP data. This can be useful if you have changed the file name manually

5.4.10 Locate in Browser Map

If your images contain position data (GPS data), you can display this position on a map in the web browser. This also works with several images at the same time.

5.4.11 Rotate Images Automatically

Some digital cameras have an internal sensor, that tells them whether a photo was taken in landscape or portrait mode. This information will be saved in the image files, too. The function ***Rotate Images Automatically*** searches all images in the browse window for this information and rotates them in the corresponding way.

5.4.12 Browse Settings

This menu entry shows the options dialog ***Preview Images*** (see chapter 7.10.1.32).

5.4.13 Update

Update recreates the preview images, that don‘t conform with the current settings i.e. the preview size.
By holding the ***Shift-key*** while selecting ***Update*** all preview images will be recreated.

5.4.14 Rotate 90°, Rotate 180°, Rotate 270°

The commands ***Rotate 90°***, ***Rotate 180°*** and ***Rotate 270°*** allow to rotate the selected images. This way portrait pictures made with a digital camera can

quickly be turned into the right position. By the way: JPEG-images may be rotated lossless (see chapter 5.5.2).

5.4.15 Add to Favourites, Edit Favourites

If you are working in the same image folder most of the time, you should add this folder to the **favourites**. This way it appears in the browse window under the item Favourites and you can access it quickly. ***Edit Favourites*** allows you to rename, delete or change the order of the favourites.

5.4.16 New Keyword

New Keyword allows to assign a keyword to the currently selected files. These keyword are saved as XMP or IPTC data (see chapter 2.14.1), if the file format is able to save them. Otherwise the keywords are stored in the PhotoLine browse file Browse.plb.

Assigning a keyword is very simple: just type the keyword in the field **Name** and leave the dialog by using **OK**.

Aside from this you can manage a list of mostly used keywords. These are shown in the list field at the left. **Add To List** adds the keyword given by **Name** to the list and **Delete** removes the currently selected one.

The keyword list has an additionally meaning. By holding the Ctrl-key (Windows) or Command-key (macOS) when accessing the context menu, you will get a modified context menu containing the first 16 entries of the keyword list. This way it is possible to assign keywords very quickly. Using the same context menu allows to remove keywords, too.

5.4.17 Create Folder

By using this function you can create a new folder in the current one.

5.4.18 Delete Folder

This function deletes the active folder. Note that of course all files in this folder will be deleted, too.

5.4.19 Search Pictures

Search Pictures searches for pictures in a given directory and optionally in its subdirectories. You can search for many different criteria like filename, file size or a keyword.
You can also search for several criteria at once, e.g. for all files that were recorded after 8/19/2004, are smaller than 100 kByte and contain “Pic” in the file name. You can create additional search entries with “+” and delete entries that are no longer needed with “-”.
If **Search in Folders** is activated, additionally to the files in the current directory the files in the subfolders are tested, too.
The result of the search is displayed in the browse window under **Search Result**. Of course you can search in the search results, too.

5.4.20 Delete File(s)

Delete File(s) deletes the images, that are currently selected in the browse window.

5.4.21 Properties

Properties... shows extended information of the first selected file in the browse window. The following dialog allows to rename the file, too. Additionally the Read-Only and the Hidden state of a file can be modified.
If more than one file is selected, you can switch between the selected files with the arrows in the bottom-left.

5.4.22 EXIF Date To File Date

If you edit and save an image recorded with a digital camera, the date of the image file will - of course - change. But sometimes you don‘t want this to happen, because file sorting by the file date won‘t sort it by record but by edit date. **EXIF Date To File Date** solves this problem by transferring the record date stored in the EXIF data (see chapter 7.4.93) to the file date. This function can operate on all files selected in the browse window or on all files in the current folder. In the latter case all files in subfolders can be modified, too.

5.4.23 Change EXIF Date

Change EXIF Date allows to modify the date, a photo was taken, in the EXIF data. The entered values will be transferred to the EXIF date. If a field is left blank, the corresponding value will not be modified. A number preceded by '+' or by '-' will increase or decrease the corresponding value.

5.4.24 Load EXIF Data/Save EXIF Data

Save EXIF Data saves the EXIF data of a picture in a separate file. Later on ***Load EXIF Data*** can be used to attach those previously saved data to another file.

5.4.25 Load XMP Data/Save XMP Data

Save XMP Data saves the XMP data of a picture in a separate file. Later on ***Load XMP Data*** can be used to attach those previously saved data to another file.

5.4.26 Filename to XMP

Filename to XMP copies the filenames of the selected files to their XMP data. This can be useful after renaming files.

5.4.27 Load IPTC Data/Save IPTC Data

Save IPTC Data saves the IPTC data of a picture in a separate file. Later on ***Load IPTC Data*** can be used to attach those previously saved data to another file.

5.5 Working With JPEG-Files

5.5.1 Basics

The JPEG file format allows to compress images very highly and this was to create small images files. Therefore, it is used widely by digital cameras. But this small image files have the disadvantage that there is a loss of information in the produced images. Usually this loss is nearly invisible. But if a JPEG file is opened and saved repeatedly with different

compression factors, the quality of the image decreases significantly. Therefore, the owners of digital cameras appreciate the so-called “lossless editing” of JPEG-files. “lossless” in this case doesn’t mean. that there aren’t any losses, because this is not possible by using JPEG. It rather means that editing the image doesn’t create new losses.

5.5.2 JPEG-Images In PhotoLine

In order to allow lossless editing PhotoLine adds to every loaded JPEG-image the corresponding compressed JPEG-data. So long as the image data of a layer aren’t modified, these compressed data stay there. Whether there are attached data can be checked in the Layer Attributes dialog (see chapter 4.11). If there is an entry “Add. Picture Data: JPEG Picture”, the JPEG-data are there. If a loaded JPEG-image is saved, the same compressed JPEG-data will be written, that were loaded before.

Now one may ask what should be the advantage of being able to save a file the same way it has been loaded. Well, it doesn’t have to be the same. There are several operations that can be applied without loosing the JPEG-data. These operations are:

- Rotation by 90°, 180° and 270°
- Mirror horizontally and vertically
- Change document information
  Via Document Information (see chapter 7.4.93) metadata can be added and removed. The Document Attributes dialog allows to remove all metadata.
- Remove EXIF-data
  The Attributes-dialog allows to remove the EXIF-data.
- Assign or remove an ICC color profile
  An ICC color profile can be assigned or an assigned profile can be removed. This can be done with Set Color Profile (see chapter 7.6.15) or by using the Attributes-dialog.

When working with JPEG-files you should know a few simple rules in order to always get the expected result:

- The function ***Save*** always saves the existing JPEG-data. Changing the JPEG-compression in the file options doesn’t have any effect on Save.

- The function ***Save As*** saves the existing JPEG-data as long as they are smaller than the JPEG-data, that will be created by compressing using the current JPEG-options. So don't be surprised, if changing the JPEG-compression only shows an effect when lowered under a certain value.
- The function ***Web Export*** works the same way as ***Save As***.
- If ***Batch Converting*** uses the option **Same as import** as export format, existing JPEG-data will be written. If the export format is **JPEG Picture**, the behavior will be the same as with ***Save As***. This way it is possible to use Batch Converting to rotate JPEG-files lossless. But it is also possible to compress all files in given folder with a new JPEG-compression factor.
- Every function in PhotoLine handling files automatically works lossless with JPEG-files, even if it not listed here (for example Create HTML-File).
- The functions ***Rotate 90°***, ***Rotate 180°***, ***Rotate 270°***, ***Mirror Horizontally*** and ***Mirror Vertically*** are slower than usual, if there are JPEG-data. If you find this annoying, you can delete the JPEG-data in the Attributes-dialog.

5.5.3 JPEG-Images In The PLD-Format

If a JPEG-image is inserted in an existing document and saved in PLD-format, only the JPEG-data will be saved, because they are usually smaller than the data created by the lossless compression used by PhotoLine. Therefore, PLD-files containing JPEG-images are usually much smaller than in previous versions of PhotoLine.

After loading the PLD-file the Attributes-dialog will show, that the JPEG-data are still there. Hence the image layer can still be saved lossless in the JPEG-format.

By using ***Layout/Image/JPEG Compression*** (see chapter 7.4.48) you can assign JPEG data to a 8 bit image later. This way the size of a PLD file can be controlled very precisely. But note, that this operation is not lossless, so you should only apply it, if you don't have to edit the image any more.

Embedding of JPEG-data in a PLD-file is only possible since version 11 of PhotoLine. Therefore, previous versions are not able to read these documents correctly.

5.5.4 JPEG-Images In The SVG- And The PDF-Format

The SVG- and the PDF-format allow to embed JPEG-images. PhotoLine fully supports this feature. It uses the following rules:

- If the image compression setup in the file options is different to JPEG, existing JPEG-data will be saved.
- If the image compression is JPEG, the existing JPEG-data will only be saved if they are smaller than those created using the entered JPEG-compression.

By using this approach the size of PDF- and SVG-files can be controlled in a very detailed way by manually JPEG-compressing some images.

5.5.5 JPEG-Images With Clipping

PhotoLine can read JPEG files containing a clipping path. The clipping path will be read as a vector clipping layer.

PhotoLine can also save JPEG images with clipping paths. To do this you must comply to three rules:

- The document must have a maximum of two layers. The first layer may be a group. If there is a second layer, it has to be a clipping layer.
- The document must not have transparency.
- There can be only a single clipping layer or layer mask and it has to be a vector layer.

Regardless of compliance to these rules, by default there may be a transparency warning on saving. Also keep in mind, that many applications ignore the embedded clipping path.

5.6 Scanning

5.6.1 Introduction

Scanning means digitizing images and reading the resulting data with the computer. The most common used devices are flatbed scanners and digital

cameras. Which device you should use mainly depends on the original and the usage of the image.

5.6.2 TWAIN

In order to transfer image data from a scanner to a computer there is a standardized protocol named TWAIN. Before using the TWAIN protocol the TWAIN driver has to be installed. This is usually down by installing the scanner software.

if the driver is installed correctly it can be activated in PhotoLine with ***File/Import/Select Scanner....*** After selecting that function a dialog listing all your scanner devices should appear. Now you can choose the device you want to use.

After that you can scan by executing ***File/Import/Scan...*** or by clicking the scanner icon in the general bar.

Often there is no TWAIN driver for 64 bit operating systems. Therefore, more and more OS specific interfaces are used for scanning. On Windows this is the WIA interface, that can be accessed with ***File/Import/From Scanner Or Camera***. On macOS “Image Capture” is used and the corresponding menu command is ***File/Import/Image Capture***.

5.6.3 Resolution, Bit Depth, Document Size

Most scanner drivers allow you to define which kind of image you want to get. They usually offer black/white, gray or color. Note that it is better to scan black/white images with gray because gray allows better editing.

The various additional functions of your scanner driver - like enhancing the contrast or lighten up the image - shouldn’t be used because they modify the image data and you loose image information. Your possibilities to enhance the image afterwards with PhotoLine will be smaller.

The scan resolution value is often set false by users. The motto “the higher, the better” is not true because high resolutions dramatically increase the amount of memory needed by the image, and much memory consumption means slow image processing.

If you want to scan a color picture in order to print it on an ink jet printer, you should choose a scan resolution of 150 to 200 dpi. “dpi” means dots per

inch. Of course ink jet printers offer much higher resolutions (600 dpi, 1440 dpi or even higher), but they are not real usable resolutions. They are creating their colors by placing several pixels using basic colors. These basic colors are usually cyan, magenta, yellow and black.
If you want to print the scanned image enlarged, you have to multiply the proposed resolution with the scale factor.
On printing black/white images the above color problem doesn't exist. Therefore, you should scan in printer resolution.

Scan resolution (color images) = scale factor * 150 dpi
Scan resolution (black/white images) = scale factor * printer resolution

You should always keep in mind, that scanning can create enormous amounts of data. These data can be too much for your computer.
To calculate the memory used by a scan, you can use the following formula:

Size in bytes = (width in cm / 2.54) * (height in cm / 2.54) * resolution * resolution * 3

5.6.4 The Scan Result is Always An Image

the result of scanning is always - depending on the settings in the scanner driver - a black/white, a gray or a color image.
Even if you did scan a vector graphics or text, the result will be an image.
In order to create text files you need OCR software. Many scanner already include a simple OCR software.
If you want to create vector graphics, you have to vectorize the scanned image. PhotoLine is able to convert images to vector graphics with the function ***Layer/Action/Convert Layer Type***.

5.6.5 Descreen Scanned Originals

When scanning color images it is best to use photos. If you use books or magazines, you will have the problem, that the result will be "pixelized". This comes from the way, how those are printed. Books and magazines are printed with four basic colors: cyan, magenta, yellow and black. To create

various tones, fine patterns of these basic colors are printed one over the other. If you look carefully, you can see this. The scanner can see this, too, and therefore you get this unpleasant effect.
In order to fix this problem, there are several tricks like scanning through a milky glass pane.
Another way is to use PhotoLine to reduce the effect. Scan the original with the double resolution, then apply ***Filter/Quality/Descreen*** and at last scale the image with ***Layer/Scale Layer...*** to the desired size.

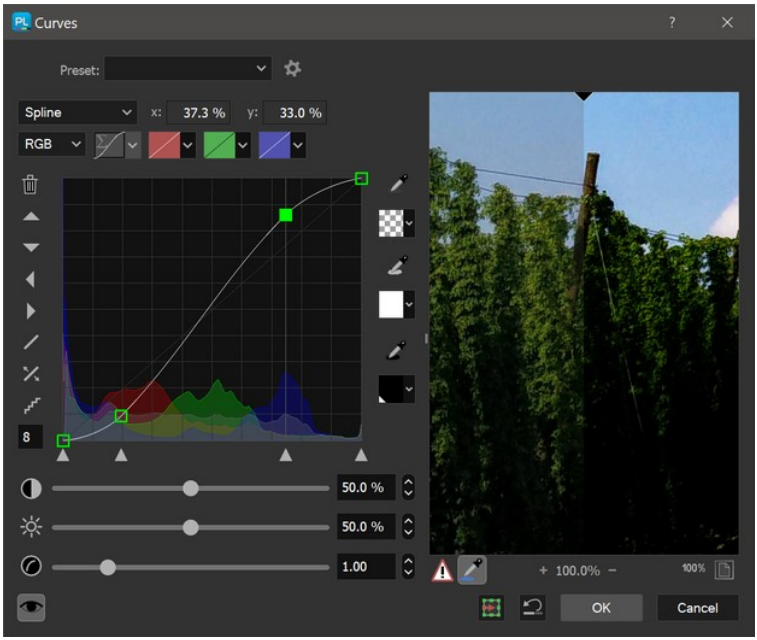
5.6.6 Straighten Scans

It happens quite often, that the resulting image of a scan is oblique.
This can be fixed by using ***Layer/Rotate Layer...***.
If the dialog is open, you can drag a line in the document window. PhotoLine automatically calculates the angle needed to adjust the scan. After clicking **OK** the image will be right.

5.6.7 Brightness/Contrast

Increasing the brightness and the contrast of a scanned image usually increases the quality enormously. In PhotoLine you can finish this task with Contrast/Brightness (***View/Toolbars/Contrast/Brightness***).

More flexible is ***Tool/Curves***.



The dialog contains two sliders to control the brightness and the contrast.
The curve fields allow you to correct all color channels of the image at once with the first curve field or to correct only a single color channel.

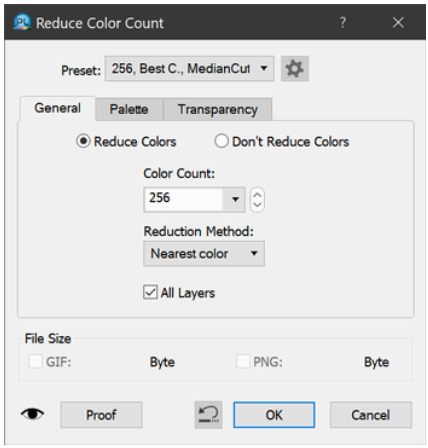
5.7 Creating Images For The Web

5.7.1 Basics

PhotoLine offers the whole functionality to create attractive and sophisticated images for use on web pages.

5.7.2 Reduce Colors

To save images as efficiently as possible, it is a good idea to reduce the number of colors. Some file formats like GIF even support only a maximum of 256 colors. Then you always have to reduce.
In order to achieve this goal, PhotoLine offers a comfortable function accessible with ***Tool/Color/Reduce Colors***.



This dialog is divided in two parts. The first part contains controls, that are always accessible, the second contains a tab control, that shows the subdialogs for color reduction.

The first part is used for the basic management. You can turn on the **Preview**, so that every change of the settings is shown immediately in the document window. This task may last quite long on complex images, therefore you can manually start a preview by pressing the **Proof** button.

If **Preview** is selected, it is possible to display the resulting GIF and PNG file size for the given settings.

Images are reduced quite often with the same settings. Because of this there are **Presets** and **Edit**. They allow you to save the current settings and call them off later. To do this you have to set the desired options in the tab control. Pressing **Edit** opens the management dialog where you can save the settings by entering a new name and pressing New. This new name is automatically added to the **Presets** list.

The second part of the ***Reduce Colors*** dialog contains the real settings for color reduction. The are separated in three subdialogs.

The **General** part controls the basic way of action.

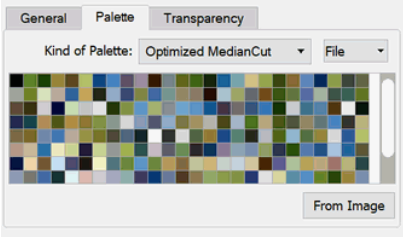
You can set the desired number of colors with **Color Count**. The fewer colors are used in an image the smaller will usually be the resulting file. But at the same time the image quality will be lower, too. If used in the internet

you should always try to keep your image files small in order to decrease the time needed for download.

Another option to influence the resulting file size and the image quality very strongly is **Reduction Method**. PhotoLine offers here a large variety. If you want to save a GIF file, usually **Nearest Color**, **Error Diffusion** and **Horizontal Line** will be best. Which one gives the best combination of quality and size, depends usually on the image and on personal preferences and should be decided singly.

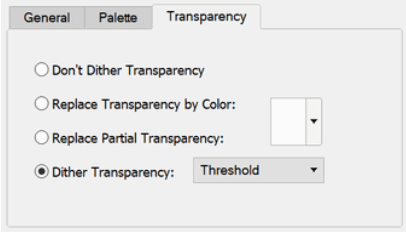
All Layers controls, whether all layers are reduced with the same color palette. Especially animated GIF files are getting smaller with this option.

At first sight it might be a bit unusual that there is a choice between **Reduce Colors** and **Don't Reduce Colors**. This option is needed, because this function is not able to reduce the number of colors but to reduce or replace transparency, too. If you only want to remove the transparency, you should choose **Don't Reduce Colors**.



The subdialog **Palette** is used to adjust the color palette. These are the colors used for creating the new image. There are two ways to automatically create a color palette: **Optimized Octree** and **Optimized MedianCut**. Which one is better depends on the image, but usually **Optimized MedianCut** is a good choice. The third mode is **Standard**. It uses a standard palette which is used by most web browsers, too. The last mode is **Loaded**, which uses the currently displayed palette. By double clicking a color this color can be modified. You can load a new palette, too.

The palette can only be changed, if Color Count is set to 256 or lower. If more than 256 colors are allowed, no palette will be used.



The **Transparency** subdialog controls, how to modify the transparency of an image. Many file formats - like BMP - are not able to save transparency at all. Others - like GIF - can only save 1-bit-Transparency, that means, a pixel can be visible or transparent, steps in between are not possible. And at last there are formats like PNG, that are able to save full transparency, but sadly some web browser can't display full transparency. Therefore, transparency even has to be reduced in this case.

You have the choice between three option: Don't Dither Transparency doesn't modify transparency, Replace Transparency by Color removes the transparency completely and replaces it by a given color and Dither Transparency allows you to create 1-bit transparency using different dithering methods.

5.7.3 File Formats for the Web

There are a variety of file formats that can be used on the web. All of them have their advantages and disadvantages.

GIF

GIF is one of the oldest web formats. Its characteristics are:

- only palette images, so maximum 256 colors
- only 1-bit transparency
- supports animations

PNG

PNG has been started to replace GIF. In wide areas it has succeeded, only for animations GIF is often still used.

- supports true color, but also palette images
- supports 1-bit, but also full transparency
- better compression than GIF
- lossless compression
- Through the extension APNG it also supports animations. APNG is now supported by all major web browsers. APNG images still have the file extension ".png".

JPEG

Another old web format is JPEG. Despite its age and although various successor formats have been developed, it is still widely used:

- supports true color images
- lossy compression
- no transparency

WebP

WebP has set out to inherit JPEG. However, it has only partially succeeded, although it offers better compression and is supported by all major browsers.

- supports true color images
- lossless and lossy compression
- full transparency
- supports animations

SVG

SVG is a bit of an outsider among web formats. It's mostly good for vector graphics, but can also contain text and images.

5.7.4 Animated GIFs

In PhotoLine, there are two ways to create animations for the web:

- Classic layer-based animations (Chapter 4.30).
  As with a flipbook, each layer represents a frame of the animation. However, the layer does not have to contain the entire frame, but can also modify only a part of the animation.
- The Dynamic Animation (chapter 7.9.1)
  The layers form only the components, from which the animation is put together. The actual animation consists of the layers and commands,

when and how long a layer is displayed in the animation and how it should change during this time (position, size, rotation, opacity).

Both animation types can be saved as GIF, PNG and WebP.

To further process an animation in another program that does not (correctly) support the above file types, the frames of the animation can also be exported as separate files (chapter 7.9.2).

5.8 Printing

PhotoLine offers a very powerful printing feature. To adjust the settings, you have to select the function ***File/Print Options***.

Now you can choose between:

- Normal
- Poster (to distribute a picture on several pages)
- Label (to print a picture repeatedly on a page)
- CD-Label
- Pages mode when printing documents with several pages

Size contains controls to adjust the ***size*** of the printed picture. The Zoom combo box is editable and allows to define a scaling. Another way is to edit **Width** and **Height**. Both are unit fields and allow to enter the size directly.

In order to rotate the printing by 90 degrees, you have to select **Print Rotated**.

The modes Normal and Poster allow you to set the ***position*** of the printed picture on the page. You have the choice to align it to the left, right, top, bottom or in the center, too.

If you are using the mode ***Label***, you have to define the top and the left edge of the labels on your sheet. Additionally you have to adjust the distance between the rows and between the columns.

CD-Label allows you the choice between 2 and 3 labels on one sheet.

On the right side of the print options dialog, there is a preview. This is showing, how the printing will look like.

In the mode Normal you can move and scale the picture in the preview in order to change its position and size.

In the mode Poster you can change the position and size, too. Additionally it is possible to drag the picture over the right or bottom edge. In this case new

pages will be automatically created ensuring that the whole picture is visible.

The modes Label and CD-Label are showing the outline of the labels in the preview with a green line. You can't move the picture in these modes but you can scale it.

If the active document has more than one page, there is additional the mode **Pages**. Pages has several submodes:

- Multiple Pages
  Several pages are printed on one sheet of paper. You can choose 2, 4, 8 or 16 pages per sheet.
- Booklet
  Two pages are printed on one sheet. The pages are not printed in the order they were created, but in a way, so that the sheets can be folded and stitched, and the result will be a booklet. You should have a document with a page count, that is a multiple of 4, because 4 pages fit on one sheet: 2 pages on the front and two pages on the back. Otherwise your booklet will have empty pages at the end.
  If you don't have a printer with duplex unit, you will have to print all the left pages first and then all the right pages on the back.
- Greeting Card
  This mode prints four pages on one sheet. The sheet can be folded and glued together afterwards, so that the result is a greeting card. The pages 1 and 4 will be the front and back, and the pages 2 and 3 will be the inside.

All changes you make in this dialog are saved to disk, if you are using the PLD file format. This way you don't have to adjust your settings over and over again on printing.

By using **Extended**... the function ***Print Markers*** (see chapter 7.4.90) can be called.

6. The Tools in the Toolbox

6.1 Basics

The toolbox is adjusted automatically to the active layer. This means depending on the type of the active layer, PhotoLine is showing the matching tools. Therefore, you are never able to select a tool, which cannot be used with the current layer.
PhotoLine contains so many functions, so that not all of them fit in the toolbox together. Because of that, some tools have a small red triangle at the bottom right. Those tools are used multiple. By clicking and holding the mouse button, after a short delay the available selection of tools appears.
There are two types of tools in the toolbar:

- Tools that can be used no matter which layer is active
- Tools that are only useful on a certain kind of layer

6.2 Tools for All Kind of Layers

6.2.1 The Layer Tool

The layer tool is used for selecting, moving, creating, scaling, shearing, rotating and distorting layers. By double-clicking you can enter a group and by clicking outside of it you can leave it again.
Tip: You can quickly toggle between the layer tool and the active tool using the ***ESC***-key.

Selecting Layers
PhotoLine has two different modes to select layers by left-clicking with the mouse:

- If Prefer Dragging is activated, the layer at the mouse position is selected by clicking. If several layers lie above each other, you can switch through them by clicking several times.
  In this mode clicking&dragging inside the frame of the active layer will always move the active layer.

- If Prefer Dragging is not activated, clicking will always select the layer visible at the mouse position. You cannot switch through layers at the same location by clicking.
  If you click&drag in this mode, the layer at the mouse position is first selected and then moved. This means, you may not move the active layer.

Normally only layers within the active group will be selected. This behavior can be modified by turning on ***Deep Selection*** in the Tool Settings or by holding ***Shift+Ctrl*** (Windows) or ***Shift+Command*** (macOS) respectively.

Alternatively you can use the arrow keys while pressing the mouse button. This way you can switch through all layers at the current mouse position regardless of the active group.

The context menu of the layer tool lists all layers at the mouse position. Layers will only be listed, if they have a name.

Move/Create/Copy Layers

You can drag the selected layers. By holding ***Shift*** you can restrict the moving direction in steps of 45°.

If you hold ***Shift+Ctrl*** (Windows) or ***Shift+Command*** (macOS) a copy of the layer will be moved. Using additionally ***Alt*** will create a virtual copy (see chapter 2.3.6).

If you hold ***Ctrl*** (Windows) or ***Command*** (macOS) and click, you can create a new layer with a rubber rectangle. After releasing the mouse button you will see the normal dialog for creating a layer.

A double click on the icon of the layer tool can be used to create a new layer.

Edit Layers

Selected layers have small handles at the corners and edges. If the handles are green, you can modify the layer by using these handles:

- Clicking and dragging modifies the layer size. The Tool Settings are offering options to adjust the behavior (centered, proportional, ...). The layer content will be scaled (exception: text layers).
- Clicking a bit outside the handles will rotate or shear the layer. The corner handle allow rotating, the edge handles shearing. The mouse cursor will change to signal the available operation.

If the active layer is a text layer, double-clicking a handle will adjust the layer size to its content. Double-clicking a corner handle adjusts the entire size, a double click on one of the side handles only the width or height.

The Tool Settings can be used to turn on an extended mode (by using the gear icon ⚙). Alternatively you can use the ***Ctrl*** (Windows) or ***Command*** (macOS) key to turn it on temporarily:

- Clicking and dragging a corner will perspectively distort the layer.
- The edges will change the perspective position.
- Clicking a bit outside of the handles will activate Special Scaling:
  Image layers: New pixels are added at the layer edges.
  Vector layer: The line width will be scaled, too.
  Text layers: The font size will be scaled.

If the handles are cyan or red, editing by using the layer tool is locked (see chapter 4.7). If the handles are gray, input focus is not on the document but on another user interface element. Therefore, keystrokes will not be handled by the document and the layer tool, respectively, but by that user interface element.

If more than one layer is selected in the Layer List, there will be a single frame with handles around all selected layers.

The Tool Settings have an option to turn on a small magenta-colored circle containing a cross. This special handle is the rotation point of the layer. This point can be dragged with the mouse and will snap to the corners and the center of the layer.

The layer tool also allows to rotate the active layer by using ***Alt+arrow left*** and ***Alt+arrow right***. By additionally holding ***Shift***, the layer will be rotated in steps of 90°.

If the current layer is a 3D body, it can be modified with various shortcuts (see chapter 7.8.57).

Move and Copy Selection Content

If you have created a selection in your document (see Chapter 2.4.1 and Chapter 2.4.2) and the active layer is an image, you can move and copy the contents of the selection directly with the Layer tool without creating a new layer. The following options are available:

- Click and drag.
  The selection content is moved and the image content of the original selection is deleted. Subsequent move actions will no longer delete.
- Click and drag with the Alt key held down
  The selection content that is moved is refilled, but the original image content is not deleted.
- Click and drag with Shift key held down
  The selection content becomes a new layer. The new layer is dragged immediately.
- Double-click
  The selection content is copied to the current position, but can be moved further without refilling it. This allows you to stamp it multiple times into an image.

Guides

You can use the layer tool to modify and delete guide lines:

- After clicking on the document ruler you can drag a new ruler into the document. This works with any other tool, too. Holding Shift while dragging will create the guide for the active document only.
- If the mouse is over a guide line, the mouse cursor will indicate, that you can drag that guide.
- Dragging a guide outside the document will delete it.
- Double-clicking a guide line will open the Guides palette (see chapter 4.39).

Options

Proportional scaling (Shift key)

Centered Scaling

Show rotation point: The rotation point is displayed and used. It can also be changed.

Deep selection (Shift+Ctrl): See above under ***Selecting Layers***.

Prefer dragging: See above under ***Selecting Layers***.

Normal transformation mode: See above under ***Edit Layers***.

Extended transformation: See above under ***Edit Layers***.

, Add/remove Auxiliary grid for transformation.

Mouse Cursors

The shape of the mouse cursor always corresponds to the current situation. There are the following shapes:

By clicking and dragging the active layer or the selection will be moved.

By clicking the next layer at the current position will be selected.

By clicking the next layer at the current position will be selected. By clicking and dragging the active layer will be moved.

By clicking and dragging the active layer will be scaled. By holding ***Shift*** it will be scaled proportionally.

By clicking and dragging the active layer will be rotated. By holding ***Shift*** it will be rotated in 45° steps.

By clicking and dragging the active layer will be sheared.

By clicking and dragging the active layer will be distorted perspectively.

Shift: The corner point corresponding to the clicked point is moved, too.

Shift+Ctrl/Command: The clicked corner point can be only moved along the layer bounds.

By clicking and dragging the rotation point of the active layer will be moved.

By clicking and dragging a horizontal/vertical guide line will be moved or deleted.

6.2.2 The Rotate Tool

The ***Rotate Tool*** allows you to rotate the active layer. In contrast to the Layer Tool (see chapter 6.2.1), you can start the rotation process by clicking & dragging anywhere in the document.

By clicking with the mouse the pivot point is set. If you define no pivot point, the center of the layer will be used.

6.2.3 The Magnifier

The magnifier is used for zooming the picture in or out.
By clicking into the picture the zoom factor is doubled, and the click position is centered.
You can create a rubber rectangle, too. The zoom factor will be adjusted, so that the rectangle is completely visible.
In order to decrease the zoom factor, you have to hold ***Shift*** while clicking, or you have to click with the right mouse button (not available on macOS).
While pressing and holding the right mouse button, dragging to the left will zoom out and dragging to the right will zoom in.
The zoom factor can be changed via keyboard with ***"+"*** and ***"-"*** (Windows) or ***Command+"+"*** and ***Command+"-"*** (macOS).
By double clicking the magnifier icon the zoom factor is set to 100%.

6.2.4 The Measurement Tool

The measurement tool is used to measure distances and areas in a document.
In order to convert the pixels of a document into another unit the resolution value in the Document Attributes (see chapter 4.9) will be used. If you are working in a picture, the resolution of the background layer is used which can be modified by using the Layer Attributes (see chapter 4.11).
By clicking and dragging the following information is displayed:

- position of the start point
- position of the end point
- width and height of the current line
- length of the current line
- angle of the current line

All values are shown using the unit chosen in the Tool Settings.
In order to calculate an area, there has to be a lasso or a vector layer. If you want to measure the area of a vector layer, it has to be the active layer. By clicking on **Calc Area** the area of the lasso or vector layer is calculated.
Keep in mind, that all measurements are only approximations.

6.2.5 The Moving Hand

The moving hand is used to move the visible part of a picture.
Of course this is only useful, if the picture is larger than its window.
The moving hand has the option **Move/Zoom synchronously** to move and zoom all open documents synchronously. All documents will show the same position, too.
For faster access you can activate the moving hand by pressing and holding the space bar. On Windows you can use the moving hand by clicking and holding the middle mouse button, too. By holding Shift all documents will be moved synchronously.
Double clicking the moving hand icon adjusts the window size to the containing picture.

6.2.6 Rotate View

The ***Rotate View*** tool can rotate the display of the active document. The document itself is not changed.
You can rotate the document in two ways:
• by clicking and dragging the mouse in the document
• by entering a rotation angle in the Tool Settings
Reset sets the angle back to 0°. A simple click in the document window has the same effect.
Fix rotates the document and has the same effect as using the function ***Rotate Document*** (see chapter 7.4.2) with angle entered in the Tool Settings.
Rotate View can be called quickly by pressing the ***R key***. Additionally, you can rotate the view by using Alt+mouse wheel and by Alt+rotate gesture (if your touchpad is supporting this).
Please keep in mind that ***Rotate View*** may change the appearance of some adjustment layers a bit, but this will not influence your end result.

6.2.7 Liquify

Liquify can be used to distort a picture by painting. You can use this tool to convert a photo to a caricature or to correct facial expressions.

Liquify has several subtools:

- Push Left
  All pixels are pushed to the left relative to the moving direction of the brush. If you are painting from the top to the bottom, the pixels will be pushed to the left, the other way round they will be pushed to the right. You can use this to shift edges in a picture.
- Forward Warp
  The pixels are pushed along the moving direction. Example: You can use this to adjust the corners of a person's mouth to create a smile.
- Soften
  The distortions are softened thus correcting too strong distortions locally.
- Reset
  Reset clears the distortions and recreates the starting condition.
- Twirl
  Twirl rotates the pixels around the center of the brush clockwise. By holding Alt the pixels are rotated counter-clockwise.
- Pucker
  Pucker moves the pixels towards the center of the brush. This can be used to shrink items.
- Bloat
  Bloat moves the pixels toward the edge of the brush. This can be used to enlarge items.

Liquify allows you to display a grid. Using the grid makes it easier to recognize too strong distortions. Of course this grid will not be visible in the final result.

When using ***Liquify*** you should pay attention to a few points:

- ***Liquify*** is a lossless tool. If you are using it for the first time with an image, a new layer will be created gathering all the distortions. The original image will not be modified. This way you can enhance your modifications later if needed.
- If you want to apply your corrections permanently, the easiest way is to mark the original image and the liquify layer in the layer dialog and to use the command ***Layer/Merge Layers***. This command is accessible from the context menu of the layer list, too.

- You should always use a soft brush. The steps distance should be a value between 5% and 10%.
- Always use a brush, that is large enough. A brush too small can create ugly distortions at the brush edge. This is especially true for ***Push Left*** and ***Forward Warp***.
- If you are using a high tool intensity, a small wrong movement can create a wrong distortion. Therefore, it is often better to use a small intensity and to apply the correction several times.
- Of course ***Liquify*** observes the mask. This way you can protect areas from modification.

Using the Tool Settings you can copy and save the current distortions. Distortions are saved as RGB image with 32-bit data depth, therefore only PLD and TIFF are available as save formats.
You can also use existing images as distortion by using ***Paste*** or ***Load***. Images with a wrong size will be scaled appropriately.

6.2.8 Distort

The ***Distort*** tool allows you to distort layers by using a grid. On selecting the tool a simple frame with 4 handles is drawn around the layer. You can now modify this frame and the layer will accordingly change its appearance.
The ***Distort*** tool has two sub-tools:

- Edit
  Edit allows you to modify the existing grid - in the simpliest case that is just a frame. Edit works like Edit Vector Points (see chapter 6.4.1).
- Insert Vector Points
  With Insert Vector Points you can insert new knots, and thus extend the grid. By holding Ctrl (Windows) or Command (macOS) you can use this function without explicitly selecting it.

If you are distorting an image layer, you can lighten the result. For this PhotoLine is calculating a pseudo-height based on the strength of the distortion. **Height:** controls, how PhotoLine is calculating this height. Just choose the version you like most. **Height:** is also important, if the distortion is overlapping.
If you intend to use ***Distort***, you should know the following:

- Distort is a lossless tool. You can undo the distortion any time by deleting the Distort entry in the Layer Attributes (see chapter 4.11) palette.
- If you want to permanently apply a distortion to a layer, you can use the menu command “Layer > Fix Layer” (see chapter 7.5.27).

6.2.9 Circle/Ellipse, Square/Rectangle, Rounded Square/Rectangle, Polygon, Rhomb, Parallelogram, Free Style Stars, Flowers, Grid, Spiral, Vector Object, Ruler, Rays

These vector tools are used to create simple geometric vector layers.
By holding ***Shift*** you create a layer with equal height and width.
If **In Active Layer** had been activated and the active layer is a vector layer, no new layer will be created, but the vector object will be added to the active layer. If the active layer is an image, the vector object will be drawn in that image. If ***Edit Mask*** (see chapter 4.5.2.4) is turned on, the foreground color (see chapter 4.5.2.1) is used for drawing in the mask. If the ***Ctrl-key*** (Windows) or ***Command-key*** (macOS) is pressed, the background color will be used.
Use the tool options dialog to setup shape specific options like corner radius, corner count of stars, ...
The ***Ruler*** tool can be used to create editable rulers. The tool options allow to control, how many units are shown in the entered area.
The tool options can be used to edit existing layers, too, if they were created with one of those tools previously.
You can additionally define the color and outline style of new layers. Note that these options are for new layers only. You have to edit existing layers by using the toolbar (chapter 4.5.4) or the layer attributes (chapter 4.11).

6.2.10 Charts and “Show Chart Settings”

This tool allows to create charts with PhotoLine.
The settings dialog contains three tabs: **Data**, **Special** and **Axis**.

Data is used for entering the chart data. They can be loaded from a file, too. **Transpose Values** exchanges the lines and columns of the data table.
Special defines the basic **appearance** of the chart. You can select the chart Kind and the Appearance of a data line. Furthermore you can enter the limits of the charts manually, if you don‘t like the way PhotoLine calculates them. Additionally it is possibly to create a legend by checking **Create Legend**. **First Line** is **x-Axis Legend** and **First Column is Legend** are controlling, whether the first data line and the first data column are containing real data or only documentation.
Axis controls the appearance of the background of the chart.

6.2.11 Placeholder Layer

The ***Placeholder Layer*** tool is used to create placeholder layers (see chapter 2.3.7). In the Tool Settings the option **Show File Panel** allows you to choose whether a file is inserted directly after creation.
If you create an empty placeholder layer, you can fill it later by dragging a file to it. Alternatively, you can double-click the File entry in the Layer Attributes (see chapter 4.11).

6.2.12 The Mesh Gradient Tool

The Mesh Gradient tool is used to create and edit mesh gradient layers (see chapter 2.3.9).
There are two ways to create a mesh gradient:

- If the active layer is a vector layer, it can be converted into a gradient grid by clicking on the layer. However, to do this, the path of the vector layer must have only one subpath.
- By clicking and dragging, you can create a rectangular mesh gradient.

The Tool Settings provide settings for editing an existing mesh.
You can choose between three sub-tools:

- Edit
  Edit allows you to modify the existing grid - in the simpliest case that is just a frame. Edit works like Edit Vector Points (see chapter 6.4.1).

- Insert Vector Points
  With Insert Vector Points you can insert new knots, and thus extend the grid. By holding Ctrl (Windows) or Command (macOS) you can use this function without explicitly selecting it.
- Color Picker
  The color picker allows you to quickly read colors from the document and assign them to one or more nodes of the mesh.
  There are three modes:
  - Clicking on an unselected node assigns the color of the document at that location to the node.
  - Clicking on a selected node assigns the color at the node locations to all selected nodes.
  - Clicking anywhere in the document assigns the clicked color to all selected nodes. All selected nodes will have the same color afterwards.

  The color picker can also be accessed quickly by holding down the Alt key. While it is active, the contents of the gradient mesh is hidden so that you have access to all locations in the document.

You can also specify in the Tool Settings how the colors are interpolated between the nodes. **Linear Interpolation** is faster, **Cubic Interpolation** provides smoother gradients.
The Tool Settings also show the color of the active node. If the color is changed, all selected nodes will be adjusted.

6.2.13 The Text Tool

The text tool offers all functionality needed to create and edit text. You can create normal text layers, you can create text running along paths and you can connect two text layers, so that text flows from one text layer to the other. And - of course - you can edit existing text very similar to a word processor. You can select blocks of text, copy text, change text attributes, ...

Creating Text Layers
By a single click on a place with no text layer you can create a dynamic text layer. A dynamic text layer is automatically resized according to its content. It gets larger, if you enter additional text, it gets smaller, if you delete text.

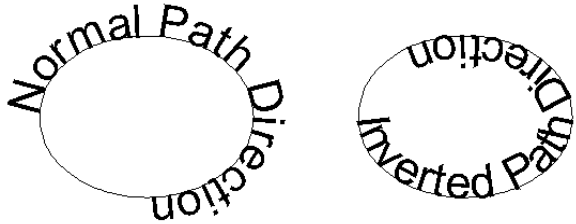
You can also click and drag in order to get a text layer with a fixed size. PhotoLine will automatically format the entered text to fit into the text layer. If you want to create a text layer at a position with an already existing text layer, you have to hold ***Ctrl*** (Windows) or ***Command*** (macOS) while clicking. If you don't do this, the text cursor is simply set to the clicking position.

But PhotoLine offers not only simple rectangular text. Text can also run along a vector path/object. This text is called path text. Path text consists of lines, too. Every subpath of the vector object is a separate line.

You can create a path text in various ways. The simplest way is to create a vector object with one of the vector figure tools (circle, rectangle, ...) at first. If you click with the text tool onto the edge of the vector object afterwards, the newly entered text will automatically run along the path.

Another way is to create a normal text layer. If you select **Run on Path** in the Tool Settings afterwards, PhotoLine will search for the closest vector layer and connect the text layer to it. For determining the closest vector layer PhotoLine does not use the distance in the document window, but the order in the Layer List (see chapter 4.7).

In order to enable exact placement of path text on a vector object, there are specific adjustments. **Invert Path Direction** turns the direction of the path text. While the text usually runs from the start to the end, after selecting **Invert Path Direction** it will run the other way round. This has the additional effect, that the text flips to the other side of the path. The following image will illustrate this:



Beside this there is **Offset**. **Offset** allows you to move the starting point of the text. The entered value is given in percent. The text starts at the vector

start point with 0%, at the middle of the path with 50% and at the end with 100%.

Note: you can use all character and paragraph attributes like **right aligned** and **centered** with ***path text***.

The Text Ruler

If you are editing a fixed size, non-dynamic text layer, you will see a text ruler at the top edge:

The text ruler allows to change some paragraph attributes. You can change the paragraph indent (▼), the left and the right indent (▲) and the tabulator positions.

You can modify a tabulator by clicking and dragging it to another position. If the destination position is outside the ruler, the tabulator will be deleted. You can create a new tabulator by clicking on a free position in the ruler.

A double-click in the ruler opens the tabulator dialog in the Tool Settings.

Text Styles are offering a more sophisticated way of formatting text (see chapter 4.34).

Text Flow

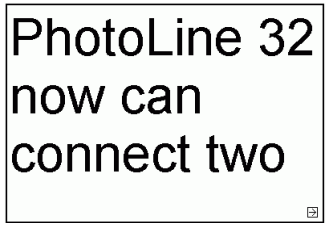
PhotoLine knows two kinds of text flow: automatic and manual text flow. Automatic text flow is needed if text should flow from one page to the next. Manual text flow is used for text flow inside a page.

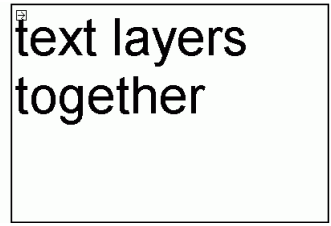
Automatic text flow is an attribute of the text layer and can be turned on in the toolbar (see chapter 4.5.3.3). The text layer can have two different attributes:

- From Previous Page
  This means the text layer is observing the previous page. If a text layer appears on this page that wants to flow to the next page, automatically a text flow will be created.
- To Next Page
  This is the corresponding attribute to the one above.

This means automatic text flow is only created if on one page there is a text layer with “text flows to the next page” and on the next page there is a text layer with “text comes from previous page”.

In contrast to automatic text flow manual text flow is created by using the mouse. While using the text tool in a non-dynamic text layer, in the bottom right corner a small square is displayed. This square is the text flow marker. This marker can have several states. If the square is empty, it indicates, that everything is OK. If the overflow symbol ⊞ is shown, the text doesn't fit in the layer and therefore some parts of the text or the whole text is invisible. And last there is the text flow symbol ⊡ . This indicates, that the text is flowing from the active layer to another one:

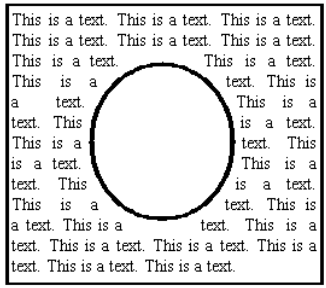




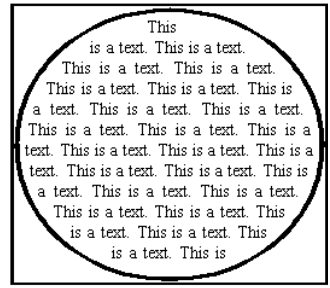
But the text flow marker is not only used for displaying information. It is needed for creating and breaking text flows, too. If the mouse is over the text flow marker, it changes to the text flow cursor . By clicking an existing text flow is displayed. If you are dragging to another text layer, a new text flow will be created. If you are dragging to a place without text layer, an existing text flow will be terminated. In the latter case the mouse cursor changes to .

Shape Flow

Shape flow is text that is formatted inside or around another layer. Therefore, its layout is defined by the shape of this other layer.



Shape flow around a vector layer



Shape flow inside a vector layer

In order to create shape flow you have to select a non-dynamic text layer first. After that in the lower right corner of the layer a small symbol appears: . If you only click on this symbol, all layers are marked, around or inside which the active text layer is flowing. By clicking and dragging to another layer a frame around this layer is drawn in order to indicate that releasing the mouse-button creates shape flow around this layer. Additionally the status bar shows the name and the type of that layer. If the wrong layer is preselected, because several layers are lying at the same place, you can switch between the layers under the mouse by using the keys ***Arrow-Left*** and ***Arrow-Right***. If you want to create shape flow inside a layer, you have to press and hold ***Shift*** while selecting. If the mouse is over a valid layer it changes its appearance to . On releasing the mouse-button the text layer will flow inside the destination layer.

If the distance of the text to the shape layer is to small, it can be enlarged by using the Tool Settings, subpoint “Layer Settings”.

In order to remove a shape flow you have to use the Layer Attributes dialog (see chapter 4.11). Here you simply delete the corresponding ***Text Shape Flow*** entry.

Editing Text

There are some shortcuts, that ease editing text.

Every time you press the ***Shift-key*** in combination with an arrow key, the text cursor doesn’t move but the according text area is selected.

If you are pressing the ***Ctrl-key*** (Windows) or the ***Alt-key*** (macOS) in combination with ***arrow left*** or ***arrow right***, the text cursor is moving word-wise. Of course the ***Shift-key*** works, too: the text is selected word-wise. If you type ***Backspace*** or ***Delete*** in combination with ***Ctrl*** (Windows) or ***Alt*** (macOS), PhotoLine will delete word-wise.

If the ***Alt-key*** (Windows) or the ***Ctrl-key*** (macOS) is used in combination with ***arrow up*** or ***arrow down***, the selected area is moved one pixel up or down. If no text is selected, the character after the text cursor is moved. This is an easy way to change the baseline.

If the ***Alt-key*** (Windows) or the ***Ctrl-key*** (macOS) is used in combination with ***arrow left*** or ***arrow right***, the character spacing of the selected text is

reduced or enlarged by one pixel. If no text is selected, the character after the text cursor is moved. This is an easy way to change the kerning.

If the ***Ctrl-key*** is used in combination with "-", a conditional hyphenation is inserted. A word, that doesn't fit in a line, will be hyphenated at this location.

By typing ***Shift+Space*** a fixed space is inserted. A fixed space looks like a normal space, but at the fixed space location line-wrapping is not possible. Fixed spaces are used to enter expressions, that shouldn't be split.

Ctrl+Return inserts a page break while ***Alt+Return*** inserts a break to the next layer in the text flow.

Shift+Return inserts a soft return. A soft return doesn't create a real new paragraph, but it just breaks the line at the current position.

Spell Checking

On macOS and Windows 10 (or better) PhotoLine supports the built-in spell checker.

Spell checking takes place while typing and marks unknown words red.

The context menu of a marked word lists the correction proposals, if there are any.

The next command is ***Ignore Word***. Applying it will insert that word in a list and it won't be marked as wrong any more in the active document. The list will be saved along with the document.

Similar to ***Ignore Word*** is ***Add to User Dictionary***, but the user dictionary isn't saved with the document. Instead it is a setting of PhotoLine. The user dictionary is used for every document, not only the active one.

Both - the user dictionary and the ***Ignore Word-list*** - can be edited in the options (see chapter 7.10.1.22).

On macOS there is additionally the command ***Spell Checking...***. This command shows the standard dialog of the macOS spell checker. It can be used to - for example - switch the checking language.

Inserting Layers In Text

Its a common problem, that text has to be illustrated by an image or a graphic. But text changes shouldn't require a repositioning of the graphic. Therefore, the graphic should be part of the text.

This is possible by using PhotoLine, too. You have to proceed like this: first you have to select the layer, which you want to insert into the text, by using the ***Layer Tool***. Then you have to copy this layer by using ***Edit/Copy***. Afterwards you switch to the Text Tool and place the text cursor to that location, where the layer should appear. Now you can insert it by using ***Edit/Paste***.

A graphic layer inserted in text is always the child of its text layer. This way the layer can be edited like any other layer by using the standard tools.

The Tool Settings Of The Text Tool

The Tool Settings allow to inspect and modify various text attributes. It is split up in several subdialogs.

If you are holding ***Alt*** while modifying a setting, the new settings will be applied to the whole text instead of the current selection.

- Common Settings **T**

  With text layers you can adjust the font, the font size and special decorations like fat, italic and underlined. Furthermore you can use superscript and subscript. If the font is displayed red, it isn‘t installed on the computer. In this case PhotoLine will use a replacement font.

  Beside that you can change the alignment of paragraphs. You may choose between left aligned, centered, right aligned, justified and forced justified. Forced justified justifies all lines of a paragraph including the last one.

  The line distance can be relative or absolute. Using the relative line distance the height of a line is determined by its content. If the font size is raised, the line distance is enlarged, too. The entered value will always be added to the calculated one.

  The absolute line distance controls the distance between the baselines of two text lines directly. A value of 0 means, that all text lines are drawing above each other.

- Character Settings **E**

  These settings can be applied to individual characters or to blocks of text.

  Some fonts contain an embedded kerning in order to enhance the appearance of text. Often special character combinations are treated separately. These are combinations like “Te”, where the “e” is shifted to

the left. PhotoLine normally uses this kind of kerning. If you don‘t want this behavior, you will have to turn Font Kerning off.

Kerning changes the distance between characters. Values greater than 0 enlarge the distance, values smaller than 0 reduce it.

Baseline Offset moves characters vertically.

Char Width allows to scale text horizontally.

The underline settings allow to modify the width, position and color of the underline stroke.

- Paragraph Settings

  Paragraph settings affect all paragraphs, that are contained in the currently marked text block.

  The paragraph settings are divided into four parts:

  Indent

  Indent controls the edges of a paragraph. There are three different kinds of indention: the indention of the first line (also called “paragraph indention”) , the left indention and the right indention . These values can be changed by using the text ruler, too.

  Paragraph Distance

  These values are controlling the distance between paragraphs. There is the distance before a paragraph and the distance after a paragraph .

  Page Format

  Page Format controls the behavior of paragraphs, that should be distributed to two pages or columns. Activating Connect Paragraphs ensures, that this paragraph will be on the same page as the next one. The option is mainly useful for headlines. Don‘t Split Paragraph makes sure, that the paragraph won‘t be distributed to two pages. If Paragraph Control is activated, there won‘t remain single lines of a paragraph at the start or at the end of a page. The formatting process takes care, that there are at least two text lines.

  Text Register

  Text in Register controls, whether the selected paragraphs are using the line raster defined in the Layer Attributes dialog (see chapter 4.11 “Text Register”).

- Tabulator Settings

  Like in a text processor, text layers allow to create tabulators. Tabulators are predefined positions. If the Tab-key is pressed, the text cursor always

jumps to the next tabulator position. If there is no next tabulator position in the current line, the text cursor jumps to the next line.

By using tabulators you can create tables in a text layer. You simply set a tabulator at the beginning of each column. This way you can easily fill the table by pressing Tab after each field. Another advantage is that columns will stay straight, if text is inserted afterwards.

You can assign a fill character to a tabulator. The free space created by pressing Tab will be filled with this character.

At the moment PhotoLine supports left aligned, right aligned, centered and decimal tabulators. A decimal tabulator behaves like a right aligned tabulator with a single difference: by typing a definable decimal character text formatting is no longer right aligned. Everything including the decimal character is placed behind the tabulator position.

Be aware that tabulators are always created for the current paragraph and not for the whole text. If you want to assign the tabulator positions of a given paragraph to another one, you can use the functions Copy Ruler Settings (see chapter 7.4.28) and Paste Ruler Settings (see chapter 7.4.29). These functions are part of the context menu (see chapter 3.2), too, if the active tool is the text tool.

- Layer Settings

  This subdialog contains values that affect the whole text layer.

  Run On Path converts a text layer to a path text or turns this feature off. If there is no vector layer, Run On Path will be disabled. Invert Path Direction flips the direction of the path text on the path and Offset moves the starting point of the text. By selecting Distort Letters the text will be shown as vector graphics. This allows a finer distortion, but display speed will be slower and on saving as PDF the file size will be larger. By clicking Extended... the function Text on Path (chapter 7.4.22) will be called which allows a more detailed control of path text. You can find more information on this topic earlier in this chapter and in chapter 7.4.22 Text on Path.

  Vertical Alignment controls the vertical position of the text in the layer. The default is **Top**. However, **Center** and **Bottom** are also available. This setting only has an effect if shape flow is not active.

  In the case of shape flow, the distance between the text and the shape can be set with **Flow Distance**.

If you have accidentally converted a dynamic text layer into one with a fixed size, you can undo this using the **Dynamic Text Layer** switch.

Mouse Cursors

While working with the text tool you will see the following mouse cursors:

By clicking the next text layer at the current position will be selected.

By clicking the text cursor will be set to the current mouse position. Clicking and dragging will select a text block.

This cursor indicates, that clicking and dragging will select line wise. It is displayed, if the cursor is placed left to a line.

By clicking a dynamic text layer will be created. By clicking and dragging a fixed size text layer will be created.

By clicking a text layer containing path text will be created. By clicking and dragging a fixed size text layer will be created.

By clicking the text flow between text layers is edited.

By releasing the mouse button an existing text flow will be cut.

By releasing the mouse-button a shape flow around the selected layer is created.

By releasing the mouse-button a shape flow inside the selected layer is created.

By clicking and dragging the active layer will be scaled.

By clicking and dragging the active layer will be rotated.

By clicking and dragging the active layer will be sheared.

By clicking and dragging the active layer will be distorted prospectively.

6.2.14 Vector Drawing

The tool ***Vector Drawing*** allows to create freehand vector graphics.

By clicking and dragging any shape can be created. After releasing the mouse-button the result will be optimized automatically. The strength of optimization can be controlled by ***Options/Working/Vector*** (see chapter 7.10.1.19).

Every click creates a new vector layer. If you want to continue drawing in an existing layer, you have to press and hold ***Shift***.

Since curves are often not as round as they should be when drawing with the mouse, there is an optional mouse smoothing function. A new position is calculated from the last mouse positions, which smoothes corners. This also means that the painting position is always slightly behind the mouse position. **Count** indicates how many mouse positions are used for the calculation. The higher the value, the smoother the input becomes, but the tool also lags more behind the mouse.

Weight controls how the mouse positions are calculated. At 100%, all mouse positions have the same weight. The lower the value, the more the weight shifts towards the current mouse position.

By clicking and dragging a new vector layer will be created.

By clicking and dragging the active vector layer will be modified.

6.2.15 Curve Creation

Curve Creation is a mix between vector graphics creation and editing. It can be used to create new paths, but already entered points can be selected and edited, too.

By clicking and dragging new curve points are created, simple clicking creates line points. Because you can't create a line point directly after a curve point, you can force to create one by holding ***Shift***.

By holding ***Ctrl*** (Windows) or ***Command*** (macOS) a new vector layer will be created. Holding ***Shift+Ctrl/Command*** will create a new subpath in the active vector layer.

Close Path in the Tool Settings controls, whether a new path will be closed automatically or whether it will be open. If it isn't closed automatically, you can close it manually, too.

If you double click an already selected vector point, its position can be modified numerically.

Editing points works the same way as in ***Edit Vector Points*** (see chapter 6.4.1).

6.2.16 Create Line

Use ***Create Line*** to draw a simple line. Holding ***Shift*** while dragging allows only lines in 45°-steps.

6.2.17 The Crop Tool

The ***Crop tool*** is used to cut an image or a document to a given size. Usually you first define the size you want to get. Furthermore you can optionally scale the result to that given size.

There are 3 possibly situations:

- The width and the height in the Tool Settings are empty or 0
  In this case the result will be the selected area. If Resolution is activated, after cropping the resolution will be set to the value in the Tool Settings.
- The width and the height have a value with the unit “Pixel”
  If Scale is activated, the result will be scaled to the given pixel size and the resolution will be set to the given value. Otherwise the result will not be modified.
- The width and height have a value with a physical unit
  If Scale is activated, the result will be scaled, so that the selected area along with the specified resolution receives the target size. Otherwise the resolution will only be set.

If all settings are done, you can select the area you want to keep by using a rubber box. Optionally you can turn on guide lines which help you to rotate the image composition.

By clicking **Crop** or double-clicking inside the selected area cropping is executed. In order to straighten the result, there are several ways to rotate the background:

- by clicking and dragging outside the selection rectangle
- by holding Ctrl (Windows) or Command (macOS) and clicking and dragging inside the selection rectangle
- by using Alt+Arrow left and Alt+Arrow right
- on macOS by using the rotate gesture

If your picture is distorted perspectively, you can correct that by clicking and dragging on a corner point while holding the ***Ctrl key*** (Windows) or ***Cmd key*** (macOS).

The ***Crop*** tool is always changing the size of the whole document, while the lasso tool (see chapter 6.2.21) is changing the size of the active layer. If the active layer is the background layer (see chapter 2.11), the result of both tools is similar.

Tip: Typing ***Tab*** will switch the given height and width. Landscape will become portrait and vice versa.
Another tip: If you only want to crop with a certain ratio, the unit of the width and height has to be “Pixel” and **Scale** must be turned off.

6.2.18 The Straighten Tool

The ***Straighten*** tool is a simple and fast way to straighten images. You just have to drag a line and PhotoLine will rotate the image, so that line will become horizontal or vertical.

6.2.19 The Color Picker

The color picker reads a color from an image or from a document and sets this color as foreground color. Holding ***Ctrl*** (Windows) or ***Command*** (macOS) allows you to read the color from a rectangle.
By holding ***Shift*** the background color is set.
The Tool Settings allow to control the size of the area used to read the color values. Beneath fixed values like 1x1 pixel or 3x3 pixel there is the mode **Auto**. Using this mode PhotoLine calculates the size by itself depending on the current zoom factor of the document. A zoom factor of 100% or larger results in a 1x1 pixel area. On smaller zoom factors a 3x3 pixel or 5x5 pixel area is used.

6.2.20 The Color Position Tool

The tool ***Color Position*** allows you to mark positions in your document. The color at that positions will be shown in the Picture Info dialog (see chapter 4.24).
Existing positions can be deleted by dragging them outside the document window.

6.2.21 Free Lasso, Rectangle Lasso, Circle Lasso, Horizontal Lasso Line, Vertical Lasso Column

Creating and Editing Lassos

Lassos are used for cutting out and moving image parts. Furthermore they restrict the area affected by other tools

The free lasso lets you input a vector path by clicking and dragging. By clicking, you create lines. By dragging you create a freehand curve. You can expand an existing lasso by holding ***Shift***, you can reduce it by holding ***Ctrl*** (Windows) or ***Command*** (macOS). Creating a free lasso is stopped by double-clicking (or right clicking).

If you hold ***Shift*** while creating a circle or rectangle lasso, width and height will have a fixed ratio. This behavior can be customized by using the switch **proportional** in the Tool Settings. If it is turned on, lassos will always be created proportionally and only pressing ***Shift*** allows free creation. When working in proportional mode a list allows to choose the ratio between width and height. If there is no appropriate ratio listed, you can create your own by entering for example “13:10”. After creating a non-proportional lasso, its ratio will automatically be inserted in the list. By typing ***Tab*** the ratio is switched: “13:10” will become “10:13”.

A lasso is deleted by ***clicking outside*** its frame or by using ***Edit/Deselect*** (***Ctrl+D*** on Windows and ***Command+D*** on macOS).

The lasso can be scaled and rotated like a normal layer (see chapter 6.2.1).

Soft Edge adjusts the smoothness of the edge of a lasso. If the lasso is already filled, it will have no effect.

By double-clicking one of the lasso icons, the lasso dialog appears. With this dialog you can create a lasso by numbers (see chapter 7.6.28).

Cropping the Active Layer

Crop reduces an image to the size of the lasso. Cropping is especially useful for removing unwanted borders of scanned images. If Straighten is activated, the selected area will be transformed to normal, **straight rectangle**. This feature can be used to align slanting scans or to remove

perspective distortions of photographs. Cropping with the ***Lasso*** tool is always changing the size of the active layer, while the crop tool (see chapter 6.2.17) is changing the size of the whole document. If the active layer is the background layer (see chapter 2.11), the result of both tools is similar.

Enhance Mask Edge

The Tool Settings offer a way for enhancing the edge of a mask. In order to do so PhotoLine is examining the image content at the edge of the mask and is creating intermediate mask values depending on its similarity to the content of the selection. **Width** controls the width of the area, that is examined, and pressing **Enhance Edge** executes the function.

Remove Object

PhotoLine can remove the selection in a “smart” way. This means the selection will be replaced by nearby parts of the image in a way, that the removal of the selection is noticeable as little as possible. Usually it is enough to create a selection and delete it with **Remove Object**. Removal is a random-based process, so using the function repeatedly creates a different result every time. So if you are not satisfied, simply use **Remove Object** once more.

In difficult situations you have additional ways to modify the result:

- Define Neighbourhood
  Usually PhotoLine is searching in the whole picture for possible image parts, that can be used for replacing the selection. But if a large part of the image isn't well suited due to its content, that will influence the result in a bad way. Therefore, you can use Define Neighbourhood to restrict searching to an appropriate area.
- Define Image Structure
  If the object, that should be removed, is in front of a structured background, you can use Define Image Stucture to lay down the course of the structure. Examples for structured backgrounds are i.e. paved paths and lawns.

For removing small parts in an image, you can use the ***Remove Brush*** (see chapter 6.3.16), that works in a similar way.

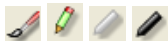
6.2.22 The Automatic Lasso

The automatic lasso is similar to the ***free lasso***. By clicking and dragging you can create freehand curves, by clicking without dragging you can create connections between two points. The main difference is, that the automatic lasso doesn't create straight lines but a path following the strongest contrast in the mouse area. If you want to select an object, simply click on its edge. From now on a line is following the mouse. If you agree with the suggested path, you only have to click with the mouse.
Sometimes the suggested path may not be appropriate. In this situation you can press and hold the ***Ctrl-key*** (Windows) or ***Command-Key*** (macOS) in order to switch to the "free lasso"-mode. Now you can draw straight connection lines.
Wrong lines can be removed by pressing the ***Backspace-key***.
By double-clicking you end input.
Due to its similarity to the ***free lasso*** it has the same settings (see chapter 6.2.21). Additionally a **Tolerance** is available. Tolerance is the width of the area, in which the best contour is searched for. The Tolerance can be adjusted by using the keys ***Arrow Up*** and ***Arrow Down***, too.

6.2.23 The Vector Lasso

Using the Vector Lasso you can create the lasso using curves and lines - similar to a vector layer.
The handling corresponds to the Curve Creation tool (see chapter 6.2.15). By clicking and dragging new curve points are created, simple clicking creates line points. Because you can't create a line point directly after a curve point, you can force to create one by holding ***Shift***.
By holding ***Ctrl*** (Windows) or ***Command*** (macOS) a subpath will be created.

6.3 Tools for Image Layers

6.3.1 Painting, Pencil, Chalk, Coal 

Painting, pencil, chalk and coal are used to draw with the foreground color and the current brush in the active image layer. Changing the intensity, the blending mode and the color channels will influence the result. The current brush can be selected in the brush list.

Clicking on **Apply To Entire Image** fills the whole image. This is a simple way to create a single colored image. Double clicking the tool icon has the same effect.

A quick way to set the foreground color is holding ***Alt*** and clicking into the image. By doing so the settings of the ***color picker*** (see chapter 6.2.18) are used.

The brush size can be changed by using the keys ***arrow up*** and ***arrow down***, by using the mouse while holding Ctrl (Window) or Command (macOS) or with Shift+mouse wheel (see chapter 4.5.2.2).

You can draw straight lines by holding the ***Shift*** key. While holding ***Shift*** only basic angles like 0°, 45°, 90° can be created. Releasing ***Shift*** while dragging allows free angles.

If you only click with the ***Shift*** key pressed, a line is drawn from the last position to the click position.

Pencil has a speciality compared to painting: the brush used for drawing has no soft edge and is not antialiased and it is always aligned to the pixel grid. While brushes used with other tools always have a smooth edge, the edge of ***pencil*** brushes is rough.

6.3.2 The Eraser

The ***eraser*** is used to erase parts of an image. It uses the background color.

The current brush defines the shape of the eraser.

Clicking on **Apply To Entire Image** clears the whole image (currently selected). Double clicking the tool icon has the same effect.

A quick way to set the background color is holding ***Shift+Alt*** and clicking into the image.

6.3.3 The Auto Eraser

The ***Auto Eraser*** is a kind of „clever“ eraser (see chapter 6.3.2). It only remove those parts, that have color similar to the starting position. The **level** of similarity can be entered in the Tool Settings.

6.3.4 The Auto Transparency

The Auto Transparency is similar to the Auto Mask (chapter 6.3.5). The main difference is, that it doesn‘t create a mask but a transparency channel (see chapter 2.3.2).

6.3.5 The Wand/the Auto Mask

The wand is used for automatically masking image areas, which have a similar color. As a result you get a lasso.

In the settings you can adjust the **Tolerance** with a slider. The higher you choose the tolerance, the more permissive is PhotoLine on creating the lasso. This tolerance can be adjusted by clicking and dragging inside the document. While doing that the corresponding result will be marked with blue color. Please note, that this preview doesn't respect the setting of **Fill Holes** (see below).

Soft Edge controls the sharpness of the newly created lasso.

Fill Holes makes it easy to create a homogenous lasso, which doesn't have small or large holes. But pay attention: Fill Holes fills all holes, even the wanted. If you want to mask - for example - the letter "o", you must not activate **Fill Holes**.

If **Only Contiguous Areas** is turned on, all selected areas have to be connected. If it is turned off, the Auto Mask works similar to ***Select Colors*** (see chapter 7.6.9).

You use the wand by simply clicking. If you hold ***Shift***, the existing Lasso will be expanded. If you hold ***Ctrl*** (Windows) or ***Command*** (macOS) the lasso will be reduced.

6.3.6 The Mask Brush

The Mask Brush is used to edit an existing mask. You don't have to turn on the mode "Edit Mask" (see chapter 4.5.2.4) in order to do this.

The Mask Brush has two subtools. The brush allows editing parts of an image and is adding them to the selection this way. The eraser protects image parts from editing and removes them from the selection. You can access the eraser quickly by holding Alt. You can use the right mouse button, too, if you have configured PhotoLine that way (see chapter 7.10.1.20 **Clear with right mouse button**).

6.3.7 The Quick Selection Tool

The ***Quick Selection*** tool is a semi-automatic tool for creating cut-out masks for objects. It has several subtools:

- Define Bounds
  This tool is used for creating a rectangle, that encloses the object. After that Mark Object will be activated.
- Mark Object
  With Mark Object you can mark the parts of the image, that belong to the object. These parts are shown yellow.

- Mark Background
  With Mark Background you can mark the parts of the image, that belong to the background. These parts are shown red. You can quickly access this tool by holding Shift.
- Despeckle
  If Despeckle is active, small speckles in the newly created selection will be deleted automatically. Speckles are areas that are only a few pixels in size.
- Erase Marks
  If you have placed wrong marks in your image, you can use Erase Marks to remove them. You can access this tool quickly by holding Alt. You can use the right mouse button, too, if you have configured PhotoLine that way (see chapter 7.10.1.21 **Clear with right mouse button**).
- Erase
  All current Quick Selection marks will be deleted. After that Define Bounds will be activated.

You use the Quick Selection tool in two steps. First you create a rectangle enclosing the object. PhotoLine will then automatically start computing a first proposal for the cut-out mask. This may last from a few seconds up to more than a minute depending on the speed of your computer, the size of the image and the complexity of the object. In the second step you repeatedly place object and background marks, until you are satisfied with the result.

The Quick Selection tool can enhance the edge of the created selection to adapt it to the unsharpness of the object. **Edge Width** controls the width of enhancement.

Tips for using the Quick Selection tool efficiently:

- If an object fills nearly the whole image, you should create a smaller rectangle with ***Define Bounds***. Afterward remove the wrong marks with ***Erase Marks***.
- Like written above computing a proposal can last quite a while. But meanwhile you shouldn't wait, instead you should mark the object and the background with a large brush. This will enhance the result and reduce the computing time.

- Switch tools by using the modifier keys: Shift for ***Mark Background***, Alt or the right mouse button for ***Erase Marks***.
- While enhancing the result, you often have to change the brush size. This is done most quickly by holding Ctrl (Windows) or Command (macOS) while dragging the mouse.
- You may often need to change the zoom factor of your document for detailed work. You can do this very quickly by using the mouse wheel while holding Ctrl (Window) or Command (macOS). This way you can zoom to a certain location very fast.
- Use the Magnifier (chapter 4.29). The mode **Selection** will show you, what the cut-out object will look like.

6.3.8 The Border Matting Tool

The Border Matting tool is used to create cut-out masks for semi-transparent areas like hair. Usually you first create a basic selection with another tool - i.e. the Quick Selection tool or the Auto Mask - and enhance that with the Border Matting tool in the critical areas.

If you select the Border Matting tool and there is already a selection, the image will be marked with different colors depending on the existing mask values:

- Yellow
  All parts of the image inside the selection, that can be edited completely, are marked yellow. These areas have a mask value of 255.
- Red
  All parts of the image outside the selection, that are completely protected from editing, are marked red. These areas have a mask value of 0.
- Orange
  The remaining parts are orange.

You can edit the existing marks with the subtools of the Border Matting tool:

- Mark Object
  With Mark Object you can mark the parts of the image, that belong to the object.

- Mark Background
  With Mark Background you can mark the parts of the image, that belong to the background. You can quickly access this tool by holding Shift.
- Define Working Area
  You can use Define Working Area to mark the parts of the image where you want to recalculate the mask values. You can access this tool quickly by holding Alt. You can use the right mouse button, too, if you have configured PhotoLine that way (see chapter 7.10.1.21 **Clear with right mouse button**).

If you activate Edit Soft Edge in the Tool Settings the otherwise orange areas will become transparent. This means the mask values will be recreated there, too.

Apply recalculates the new mask values. After that you will still see the color marks. You will see the normal mask and lasso view only after switching to another tool. You can nevertheless examine the result directly by using the Magnifier (see chapter 4.29).

Note: It might be quite laborious to create good color marks. Therefore, the Border Matting tool is saving your marks along with the image. This way you don't have to create everything in one single step. The marks will only be deleted under one of the following conditions:

- You press Apply in the Tool Settings.
- You press Erase in the Tool Settings.
- You modify the image.

You can postprocess the selection with ***Extract selection*** (chapter 7.6.31).

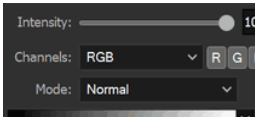
6.3.9 The Airbrush/Spray

This tool sprays with the current brush the foreground color onto an image. You can modify the intensity and the used color channels. You should work with low intensities like 10% to get a nice looking result.

By clicking **Apply To Entire Image** PhotoLine fills the whole image with the given settings. This way you can create a single colored image.

If you hold ***Alt*** while clicking, you can set the foreground color.

6.3.10 The Color Gradient

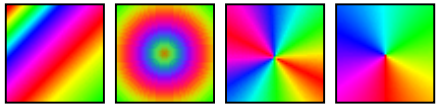


In the tool settings, a predefined gradient can be selected or the existing gradient can be modified.

Properties of a Gradient

The appearance of a gradient is determined by several properties:

- The color model (under **Channels**).
  Different color models are available: the color model of the document (see chapter 2.11), HIS, HSV and Lab. When calculating the gradient, intermediate colors are calculated in the set color model. This makes e.g. gradients in HIS and HSV more colorful than in RGB.
- The colors of the gradient
  The colors of the gradient can be changed via a control element consisting of a gradient bar and a bar containing the colors of the gradient.
  By clicking on the gradient bar you can select a predefined gradient. You can predefine your own gradients in the Color Editor (see chapter 3.4) or by dragging a gradient into the Gradient List (see chapter 4.14).
  The color fields below the gradient bar can be moved with the mouse. If you drag a color field down or up out of the color bar, it will be deleted. If you click into the free area, a new color field will be created. The color of the color fields can be changed by a double click. The diamonds between the color fields change the interpolation between the respective colors.
  The arrow at the right border allows to call advanced functions (see chapter 3.4.6.1 and following).
- The gradient type
  There are four gradient types: Linear, Circle, Radial mirrored and Radial.



Applying a Gradient

To apply a gradient, you draw a line in the image with the mouse, indicating the start and end points of the gradient. The border beyond that is filled with the starting or ending color.

Gradients can be constrained by the mask.

Gradients can also be created in the mask by activating the Edit Mask icon (see chapter 4.5.2.4).

There is a special feature with the gradient tool when it is applied only to transparency (**A** channel in the tool settings). In this case, the gradient's transparency overwrites the existing one and does not add to it as usual.

If **In Active Layer** is disabled, the gradient is not drawn in the active image layer, but a new vector layer is created.

Post-processing a Gradient

After a gradient has been created, it can still be edited afterwards:

- Clicking and dragging changes the position of a color.
- Clicking on the gradient line creates a new color.
- By dragging away a color can be deleted. Note, however, that the gradient must consist of at least two colors.
- The context menu for the gradient line allows you to change the gradient type and color mode.

You can still edit gradients after switching to another layer or even after saving and reloading the document. But to do this, the gradient must meet certain conditions:

- The intensity must be 100%.
- All colors must be completely opaque.
- The gradient must be applied to all channels.
- The blend mode must be ***Normal***.

6.3.11 Flood Fill

This tool is used for filling parts of an image with the foreground color. It works like the wand. If you click on an image, the area with a color similar to the clicked point will be filled.
It has the normal settings for adjusting the **intensity** and for setting the color channels that will be modified.
There is also the **Tolerance** slider, which controls how different colors may be to be considered similar.
Clicking will fill with the set tolerance. Click+drag allows to adjust the tolerance.
Especially useful for comic drawers are the options **Source** and **Overfill**. **Source** controls which layers are used to determine which area to fill. This way comic drawers can create the outlines of their drawings by using vector tools on one layer, and fill them by using Flood Fill on another. Vector and text is usually drawn antialiased which may lead to small, one pixel wide, holes in the filling. In order to avoid this **Overfill** enlarges the filling area by one pixel and these holes disappear.
If you activate **Create Vector Layer**, the active image layer is not changed, but a new vector layer is created above the image layer allowing the fill color to be adjusted later. This is particularly useful if you want to use patterns or gradients.
A quick way to set the foreground color is holding ***Alt*** and clicking into the image. By doing so the settings of the ***color picker*** (see chapter 6.2.18) are used.

6.3.12 The Stamp

The stamp is a tool for painting with pictures.
The accompanying dialog allows to set the **Intensity** for that tool.

The **Stamp** menu enables you to load or save stamps. It is possible to use the current lasso as stamp, too.

All picture files in the folder ***Stamp*** in the folder ***Defaults*** in the PhotoLine directory are listed in a combo box. This way you have quick access to them. These picture files are quite normal, but the PLD file format is preferred. A picture file may have more than one layer. In this case the layers are used alternately.

Via **Properties** you can access the brush properties of the current stamp and modify its size, angle, step distance and jitter settings. Using **Reset** you can reset the brush properties and the size of stamp will be set to its original size.

6.3.13 The Copy Brush

The ***Copy Brush*** is a quite interesting tool. It allows copying an arbitrary part of a picture to another place or to another picture window.

The ***Tool Settings*** allow choosing, whether the distance between source and destination will stay the same, even if the mouse button is not pressed. If **Preview Copy** is turned on, you will see a preview of the copy result while moving the mouse.

Source controls whether the source data are fetched from the source layer, from all layers up to the active one or from all visible layers.

Additional you can scale and rotate the copy data. A click on **Reset** will clear this transformation.

To use the copy brush, you have to do the following:

- Set the source point: Hold ***Alt*** and click on the source position. This point is now the source point for copying. Of course you can change the source point every time you want to.
  If you have activated Clear With Right Mouse Button in “Preferences/Work/Mouse” (see chapter 7.10.1.21), you can set the source point by using the right mouse button, too.
- Painting with the mouse now copies from the source.

Tip: In the channel settings of the Copy Brush, there is the blend mode “Replace”. This copies all color channels, including transparency. Note, however, that it is only available when **Source** is set to **Active Layer**.

6.3.14 The Healing Brush

The ***Healing Brush*** is similar to the ***Copy Brush***. You have to mark the source area by holding ***Alt*** first, too. But while the copy brush is copying the source pixels unmodified to the destination, the healing brush is transferring only the changes in color and brightness und adjusts the source pixels to the destination. Because of this the healing brush is perfectly suited to remove unwanted parts of an image.

When working with the healing brush you should keep a few points in mind:

- PhotoLine automatically expands the copy area by a smooth edge. Therefore, it is usually better to use a “hard” brush.
- Because of this automatic smooth edge, your painting should exactly cover the area, that you want to correct.
- The width of the smooth edge depends on the size of the brush. A small brush creates a narrow smooth edge.
- As the ***Healing Brush*** adjusts the brightness and the color automatically, you rarely have to reset the source point. If you want to - for example - remove pimples or moles from a face, it is usually sufficient to set the source point once and use it many times.
- It is often better to make several small corrections than a larger one.
- The ***Healing Brush*** can work with multiple layers. If you create a new empty layer with transparency above the one you want to correct, you can paint all corrections directly into this new layer. The original image will not be modified.

6.3.15 The Patch Tool

The ***Patch Tool*** works in the same way as the ***Healing Brush*** (chapter 6.3.14). They differ only in how the source and target areas are defined.

With the Patch tool, the target area, i.e. the area that is to be changed, is first determined using a selection tool (e.g. one of the lassos). Then the source area is selected by a single click. You can also do this several times to correct the position slightly if necessary.

6.3.16 The Remove Brush

Like the ***Copy Brush*** (chapter 6.3.13) and the ***Healing Brush*** (chapter 6.3.14) the ***Remove Brush*** is used for deleting unwanted parts of an image. To achieve this it uses a "smart" removal technique: It searches for matching image parts in the neighborhood and inserts them instead of the original content. This is a random process, so if you are not satisfied with a result, you can use **Retry** in the Tool Settings, and you might get a better result.

The ***Remove Brush*** can work with multiple layers. If you create a new empty layer with transparency above the one you want to correct, you can paint all corrections directly into this new layer. The original image will not be modified.

If you want to remove a large part of an image, it may be better to use the smart removal offered by the lasso tools (see ***Remove Object*** in chapter 6.2.21).

6.3.17 The Red Eye Brush

Red eyes are a common problem in photography. The ***Red Eye brush*** can be used to remove them. First you select the area that should be corrected. After releasing the mouse button, the correction will take place. In the Tool Settings **Intensity** allows to enlarge or shrink the area a bit. **Brightness** can be used to make the result darker or brighter.

When working with the Red Eye brush you should keep a few points in mind:

- PhotoLine automatically expands the correction area by a smooth edge. Therefore, it is usually better to use a "hard" brush.
- Because of this automatic smooth edge, your painting should exactly cover the area, that you want to correct.
- The width of the smooth edge depends on the size of the brush. A small brush creates a narrow smooth edge.
- Intensity and Brightness can be used to optimize the result until you execute another function or switch the active layer.

- The Red Eye brush can work with multiple layers. If you create a new empty layer with transparency above the one you want to correct, you can paint all corrections directly into this new layer. The original image will not be modified.

6.3.18 The Finger

The finger simulates a human finger on a wet oil painting. The color is smearing from the start position to the direction you are dragging.
You can setup to use the foreground color in the ***tool options dialog***. Then you will smear with a colored finger in a wet oil painting. If **Merged Copy** is activated, the ***Finger*** tool will use all visible layers instead of only the active layer.

6.3.19 The Water

Water simulates water on a watercolor. The pixels under the brush are mixed.
You can use the water to soften hard edges.

6.3.20 The Filter Brush

The filter brush allows you to draw with filters.
In the tool settings, you can choose the filter type, the size of the filter and the color channels, which you want to modify.

6.3.21 The Replace Color Brush

This is a color sensitive brush. This means that this brush replaces only a certain color of an image with another.
There are two possible modes. The first one replaces all colors that are similar to the foreground color with the background color. The second mode gets the color from the click point and replaces it with the foreground color.
The ***Replace Color Brush*** is very suitable for removing the so-called “red eyes” from photos. In order to do this you should choose the mode **Click Color -> Foreground Color** and set the foreground color to the wanted eye color.

6.3.22 The Brighter Tool

The brighter tool allows lightening up in a very detailed way. The tool can edit either the shadows (the dark parts of the image), the midtones, the lights (the bright parts of the image) or the full range.
Protect Tones should reduce color shifts, that might appear with strong brightness corrections.

6.3.23 The Darker Tool

The darker tool is the counterpart to the lighter tool. It darkens parts of images. The tool can edit either the shadows (the dark parts of the image), the midtones, the lights (the bright parts of the image) or the full range.
Protect Tones should reduce color shifts, that might appear with strong brightness corrections.

6.4 Tools for Vector Layers

6.4.1 Edit Vector Points

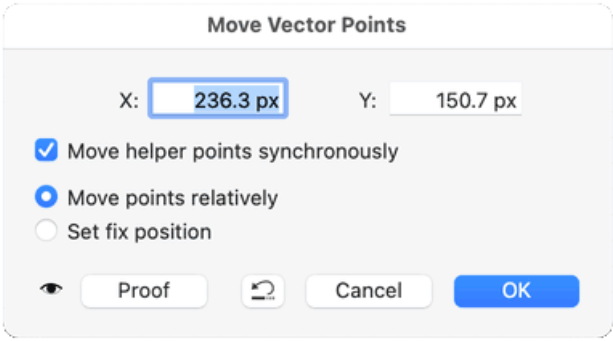
Edit Points Using the Mouse
You can select and edit path points with this tool. By holding ***Alt*** and clicking a path point the whole subpath will be selected.
If you select a curve point, two additional control points appear. By moving these control points, you can change the shape of the curve. Normally the two control points are moved symmetrically. Holding a modifier key changes this behaviour:

- , Alt key
  If the symbol is activated, the corresponding point is changed as well. The symbol adjusts its status according to whether the current control points are already symmetrical.
  The symbol has additional meaning when moving a path point: If it is not selected, the control points remain at their original position and are not moved.

- , Ctrl key (Windows), Command key (macOS)
  The distance of the corresponding control point will be adjusted to the distance of the currently edited one.
- , Shift key
  The control point can only be moved along its original direction.

You can directly modify a curve by clicking and dragging it. This will modify the previous and the following curve, too. If you don't want that, you can hold the ***Shift*** key.
Double clicking on the path inserts a new point at the click position.

Edit Points Numerically
If you double click an already selected vector point, its position can be modified numerically:



With **Move helper points synchronously**, affected control points are also moved analogously to your manual change. If you double-click a path point, these are the corresponding control points, if you double-click a control point, this is the control point on the other side of the path point.
In addition, there are two working modes that only have an effect if several path points are selected and you double-click one of these points:

- With **Move points relatively** you enter the position of the clicked point. The other selected points will then be moved in the same way as the clicked point.
- At **Set fix position** you enter the direct position for all points.

If you have double-clicked a control point, you can also specify its position relative to its path point. The constants x and y are defined for this purpose. So if you enter "x+50" as the value, the control point will be placed 50 units to the right of the path point.

Miscellaneous

The menu command ***Edit/Delete*** or the corresponding shortcut ***Del*** deletes the selected points. By default, the points are simply removed. However, if **Delete Points With Correction** is activated in the tool settings, PhotoLine tries to keep the curve by adjusting the preceding and following controls points.

If the symbol **Edit Colors in Document** is activated, you can edit gradients, patterns and vector patterns directly in the document window. With gradients it offers the following options:

- Clicking and dragging moves a gradient color.
- By clicking on the gradient line a new color is created.
- Alt+click on the gradient line moves the gradient.
- Dragging a color away deletes that color. But note, that there have to be at least two colors in the gradient.
- The context menu of the gradient line allows to modify the gradient type and the color space.

With pattern colors and vector pattern colors you will see a rectangle, which can be used to transform the pattern:

- The circle handle will change the location of the pattern.
- The rectangle handles will scale the pattern.
- Clicking and dragging a bit outside of the middle scale handles will shear the pattern, doing that with the corner handle will rotate it.

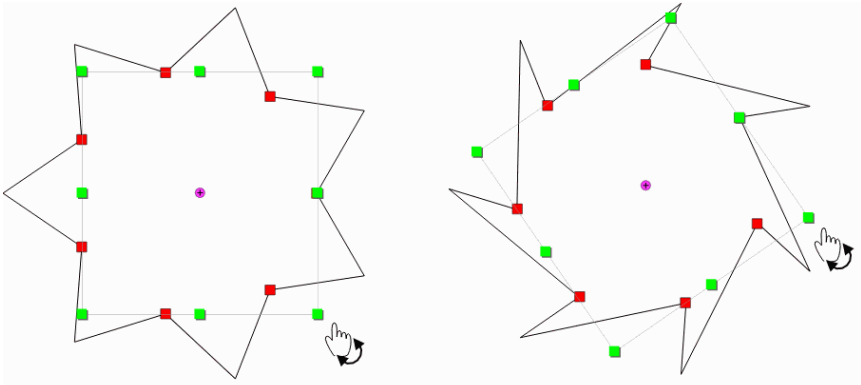
If you assign a new pattern to a vector layer while holden the ***Alt*** key, the new pattern will adopt the transformation of the previous pattern.

The Tool Settings offer a way to invert the direction of a subpath by using **Invert Direction of Subpath**. It will change the direction of all subpaths

containing selected vector points. This may be important when using the fill mode “Non-Zero-Winding-Number” (see chapter 4.5.4.4) or when creating 3D Bodies with a hole (see chapter 7.8.57).

6.4.2 Transform Vector Points

Transform Vector Points is largely identical to ***Edit Vector Points*** (see chapter 6.4.1). There is only one big difference: If several vector points are selected, a selection frame is drawn around these vector points. With this selection frame the points can be transformed, just like a layer can be transformed (see chapter 6.2.1).



The inner points of the star are selected. The inner points have been rotated.

6.4.3 Insert Vector Points

This tool allows to insert additional points in a vector path.
By clicking with the ***hammer cursor*** on the path, the new point is inserted. In curves a curve point will be inserted and in lines a line point. Holding ***Ctrl*** (Windows) or ***Command*** (macOS) reverts this behavior.
Whenever the mouse cursor is on a position where a point can be inserted, the cursor changes to another hammer form.

6.4.4 Delete Vector Points

This tool allows deleting vector points by clicking on one of them.
Whenever you are on a deleteable point, the ***nippers*** are closed.

6.4.5 Cut Vector Path

With this tool a vector path can be cut into two paths.
Whenever you are on a cutable path, the ***scissors*** are closed.

6.4.6 Connect Vector Paths

This tool combines two vector paths to one. Both paths have to lie in one layer.
In order to use it, you have to click to the first point, then to the second. If you had already selected one point, you have only to click on the second point. PhotoLine shows two little bars beside the mouse cursor to show that you have to select the second point.

6.4.7 Convert Vector Points

The tool ***Convert Vector Points*** is able to convert lines to curves and reverse. It works the same with line and curve points..
It uses the following mouse cursor shapes:

- The mouse cursor is at an invalid position. Therefore, no action is possible.
- The mouse cursor is over a curve or curve point. By clicking the tool will create a line.
- The mouse cursor is over a line or line point. By clicking the tool will create a curve.

6.5 Tools for Text Layers

6.5.1 The Tool “Text Shape Flow Inside”

This tool creates shape flow (see also chapter 6.2.12) inside another layer by clicking on this layer. The layer that will be selected by clicking is marked by a red frame. If there are several layers above each other, another one can be chosen by using Arrow-Left, Arrow-Right or the Tab-key.

6.5.2 The Tool “Text Shape Flow Outside”

This tool creates shape flow (see also chapter 6.2.13) around another layer by clicking on this layer. The layer that will be selected by clicking is marked by a red frame. If there are several layers above each other, another one can be chosen by using Arrow-Left, Arrow-Right or the Tab-key.

6.5.3 The Textflow Tool

This tool creates a text flow (see also chapter 6.2.13) starting from the current text layer. The destination layer that will be selected by clicking is marked by a red frame. If there are several layers above each other, another one can be chosen by using Arrow-Left, Arrow-Right or the Tab-key.

7. The Menus

7.1 The File Menu

7.1.1 New/New Document

New Document creates a new document (see chapter 2.11). A document is usually created in size (for example DIN A4 or Letter) it should be printed later.
On creating a new document a background color can be chosen. This color is not printed. It is only displayed on-screen in order to simulate printing on colored paper.
The **Color Mode** can be setup at the bottom of the dialog.
New Document is able to create complex documents automatically. Aside from the number of pages it can be entered, if and how many columns of text should be created on every page. Optionally the text columns can be concatenated in order to create text flow (see chapter 6.2.12).
Furthermore it is possible to transfer a previously defined set of guide lines (see chapter 4.39) to the new document.

7.1.2 New/New Image

New Image is used for creating pictures like in any other image processing application. You can choose the layer kind (RGB, CMYK, ...), the size and the resolution. If you select ***Use Transparency***, it is possible to create images with transparent areas.
By pressing ***Shift*** while clicking on the function ***New Document*** (see chapter 7.1.1) is called.

7.1.3 New/Create Calendar

Create Calendar is used to create calendars. You have the choice between a monthly calendar and a calendar for a full year.
The settings for the new calendar are divided in 3 sub-dialogs:

- Type
  Type defines the basic appearance of the new calendar. The most important decision is whether a weekly, a monthly or a full year calendar should be created.
  Aside from that you have to decide whether the week of the year should be displayed and whether special days should be shown. Special days can be managed by clicking Change... (see below).
- Page
  Page defines the page size of the new calendar. Additionally you can define the font, that will be used for headlines and for the days in the calendar. The size of the text will be calculated automatically depending on the page size, but it can be modified later.
- Color
  Color allows to change the color of all parts of the calendar. Optionally the text in the calendar can have a colored background.

The created calendar is fully editable: you can change the font, the size or add pictures.

Special Days

PhotoLine can insert special days in a calendar. Special days can be personal dates or holidays.

The Special Days dialog controls which special days are entered. It is opened by clicking **Change...**. In this dialog you can

- create a new special day with a fix date or relative to a base.
- modify or delete special days.
- load or merge a file defining special days.
- save the current special days to a file.

The special days are organized in groups which can be chosen without restrictions. You can choose an existing group in the dialog for creating new special days from a combobox. Entering a new name will create that group.

All special days can be selected and edited separately.

Every special day and every group is preceded by a switch. Activating this switch shows this day or the whole group in the calendar.

The file structure for merging a file is simple:

D[D].M[M].[YY|YYYY],[“]Name[“]

The new data will be inserted in a group with the name of the file.

7.1.4 New/Document Templates

Document templates are shown in the ***New*** submenu below the separator. They are usually PhotoLine documents or pictures. If a template is selected in the menu, the corresponding document is loaded, but the filename will be ***Untitled***, so that you are forced to assign a new name on first saving.
In order to be listed in the menu, a document has to be placed in PhotoLine application directory in the folder ***Defaults/Templates***. The filename without the filename extension will be the menu entry.
The main reason behind the document templates is to allow fast access to often used documents. For example you can create a template for letters, which already includes your address and the salutation.

7.1.5 Open

Open shows the file select dialog and allows to open one or more files.

7.1.6 Open as Placeholder

Open as Placeholder creates a new document containing a placeholder layer which references the selected file. If you are opening a raw file, there will be adjustment layers for developing the raw file, too.
This way you get a document that just contains the edit steps for enhancing a file.

7.1.7 Close

Close closes the current document window. If the document has been modified, you are asked whether to save the document.

7.1.8 Close All

Close All closes all opened documents. On modified documents you are asked whether they should be saved.

7.1.9 Save /Save as

Save and ***Save as*** save the current picture in a file. ***Save*** uses the current name. If the picture doesn't have a valid filename, ***Save as...*** will automatically be used.

Save as... shows the file select dialog and asks for a name for saving the picture. You can choose the file format for saving with **File Type**. But you can also change the file format by simply appending the corresponding extension. I.e. if the name "Test.tif" is entered, the picture will be saved in the TIFF-format, even if **File Type** is set to different format.

The **Options**-button allows to adjust the settings for the given format (see chapter 7.10.1).

If **Remember Save Path** is selected, calling the next time ***Save as...*** will not preselect the folder the document was loaded from, but that, that is chosen during the current ***Save as...***.

No file format - with the exception of the PhotoLine-Format PLD - is able to store all possible features of a picture (some are not able to store layers, others can't save text, ...). Therefore, PhotoLine is saving a reduced version of the picture, if the format is not able to save all features. The reduced version normally looks the same as the original, but it doesn't contain all data anymore (i.e. the text layers have been converted to images or the whole document has been converted to one image layer). With ***Options/File*** (see chapter 7.10.1) you can adjust, how the original is reduced and whether PhotoLine warns you before reducing.

7.1.10 Save All

Save All saves all open documents and pictures without any further request.

7.1.11 Reload Document

Reload Documents replaces the active document with the version stored in the document's file.

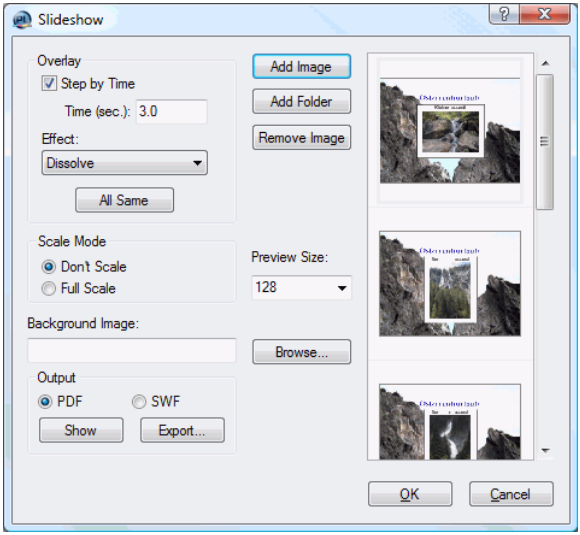
7.1.12 Browse

Browse shows all pictures of one directory as thumbnails. A detailed description can be found in chapter 5.4 and the settings in chapter 7.10.1.33 “Browse/Preview Images” and in chapter 7.10.1.34 “Browse/Settings”.
If you select this function, PhotoLine will open a window containing the thumbnails of the current directory. If there are many or very large pictures in the directory, this operation may last up to some minutes. Double-clicking one of the thumbnails opens the corresponding picture. It is possible to drag and drop a thumbnail on a picture window. The picture will be added as a new layer.
In order to save time, PhotoLine stores the created thumbnails in a file named “Browse.plb”. Therefore, browsing will be much faster next time.

7.1.13 Functions/Batch Converting

This function is used for converting/editing whole picture directories.
Source Directory is the path that contains the pictures, which you want to convert. If you turn on **Include Subfolders**, the directories inside the source directory will be converted, too. Please not: If the destination directory is inside the source directory, you can’t use **Include Subfolders**.
You don’t have to convert all files in this directory. You can restrict the source to a certain **Picture Type**. For example you can choose to convert TIF-files only.
Convert Action defines what to do with every picture. You can select one of the existing actions (see chapter 4.27). It is possible to select **No Action**, if you only want to convert the file format.
Destination Directory is the destination for conversion.
Picture Type rules, what file format to use for saving. If the destination type is not **Same as import**, you can directly adjust the settings for that file type. The settings made here do not affect the global file format settings.
All settings can be saved as preset (see chapter 3.9.2). If you turn off the switch **Apply Folders**, accessing a preset won’t change the source and destination directory.

7.1.14 Functions/Slideshow



Slideshow allows to create a new or to edit an existing slideshow document. A slideshow document is a normal PhotoLine document consisting of several pages. Each page has information attached to it defining how long this page will be visible and which effect should be used to switch to the next page.

With **Add Image** you can add one or more picture files to the slideshow, **Add Folder** allows to add all picture files residing in a folder. **Remove Image** removes the currently selected picture.

Overlay controls for every single page how to switch to the next page. It is possible to switch after a certain duration or - if **Step by Time** isn't selected - manually by pressing a key. Manually by pressing a key works only when saved as PDF. **Effect** offers various blend modes. **All same** applies the current overlay settings to all pages.

Background Image lays down a picture, that will be visible on all pages. **Background image** is not fully the correct term, because it is possible to use any document containing text, images and vector graphics.

Scale Mode lays down how to treat pictures, that are smaller than the document. By selecting **Don't Scale** they keep their size, **Full Scale** enlarges them to document size proportionally.

Show displays the slideshow. Note, that PhotoLine doesn't show the slideshow itself but needs extra software. PhootLine will create a PDF file with the corresponding content. This PDF file will usually be shown by Adobe® Reader™. You have to install this software in order to view PDF-slideshows. Furthermore PhotoLine must not be the default application for PDF files.

Export... saves the current slideshow as PDF file. You don't have to save the slideshow with **Export...,** you can simply leave the dialog with **OK**, too. If you do so, you will get a normal document, that can be saved with ***Save As...*** as PDF file. The main advantage of using **Export...** is, that **Export...** automatically adjusts the save parameters to achieve a very small slideshow file.

After leaving the dialog with **OK**, you should also save your slideshow as PLD file in order to allow editing afterwards without loss of quality.

7.1.15 Functions/Next Picture

Next Picture opens the next image in the same directory as the current one.

First the current picture is closed. If it has been modified, you will be asked whether you want to save it.

7.1.16 Functions/Previous Picture

Previous Picture opens the previous image in the same directory as the current one.

First the current picture is closed. If it has been modified, you will be asked whether you want to save it.

7.1.17 Functions/Delete Picture

Delete Picture deletes the file, that the active document is based on.

7.1.18 Functions/Copy Picture

Copy Picture copies the file, that the active document is based on.
If the document is modified, you will be asked whether the document should be saved first. After that a Path Preset dialog is opened. Here you can set up a list of destination paths.
Clicking on the disc symbol at the left of a path performs the copy operation to the corresponding path.
The icons at the bottom of the dialog are used for managing the path list. The "+" symbol adds a new path to the list and the "-" symbol removes an existing one. The disc symbol saves the current path list.
Leaving the dialog by using **Close** doesn't save the path list automatically.

7.1.19 Functions/Move Picture

Move Picture moves the file, that the active document is based on.
If the document is modified, you will be asked whether the document should be saved first. After that a Path Preset dialog is opened. Here you can set up a list of destination paths.
Clicking on the disc symbol at the left of a path performs the move operation to the corresponding path.
The icons at the bottom of the dialog are used for managing the path list. The "+" symbol adds a new path to the list and the "-" symbol removes an existing one. The disc symbol saves the current path list.
Leaving the dialog by using **Close** doesn't save the path list automatically.

7.1.20 Functions/1 Star, 2 Stars, 3 Stars, 4 Stars, 5 Stars, No Stars

These functions allow you to rate the active document or to remove an existing rating. This rating will be saved in the metadata (XMP and IPTC).
You can access these functions more easily by calling the context menu while holding ***Ctrl*** (Windows) or ***Command*** (macOS).

These functions only exist for your comfort. You can rate the document by using ***Layout/Document Information*** (see chapter 7.4.93), too.

7.1.21 Functions/New Keyword

New Keyword assigns one or more keywords to a document.
You can access this function more easily by calling the context menu while holding ***Ctrl*** (Windows) or ***Command*** (macOS). The context menu offers the option to remove already assigned keywords, too.
Functions/New Keyword only exists for your comfort. You can add and remove keywords by using ***Layout/Document Information*** (see chapter 7.4.93), too.

7.1.22 Import/Open in Explorer or Open in Finder

Via ***Open in Explorer*** (Windows) or ***Open in Finder*** (macOS) you can display the file of the document in the file manager of your operating system.

7.1.23 Import/From Scanner or Camera (only Windows)

From Scanner or Camera allows to read images from a scanner or a digital camera. The images are transferred by using the WIA interface.

7.1.24 Import/Image Capture (only macOS)

Image Capture allows to read images from a scanner or a digital camera. The images are transferred by using the utility Image Capture.

7.1.25 Import/Select Scanner

This function allows to select the device, which you want to use for scanning. You have to install a Twain-driver, if you want to scan.

7.1.26 Import/Scan

Scan is used for reading images from a scanner via the Twain interface.
If the resulting image is not shown properly, you can change the scan mode with ***Options/Extended/Periphery***.

7.1.27 Import/Raw Image Data

Raw Image Data is intended to read image files, that contain no format information but only the image content. They are in no way related to the Raw data files of digital cameras.
Raw image data are often used in the scientific area. Images created in this area are usually processed by software written in-house, and because those images usually have the same size and pixel format and to reduce the programming effort often non-standard files are created.
Most options of the Raw Image Data like **Width**, **Height** and **Image Kind** are self-explaining. **Separated Channels** defines whether image kinds containing several channels (like RGB) have separated channels (first all pixels of channel 1, then all of channel 2 and so on), or if the channels are meshed (pixel 1 channel 1, pixel 1 channel 2, pixel 1 channel 3, pixel 2 channel 1, pixel 2 channel 2, and so on). **Extra channel** controls whether there are are additional channels, which shouldn‘t be used.
If the image has 16 Bits per channel, the internal data format must be chosen: Little Endian (used by Intel and AMD processors) or Big Endian (used by PPC processors).
Line Overflow can be used to enter the amount of unused fill bytes at the end of each line. **File Header** defines the start of the image data in the image file.

7.1.28 Import/Image Into Active Layer

Image Into Active Layer reads a file and replaces the active layer with the content of that file. The Open-dialog contains the switch **Proportional**. If this is turned on, the ratio of the loaded layer will remain unchanged on insertion.

7.1.29 Import/Wallpaper (only Windows)

Wallpaper loads the current wallpaper. The wallpaper is the background image of the desktop.

7.1.30 Export/PDF: Portable Document Format (*.pdf)

PDF: Portable Document Format (*.pdf) exports the active document as PDF-file. It is also possible to use the normal ***Save As...*** function to save in these formats, but the Export-functions have the advantage, that the name and the changed-state of the document will not be modified. This way the risk of forgetting to save in the PLD-format - the only file format that can save without losing any information - is minimized.
Of course, you can change the file format in the following file panel, and export in a different format.

7.1.31 Export/Wallpaper... (only Windows)

The current picture will be set as desktop wallpaper. In order to do so it will be saved named “PL-Wallpaper.bmp” in the folder “My Documents”.

7.1.32 Print

You should notice that on Windows the button **Print Options** in the printing dialog opens extended print options, which allow you to control the size and position of the picture (see chapter 7.1.33).

7.1.33 Print Options

Use this command to get the print options dialog of PhotoLine (see chapter 5.8).
You can setup here if you want to print in Normal-, Poster-, Label- or CD-Label mode.
Depending on the selected mode you can make further settings.
You can always setup the size and position of your printing.
By using the button **Extended...** you can access the function ***Print Markers*** (see chapter 7.4.90).

7.2 The Edit Menu

7.2.1 Undo

This function takes back the last working step. You can configure the number of undoable steps in ***Options/Working in*** the page **Undo**.

7.2.2 Redo

If you took back a working step with ***Undo***, you can get it back with ***Redo***.

7.2.3 Find

This function searches in the current text layer or in the whole document for a given text.

7.2.4 Find Next

This function repeats the last search done with Find.

7.2.5 Find/Replace

This function replaces one text by another in a text layer or in the whole document.

7.2.6 Cut

Cut copies the current selection to the clipboard and deletes it afterwards. The selection can be a part of an image, a piece of text or a layer.

7.2.7 Copy

Copy copies the current selection to the clipboard. A selection is either the area of an image marked by a lasso or a selected block of text. If there is no selection, the active layer will be copied.

7.2.8 Merged Copy

Copy copies the selected area from the active layer to the clipboard. ***Merged Copy*** copies the selected area from all visible layers.

7.2.9 Copy Without Colored Edge

Copy Without Colored Edge copies the selection of the active image layer. On copying the colors of the background will be removed from the edge of the selection depending on the mask values. This way the result can be inserted in a new document without a disturbing colored fringe.

7.2.10 Paste

Paste inserts the content of the clipboard as a normal layer.

7.2.11 Paste as Document

Paste As Document creates a new window and inserts the content of the clipboard.

7.2.12 Paste as Virtual Copy

Paste as Virtual Copy create a virtual copy (see chapter 2.3.6) of the layer on the clipboard. This is only possible, if the layer on the clipboard is in the same document as the virtual copy.

7.2.13 Delete

Depending on the active tool this function behaves differently. If the active tool is the layer tool, the active layer will be deleted. If the active tool is the text tool, the currently selected text block will be deleted. On using a vector tool the selected vector points are removed. All other tools delete the selection.

7.2.14 Select All

Depending on the layer kind, a lasso containing the active image layer is created, all points of a vector layer are selected or the whole text of a text layer is selected.

7.2.15 Deselect

If the active layer is an image layer, an existing lasso will be deleted. If the active layer is a vector layer, all selected points will be deselected.

7.2.16 Antialias

This command allows to turn antialiasing quickly on and off. Antialiasing means, that the edges of text and vector graphics are drawn unsharp by creating interpolated colors. Usually this looks nicer.
If you want to use images in the web, this is often not desired. In this case the files should be as small as possible, but this is possibly prevented by ***antialiasing***, because it increases the number of colors used.

7.3 Functions in the View Menu

7.3.1 Panel Layout/Save Panel Layout

Save Panel Layout allows you to save the position and size of the currently visible supporting dialogs like tool bar, layer dialog and so on. You can assign each layout a unique name. After saving the layout it is inserted in the menu at ***View/Panel Layout***. You can access the layouts by using the context menu of the title bar of the supporting dialogs, too.

7.3.2 Panel Layout/Edit Panel Layouts

With ***Edit Panel Layouts*** you can delete, rename and move the existing dialog layouts.

7.3.3 Panel Layout/Reset Panel Layout

Reset Panel Layout abandons your current layout of the panels and resets it to an internal state.

7.3.4 Panel Layout/Lock Panel Layout

If you activate ***Lock Panel Layout***, the modification of the panel layout is restricted. You can no longer dock a panel to other panels or (on Windows) to the main window (see chapter 3.10). Undocking panels is no longer possible, too.

7.3.5 Hide Panels/Show Panels

To get more room on your screen for working, there is a function ***Hide Dialogs***. It will hide or show all dialogs with a simple click.

7.3.6 Zoom In

Zoom In doubles the current zoom factor of the active picture window. As a result the picture will be displayed larger. The predefined shortcut of this function is ***"+"*** on the numeric keypad (on Windows) or ***Command+"+"*** (on macOS). Whether or not the window size will be adjusted, can be set in ***Options/ Display***, page **Document** (see chapter 7.10.1.26).

7.3.7 Zoom Out

Zoom Out halves the current zoom factor. As a result the picture will be displayed smaller. The predefined shortcut of this function is ***"-"*** on the numeric keypad (on Windows) or ***Command+"-"*** (on macOS). Whether or not the window size will be adjusted, can be set in ***Options/Display***, page **Document** (see chapter 7.10.1.26).

7.3.8 Full View

Full View adjusts the zoom factor to make the whole picture visible.
Whether or not the window size will be adjusted, can be set in ***Options/Display***, page **Document** (see chapter 7.10.1.26). By holding ***Shift*** the behavior of the size adjustment will be inverted.

7.3.9 Fit to Selection

Fit to Selection adjusts the zoom factor to make all selected layers visible.
Whether or not the window size will be adjusted, can be set in ***Options/Display***, page **Document** (see chapter 7.10.1.26). By holding ***Shift*** the behavior of the size adjustment will be inverted.

7.3.10 Full Width

Full Width adjusts the zoom factor, so that the full width of the document fits in the window.
Whether or not the window size will be adjusted, can be set in ***Options/Display***, page **Document** (see chapter 7.10.1.26). By holding ***Shift*** the behavior of the size adjustment will be inverted.

7.3.11 Fit to Selection Width

Fit to Selection Width adjusts the zoom factor, so that the full width of the selected layers fits in the window. This is especially useful for editing text layers.
Whether or not the window size will be adjusted, can be set in ***Options/Display***, page **Document** (see chapter 7.10.1.26). By holding ***Shift*** the behavior of the size adjustment will be inverted.

7.3.12 View 100%

View 100% sets the zoom factor to 100%. Each pixel on the screen corresponds to a pixel in the picture.
Whether or not the window size will be adjusted, can be set in ***Options/Display***, page **Document** (see chapter 7.10.1.26).

7.3.13 Original Size

Original Size adjusts the zoom factor so that the screen size of a document is equal to the printed size. In order to work correctly previously the screen resolution has to be set in the options (see chapter 7.10.1.31).

7.3.14 Pixel Mode

If a document is displayed enlarged in PhotoLine, this means the zoom factor is larger than 100%, the pixels of images are displayed larger and larger, but text and vector layers are still displayed smoothly. In Pixel Mode this is different: if zoomed in, text and vector layers are as jaggy as images. The advantage of this mode is, that the display shows you largely the same result as the function “Reduce To Background” (see chapter 7.5.25) or the

export to an image file format like JPEG. Only the interpolation method for images set in the Layer Attributes (see chapter 4.11) will not be taken into account in the screen output, as this could take too long depending on the image.

If this option is active, the title bar of the document will show “Pi”.

If a document contains working layers, that work across pixels (e.g. a Gaussian Blur), PhotoLine automatically activates the pixel mode. In this case the pixel mode cannot be deactivated.

7.3.15 Proof Mode

If ***Proof Mode*** is activated, screen and printer output emulates the device, that is selected in Options/Color Management/Devices/Proof (see chapter 7.10.1.36).

If this option is active, the title bar of document will show “Pro”.

7.3.16 PDF Proof Mode

If you activate the ***PDF Proof Mode***, you will see on-screen the color conversion that will be made when you export the current document as PDF file. The option used for the ***PDF Proof Mode*** is **Color Space** in the PDF settings (chapter 7.10.1.14).

7.3.17 Show PDF Bleed Border

This command will show/hide the PDF bleed in the document window. The bleed is controlled via the PDF settings (chapter 7.10.1.14).

7.3.18 Mark Extreme Values

If the menu entry ***Mark Extreme Values*** is turned on, all black and white areas on-screen will be marked. If this option is active, the title bar of document will show “Ex”.

By using Options/Display/Extreme Values (see chapter 7.10.1.25) you can define, how the areas will be marked and which tolerance will be used for marking.

7.3.19 Show Lines for Text Register

The text register are equally spaced lines covering all pages of a document. ***Show Lines for Text Register*** allows to show these lines on screen.
The starting position and the distance between the lines can be set in Document Attributes dialog (see chapter 4.9). The tool settings of the text tool (see chapter 6.2.13) can be used to control whether a paragraph is aligned to the text register.

7.3.20 Show Formatting Marks

Text layers contain many characters that are normally invisible: spaces, paragraph ends, ...
With ***Show Formatting Marks*** you can make them visible. Which characters should be displayed can be defined in the settings (see chapter 7.10.1.28).
Please note that the formatting marks are only displayed in the active layer and only when the Text tool is active.

7.3.21 Show Layer Frames

Options/Display/Layer (see chapter 7.10.1.27) allows to set-up that there will always be drawn a frame around certain layer types. This way one can see at a glance which layers are existing and are selectable.
But sometimes it is more important to get a visual overview of a document and in this case these frames are quite disturbing. Therefore, ***Show Layer Frames*** allows to quickly turn on and off these frames.
Double-clicking the icon opens the display settings of layers.

7.3.22 Show Print Border

This command allows to show the printable area in the document window. This way it is possible to see at once, whether parts of the document are cut off by the printer. The default color for the print border is red, but it can be changed with ***Options/Display/Document*** (see chapter 7.10.1.26).

7.3.23 Show Layer Handles

If you are designing an icon or a mouse cursor and you want to judge the current result, the green layer handles and the layer frame can be quite disturbing. Therefore, they can be turned off by using ***Show Layer Handles***.

7.3.24 Hide Border Content

f there are layers in a document that extend beyond the document borders, then these exceeding parts are normally displayed with a reduced intensity. This is done by painting the border color (see chapter 7.10.1.26) with 50% intensity over the border.
By activating ***Hide Border Content***, the border color is applied with full intensity. If the border color is opaque, the exceeding parts are no longer visible.

7.3.25 Full Screen Mode

Full Screen Mode switches the active document in full screen mode. If the active document is already in full screen mode, the full screen mode is turned off.
In full screen mode the menu bar and the dock are hidden, but can be made visible by moving the mouse to the corresponding edge of the screen.

7.3.26 Pattern Mode

If you activate the ***Pattern Mode***, the document content will be repeated outside of the document. Therefore, it is useful for creating repeatable patterns.
If you edit a pattern by using the context command ***Create Document*** of a color field (see chapter 3.3.2), the pattern mode will be activated automatically.

7.3.27 Alignment Helpers/Show Ruler

Show Ruler turns the rulers in the document window on or off. The default unit for the rulers is “pixels”, but by right-clicking in one of the rulers the unit can be changed.

The rulers are always showing the mouse position with a small stroke. This eases positioning the mouse.

The rulers have an additional task: they are used for creating guides. By clicking in a ruler and dragging a guide line is created that can be moved to the intended position. An already created guide can be modified and deleted with the layer tool (see chapter 6.2.1). Guide lines can be edited by using ***Guides*** (see chapter 4.39), too.

The small field between the two rulers can be used to set the origin of the rulers. Clicking and dragging allows to move the origin to the required position, double-clicking allows to enter the position numerically.

7.3.28 Alignment Helpers/Show Text Ruler

Show Text Ruler turns the rulers of text layers (see chapter 6.2.13) on or off.

7.3.29 Alignment Helpers/Show Grid

This function turns on the grid in all document windows. The look of the grid can be adjusted with ***Options/Display/Grid*** (see chapter 7.10.1.29). Double clicking the icon shows the grid settings dialog.

7.3.30 Alignment Helpers/Align to Grid

If you turn this command on, most dragging and drawing operations are aligned to the grid. Double clicking the icon shows the grid settings dialog (see chapter 7.10.1.29).

7.3.31 Alignment Helpers/Show Pixel Grid

This function turns on the pixel grid. The color of the pixel grid can be adjusted with ***Options/Display/Grid*** (see chapter 7.10.1.29). Double clicking the icon shows the settings dialog.

7.3.32 Alignment Helpers/Align to Pixel Grid

If you turn the pixel grid on, most dragging and drawing operations are aligned to it. Double clicking the icon shows the settings dialog (see chapter 7.10.1.29).

7.3.33 Alignment Helpers/Show Guides

This function shows the guides in all document windows. The color of the guides can be adjusted with ***Options/Display/Guides*** (see chapter 7.10.1.29).
Double-clicking the icon calls the function ***Guides*** (see chapter 4.39).

7.3.34 Alignment Helpers/Align to Guides

If you turn this command on, most dragging and drawing operations are aligned to the guides, if a certain distance is fallen short of. This catch distance can be adjusted with ***Options/Display/Guides*** (see chapter 7.10.1.29).
Double-clicking the icon calls the function ***Guides*** (see chapter 4.39).

7.3.35 Alignment Helpers/Align to Auto Guides

If you turn this command on, most dragging and drawing operations are aligned to the automatic guides. You find more information about "Automatic Guides" in ***Options/Display/Guides*** (see chapter 7.10.1.30).

7.4 The Layout Menu

7.4.1 Document/Scale Document

Scale Document scales the active document and all layers in this document.. Usage is similar to ***Scale Layer*** (see chapter 7.5.3).

7.4.2 Document/Rotate Document

Rotate Document rotates the active document and all layers in it. The usage is analogous to ***Rotate Layer*** (see chapter 7.5.5).

7.4.3 Document/Trim Document

This function adjusts the size of the document, so that it exactly covers the content of the active page. If some layers are outside of the page, the document may become larger, too.

7.4.4 Document/Change Document Size

This function allows changing the size of a document. Its user interface is similar to ***Change Layer Size*** (see chapter 7.5.4).

7.4.5 Document/Duplicate Document

Duplicate Document copies the active document/picture and creates a new window for it.

7.4.6 Document/Vector Pattern From Document

Vector Pattern From Document creates a vector pattern from the current document and copies it to the clipboard. Afterwards, the pattern can be pasted to a color field.

7.4.7 Page/Previous Page

This function switches to the previous page. You can use the shortcut ***Ctrl+Page Up*** (Windows) or ***Command+Page Up*** (macOS) alternatively.

7.4.8 Page/Next Page

This function switches to the next page. You can use the shortcut ***Ctrl+Page Down*** (Windows) or ***Command+Page Down*** (macOS) alternatively.

7.4.9 Page/New Page(s)

This function inserts a given number of new pages after the active one. This function is only accessible in document mode (see chapter 2.11).

7.4.10 Page/Copy Page(s)

This function inserts one or more copies of the active page before or after a given page. The copy will be activated afterwards. This function is only accessible in document mode (see chapter 2.11).

7.4.11 Page/Delete Page(s)

This function deletes a single page or a range of pages without further request. But there has to be at least on page left. This function is only accessible in document mode (see chapter 2.11).

7.4.12 Page/Scale Page

Scale Page scales the active page and all layers on this page.. Usage is similar to ***Scale Layer*** (see chapter 7.5.3).

7.4.13 Page/Rotate Page

Rotate Page rotates the active page and all layers on this page. Usage is similar to ***Rotate Layer*** (see chapter 7.5.5).

7.4.14 Page/Change Page Size

This function allows changing the size of the active page. Its user interface is similar to ***Change Layer Size*** (see chapter 7.5.4).
If a page has a different size than its document, its size will no longer be modified when using ***Change Document Size.***

7.4.15 Page/Load Page(s)

Load Page(s) loads a file and mixes its pages with the existing document. This function is only accessible in document mode (see chapter 2.11).

7.4.16 Page/Save Page(s)

Save Page(s) saves a range of pages in the native PhotoLine-format PLD. This function is only accessible in document mode (see chapter 2.11).

7.4.17 Text/Font

You can open the font dialog with this function in order to select a font.

7.4.18 Text/Increase Font Size

Increases the font size by a certain value. The exact value depends on the set unit. If the font size is currently displayed in pixels, it is enlarged by 1 pixel.

7.4.19 Text/Decrease Font Size

Decreases the font size by a certain value. The exact value depends on the set unit. If the font size is currently displayed in pixels, it is reduced by 1 pixel.

7.4.20 Text/Fit in Text Layer

Fit in Text Layer creates a new text layer with the same size and location of the active layer. Additionally the attributes ***centered*** and ***Center Text Vertically*** are set. This allows fast labeling of an existing vector shape.

7.4.21 Text/Optimize Text Layer Size

Optimize Text Layer Size reduces the size of a text layer as much as possible without changing the appearance of the text.

7.4.22 Text/Text on Path

Text on Path allows to create and modify path text (see also chapter 6.2.13). The first decision to be made on path text is the shape of the path the text should run on. **Shape** can be used to set up the shape. If there is no appropriate predefined shape, you can create a corresponding vector layer and copy it to the shape field by using the context menu.

Text Alignment contains the basic adjustments of path text. Very important is **Distort**, because if **Distort** is not turned on, many other adjustments can't be made. If **Distort** is on, path text will no longer be displayed as text but as vector graphics. Text can be edited as usual, but vector graphics allows to better fit the text onto the path. A disadvantage of Distort is, that on exporting the path text in a format like PDF the file may become larger and you cannot search after the text in PDF-files.

If **Don't Rotate** is activated, all letters are upright. If it isn't, the letters are perpendicular to the path.

The following examples are demonstrating the effect of Distort and **Don't Rotate**:

no distortion, rotation

no distortion, no rotation

distortion, rotation

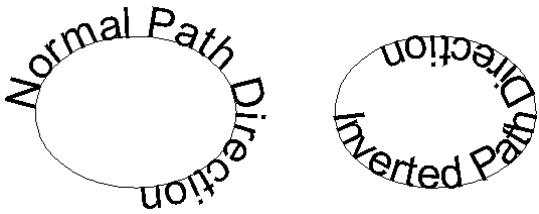
distortion, no rotation

If **Distort** isn't selected, the only other available option is **Offset** with the accompanying **Invert Direction**, that is described later.

Scale Content allows to adjust the length of the text to the length of the path. **No Stretching** lets the text unchanged, **Only Larger** enlarges the text width, if it is smaller than the path length, and **Larger and Smaller** scales the text, so that it is completely visible and uses the whole path.

Baseline, **Centered** and **Top Line** control where to place the letters. **Baseline** places the bottom edge of the letters on the path, using **Centered** the path goes straight through them and **Top Line** places the top edge on the path..

Offset defines the start position of the text on the path. If **Invert Direction** is turned on, the text starts at the end of the path and runs on the other side:



The next three text fields allow to modify the start, the end and the middle size of the text. The middle size is changed only, if **Use Middle Size** is selected. The following example shows text on a straight line. In the first case the mode is **Baseline**, in the second **Centered** and in the third **Top Line**. All three are using a middle size of 200%.

baseline. middle size 200% centered. middle size 200% top line. middle size 200%

Repetitions allows to automatically repeat text on the path. **No Repeating** shows the text only once. **Calculate Count** shows the text as often as it fits on top of the path. When using **Count** and **Calculate Count Distance** is the distance between the single repetitions.

7.4.23 Text/Text in Path

Text in Path allows to create or edit shape flow (see also chapter 6.2.13) inside a vector layer. You can set up which shape the text should flow in and what distance should be between text and shape.

7.4.24 Text/Insert Text Field

Insert Text Field inserts a special character in the text, that shows an information. This information can be:

- Date
  It will show the date, when the special character has been inserted. This date can be modified by using Update Date (see chapter 7.4.25).
- Page Number
  It will show the page number of the page, that contains the special character.
- Page Count
  It will show the number of pages of the active document.
- Document Name
  It will show the file name of the document.

7.4.25 Text/Update Date

Update Date updates a date, that was inserted by using ***Date/Page Number*** (see chapter 7.4.24). In order to use this function, you have to place the text cursor in front of the date or to select the date.

7.4.26 Text/Copy Character Settings

Copy Character Settings saves all settings that modify the appearance of a single character. These are:

- Font and font size
- Character width
- Text color
- Outline, outline line style and outline color
- Underline and underline settings
- Baseline
- Kerning

7.4.27 Text/Paste Character Settings

Paste Character Settings applies the settings saved by ***Copy Character Settings*** to the selected text. This way existing attributes can be copied very fast to another text.

7.4.28 Text/Copy Ruler Settings

Use this function to copy the attributes of the current paragraph. These are:

- Tabulators
- Indentions
- Line distance mode (absolute, relative) and line distance
- Paragraph distances
- Page formatting modes

7.4.29 Text/Paste Ruler Settings

This function assigns the copied ruler settings to the current paragraph or all marked paragraphs. You can use this function to transfer the settings of one paragraph to all other paragraphs.

7.4.30 Text/Merge Marked Text Layers

This function merges several text layers to one. In order to do this you have to mark the text layers in the Layer Dialog and then call ***Merge Marked Text Layers***. The result will be a text layer containing the text of all marked

text layers. But be aware that the positions of the single text parts may not be the same.

7.4.31 Text/Crop Text Flow

Crop Text Flow can divide a text flow (see chapter 6.2.13). There are two basic operation modes. The first one distributes the text, so that after cropping every text layer still contains the same text. The second mode holds the text together and assigns it to the first text layer, the other text layers are emptied.

7.4.32 Text/Font Overview

Font Overview creates a document listing all fonts installed on the computer. Every font is illustrated by a text sample. The page size, the text style used by the font names and the text sample are freely configurable.

7.4.33 Text/Serial Document

In order to create a serial document, you need a CSV-file containing the data to use in the serial document. CSV is the abbreviation of “Comma Separated Values”. Don‘t take this “Comma” to literally. Other characters can be used as separator, too. A simple CSV-file may look like this:

"Address","Last Name","First Name"
"Mr","Doe","John"
"Mrs.","Doe","Jane"

Each line is a data set which will be used in the serial document. The first line has a special meaning as it defines the data fields contained in a data set.

Nearly every database can export CSV-files.

The first step in creating a serial document is opening the dialog ***Serial Document***. **Path of Address Data** is the location of the CSV-file. The easiest way to enter it is to use the button **Choose**.

After that, **Data Sets** is listing the data sets found in the file. By placing or removing a checkmark beside a data set, you can select the data sets, that shall be inserted in the serial document.

In **Data Fields** the fields of a data set are listed. Selecting a field name and clicking **Set** inserts this field name as keyword in the active text layer.
By clicking **Create Serial Document** a new document will be created. For every data set checked in **Data Sets** the pages of the active document will be copied to this new document and all keywords will be replaced by the corresponding content of the active data set.

7.4.34 Table Of Contents

Table of Contents creates a new document that contains the table of contents of the active document.
In order for this function to do its job, you must have assigned text styles (see chapter 4.34) to the headings in your document. In the Table of Contents dialog, you can now define which text styles represent headings. The texts with these text styles are then transferred to the table of contents.
If **Page Numbers First** is activated, the page number is placed before the heading in the generated Table of Contents.

7.4.35 Text/Form Field

The PDF file format allows to define forms. A form is a special PDF file, that contains text field editable by the user. ***Form Field*** is used to convert a text layer in a text field of this kind. But note, that a form field only acts like a text field, if the document is saved as PDF file and this file is opened with a PDF-viewer.
PhotoLine doesn‘t automatically create a frame around the form field. Therefore, if you want the text field to be visible in the PDF-file, you have to manually create a frame. For PDF-experts only: PhotoLine uses the layer name as field name.
Field Type currently only allows **Text**. **Help Text** defines a small help text, that appears, when the mouse is over the form field. If **Required** is turned on, the user has to enter a value when filling the form.
If **multiline** is selected, the user can enter line feeds. **Do Not Scroll** defines, whether the content of the text field is scrolled, if the text cursors reaches the end of it. **Maximum Text Length** allows to restrict the number of characters, that can be typed in a text field.

7.4.36 Text/Edit Text Shortcuts and Activate Text Shortcuts

When typing text there are often expressions like “Best regards” or special characters like ”©”. The expressions are much to long for repeatedly typing and the keyboard shortcuts for entering the special characters are much to complicated to remember, so one always has to search them in the character table.

In order to solve these problems, there are Text Shortcuts. Text Shortcuts consist of two parts. The first part is the shortcut, that should be easy to remember and has to be typed in the text. The second part is the text, that will appear after entering the shortcut plus a single space. An example: after typing „br “ (the space at the end is important) there appears “Best regards”.

Edit Text Shortcuts allows to manage the Text Shortcuts. New ones can be created and existing ones can be edited or deleted. A Text Shortcut can not only contain but it can also have a font or a color.

Text Shortcuts are very useful. Nevertheless there may be situations, when you don‘t want to use them. Therefore, they can be turned off and on by using ***Activate Text Shortcuts***.

7.4.37 Text/Spell Checker

Spell Checker controls whether PhotoLine is checking the correct spelling in the currently opened documents. If spell checking is on, all wrongly spelled or unknown words are marked red (see also chapter 6.2.13 “The Text Tool”).

7.4.38 Vector/Fit in Vector Layer

Fit in Vector Layer creates a new rectangular vector layer with the size and position of the active layer. Without an active layer the vector layer gets the document size.

The fill color will be the foreground color and the line color will be transparent.

This function is useful for various tasks, for example:

- For lossless image processing you can assign an adjustment to the vector layer making it an adjustment layer (see chapter 7.5.13).

- You can use the rectangle for coloring the background of a text layer.

7.4.39 Vector/Vector Outline

Vector Outline creates a filled vector layer base on the outline of the active layer and replaces the active layer with the new one. This allows the outline of a vector layer to be manually edited..

7.4.40 Vector/Optimize Vector Layer...

Use this function to optimize a vector layer.
PhotoLine tries to make some long lines and curves of many small line pieces.
You can setup the precision of the optimization.

7.4.41 Vector/Split Vector Layer

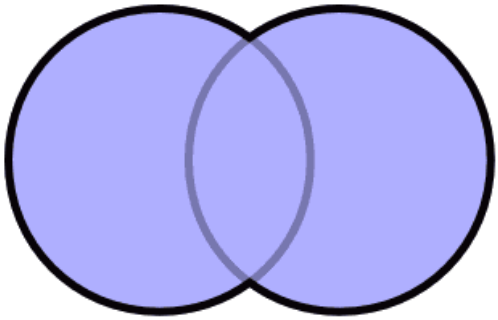
A vector layer can contain several subpaths (see chapter 2.2.6). This function splits a vector layer, so that every subpath is in a separate vector layer. You should do this, if a layer is too complex or a subpath should have a different attribute like a fill pattern.

7.4.42 Vector/Merge Marked Vector Layers

This function merges several vector layers to one. In order to do this you have to mark the vector layers in the Layer List (see chapter 4.7) and then call ***Merge Marked Vector Layers***. The result will be a vector layer containing the paths of all marked vector layers.
The resulting vector layer has the same attributes as the active layer. The attributes of the other layers are lost.

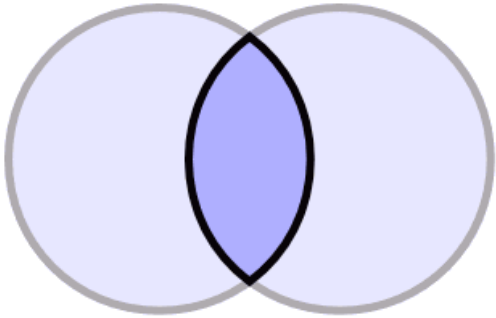
7.4.43 Vector/Union

Union combines one or several vector layers and creates path group (see chapter 2.3.8) containing all alyers. Contours in the inside will be removed.
An example with two circles will illustrate this. The original circles are shown with reduced intensity:



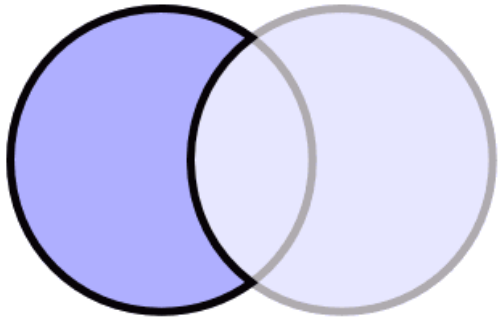
7.4.44 Vector/Intersection

Intersection creates a path group (see chapter 2.3.8) containing the intersecting area of all marked vector layers.
An example with two circles will illustrate this. The original circles are shown with reduced intensity:



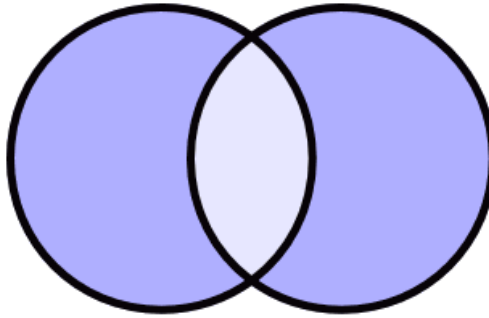
7.4.45 Vector/Difference

Difference uses the active vector layer and subtracts all other marked vector layers from it (for more information about active and marked layers see chapter 4.7).
An example with two circles will illustrate this. The original circles are shown with reduced intensity:



7.4.46 Vector/Exclusion (XOR)

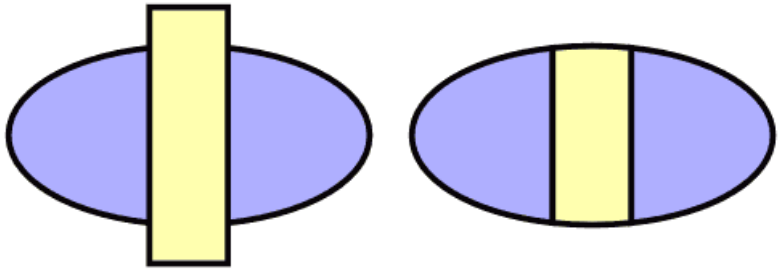
Based on the marked vector layers ***Exclusion (XOR)*** creates a path group (see chapter 2.3.8) containing the areas, that are only part of one of the layers.
An example with two circles will illustrate this. The original circles are shown with reduced intensity:



7.4.47 Vector/Cut

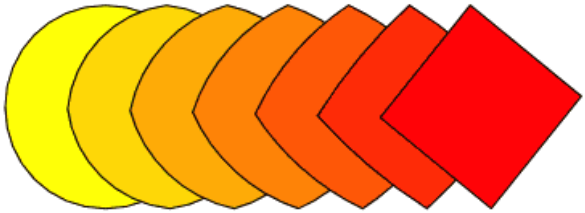
Cut is usually applied to two marked vector layers. The selected layer will be cut by the second marked layer and the result will be two new vector layers: The first one will consist of all parts of the selected layer lying outside the cut layer, and the second one will contain everything inside the cut layer.

In the following example the blue ellipse will be cut by the yellow rectangle:



7.4.48 Vector/Morph Marked Vector Layers

Morph Marked Vector Layers is used to create transitional steps for 2 marked vector layers. The number of steps is adjustable:



Aside from the shape the following properties are blended, too:

- the fill and the line color
- the line width
- the layer intensity

Morph Marked Vector Layers is a dynamic effect. This means, that the marked layers are not modified and can be edited afterwards like before. The transitional steps are recalculated automatically after each modification. The number of steps can be edited afterwards, too.

You have to follow a few simple rules for correct usage:

- You have to mark exactly 2 vector layers (see also chapter 4.7).
- The vector layers must have an identical number of subpaths (see chapter 2.2.6).
- Patterns and textures can't be used as fill or line color.
- Line patterns are not allowed.

7.4.49 Image/JPEG Compression

Photo books are getting more and more popular. But there is one problem: the file size of a self-created photo book can be enormous. For example if you have a 30-sided photo book with two pictures on every page and each picture has only 4 megapixels, the needed memory is already (30 * 2 * 12 MB), all in all 720 MB.

In order to reduce this amount of data, there is ***JPEG Compression***. This function can be used to compress a single image layer by using the JEPG method. The resulting JPEG data will be attached to the layer (see also chapter 5.5 “Working With JPEG-Files”). If a document whose image layers have accompanied JPEG data is saved, the resulting file size is usually only a fraction of the normal file size.

7.4.50 Image/Extract Appended Image Data

If a JPEG file is loaded in PhotoLine, PhotoLine stores the original data along with the image layer (see chapter 5.5.2). With ***Extract Appended Image Data*** this data can be saved directly.

7.4.51 Image/Bring to Document Size

Bring to Document Size adjusts the size of an image layer to the size of the document. Therefore, after using this function the image will have the same size as the document.

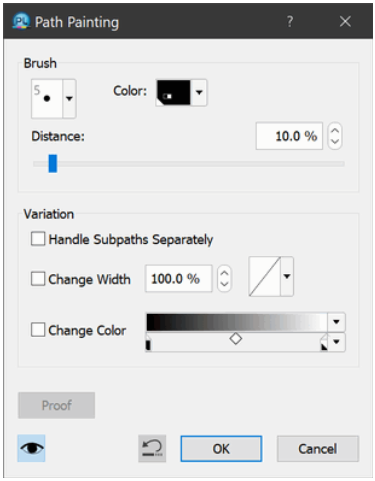
7.4.52 Image/Trim Image

Trim Image removes the transparent edge of an image and thus reduces its size.

7.4.53 Image/Straighten and Crop Image

If you are scanning a photo, it is often a bit tilted and placed in the middle of resulting image. ***Straighten and Crop Image*** will straighten the photo and will crop the edges afterwards.

7.4.54 Image/Path Painting



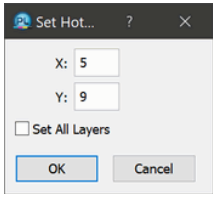
Path Painting allows to apply a painting tool along a vector path. It has a similar effect as using the tool manually, but the result is much more precise and can be modified by additional options.

Path Painting can only be used, if the active layer is a vector layer and its predecessor is an image.

Brush is the brush used by the tool. **Color** is the working color for the tool. **Distance** controls the distance between two applications of the tool. The default value of 10% ensures a continuous line.

By using **Variation** the tool settings can be modified along the path. In doing so a path with subpaths can be treated as a single long path or as several short paths. **Change Width** allows to change the brush size along the path. The text field is the end size of the brush relative to its starting size. The curve field allows the speed of modification. If the curve is used, at the beginning of the path the brush chosen above is used, in the middle of the path the end size is used and at the path end the starting brush is used again. With **Change Color** the color can be changed along the path. The colors used are given by a gradient control.

7.4.55 Image/Set Hotspot



If you want to use a picture as mouse cursor, you have to define the hotspot for this cursor. The hotspot controls, which position of the picture is used as mouse position. You can enter the hotspot via text field or by clicking in the picture.
If you select **Set For All Layers**, the hotspot will be set in all layers of an animated cursor. This way you don't have to manually switch through the layers and set them one after the other.

7.4.56 Image/Benchmark

This function allows to measure, how long the execution of an action (see chapter 4.27) lasts. This is useful, if you want to compare the performance of one computer with another.

7.4.57 Virtual Copy/Show Source Layer

This function can only be applied to virtual copies (see chapter 2.3.6). It makes the source of a virtual copy the active layer. If the source layer is on a different page, this page will be activated, too.

7.4.58 Virtual Copy/Create Real Layer

Create Real Layer converts a virtual copy (see chapter 2.3.6) into a real copy of its source layer.

7.4.59 Placeholder/Create From Layer

Create From Layer converts an arbitrary layer into a placeholder layer (chapter 2.3.7). This allows you to apply dynamic filters (chapter 2.10) to that layer.

7.4.60 Placeholder/Edit

Edit allows you to edit the content of a placeholder layer (chapter 2.3.7). PhotoLine will open a new document with the content of the placeholder layer. Saving this document updates the placeholder layer in the source document.
You can also edit a placeholder layer by using Extern Programs (chapter 7.10.1.45).

7.4.61 Placeholder/Embed

If a placeholder layer links to file, ***Embed*** can be used to embed the file data in the placeholder layer. The placeholder will no longer be dependent on an external file.

7.4.62 Placeholder/Export

If a placeholder layer has embedded data, you can export them as file by using ***Export***.

7.4.63 Alignment/Align To Pixels

The command ***Align To Pixels*** aligns the content of the selected layers to the pixel grid of the current document.
For groups the layers within the group will be aligned, too.
For vectors the single points of the vector layer might be modified, but only those that form a forizontal or vertical edge.
This command is similar to the layer attribute ***Pixel Snapping*** (see chapter 4.11) with the one difference, that this command modifies the layers permanently and isn't just an option that can be turned off later on.

7.4.64 Alignment/Left Align

This function aligns the left edge of the active layer to the next vertical guide line. If there is no vertical guide line, it will be aligned to the left edge of the document.

7.4.65 Alignment /Horizontal Center Align

This function places the active layer, so that its center lies on the next vertical guide line. If there is no vertical guide line, the layer will be placed at the center of the document.

7.4.66 Alignment /Right Align

This function aligns the right edge of the active layer to the next vertical guide line. If there is no vertical guide line, it will be aligned to the right edge of the document.

7.4.67 Alignment /Top Align

This function aligns the top edge of the active layer to the next horizontal guide line. If there is no horizontal guide line, it will be aligned to the top edge of the document.

7.4.68 Alignment /Vertical Center Align

This function places the active layer, so that its center lies on the next horizontal guide line. If there is no horizontal guide line, the layer will be placed at the center of the document.

7.4.69 Alignment /Bottom Align

This function aligns the bottom edge of the active layer to the next horizontal guide line. If there is no horizontal guide line, it will be aligned to the bottom edge of the document.

7.4.70 Alignment/Layer Align Left

This function aligns the marked layers (see chapter 4.7 and chapter 7.5.47) to the left edge of the active layer.

7.4.71 Alignment/Layer Align Hor. Center

This function aligns the marked layers (see chapter 4.7 and chapter 7.5.47) horizontally to the center of the active layer.

7.4.72 Alignment/Layer Align Right

This function aligns the marked layers (see chapter 4.7 and chapter 7.5.47) to the right edge of the active layer.

7.4.73 Alignment/Layer Align Top

This function aligns the marked layers (see chapter 4.7 and chapter 7.5.47) to the top edge of the active layer.

7.4.74 Alignment/Layer Align Ver. Center

This function aligns the marked layers (see chapter 4.7 and chapter 7.5.47) vertically to the center of the active layer.

7.4.75 Alignment/Layer Align Bottom

This function aligns the marked layers (see chapter 4.7 and chapter 7.5.47) to the bottom edge of the active layer.

7.4.76 Alignment/Layer Align Center

This function aligns all marked layers (see chapter 4.7 and chapter 7.5.47 and following) to the center of the active layer.

7.4.77 Alignment/Move Layer(s) to Right Border

This function aligns all marked layers (see chapter 4.7 and chapter 7.5.47 and following) horizontally next to each other at the right border of the active layer.

7.4.78 Alignment/Move Layer(s) to Left Border

This function aligns all marked layers (see chapter 4.7 and chapter 7.5.47 and following) horizontally next to each other at the left border of the active layer.

7.4.79 Alignment/Move Layer(s) to Bottom Border

This function aligns all marked layers (see chapter 4.7 and chapter 7.5.47 and following) vertically next to each other at the bottom border of the active layer.

7.4.80 Alignment/Move Layer(s) to Top Border

This function aligns all marked layers (see chapter 4.7 and chapter 7.5.47 and following) vertically next to each other at the top border of the active layer.

7.4.81 Alignment/Distribute Layers Horizontally

This function distributes all marked layers (see chapter 4.7 and chapter 7.5.47 and following) horizontally between the two outermost. Afterwards the centers of the layers will have an equal distance.

7.4.82 Alignment/Distribute Layers Vertically

This function distributes all marked layers (see chapter 4.7 and chapter 7.5.47 and following) vertically between the two outermost. Afterwards the centers of the layers will have an equal distance.

7.4.83 Alignment/Distribute Layers Equally Hor.

This function distributes all marked layers (see chapter 4.7 and chapter 7.5.47 and following) horizontally between the two outermost. Afterwards the distance between the layers will be equal.

7.4.84 Alignment/Distribute Layers Equally Vert.

This function distributes all marked layers (see chapter 4.7 and chapter 7.5.47 and following) vertically between the two outermost. Afterwards the distance between the layers will be equal.

7.4.85 Arrange/Bring to Front

Bring to Front tops the active layer. It will lie over all other layers.

7.4.86 Arrange/Bring Forward

Bring Forward moves the active layer one step forward. It will lie in front of the layer that was in front of it, when calling the function.

7.4.87 Arrange/Send Backward

Send Backward moves the active layer one step backward. It will lie behind the layer that was behind it, when calling the function.

7.4.88 Arrange/Send to Back

Send to Back moves the active layer backward as far as possible. In a document the layer will lie behind all other layers, in a picture the layer will lie directly above the background layer.

7.4.89 Barcode

The function ***Barcode*** allows to create the common types of barcodes and QR-Codes. Regularly used codes can be saved by using **Preset**.
Code Type shows the available barcode types. The content of the **Value** field in combination with the code type is shown in the preview.
Show Text controls, whether the value of the barcode is displayed below the code as text. **Position** and **Size** define where the barcode will be created. In order to set these values you can enter a rectangle in the document window with the mouse, too. **Font** is the font used for the text.
Important: Many code types have rules a valid code has to follow. Some of the codes must be granted by an organization or authority. Therefore, PhotoLine doesn't fully check whether the code is valid, but only realizes it as good as possible.

Special Case: QR-Code
QR-Codes are used more and more. They can contain arbitrary text, but by using special commands they can be used for special applications. This is

done with the buttons **V-Card** and **SMS**. They show a predefined input mask, whose content is translated to the corresponding command by PhotoLine.

Tip: If a QR-Code contains to much information, it can be read worse by the decoding device (usually a mobile phone). So it is better to constrain yourself to the really needed information.

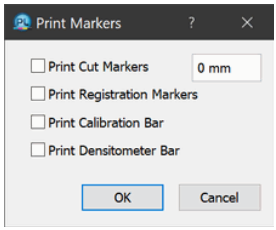
7.4.90 Text to Picture

Text to Picture displays information related to a picture. These information are read from the file as EXIF- or IPTC-data or they are common information like the file date or filename.

The subdialog **Text** defines what information and how they are displayed. The scheme of input is identical to the function ***Rename Images*** (see chapter 5.4.8).

Design controls, where the information are shown. Furthermore the text can get a colored background to make it more readable. The background can be semi-transparent, too.

7.4.91 Print Markers



Print Markers allows extended settings for printing, but which aren‘t necessary for standard printing.

Print Cut Markers shows additional strokes at the edge of the document to ease cutting the cutting by using a cutting machine. Because cutting often produces white lines at the edge, it is possible to move the stroke by using a text field.

If **Print Registration Markers** is turned on, at the 4 corners of the document small circles with a cross inside are printed. If you want to print

your document in a print shop, those markers allow to place the four color channels of the document (usually cyan, magenta, yellow and black) exactly above each other.

Print Calibration Bar prints an additional color bar containing the color red, green, blue, cyan, magenta, yellow and black.

Print Densitometer Bar prints a color bar containing various densities for each basic print color.

7.4.92 Create Multipage Document

Create Multipage Document combines all open pictures to a single document. Every picture will be placed on a separate page.

7.4.93 Create Print Document

The function ***Print Document*** creates a new document. There are three modes:

- Document Mode
  The currently opened documents will be inserted in the new document. If a document has more than one page, only the active page will be used.
- Page Mode
  The pages of the active document will be inserted in the new document.
- Layer Mode
  The layers of the active page will be inserted in the new document. You can use this to view a layer stack side by side.

Paper Size is the size of the resulting document.

There are several ways to control the size of a picture in the new document. **Screen Size** means, that every pixel of the picture will be as large as a pixel of the new document. If you choose **Original Size**, the picture will be scaled corresponding to its resolution (dpi-value). Last, but not least you can set a **fix size** for the pictures.

Place Images controls the placement of the pictures in the document. You can set the edges of the paper and the distance between the pictures.

If you choose **Fill Page**, the pictures are copied repeatedly into the new document, until the page is full.

If the active document has more than one page, **Page Mode** can be used to place all pages onto one.

7.4.94 Document Information

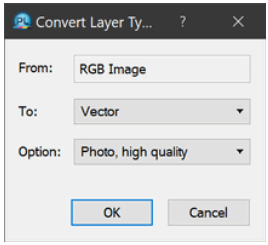
This function is used to inspect and edit IPTC-data (see chapter 2.14.1) contained in a document.
If the given file contained EXIF-data (see chapter 2.14.2), they can be inspected, too, but they cannot be edited.
Additionally the ***Document Information*** lists all fonts used in the active document.

7.5 The Layer Menu

7.5.1 New Layer

New Layer adds a new layer to the active document.

7.5.2 Convert Layer Type



This function allows to convert one layer kind into another. Following conversions are possible:

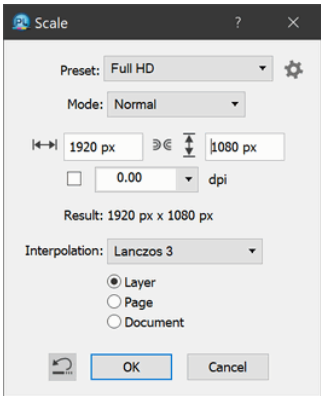
- Raster image to raster image, for example RGB image to gray image
- Raster image to bitmap, here you can setup a dither pattern
- Raster to vector image
- Vector image to raster image
- Text layer to vector layer
- Text layer to raster image
- Group to raster image

The text at the top shows the kind of the active layer (CMYK image, RGB image, gray image, bitmap, vector, group, text). The combo box below that allows to choose the destination kind. **Option** allows to control the conversion. If - for example - the destination kind is “Monochrome Picture”, you can define the kind of dithering.

The switch **Document** controls, whether only the active layer or the whole document will be converted.

Convert Layer Type can be used to reduce 16-bit-images to 8-bit or the other way round.

7.5.3 Scale Layer



Scaling has various different working modes:

- Normal
  Normal allows to control the destination width and height. Optionally the image resolution can be set in dpi.
- Percent
- Resolution
  This mode changes the resolution of an image. It modifies the number of pixels in an image, but its size in inches stays the same.
- Width
  Width is similar to Normal. The one difference is, that only the destination width is adjustable. The height will be calculated accordingly.

- Height
  Using Height only the destination height is entered. The width will be calculated accordingly.
- Fit
  With Fit you have to define a destination size. PhotoLine will scale the layer proportionally, so that it will fit into that destination size. This mode is used most in combination with Batch Convert.
- Formula
  Formula allows to enter formulas as destination size. The following variables are defined:
  w: current width
  h: current height
  d: current resolution in dpi
  You can use all formulas and expressions listed in “Unit Text Fields” (chapter 3.3.7). The formula mode is mostly used in combination with actions (see chapter 4.27).

There are 5 interpolation modes:

- Quick
  No interpolation is made, therefore no new pixel values are created. This mode is usually not suited for photos, but it is the quickest mode.
- Bilinear
  New pixels are created by linear interpolation.
- Bicubic
  Bicubic usually gives better results compared to bilinear. Large magnifications may be a bit unsharp.
- Lanczos 3
  Lanczos 3 is similar to bicubic, but it has additionally a light sharpness effect. Therefore, magnifications often look better.
- Lanczos 8
  The sharpening of Lanczos 8 is stronger than that of Lanczos 3.
- Liquid
  The mode Liquid is only available, if Layer is selected and the active layer is an image. Liquid will not scale the image equally, but instead it will try to keep the size of the important parts and to scale only the unimportant ones. You can create a selection to define the important

parts by yourself. The quality of Liquid scaling heavily depends on the scene of the photo.

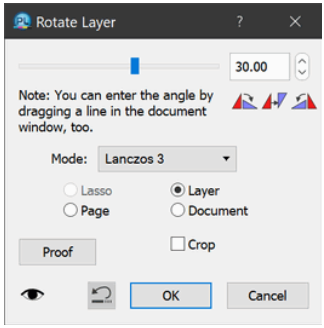
The radio buttons **Layer**, **Page** and **Document** select whether to scale the active layer, the active page or the whole document.

7.5.4 Change Layer Size

This function allows to change the size of an image layer. The image will not be scaled, but pixels will be added or removed at the edges. The alignment of the current layer content can be set via arrow-buttons. It is possible to place the image with the mouse, too.

- New Size
  You can enter the new size and position with text fields. If the active layer has a transparency channel, you can cut off the invisible parts with Crop Size.
- Resize
  Resize is similar to New Size, but you enter the size difference instead of the new size.
- Formula
  Formula allows to enter formulas as size and position. The following variables are defined:
  w: current width
  h: current height
  You can use all formulas and expressions listed in “Unit Text Fields” (chapter 3.3.7). The formula mode is mostly used in combination with actions (see chapter 4.27).

7.5.5 Rotate Layer



To perform a simple straighten of the image horizont or canting of an upright object, hold down the left button of your mouse and drag either a horizontal line or a vertical line in the document window to create the desired correction. PhotoLine automatically calculates the corresponding rotation angle.

For a more precise rotation, the angle of rotation can be entered via movement of the slider or entry of numbers in the text box.

The **Crop** option removes picture information outside the image boundary created by the rotation. If not checked, empty sections are filled with background color.

You can rotate the **Lasso**, the active **Layer**, the active **Page** or the whole **Document**. ***Rotate Layer*** offers the same working modes as ***Scale Layer*** (see chapter 7.5.3).

7.5.6 Rotate/Mirror Layer/Rotate right

These functions turns the active layer to the right.

If you select one of these menu entries while holding ***Shift***, all layers will be rotated.

7.5.7 Rotate/Mirror Layer/Rotate 180°

These functions rotates the active layer by 180°.

If you select one of these menu entries while holding ***Shift***, all layers will be rotated.

7.5.8 Rotate/Mirror Layer/Rotate left

These functions turns the active layer to the left.
If you select one of these menu entries while holding ***Shift***, all layers will be rotated.

7.5.9 Rotate/Mirror Layer/Flip Horizontal

This function flips the active layer horizontal.
If you select the menu entry while holding ***Shift***, all layers will be flipped.

7.5.10 Rotate/Mirror Layer/Flip Vertical

This function flips the active layer vertical.
If you select the menu entry while holding ***Shift***, all layers will be flipped.

7.5.11 New Adjustment Layer

The entries in ***New Adjustment Layer*** allow to create a new adjustment layer (see chapter 2.9). The new layer can be a gray image or a text layer.
There are the following works available:

- Curves (chapter 7.6.39)
- False Color (chapter 7.6.7)
- Levels (chapter 7.6.38)
- Hue/Saturation (chapter 7.6.4)
- Hue Editor (chapter 7.6.5)
- Color Balance (chapter 7.6.6)
- Replace Colors (chapter 7.6.3)
- Selective Color Correction (chapter 7.6.12)
- Threshold (chapter 7.6.13)
- Exposure (chapter 7.7.22)
- Color Lookup (chapter 7.6.11)
- Match Colors (chapter 7.6.14)
- Channel Mixer (chapter 7.6.41)
- Gray Mixer (chapter 7.6.42)
- Optimize HDR (chapter 7.6.43)
- Adaptive Sharpen (chapter 7.7.9)
- Unsharp Masking (chapter 7.7.8)

- Sharpen (chapter 7.7.7)
- Gaussian Blur (chapter 7.7.11)
- Adaptive Soften (chapter 7.7.12)
- Soften (chapter 7.7.10)
- Motion Blur (chapter 7.7.13)
- Wipe Effect (chapter 7.7.19)
- Median (chapter 7.7.48)
- High Pass (chapter 7.7.45)
- Minimum (chapter 7.7.46)
- Minimum Round (chapter 7.7.45)
- Maximum (chapter 7.7.49)
- Maximum Round(chapter 7.7.50)
- Vertical Edge (chapter 7.7.43)
- Horizontal Edge(chapter 7.7.43)
- Outline Filter (chapter 7.7.44)
- Relief (chapter 7.8.21)
- Sponge (chapter 7.7.27)
- Roughen (chapter 7.7.29)
- Grain (chapter 7.7.30)
- Remove Dirt (chapter 7.7.26)
- Remove Dust/Scratches (chapter 7.7.24)
- Custom (chapter 7.8.8)
- Perturbation (chapter 7.8.11)
- Clouds (chapter 7.8.10)
- Rasterize Image (chapter 7.8.12)
- Light/Shadow (chapter 7.7.31)
- Color Temperature (chapter 7.7.33)
- Color Correction (chapter 7.7.34)
- Chromatic Aberration (chapter 7.7.40)
- Correct Highlights (chapter 7.5.12)
- Denoise (chapter 7.7.42)
- White Point (chapter 7.7.32)

7.5.12 New Adjustment Layer/Correct Highlights

Correct Highlights is mainly used for editing raw files which where made using a digital camera. These raw files often have a magenta tint at their

brightest parts. ***Correct Highlights*** removes this tint from all parts of the image exceeding a certain brightness.

7.5.13 Modify Adjustment Layer

This function assigns a work to the active layer and this way makes the layer an adjustment layer (see chapter 2.9). If the layer is already an adjustment layer, the current work settings can be edited. There are the same works available as in ***New Adjustment Layer*** (see chapter 7.5.11).

7.5.14 Layer Mask/Convert for Previous

Convert for Previous transforms the current layer into a layer mask (see chapter 2.8) of its predecessor. Image layers will be converted to gray, groups, text and vector layers will stay unchanged.

7.5.15 Layer Mask/Create

Create creates a layer mask (see chapter 2.8) connected to the active image layer. After creation the image layer will still be completely visible. By painting with black color image parts can be made transparent, by painting with white the image will become opaque again.

7.5.16 Layer Mask/Apply

If the active layer is a layer mask (see chapter 2.8), the layer mask can be applied. By applying, it will be transferred to the alpha channel of the connected image layer and will be deleted afterwards. The appearance of the image layer will not change.

7.5.17 Layer Mask/Create from Alpha

If an image layer already has an alpha channel, this alpha channel can be used to create a layer mask (see chapter 2.8). After creation of the layer mask the alpha channel will be removed.

7.5.18 Layer Mask/Create from Mask

If an image layer has a mask, the mask can be used to create a layer mask (see chapter 2.8). After creation of the layer mask the mask will be removed.

7.5.19 Layer Mask/Apply to Mask

If the active layer is a layer mask (see chapter 2.8), an ordinary mask can be created from this layer mask. The layer mask will stay unchanged.
In combination with ***Create from Mask*** layer masks can be "abused" to store several layers for an image layer.

7.5.20 Layer Mask/Layer Mask

Layer Mask indicates whether the current layer is a layer mask (see chapter 2.8). Furthermore a layer can be made a layer mask by using this function (only if the layer was already a layer mask) or the layer mask state can be cancelled.

7.5.21 Clipping Layer/Clip Previous

Clip Previous converts a layer to clipping layer (see chapter 2.7) or turns this feature off again. Pay attention: an image layer, which is made a clipping layer, is automatically converted to gray.
The same functionality is accessible through the layer list (see chapter 4.7).

7.5.22 Clipping Layer/Clipping Width

If a layer is a clipping layer (see chapter 2.7), the edge of this layer can be smoothed by using ***Clipping Width***. This way rough edges can be reduced when using clipping.
The same function can be accessed by using the Layer Attributes dialog (see chapter 4.11).

7.5.23 Clipping Layer/Delete Clipped Layers

When the command is applied to a clipping layer, all layers outside the clipping layer are deleted. If the clipping layer is a rectangle, the path of affected vector layers is also clipped.

7.5.24 Merge Down

The selected layers are merged with the layer before them. The result will always be an image layer. After that all participating layers will be deleted.

7.5.25 Flatten Image

Flatten Image merges all layers of one document into an image layer and replaces the layers with the result.

7.5.26 Merge Layers

Merge Layers converts the selected layers into an image layer.

7.5.27 Fix Layer

Fix Layer removes all special attributes of a layer and sets them into the layer. Special attributes are layer styles, rotations, scalings and so on.
Fix Layer tries to make the smallest changes possible. If there is - for example - a scaled and rotated vector layer, the scaling and the rotation will be calculated into the layer. The result will still be a vector layer. But if the vector layer owns a layer style (for example a shadow), the vector layer will be converted into an image layer containing this shadow. Similar is the effect if applied to a text layer: the scaling of a scaled text layer will be removed and the font size and the character width will be adjusted appropriately.
If you hold ***Shift*** while calling this function, the layer style will be ignored. Only an existing scaling or rotation will be calculated into the layer. The layer style is left untouched.

7.5.28 Display/Color Filter

Color Filter controls the visibility of a layer on a per pixel base.
With **Layer** you can define which color values a layer pixel must have in order to be visible, and with **Background** you define which color values a background pixel must have, so that the corresponding layer pixel is visible.
There are 3 possible color modes to lay down the visible color ranges:

- the color mode of the given picture
  With Layer this is the color mode of the layer and with Background the color mode of the document. If the color mode has more than one channels, every channel can be used for setting the color range.
- Gray
  There is a single channel, that corresponds to the brightness of the pixels.
- HIS
  There are the channels hue, intensity and saturation

If you apply ***Fix Layer*** (see chapter 7.5.27) to a layer with a color filter, the color filter will be converted to a layer mask (see chapter 2.8).

7.5.29 Display/Show All Layers

Show All Layers makes all layers visible (see chapter 4.7).

7.5.30 Display/Show Only Active Layer

Show Only Active Layer hides all layers (see chapter 4.7) but the active. This is useful if you want to do some detail work on the active layer, without being disturbed by other layers.

7.5.31 Display/Single Step

Single Step is a display mode designed for animations. Turning it on only the active layer is visible. Activating another layer automatically hides the last one. This way - especially in combination with ***Activate Previous Layer*** (***Ctrl+Shift+Tab*** on Windows and ***Command+Shift+Tab*** on macOS) and ***Activate Next Layer*** (***Ctrl+Tab*** on Windows and ***Command+Tab*** on macOS) - it is possible to switch very fast through all steps of an animation and view them.

7.5.32 Display/Show Layer

Show Layer can be used to hide a layer or to make it visible again.
The same functionality is accessible through the layer list (see chapter 4.7).

7.5.33 Display/Print Layer

Print Layer controls whether a layer is printed. Irrespective of this setting only layers, that are shown onscreen, are printed.

7.5.34 Navigation/Activate Last Layer

This function activates the last layer. You should use this function in combination with actions, in order to activate other layers.

7.5.35 Navigation/Activate First Layer

This function activates the first layer. You should use this function in combination with actions, in order to activate other layers.

7.5.36 Navigation /Activate Next Layer

This function activates the layer after the active layer. You should use this function in combination with actions, in order to activate other layers.

7.5.37 Navigation/Activate Previous Layer

This function activates the layer before the active layer. You should use this function in combination with actions, in order to activate other layers.

7.5.38 Management/Load Layer

This function loads one or several picture files. These files will be inserted in the active document as layers. For example it is possible to load the previously created animation steps of an animated GIF at once.

7.5.39 Management/Save Layer

This function saves the active layer.

7.5.40 Management/Delete Layer

Delete Layer deletes the active layer. There will be no further request.

7.5.41 Management/Duplicate Layer

Duplicate Layer copies the active layer and inserts the copy in front of it.

7.5.42 Management/Duplicate Layer Virtually

Duplicate Layer Virtually creates a virtual copy (see chapter 2.3.6) of the active layer and inserts the copy in front of it.

7.5.43 Management/Enter Group

If you want to edit the layers inside a group, you have to enter the group with this function. If the active tool is the layer tool (see chapter 6.2.1), you can enter a group by typing ***Return*** or by double-clicking the group.

7.5.44 Management/Leave Group

If you are inside a group and want back again, you can leave the group with this function. If the active tool is the layer tool (see chapter 6.2.1), you can leave a group by clicking on a position without a layer of that group.

7.5.45 Management/Group Marked Layers

Group Marked Layers creates a group containing all layers, which have been marked in the Layer List (see chapter 4.7).

7.5.46 Management/Ungroup

Ungroup is the counter-part of ***Group Marked Layers***. It creates separate layers from the content of a group.

7.5.47 Management/Mark All Layers

Mark All Layers sets the mark for all layers (see chapter 4.7). This way you can group all layers quite fast.

7.5.48 Management/Unmark All Layers

This function removes the mark for all layers (see chapter 4.7).

7.5.49 Management/Add Next Layer To Selection

This function activates the next layer and adds it to the selected layers (see chapter 4.7). This function can be used in actions to mark and group layers.

7.5.50 Management/Copy Group Reverse

Copy Group Reverse copies the active group, but the order of the layers inside the group will be reversed.
You can use this function to create endless animations. First you create the animation steps for the first half of the animation, then you group these layers, copy them reverse and dissolve your groups. Your animation is finished.
Note that there is no function ***Copy Group***, because you can do this job with ***Copy Active Layer***.

7.5.51 Management/Copy Layer Style(s)

You can use ***Copy Layer Style(s)*** to copy the layer styles (see chapter 7.8.40) of the active layer in order to transfer it to other layers or to insert it into the list of Simple Layer Styles (see chapter 4.20).

7.5.52 Management/Paste Layer Style(s)

Paste Layer Style(s) assigns the previously copied layer styles (see chapter 7.5.51) to the marked layers.

7.5.53 Management/Copy Layer Attributes

Copy Layer Attributes copies the attributes of the active layer. The attributes contain:

- the layer styles (see chapter 2.5 and chapter 7.8.40)
- the layer distortions (see chapter 2.6 and chapter 7.8.34)
- the fill and a line colors and line styles

After copying you can insert the layer attributes into the list of Extended Layer Styles (see chapter 4.20) or assign them to the marked layers.

7.5.54 Management/Paste Layer Attributes

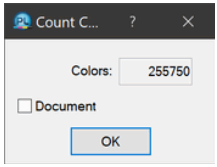
Paste Layer Attributes assigns the previously copied layer attributes (see chapter 7.5.53) to the marked layers.

7.6 The Tool Menu

7.6.1 Color/Invert

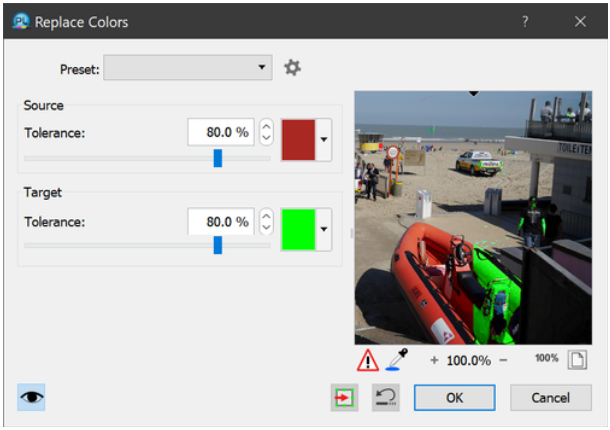
This function inverts the active image layer.

7.6.2 Color/Count Colors



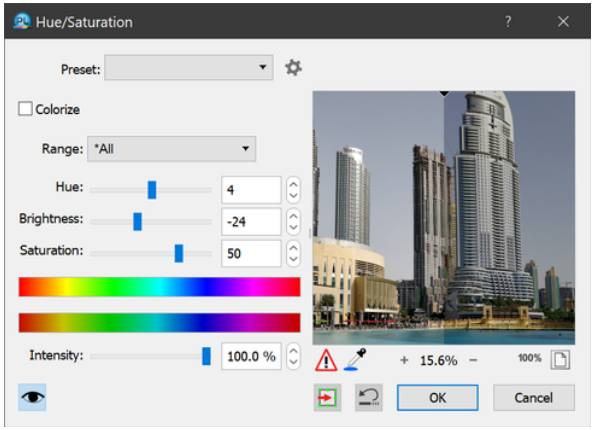
This function counts the number of colors used in an image layer. If Document is on, the colors in all image layers of the document are counted. You use this function, if you want to save an image in a file format supporting color palettes (BMP, PNG, GIF). Palettized images should normally use 256 colors or less. If you save an image with 256 colors at the most in one of those formats, the resulting file will be remarkable smaller.

7.6.3 Color/Replace Colors



Replace Colors allows you to color parts of an image. At the top of the dialog there is a color field that defines the **Source Color**. This is the color that will be replaced. The color can be changed be double-clicking or by picking a color from the image with the mouse.
The slider beside controls the tolerance, how different a color may be to the source color to be still replaced.
The color field below shows the destination color. It can be changed similar to the source color. But if you want to pick a color from the image, you have to hold ***Shift***. You can set the tolerance for the destination color, too.

7.6.4 Color/Hue/Saturation



You can adjust the **Hue**, **Brightness** and **Saturation** of the basic colors or of all colors.

Using **Range** you can choose the color range to edit. The two color bars allow to adjust this range.

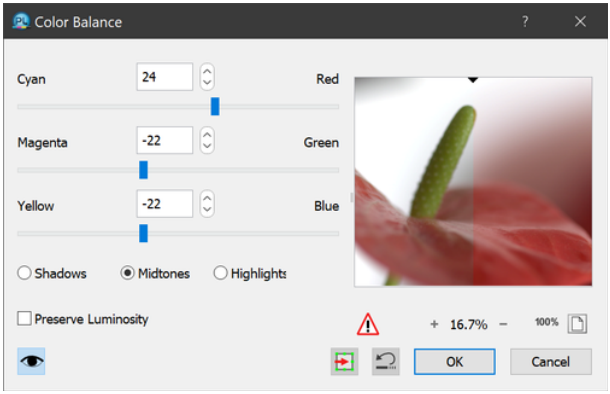
You can use this function to remove an existing, but wrong color cast. You can use it for special color effects, too.

If you choose **Colorize**, the whole picture will be colorized with the colors, which you have set with **Hue**.

7.6.5 Color/Hue Editor

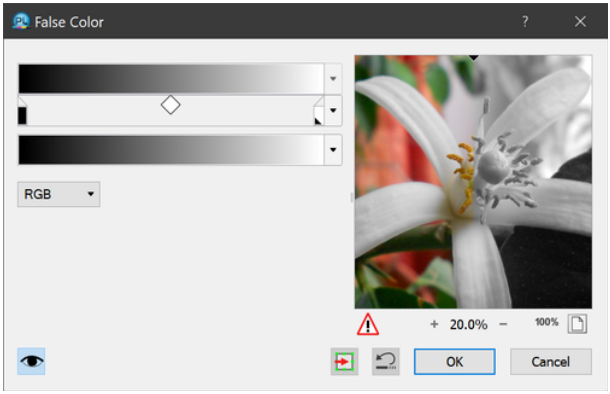
Hue Editor is a more flexible version of Hue/Saturation (see chapter 7.6.4). It modifies hue, saturation and brightness using curves.

7.6.6 Color/Color Balance



This function allows removing a color shade from a picture.
You can change the shade with the sliders. The radio buttons **Shadow**, **Midtones** and **Highlights** control, what color parts to change.
The switch **Preserve Luminosity** ensures to keep the brightness of the image constant.

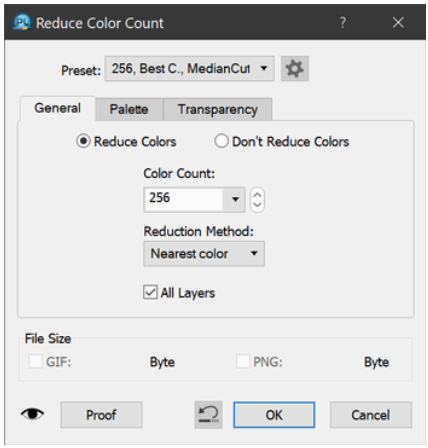
7.6.7 Color/False Color



This function allows colorizing a gray image.
You can assign a color gradient to a gray bar. The color fields lying in between control the color gradient. You can drag the color fields freely and

change the color gradient this way. If you drag a color field to the top or bottom, it will be deleted. If you click beside a color field, a new one will be created. By double clicking a color field, you can change its color.
The combo box below allows choosing a color space. The HIS color space usually creates more colorful gradients.

7.6.8 Color/Reduce Colors



Reduce Colors reduces the number of colors used in an image (see chapter 5.7.2).
The resulting number of colors can be one of the following: 64k, 32k, 256, 128, 64, 32, 16, 8, 4 and 2. With more then 1024 colors PhotoLine does not calculate a color palette. Instead it is reducing the number of bits used per color channel. With 65536 colors the RGB-channels are using 5/6/5 bits, and with 32768 colors they are using 5/5/5 bits.
Of course there is no reason to reduce a bitmap, because a bitmap contains only two colors and fewer colors are not possible.
Color reducing is mostly used by saving images for web use. But it is a useful tool for reducing file sizes, too.
The combo box **Color Count** controls the resulting number of colors.
Reduction Method allows choosing between **Nearest Color**, **Error Diffusion** and different dither methods.

Nearest Color replaces a color with that color from a given palette that looks most alike.

Error Diffusion tries to reproduce the image by mixing the colors of the color palette.

You can choose between different color palettes: **Optimized Median Cut**, **Optimized Octree**, **Standard** and **Loaded**.

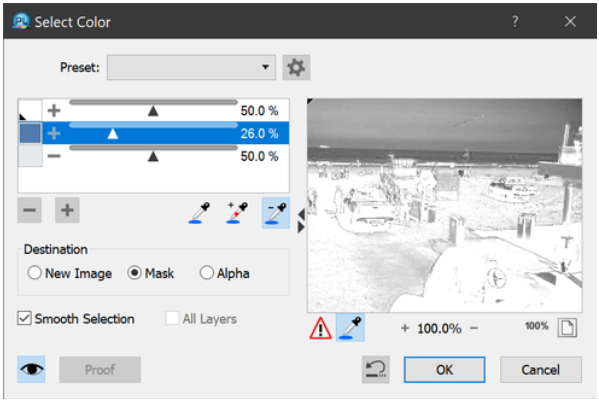
Standard is the color palette used by Windows and most Internet browsers.

Optimized Median Cut and **Optimized Octree** are creating a color palette from the colors used in the image. Depending on the image one or the other produces the better result.

Loaded uses the palette, that is shown in the color list.

You can load and save a color palette with **File**.

7.6.9 Color/Select Colors



This function selects the area occupied by one or more given colors. For example it is possible to select all red tones.

In the preview you can see the currently selected area.

Tolerance controls, how generous PhotoLine is, when selecting.

You can choose a color with the color picker. The color picker “+“ adds another color to the selection, the color picker “-” removes a color.

There are three options, what should be done with the selection:

- You can create a new image.
- You can create a lasso/mask.
- You can create an alpha channel (transparency).

Selecting **Smooth Selection** creates more than 2 values (black and white) in the destination depending on the similarity to the selected color.

If the destination is **Alpha**, turning on **All Layers** applies the current settings to all image layers of the active group.

7.6.10 Color/Color To Transparency

Color To Transparency creates transparency for an image based on a predefined color. It also removes this color from semi-transparent areas, so that the result can be better placed on a different background.

- Simple Calculation
  Simple Calculation is mainly intended for images on a very homogeneous background, usually white or black. If Filter Saturation is active, the difference between the saturation of the color and the image will influence the result.
- Color Similarity
  Color Similarity is used, if the background color has larger differences. This is the case e.g. with typical greenscreen shots. Hue Tolerance determines how strong the color tone of the image may deviate from the set color. In addition, the effect of differences in saturation and in brightness is adjustable.

The histogram shows the distribution of the calculated transparency. It can also be used to improve the result.

7.6.11 Color/Color Lookup

Color Lookup modifies the colors of an image by using 3-dimensional color tables.

Its dialog offers a popup list that shows the installed color tables. On the one hand these are the abstract color profiles that are installed in the OS and on the other hand they are:

- color profiles
- files in the 3DL and Cube file format
- HaldCLUTs in the PNG and TIFF file format

that are found in the “ColorLookup” subfolder inside your settings folder (chapter 1.6)
The **Load** buttons loads a file in one these file formats.

7.6.12 Color/Selective Color Correction

Selective Color Correction is used for adjusting colors in an image. It originally comes from the prepress industry and therefore the correction is limited to the printing colors cyan, magenta, yellow and black. **Colors** controls which colors will be corrected. You can modify several colors without leaving the dialog.

7.6.13 Color/Threshold

The function ***Threshold*** converts an image to pure black and white. You can define a threshold value, and the parts of the image brighter than that threshold will become white, and the rest black.

7.6.14 Color/Match Colors

You can use ***Match Colors*** to adjust the color gamut of an image to a source image.
If there is a mask for the active layer, it can be deactivated via **Use Mask**.
Brightness and **Color** control the intensity of the adjustment. If both are 0%, the target image is not changed.
If **Destination from Selection only** is active, the color gamut of the target image is determined only from the areas selected by the mask/lasso.
Source is used to specify the source image. Again, you determine with **From Selection only** that the color gamut is calculated only from the selected areas. Use **Document** to select the document of the source image. There are all open documents available. **Layer** controls the source image more finely. If a document contains more than one layer, the overall composition is used with **All Layers**. If the target image is part of the selected document, you can choose **Below Active** for the underlying layers. Apart from that, there are the image layers of the source document.

7.6.15 Color/Set Color Profile

PhotoLine can assign an ICC color profile (see chapter 2.12) to layers, pages and whole documents. On displaying a layer on the screen the color profiles will be used according to the following rules:

- If the layer has an own profile, this one will be used.
- If the layer has no profile, the profile of the next group will be used which the layer is embedded in.
- If no group has a profile, the profile of the page will be used.
- If the page doesn't have a profile, the profile of the document will be used.

If your document is a picture (see chapter 2.11) the background layer cannot have a color profile on its own. Instead the profile will be assigned to the whole document. In the Attributes dialogs (see chapter 4.9, chapter 4.10 and chapter 4.11) you can inspect, whether a color profile is assigned to a layer, a page or a document. Here you can delete the color profile, too, so you don‘t have to always use ***Set Color Profile***.

By assigning a color profile the data of an image layer isn‘t changed, but they will be interpreted differently on displaying. Therefore, assigning a color profile can change the appearance of a layer significantly.

Depending on the selected profile, there is the option **Linear Brightness (Gamma 1.0)**. This is mostly used in combination with 32 bit images, because those images usually have a linear color space.

In addition to the effects above assigning a color profile to a document or page has one more important meaning. By assigning a color profile the working color space of a document/page is changed. Without color profile documents are working in RGB-mode. But after assigning a profile (i.e. a gray profile or a CMYK profile), the color space of the profile will be the color space of the document. This will influence many parts of PhotoLine:

- Adjustment layers offer the channels of the working color space for editing.
- The channel palette uses the working color space.
- If a document or a part of a document has to be rendered as image, this image will be created using the working color space. This affects normal working as well as saving.

7.6.16 Color/Convert With Color Profile

Convert With Color Profile can convert a single layer, a group, a page or a whole document to a different ICC color profile. This function changes the data of the layers. But nevertheless the appearance of the layers only changes, if the new color profile is not able to display all colors the old profile was able to.
Depending on the destination profile, there is the option **Linear Brightness (Gamma 1.0)**. This is mostly used in combination with 32 bit images, because those images usually have a linear color space.
You can use this function to convert a RGB image to CMYK and vice versa by using the appropriate color profiles, too.

7.6.17 Color/Export Color Profile

Export Color Profile saves the embedded color profile used for the active layer to a file. If there is no embedded color profile, the function is not available.

7.6.18 Mask/Delete Mask

This function deletes the current mask/lasso.
There will be no further request.
The memory occupied by the mask will be freed.

7.6.19 Mask/Invert Mask

This function inverts the current mask/lasso. The area previously protected will be freed and vice versa.

7.6.20 Mask/Mask from Alpha

This function converts the alpha channel of an image layer into a mask. If there was already a mask, it is replaced without further request.

7.6.21 Mask/Mask to Alpha

This function converts the current mask into an alpha channel. If there was already an alpha channel, it is replaced without further request.

7.6.22 Mask/Mask Add to Alpha

This function adds to the existing transparent areas the area of the mask.

7.6.23 Mask/Border Mask

This function replaces the current mask/lasso with its outline.
In its dialog you can enter the width of the outline.

7.6.24 Mask/Expand Mask

This function expands the current mask/lasso.
In its dialog you can enter, how much the mask should be enlarged.

7.6.25 Mask/Contract Mask

This function contracts the current mask/lasso.
In its dialog you can enter, how much the mask should be contracted.

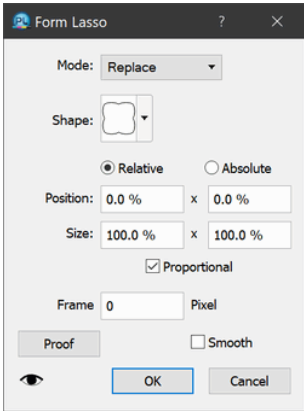
7.6.26 Mask/Load Mask...

This function loads a mask for the active image layer.
If there was already a mask, it is replaced. You can load only gray images as mask.

7.6.27 Mask/Save Mask...

This function saves the current mask.
The result will always be a gray image.

7.6.28 Lasso/Form Lasso



Form Lasso can be called by double-clicking Rectangle Lasso or ***Circle Lasso*** (see chapter 6.2.21).
It is used to create a new lasso or to modify an existing one. **Mode**: is the working mode: **Replace** replaces the current lasso, **Add** adds the new lasso to the current one and **Remove** subtracts it.
Shape: is the shape of the new lasso.
Relative and **Absolute** define whether **Position** and **Size** are relative to the size of the image or are given in a unit like mm or pixel.
Frame Width controls, how strong the edge of the lasso will be softened.

7.6.29 Lasso/Fill With Foreground

This function fills the content of the lasso, the selection, with the foreground color.

7.6.30 Lasso/Fill With Background

This function fills the content of the lasso, the selection, with the background color.

7.6.31 Lasso/Extract Selection

Extract Selection has 3 subtasks:

- You can smooth the edge of the mask. This doesn't use simple blurring, but instead filters the edge according to the content of the selection. Smoothing is mainly useful as a post-processing step after using the Border Matting tool (chapter 6.3.8).
- The edge of the selection always contains colors of the background, too. These are disturbing, if the selection is copied to another picture. **Remove Color Border** is removing these background colors.
- The result of the ***Extract Selection*** can be placed on the clipboard or a new layer or document can be created. If you didn't activate **Remove Color Border**, you can replace the active mask, too.

In order to inspect the impact of the current settings better, you can define a background color for the dialog preview.

7.6.32 Lasso/Redo Last Lasso

If you have lost your lasso/mask by applying an operation (for example “Edit > Cut”), you can restore it with ***Redo Last Lasso***.

7.6.33 Lasso/Crop

This function converts the content of a lasso into an image layer. The active image layer will be replaced by the result. This function can also be reached as a shortcut by using the right click context menu.

7.6.34 Lasso/Convert Layer to Lasso

This function converts a layer into a lasso.

7.6.35 Lasso/Convert Lasso to Layer

This function converts a lasso into a layer..

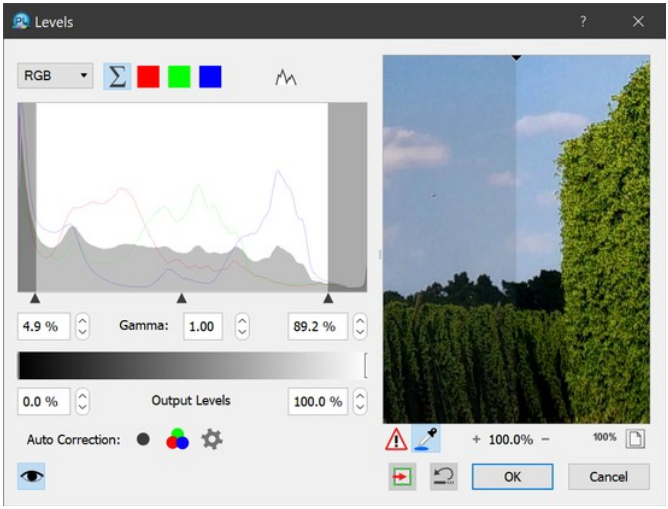
7.6.36 Lasso/Convert Selection to Layer

This function converts the selection into an image layer. If there is no selection, the copy of the active image layer is created.

7.6.37 Lasso/Convert To Clipping Layer

Convert To Clipping Layer converts a lasso to a clipping layer (see chapter 2.7) and implicitly to a vector layer.

7.6.38 Levels



The histogram finds out, how often each component is found in an image. By equalizing the distribution of the components, an image with more contrast is created.

The dialog of the histogram can display different distributions. You can switch between hue, intensity and saturation.

Gamma controls whether the compensation happens linear or is strengthened or weakened.

The large curve is showing the distribution of the selected component. If you chose - for example - intensity, the left side corresponds to 0% (lowest intensity) and the right side with 100% (highest intensity). In the curve there are two green lines that can be dragged with the mouse. They are the source range and control, what range of the current distribution will be. The source range can be changed by the two text fields below the curve field, too.

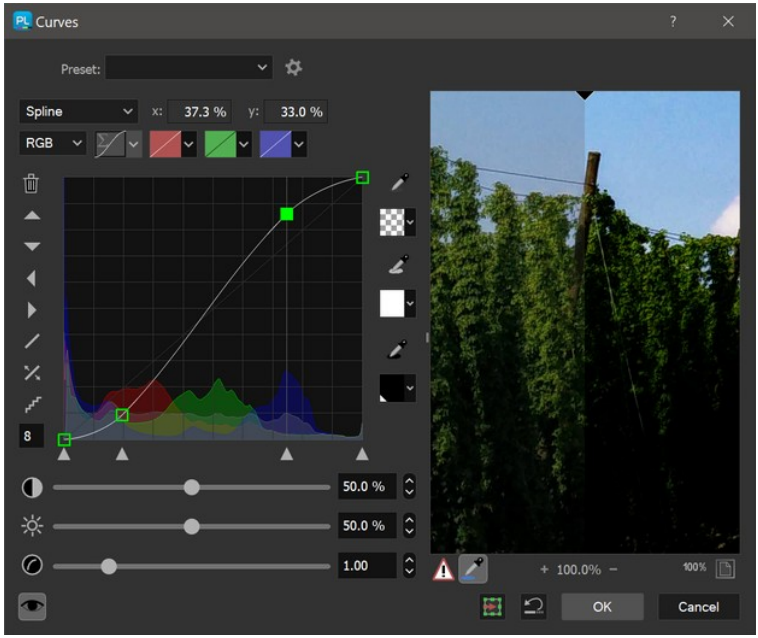
The small preview is showing the result of the compensation.

Auto Correction tries to find the optimal settings for the source range:

- The symbol ● adjusts the range of the current channel.
- The symbol adjusts the range of the single color channels.
- The gear symbol allows you to control the precision of the two auto modes. The values specify the percentage of the number of pixels that may be discarded when the limits are calculated automatically.

Output Levels controls the destination range.

7.6.39 Curves



The tool ***Curves*** adjusts all or individual color channels of an image.

The sliders **Brightness**, **Contrast** and **Gamma** allow you to change these attributes in a simple way.

The curve fields change the color channels in a more sophisticated way. The curve of the active curve field can be modified in the large curve editor (see also chapter 3.7). The first curve field affects all color channels, the other ones only the given channel. It is possible to drag a curve to another curve

field. Aside from the native color space of the image the channels can also be edited in Lab and HIS, if the image is RGB, CMYK or Lab.

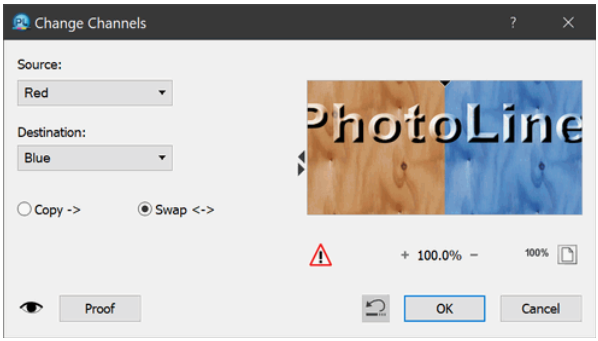
If the Shift key is pressed when moving a curve point, the point is only moved vertically, with the Alt key the point snaps to the grid if it is close to it.

By selecting the white, black or gray pipette you can set a white, black and gray point. If the gray pipette is active and you are clicking to a place in an image, that should be 50% gray, PhotoLine automatically calculates the corresponding curve. It is possible to do the same with black and white. You can reset the gray point by assigning a transparent color.

Picking a color in the document window or the dialog preview will create a corresponding point in the curve. Dragging edits the newly inserted point. Holding Ctrl (Windows) or Command (macOS) will create a new point in the curves of all color channels.

File saves and loads the current settings.

7.6.40 Change Channels



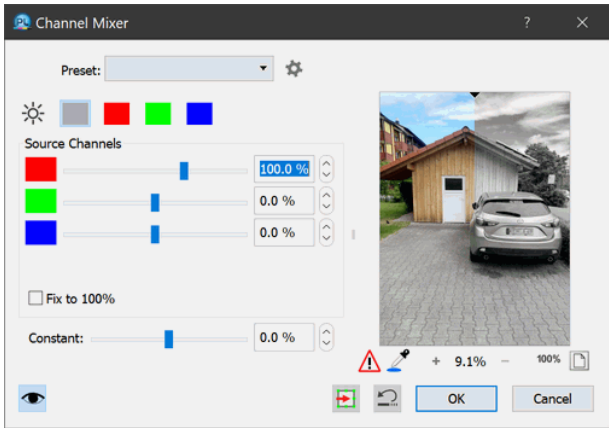
This function allows switching the color channels of an RGB or CMYK image

Source is the source channel. **Destination** is the destination channel.

You can select one of the color channels (Red/Green/Blue or Cyan/Magenta/Yellow/Black), **File** or **Clipboard**. Especially **Clipboard** is a fast way to make a color channel a layer or a mask of another layer.

File as source loads a channel and File as destination saves a channel. If you are loading a channel, it has to have the same size as the image.

7.6.41 Channel Mixer



The ***Channel Mixer*** replaces the single channels of an image by a combination of all channels.
Mainly the Channel Mixer is used to convert a color image to a gray image according to user-defined rules. In order to do this, the **Output Channel** has to be set to **All**. Now the Source Channels can be used to create the best mix. Usually the sum of the source channels should be 100%. If not, the value **Constant** can be used to correct the result.

7.6.42 The Gray Mixer

In PhotoLine there are many ways to convert an image to gray: Hue/Saturation, False Color, Convert Layer Type, the Channel Mixer, ...
The Gray Mixer is one more way: here you can assign a weight to every color. A value of 0% means, that this color has the standard weight. If every color is set to 0%, the result will look like ***Convert Layer Type***. The value of the Gray Mixer lies in strengthening or weakening single colors and thus raising or reducing their contrast in the resulting gray image.

7.6.43 Optimize HDR

HDR images can contain color values smaller than 0% and larger than 100%, but only the range from 0% to 100% is visible.
If you want to modify the visible range of an HDR image, the normal ***Levels*** function is not well-suited, because it will show you only the existing values from 0% to 100%, ***Optimize HDR*** instead will show you the full spectrum of values, so you can easily define the visible range. Additionally it will show you the minimum and maximum values of the image.
Often in HDR images, the brightness in the dark areas of the image is already correct and should not be changed by increasing the visible range. This is made possible by the **Protect Brightness** option. If it is activated, the brightness range defined by **Range** remains unchanged. Of course, the remaining brightnesses must then be compressed so that they still fit into the remaining range.

7.7 The Filter Menu

7.7.1 Basics

Most of the filters have the same dialog. You can set the **Size** of the filter matrix. This value controls the effect of the filter and is dependent of the desired effect.
With **Channels** you can choose the color space and the color channel, which you want to edit.
Some filters have a slider named **Threshold**. Most of the time it controls a limit, at which the filter starts working. The exact meaning is depending on the filter.
The slider **Intensity** controls the intensity of the filter. This way you can reduce the effect of a filter on an image very flexibly.
Further description on using the dialogs can be found in chapter 3.9 “The Parts of a Typical Dialog”.

7.7.2 Automatic/Correction Wizard

The Correction Wizard applies four enhancements, that are usually applied to digital photos. Each enhancement proposes appropriate settings which can be used most of the time but can be altered if needed. The four steps are:

- Automatic Whitepoint Correction
  By clicking in the image a custom whitepoint can be set. Active can be used to turn the Whitepoint Correction off.
- Automatic Brightness Correction
  Often digital photos don‘t contain the full dynamic range. Automatic Brightness Correction will fix this. Using 0% for White Clip and Black Clip keeps the image unchanged.
- Automatic Color Correction
  Pale colors can be made brighter with Automatic Color Correction.
- Unsharp Masking
  Often a little sharping enhances the look of an image significantly. This is accomplished by Unsharp Masking.

7.7.3 Automatic/Automatic Correction

The ***Automatic Correction*** applies the ***Whitepoint Correction*** (see chapter 7.7.4), the ***Brightness Correction*** (see chapter 7.7.5) and the ***Color Correction*** (see chapter 7.7.6) without any user interaction.

7.7.4 Automatic/Whitepoint Correction

Whitepoint Correction calculates a whitepoint based on the active image and applies it. Please note, that this automatic mode may calculate a wrong result on images with an extreme content, i.e. one color is absolutely dominating.

7.7.5 Automatic/Brightness Correction

Digital photos often contain no full black and white. ***Brightness Correction*** fixes this, so that the resulting image covers the full brightness range.

7.7.6 Automatic/Color Correction

If an image looks too pale, ***Color Correction*** will analyze the colors and - if needed - rise the saturation.

7.7.7 Sharpen/Sharpen

The ***Sharpen*** filter enhances the structure of an image resulting in more contrast. This way it is possible to emphasize the hair of someone or to make unsharp, nearly unrecognizable objects better clearer.
This way you can render prominent elements, which should attract the attention of the viewer.
This can happen in such a detailed way, so that only experienced people are able to recognize the manipulation.

7.7.8 Sharpen/Unsharp Masking

This filter works similar to the ***sharpen*** filter and therefore is used in the same fields. However, Unsharp Masking is much more sophisticated, as it works by first creating a special mask layer to limit the sharpening only to high contrast areas. Its results are of a higher quality but the speed is slower, too.
Small filter radii - often in combination with a high intensity - are used to increase the sharpness in an image.
Big filter radii in combination with a small intensity can be used to increase the local contrast in an image. The result is similar to “clarity” known from other software.

7.7.9 Sharpen/Adaptive Sharpen

Adaptive Sharpen is not sharpening an image homogeneously but is only increasing contrasts higher than a given limit. In contrast to Unsharp Masking it uses all color channels for calculating the contrast and is not filtering channel by channel. Usually ***Adaptive Sharpen*** gives best results with a threshold around 10%.

7.7.10 Blur/Soften

The ***Soften*** filter reduces the contrast of an image, so that the content of the image becomes blurred.
You can use this filter, if you want to attract the attention of the viewer to an object in the foreground. Therefore, you use the soften filter on the background, in order to make it less eye catching.
Another field of use is to create a certain romantic touch by softening images.

7.7.11 Blur/Gaussian Blur

This filter is similar to the ***soften*** filter. The difference is, that the softness is not created linearly, but bell-shaped.

7.7.12 Blur/Adaptive Soften

Adaptive Soften doesn't blur uniformly the whole picture but tries to retain high contrast. For controlling this behavior the value **Threshold** is used. The smaller the value the better edges are retained. Usually you get the best results by using a value in the range of 4 % to 10%.

7.7.13 Blur/Motion Blur

Motion Blur simulates moving objects. **Angle** is the direction of movement.0% corresponds to a horizontal movement to the right, 25% to vertical movement upwards and so on.

7.7.14 Blur/Radial Blur

Radial Blur blurs an image starting at a definable center. The center can be set by clicking in the preview or by clicking in the document window. **Intensity** is the strength of blurring.
There are 2 working modes:

- rotation mode
  Rotation around the center is simulated.
- zoom mode
  It is simulated, that the image approaches the spectator.

7.7.15 Blur/Calculate Average

Calculate Average calculates the average color value of an image. Afterwards it fills the image with that color value.

7.7.16 Blur/Variable Blur

Variable Blur is a specialized Version of the Gaussian Blur. While the Gaussian Blur applies the same filter radius to the whole image, the Variable Blur adjusts the radius based on the mask value (see chapter 2.4.1) at the current location. This can be used to simulate depth of field.
A mask value of 0 means a radius of 0. There is no filtering. A mask value of 255 means maximum filtering: the value entered in the dialog will be used. The calculation of the values in between depends on **Bias**. If the bias value is 0.50, the radius will be interpolated linearly.
Please note, that you shouldn't use Variable Blur, if you don't have a soft mask with values between 0 and 255. If you don't have a soft mask, Variable Blur is just a very slow Gaussian Blur.

7.7.17 Context Blur

Context Blur is - just as Adaptive Blur - an edge-preserving filter.
For this, the filter searches the edges in the image and blurs along the edges. In areas without edge it behaves like a standard blur.
Context Blur has the following settings:
• **Prefilter**
Before the edge detection, the image can optionally be blurred. This blurred image is just used for edge-detection and doesn’t influence the end-result by itself.
• **Postfilter**
The found edges can be blurred, too. Thus individual noise pixels do not affect the result.

• **Length**

Length is the size of the Context Blur, so it is roughly equivalent to the size of a normal blur.

• **Gaussian Weight**

By default Context Blur weightens all pixels the same. If **Gaussian Weight** is activated, nearby pixels are weighted stronger.

Depending on the settings, Context Blur has different fields of use:

• Prefilter small, Postfilter large, Length medium to large

With settings like these Context Blur behaves like an oil color filter.

• Prefilter 0, Postfilter small, Length small to medium, Gaussian Weight

With these settings, Context Blur can be used to reduce image noise or JPEG artifacts.

7.7.18 Blur/Shake

Shake creates an unsharp image similar to a shaken photo.

7.7.19 Blur/Wipe Effect

The ***Wipe Effect*** is similar to the ***Motion Blur***, but it blurs the image only in one direction and the original image data keep unmodified.

For the wipe effect, you will need an image with transparency, and only the transparent areas will be changed.

7.7.20 Quality/Dehaze

Dehaze removes stray light in photos caused by fog, haze or smog. As a result, the colors in the image are stronger, and a slight color cast may be removed.

Size is used to preserve the structures in the image, so that the local contrast keeps correct. Larger values weaken the effect of ***Dehaze***.

Haze Color sets the color of the stray light. If **Calculate Haze Color** is turned on, the haze color is determined automatically during the calculation of the filter.

As a result, ***Dehaze*** creates new layer including the improvement. So you can readjust the strength of the filter later on.

If ***Dehaze*** is applied to an adjustment layer, it won't edit the adjustment layer, but the background including the adjustment.

Final tips:

- A good starting value for Size is (width + height) / 100.
- If the effect of Dehaze is too strong, it helps to increase Size.
- If Dehaze creates a color cast, the haze color is wrong. You can change it manually. But often it helps to change Size, too.
- As Dehaze removes stray light, the resulting image is always darker. It may be necessary to increase the brightness later on.

7.7.21 Quality/Optimize Contrast

This function optimizes the contrast in that way, that the image will have the highest possible contrast. Using the function on normal images the effect may be to extreme. If it is so, you can reduce it by using **Intensity**.

You can also specify how the selection is handled. If **Equalize selected area only** is activated, the function only edits the selected area. Otherwise, it uses the selected area to determine how the image should be optimized and then edits the entire image.

7.7.22 Quality/Exposure

Exposure offers several ways to modify the brightness and contrast of images. You can do this with other functions, too. The main reason for the existence of ***Exposure*** is the ability to import PDF files containing exposure adjustment layers.

7.7.23 Quality/Vibrance

Vibrance edits the saturation of an image.

The **Dynamic** setting prefers less saturated colors and has less effect on reds than other hues. This keeps skin tones more natural in an image.

Saturation changes all colors in the same way.

Mode controls the used color model.

7.7.24 Quality/Remove Dust/Scratches

This filter is used to remove dust, scratches and fluff from a scanned image. In order to do this all small objects and fine structures are filtered.
Aside from the usual filter settings there is the value **Threshold**. This value controls, how strong a disturbance has to be in order to be removed. A value of 0 removes all disturbances and a value of 100 removes nothing.
You will get better results, if you are selecting the disturbances by a (soft) lasso before.

7.7.25 Quality/Descreen

This filter removes the patterns of an image that was scanned from a printed copy. It should be used with an increased scanning resolution, and then after ***Descreen***, the image should be scaled down to the desired size.

7.7.26 Quality/Remove Dirt

Remove Dirt is similar to the median filter. It removes disturbing pixels.

7.7.27 Quality/Sponge

The ***Sponge*** exchanges the pixels in an image with other pixels at a given distance.

7.7.28 Quality/Pixelize

Pixelize converts an image into small squares. You can control the size of the squares.

7.7.29 Quality/Roughen

Roughen is creating noise in an image. Some pixels are made lighter, some darker.
The ***Roughen*** filter is mainly used as a basis for creating structures.

7.7.30 Quality/Grain

Grain simulates film grain known from analogue photography.
By doing this uniform parts of an image are looking livelier. Blocky gradients can be enhanced, too.

7.7.31 Digital Camera/Light/Shadow

Light/Shadow is used for lightening dark areas (shadow) and darkening bright areas (lights), too.
Light and Shadow have both two settings: **Range** and **Gamma**. If the range of the shadow is increased, the shadows will become a bit brighter and more saturated. If the shadow gamma is increased, the shadows will get much brighter. The light values act correspondingly: Range decreases the brightness slightly and increases the saturation, and Gamma decreases the brightness a lot.
Usually it is a good approach to find a good value for **Gamma**, so that the image has the correct brightness. If the colors are too pale now, you can decrease **Gamma** a bit and increase **Range**.

7.7.32 Digital Camera/White Point

White Point allows to correct the white point of an image. This way the brightness and colors are corrected, too.
There are two different modes:

- Setup White Point
  In this case the color field defines the white point which can be read from the image by using the mouse, too. If there is no white in an image, Limit can be used to set the relative brightness of white to the given color.
  Automatic checks the image and calculates a white point and a limit from its content. Please note, that the automatic mode may calculate a wrong result on images with an extreme content, i.e. one color is absolutely dominating.
- Setup Gray Point
  If an image doesn‘t contain white, a gray point can be set, too. The white point will be extrapolated based on this gray point. Fix White Point

keeps the white and black in an image unchanged. In between the colors are modified accordingly to the gray point.

Gamma changes the brightness of the image.

7.7.33 Digital Camera/Color Temperature

This filter is used to modify the color temperature of an image. This is done by transforming the image from the white point of the source color temperature to the white point of the destination color temperature. There are two working modes:

- **Set Color Temperature** uses the value entered in the dialog as destination temperature. This mode is used to simulate special light conditions.
- **Correct Color Temperature** uses the given temperature as source temperature. This temperature should correspond to the light conditions the photo was taken.

7.7.34 Digital Camera/Color Correction

By using ***Color Correction*** you can correct the colors of an image. If **Adjust Whitepoint** is activated, bright colors will not be corrected. You can use the color picker to choose a color, that should become neutral: gray or white.

7.7.35 Digital Camera/Create HDR-Image

Some digital cameras are able to create a series of images every time a photo is taken. The photos differ by the exposure time. The created images are varying from under-exposed, which show the lights well, to normal-exposed to over-exposed, which shows the shadows well.

Create HDR-Image is used to create a detail-rich image from two or three source images out of such a series of images. First you have to load the source images by using **Add Image**. Additionally you can use the context menu of the Browse-window to open ***Create HDR-Image*** with the selected pictures.

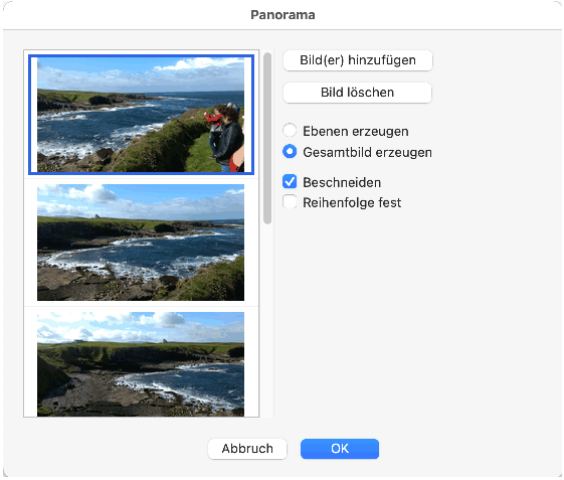
Sometimes the images you want to combine are not perfectly aligned. In this case you can use the alignment mode by clicking on ┼ under the preview. If the alignment mode is on, the preview will only show the image

selected in the image list at the left. Additionally there are a red and a green marker which you have to drag to the same location in every image. After leaving the alignment mode, PhotoLine will ensure, that the locations of the markers will lie above each other in the resulting image.

By leaving the dialog with **OK**, you will get an image with 16 bits per channel as a result. This picture can now be enhanced by using ***Light/Shadows*** (see chapter 7.7.31). Often it is useful to increase the contrast of the image afterwards with ***Curves*** (see chapter 7.6.39) or to increase the color saturation by using ***Hue/Saturation*** (see chapter 7.6.4), too.

7.7.36 Digital Camera/Stitch

With the Stitch function you can combine several photos to create a panoramic image.



With **Add Image(s)** you can add the images you want to stitch to the image list. Usually, however, it is easier if you select the necessary images in the Browse panel (chapter 5.4) and call the Stitch function via the context menu of Browse. Then the selected images are automatically taken over.

There are two basic working modes:

- Create Layers
  Here the individual images are only aligned against each other. As a result, you get a document that contains a layer for each of your images.

These layers are not blended, so you will usually see hard edges between them.

In this new document you can now either change the alignment or make other minor corrections. When you are done with this, a second call to Stitch will combine this layered image into one (blended) overall image.

- Create Sum Layer
  With **Create Sum Layer** you get a document with a single layer containing the panorama as a result.

There are only two options. **Crop** automatically removes gaps in the result caused by aligning the frames. If you have **Create Layers** enabled, this option is not available, as it would only unnecessarily restrict post-processing. **Sequence fixed** is a pure optimization. It indicates that the individual images are already specified in the order in which they must be assembled. This makes the calculation of the panorama a bit faster. In case of doubt, however, you should rather deactivate **Sequence fixed**.

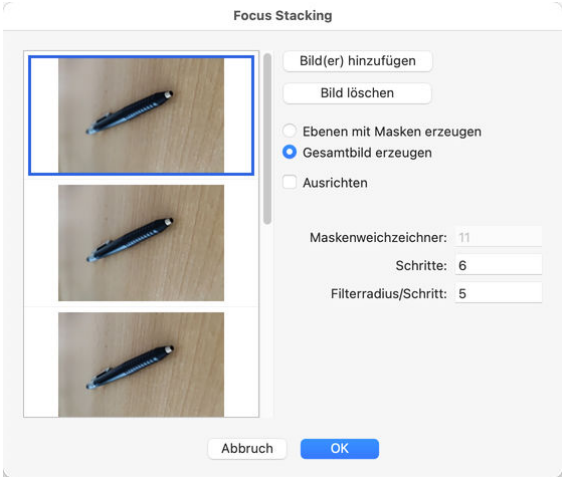
General notes:

- For a panorama, the source images should always overlap by about a third.
- When you take the source images, there should not be too much movement in the images, e.g. heavy road traffic or the wave motion of a sea are bad.

7.7.37 Digital Camera/Focus Stacking

Focus stacking is about increasing the sharpness of a subject that you want to photograph. Especially in macro photography, the problem arises that often only parts of a subject can be focused.

This is where Focus Stacking comes in. You take several pictures of the subject, shifting the focus point in each photo. Focus Stacking then calculates a sharper overall image from these images.



With **Add Image(s)** you can add the images you want to combine to the image list. Usually, however, it is easier if you select the necessary images in the Browse panel (chapter 5.4) and call the Focus Stacking via the context menu of Browse. Then the selected images are automatically taken over.

You can create two types of result:

- Create Layers with Masks
  Here a layer mask is created for each image and the result is the sum of the partial images. This has the advantage that you can edit the layer masks to improve the result.
- Create Sum Layer
  With **Create Sum Layer** the result is a single image. It usually gives a better result than creating layers with masks. However, if anything in the overall image has been merged incorrectly, the result is more difficult to post-process.

If you have taken your pictures without a tripod, you can align them with **Align**. However, this only works to a certain extent. Basically, it is better to take the individual images with a tripod.

The remaining settings control how the result is calculated.

- **Mask Blur** has a meaning only when layer masks are created. It determines how much the individual submasks blend into each other.

- The actual calculation of the result is done by frequency separation. For this purpose, the individual images are divided into frequency bands, and the information of the image that has the highest contrast in the respective band is then used in the overall result. **Steps** defines the number of frequency bands.
- **Filter Radius per Step** controls the width of the frequency bands.

Tip: Calculating a focus stack can take some time. If you want to carry out tests with different settings and especially if you have also activated **Align**, it makes sense to first work in the **Create Sum Layer** mode. This way you get a document that contains the aligned single images and at the top the sum image. If you now want to try out Focus Stacking with other values, you only have to delete the sum image and call the function again. Since the individual images are already aligned, you do not have to do this again for the subsequent calls.

7.7.38 Digital Camera/Lens Correction

Lens Correction can remove several types of distortion that may occur when taking a picture:

- Lens distortions

  PhotoLine uses Lensfun to correct lens distortions. Please note that Lensfun is only available in the 64-bit version of PhotoLine.

  PhotoLine always includes Lensfun's current lens data. If you still want to install newer data yourself, you can copy it into a subfolder named “lensfun” in the settings folder (see chapter 1.6). The next time PhotoLine is restarted, this lens data will be used.

  In the **Lensfun** subdialog the information about the current image is displayed when opening the dialog. If these are not correct, you can also correct them. The camera value is for your information only and does not have to be correct.

  Use the **Vignette** switch to automatically correct the vignetting in an image. However, the image must be in a linear color space (i.e. in a color space with a gamma value of 1.0). This applies e.g. to the background image of a raw image, but not to common JPEG images. If the image has no linear color space, you should switch off **Vignette** and correct the vignetting via the **Vignette** subdialog.

- Perspective
  Allows you to correct a perspective distortion in a photo.
- Vignette
  With this subdialog you can add vignetting to an image or remove it.
- Chromatic Aberration
  Chromatic Aberration offers the same functionality as the filter of the same name (chapter 7.7.40).

7.7.39 Digital Camera/Undistort Lens

Undistort Lens can be used to remove distortions from digital photos created by the vault of the camera lens.
In the 32-bit version of PhotoLine this function is the replacement for the Lensfun support in ***Lens Correction*** (chapter 7.7.38), which is only available in the 64-bit version.

7.7.40 Digital Camera/Chromatic Aberration

Chromatic aberration is an error caused by different refraction of different wavelengths of light. This way in digital images edges may become colored. This error is usually not visible in the center of an image but gets worse towards the edges.
The filter Chromatic Aberration is used to reduce this error or to remove it at all. This is done by moving the red and the blue channel relatively to the green channel. Normally the red channel has to be moved by a negative amount and the blue channel by a positive. The real value depends on the used lens and therefore on the used camera.
Width Compensation ensures, that the displacement at all edges is the same regardless of the distance to the center.

7.7.41 Digital Camera/Rectify

Rectify removes the perspective distortion in digital images. Often perspective distortion happens, if a picture of a large building is taken standing on the ground. The building will look like it was falling down.
In order to correct this distortion you have to define 4 edges, that should be straight in the resulting image.

7.7.42 Digital Camera/Denoise

Images are called noisy, if areas, that are single-colored in reality, contain many different color and intensity values. Usually you get noisy images, if you take a picture by using a digital camera and the light is to weak and/or the exposure time is to short.

The ***Denoise***-dialog has two parts:

- Color Noise
  The human eye is not very sensitive to color changes, therefore at first sight these settings don‘t show much effect. But if you set the filter size to high, the edges in your image may become gray.
- Intensity Noise
  Reduction of intensity noise is a two-sided sword: on the one side the noise will be reduced, but on the other side the image may become unsharp. In order to avoid this there is Threshold. Threshold defines the minimum value for reducing noise. 0% doesn‘t reduce anything. Usually this value should be - depending on the image - between 4% and 10%.

7.7.43 Stylize/Vertical Edge, Stylize/Horizontal Edge

These filters are searching for the vertical/horizontal edges in an image. Therefore, the result is somewhat similar to the ***outline filter***, but they enhance more the vertical/horizontal structures.

The result is an image, where every found edge is shown a colored line. You can use this filter to convert an image into a line drawing or as special effect.

7.7.44 Stylize/Outline Filter

The Outline filter extracts the edges of an image.

The result is an image, where every found edge is shown as colored line. You can use this filter to ***convert an image*** into a line drawing or as special effect.

7.7.45 Other/High Pass

The ***High Pass*** filter retains high contrasts, image parts with low contrast get gray.

If the result of the high pass filter is merged with the original image by using the blend mode “Overlay”, the edges of the original image will be enhanced.

7.7.46 Other/Minimum

The ***Minimum*** filter is used, similar to the median filter, to eliminate isolated, faulty pixels. Each pixel is replaced with its neighbor with the lowest gray or color value. The size of the neighborhood is defined by the filter size.
The minimum filter darkens the image a little bit.

7.7.47 Other/Minimum Round

Minimum Round is replacing - similar to the Minimum filter - every pixel with its neighbor having the lowest gray or color value. The size of the neighborhood is controlled by the filter size. The examined area is circular.

7.7.48 Other/Median

The ***Median*** filter is used to eliminate isolated, wrong pixels. This way it is possible to “clean” images that are a bit noisy. Colored areas become more uniform.

7.7.49 Other/Maximum

The ***Maximum*** filter is used, similar to the minimum filter, to eliminate isolated, faulty pixels. Each pixel is replaced with its neighbor with the highest gray or color value. The size of the neighborhood is defined by the filter size. The examined area is square.
The maximum filter lightens the image a little bit.

7.7.50 Other/Maximum Round

Maximum Round is replacing - similar to the Maximum filter - every pixel with its neighbor having the highest gray or color value. The size of the neighborhood is controlled by the filter size. The examined area is circular.
Maximum Round produces a result similar to the Bokeh effect known from photography.

7.7.51 Other/Move Layer Content

Move Layer Content is used to shift the content of an image layer. **Horizontal** and **Vertical** control, how far the content is shifted. Negative values are allowed, too.
Furthermore you can define, what to do with the area laid open. You can fill it with the background color, and you can fill it with the area, that was shifted out.
If **Preview** is turned on, you can see the preview in the document window.

7.7.52 Other/Deinterlace

Video images are made of two half images. The first consists of all odd lines, the second of all even lines. If an object is moving fast, the two images differ a lot and the result is unsharp. The Deinterlace filter reduces this effect by eliminating one of the two images.
Start offers the choice to use the odd or the even lines for the result. **Mode** defines how to replace the lines. You can **Double Lines**, which doubles the lines, that are kept, or you can **Interpolate Lines**, the merges two following lines of a half picture.

7.7.53 External Programs/Manage External Programs

The submenu ***External Programs*** allows you to edit the active layer or the active document outside of PhotoLine. ***Manage External Programs*** is a fast way to manage the list of available external programs (see chapter 7.10.1.44). If you did set **Ask** in that dialog for an application, on executing this application you have 3 choices:

- Edit Active Layer
  The active layer will be saved in a temporary file, and this temporary file will be opened with the external program. If you save the file, PhotoLine will automatically replace the active layer with its content and will delete the temporary file afterwards.
- Edit Document
  The whole document will be saved as a simple one-layer file. Aside from that, the behavior is the same as with Edit Active Layer.

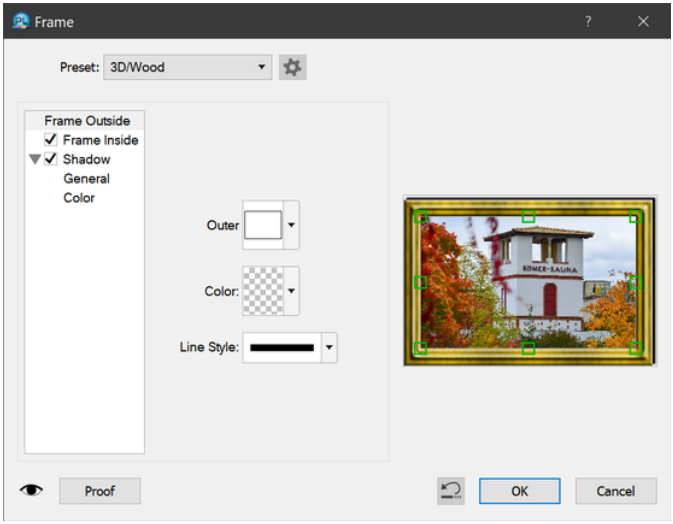
- Edit Original File
  Edit Original File is a bit different compared to the other options. The file will not be saved, instead the file, the current document is based on, will be transferred to the external program. Please note, that this file may have a different content than your document, if you already have edited your document.

7.7.54 Plug-In Modules

PhotoLine is able to load standard filter plug-ins.
In ***Options/Extended/Plug-In Paths*** you can set, whether the plug-ins should be loaded and the paths to those plug-ins.
If plug-ins are loaded at start-up, the Filter menu will contain additional submenus.

7.8 The Effects Menu

7.8.1 Frame



This function allows to create frames around images or documents.
A frame consists of 3 parts:

- the outer frame
  The outer frame is always present and cannot be turned off. It controls the basic shape of the frame.
- the inner frame
  The inner frame controls the inner shape of the frame. It can be turned off.
- the shadow
  The shadow is optional.

If there is only an outer frame, the image will be clipped by the outer frame. The result may look like this:

If there is an inner frame, too, the result is a frame with a surface. The inner frame may be different to the outer frame.

The surface of a frame like this can be filled with any color. Furthermore a layer style (see chapter 7.8.40) can be assigned.

The frame can be create to lie completely inside of the source image or lie outside.

A frame with both inside and outside frame may look like this:

Additionally a shadow can be created. By using a shadow the image appears to be floating above the background.

7.8.2 Effect Filters/Mosaic

Mosaic breaks up an image in many small pieces and illuminates these pieces afterwards in order to create an 3D-effect.
Cell controls the way, how the image is broken up. **Corners** is the number of corners per piece, **Size** is the length of an edge of a piece and **Variation** defines the regularity.
Width is the distance between two pieces and **Color** is the color used to fill this area.
The remaining subdialogs control the illumination.
Emboss defines the position of the light source, **Flattening** gives the height of a piece and **Strength** the overall intensity of the light source.
Light and **Shadow** control the corresponding color and intensity.
Special handles various settings. **Soften** reduces rough edges created by the illumination. **Border Form** controls the shape of the edge of a piece. If you select **Hide Original**, every piece of the mosaic will have a uniform color, if it is not selected, the original image will shine through. **Soft Light** uses an alternative way of illumination, that achieves sometimes better results.

7.8.3 Effect Filters/Lightning

Lightning creates a lightning. This effect filter can be used without an active image layer. As a result you will get a group containing vector layers.
The subdialog **Lightnings** controls the basic look of the lightning: its **Position**, the **Width** and the **Color**.
Parameters defines the exact appearance of the lightning. The settings are quite abstract, therefore you should "play" a bit with them in order to get a feeling for their effects.
Glow and **Light** control the appearance of the shine of the lightning: the **Width**, the **Intensity** and the **Color**.

7.8.4 Effect Filters/Lights

Lights simulates one or more light sources, that shine on an image.
The light sources are displayed in the preview field at the right side. The active light source has a small red dot in its center, the other ones a green one. By clicking on a green dot, the corresponding light source can be edited. Around the active light source there is an ellipse, that represents its outline on the image. The two filled handles on the ellipse are used to change the width of the outline, the two hollow handles are used to change the length of the outline. The width can never be larger than the length. If the width is equal to the length, the light source is exactly vertical above the image.
The value **Brightness** in **Ambient light** controls the basic brightness of the image. Usually this value is smaller than 100% in order to darken the image, because only this way it is ensured, that the light sources create a good effect.
Spot controls the attributes of the active light source. **Focus** is its sharpness. The value 0% indicates a point light source and is therefore maximum blurred, the value 100% isn't blurred at all, that means in the lighted area is equal brightness. The area with equal brightness is displayed by a small ellipse inside the light source ellipse. If Focus is 0%, this small ellipse is invisible, because nowhere is equal brightness. **Brightness** is the brightness of the light source. A value smaller than 0% doesn't lighten an image but

darkens it. **Color** is the color of the light source and **Direction** is the direction, from where the light comes.
Pressing **New Spot** creates a new light source, **Delete Spot** deletes the active one.

7.8.5 Effect Filters/Emboss Filter

Emboss calculates a height map for the active image and lightens this height map afterwards.
The subdialog **Emboss** controls the kind of lighting. **Light** is the position of the light source. **Border Shape** defines the width and shape of an edge in this height map. The curve field is used for the shape, **Width** setups the width and **Mode** controls the way, how this edges are calculated. You can choose between **Unsharp** and **Shade**. **Unsharp** creates soft and kind of flowing edges, **Shade** creates hard, exactly defined edges. **Intensity** is the strength of the light. The smaller this value the lower is the difference between light and shadow.
The subdialog **Pattern** setups, how to calculate the height map. There are four modes:

- **Create From Mask**
  The mask is used as height map. The image parts, that are protected by the mask, lie lower than parts, that are not protected.
- **Create From Image Intensity**
  The brightness of a pixel is used as its height.
- **Use Pattern**
  The color field beneath is used for filling the height map. This way it is easy to map an image with a pattern like a paper structure.
- **Create Lines**
  PhotoLine is drawing lines with a given **Width**, **Length** and **Direction** in the height map.

7.8.6 Effect Filters/Projection

This function allows to map an image onto special 3D objects, so called rotation bodies. A rotation body is defined by its outline. This outline is

rotated by a given amount of degrees. The resulting body is the rotation body.
In the subdialog **Body** you can import a previously created vector graphics, that will be used as outline. Usually this is a simple graphic created with PhotoLine, for example a rectangle or a circle. Rather complex graphics More complex graphics is not well suited for this task. After importing the outline can be scaled and moved.
Angles controls the creation and position of the rotation body. **Range** defines, whether a full rotation body is created or only a part of it.
The settings in **Rotation** allow you to rotate the object around the three axis.
Additionally it is possible to turn on lighting by using the switch **Lighten**. This way light and shadow effects are created. **Edit...** allows to modify the lighting. The light color, the shadow color and the position of the light source are adjustable.

7.8.7 Effect Filters/Drawing Filter

Drawing Filter is a filter generator.
It is an extreme powerful, but quite complex tool. It works the following way:
At the beginning a new image is created. This image can be filled with the background color or be a copy of the active image layer.
Then the drawing filter walks through the image with a predefined step size. On every position PhotoLine will do an action with a selected tool. This action can, depending on the color of the point at the actual position, vary: the drawing angle, the stroke length, the intensity and the saturation of the painting color can be changed.
Here is the description of the fields in the dialog:
The subdialog **Filter** offers the basic settings.
The switch **Copy Original** controls, whether the new image will be a copy of the active image layer or it will be filled with the color of the color field beside the switch. Effectively you are going to decide if PhotoLine should draw on an empty image or over the original.

Brush sets the brush, which is used for the drawing action. The brush is important for two reasons. The first reason is, of course, that the brush is used for drawing. The second is, that in the following several settings are defined relative to the size of the brush (in percent). You can change the brush by right clicking (Windows) or by Ctrl+clicking (macOS) the brush field. Another option is double-clicking, which displays the brush editor. **Brush Mode** allows to roughen the brush. Values larger than 0 delete certain pixels and values smaller than 0 blend them out. This way it is possible to achieve a coal or chalk effect.

Step sets the distance for the actions. The steps are in percent of the brush width. **Density** controls whether the tool is applied at every step or only with a certain probability.

Tool sets the drawing tool. You have the choice between **Painting**, **Water** and **Finger**. **Water** and **Finger** are working as usual. **Painting** - on the other hand - uses always the color at the current position for the painting color.

The subdialog **Options** is used for fine tuning the drawing filter.

The **Intensity** used for drawing can be varied in different ways. Beside the mode combo box there are two text fields for the minimum and maximum intensity (in the range of 0 to 255) and a switch. There are four possibilities to set the intensity: the intensity can be **Fix**, dependent of the **Hue**, dependent of the **Intensity** and dependent of the **Saturation** of the color of the current position. If it is **Fix**, the maximum value is used. All other settings will result in an intensity between the minimum and the maximum value depending on the mode value. You can also invert the intensity.

Angle sets the direction, in which it is drawn (starting from the current position). You can set, similar to the **Intensity**, a minimum and a maximum value (in the range of 0 to 360 degrees).

Length controls the length of the brush stroke. It offers the same adjustments like **Intensity**. Usually the minimum and the maximum value is interpreted as percent. But this can be changed with **Absolute**. In this case the value is used in pixels.

The last point, **Saturation**, is only important, if the tool is **Painting**. If **Saturation** is set to Saturation, and the minimum value is 0 and the

maximum value is 255, the color of the current position is used as drawing color. But this can be modified. If **Fix** is selected, and the maximum value is 255, the image will become very colorful.

If **Fix Color** contains a non-transparent color, it is always used as tool color.

7.8.8 Effect Filters/Custom

This is a freely programmable filter based on a filter matrix. It works the following way:

The filter matrix is applied to every pixel of the image. The center of the matrix lies always on the current pixel. Now the pixels corresponding to the matrix entries are read and multiplied with matrix value. The matrix values must be in the range from -99 to +99. All results are added and the sum is divided by the divisor **Div.**. The value **Bias** is added to this result. If the option **Clip** is selected, overflows - that are results smaller than 0 and larger than 255 - are corrected. The result after all these operations replaces the current pixel.

7.8.9 Effect Filters/Tear Paper

Tearing paper isn‘t so simple as it looks at the first sight. You can see that quite easily at the number of options available in the ***Paper Tearing*** dialog. In order to understand these options there has to be a little bit of theory first:

- If you tear a piece of paper apart, you usually get 2 pieces.
- The tear edges of the two resulting pieces fit together.
- At the tear edges there is usually a white area, on which nothing of the content of the page is visible. At the second piece of paper at the corresponding location the content is visible at the edge. The white area, where no content is visible, is called “edge” in the dialog.
- Often the white area/edge, changes from one piece of paper to the other, so at some locations the content of the paper is visible until the tear edge and at some locations not.
- In PhotoLine the white area/the edge is calculated by moving two roughened lines. The intersections of the two lines are the edges.

With this basic knowledge the options of ***Tear Paper*** are understandable.

Edge Mode controls, how the white area is calculated. In practice there is only the case, that the white area is on both resulting pieces. But your computer has more choices:

- **No Edge**: there is no white area
- **Top Edge**: only the piece at the top has a white area
- **Bottom Edge**: only the piece at the bottom has a white area
- **Two Edges**: both pieces have a white areas. This is most realistic, but has the disadvantage, that the resulting pieces do not fit together on the computer.

Parts controls, whether to create one or two pieces of paper.

Corners controls the number of corner are created at the tearing. If you want to tear paper, this value should be 0, because this value means, that the tearing is not made of single corners but is continuous. Corners are only needed if you don‘t want to create a tearing of paper but the breaking of hard material.

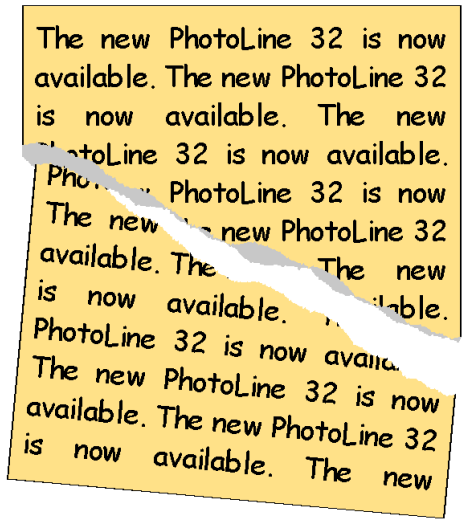
Roughness defines, how rough the two lines - used by PhotoLine to calculate the edge - are roughened. **Thickness** is how far they are moved apart.

Edge Color is the color of the created edges.

Edge 1 and **Edge 2** controls, how the two line used for edge creation are created. In edge mode **No Edge, Edge 2** has no effect and is not used. The smaller **Detail** is, the fewer waves are in the corresponding line. **Intensity** controls the height of the waves.

Position setups, where the tearing will occur.

Paper Tearing can not only be used with image layers but also with vector layers and whole groups.



7.8.10 Special Tools/Clouds

Clouds is a filter, which is creating miscellaneous cloud-like structures. The various controls are explained in chapter 3.4.5 in the part **Noise**.

7.8.11 Special Tools/Perturbation

Perturbation perturbates - nomen est omen - images. The kind of effect can be quite different. After applying the filter, the image can look like it has been treated with a sandblast unit, but also, as it was viewed through a wavy glass pane.

7.8.12 Special Tools/Rasterize Image

Rasterize Image will create an effect similar to the halftone screening of newspapers or magazines.

Rasterize Image has several color modes:

- Image Mode
  Every channel of the source image is rasterized. If the source image is in Lab color space, the channels L, a and b will be rasterized.

- Gray
  The image will internally be converted to gray, and the gray channel will be rasterized.
- RGB
  The image will internally be converted to RGB, and the channels R, G and B will be rasterized.
- CMYK
  The image will internally be converted to CMYK, and the channels C, M, Y and K will be rasterized.

7.8.13 Special Tools/Perspective Tiling

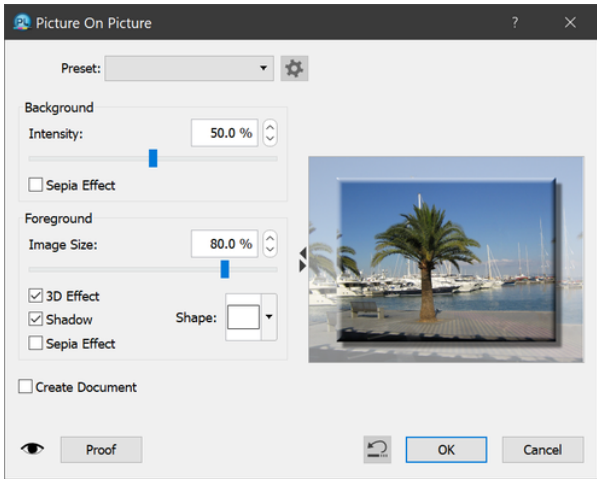
Perspective Tiling uses the active image layer, scales it with the value ***Size***: and uses the result as tile for filling itself. A ***Perspective***-value larger than 0 tilts the result backwards, smaller than 0 forwards. Additionally the image can be rotated and the placement of the tiles can be shifted. Activating ***Fill Image*** fills the whole image layer. Otherwise at the left and right edge remain unpainted areas.

7.8.14 Special Tools/Lens Flares

Lens Flares simulates reflections that happen while photographing against the sun. **X-Position** and **Y-Position** are the position of the sun. **Size** scales the single reflections. **Brightness** controls the intensity of the lens flares and **Scaling** can be used to adjust the distance between the single flares.

The combobox **Image** offers predefined lens flares. These are ordinary PLD-documents that are located in the PhotoLine folder in the subfolder ***Defaults/LensFlare***.

7.8.15 Special Tools/Picture On Picture



Picture on Picture places a picture reduced in size in the center of another picture. If applied to an image document with a single layer, this single layer will be placed in the center, too. If there are several layers, the second layer will be used. Aside from various settings there is the switch **Create Document**. If it isn‘t activated, the result of ***Picture on Picture*** will be a single-layered image document. If it is activated, the result will be a document with several layers. This way the settings and effects of the result can be modified afterwards.

7.8.16 Special Tools/Beautify

Beautify can be used to give photos a soft, romantic appearance.
Soften is controlling the softness of the image, and **Brighten** and **Color** are controlling the glowing.

7.8.17 Special Tools/Swirl

This function “swirls” an image, this means, it looks like it gets whirled by a water swirl. **Angle** controls, how much to swirl.
The normal operation of swirl is to fix the center of the image and to move the pixels around this center. If **Inverse Mode** is turned on, the edges of the image will be fix and the movement will be larger towards the center.
If the **Steps** value is larger than 1, PhotoLine will not modify the active layer but creates new layers. The result may be viewed as animation.

7.8.18 Special Tools/Generate Pattern

This function creates a repeatable pattern from an image. You can use this to create a background image for the internet.

7.8.19 Special Tools/Aquarelle

This function creates an aquarelle effect. The image looks like a painting afterwards.

7.8.20 Special Tools/Texture Filter

This function creates a textured image. The image looks like 3D.

7.8.21 Special Tools/Relief

This filter creates a pseudo 3D view of an image. With full intensity uniform areas become gray, edges become - depending on the set direction - black or white.

7.8.22 Special Tools/Ripple

Ripple ripples the pixels of an image. By clicking in the preview or in the document window, the center of rippling can be defined. **Shrinking Waves** controls whether the rippling gets smaller to the edges of the image. **Angle** is the strength of rippling and **Density** defines the number of ripples.

7.8.23 Shape Tools/Polar Coordinates

Polar Coordinates recomputes an image from cartesian (rectangular) coordinates to polar coordiantes or vice versa. You can use this - for example - to create so-called “tiny planets”.

7.8.24 Shape Tools/Vault

Vault drags a part of the active image up or down. **Sphere** modifies only that pixels, that lie inside the largest ellipse, which can be drawn inside the image. **Whole Area** drags the whole image, only the edges are fix.
On dragging it can happen, that parts of the image end outside of the image area. **Size to Fit** takes care, that in this case the result is scaled, so that all will be visible. **Intensity** controls how strong to drag.
Additionally it is possible to turn on lighting by using the switch **Lighten**. This way light and shadow effects are created. **Edit...** allows to modify the lighting. The light color, the shadow color and the position of the light source are adjustable.

7.8.25 Shape Tools/Waves

Waves is simulating waves in an image. You can adjust the **Intensity** of the waves and their **Number**.
Using ***Waves*** it can take place, that parts of the image end outside the image area. **Size to Fit** takes care, that in this case the result is scaled, so that all will be visible.
Additionally it is possible to turn on lighting by using the switch **Lighten**. This way light and shadow effects are created. **Edit...** allows to modify the lighting. The light color, the shadow color and the position of the light source are adjustable.

7.8.26 Shape Tools/Make Circular

Make Circular forms a rectangular image to a different shape. The name „Make Circular“ comes from the standard settings of this tool: an **Intensity** of 100% transforms the image to an ellipse, a square image becomes a circle. Other values lead to a pillow-like or star-like distortion.

7.8.27 Shape Tools/Distort Image with Image

Distort Image with Image displaces the content of an image layer accordingly to the content of another image, the so-called displacement matrix. Each pixel of the displacement matrix defines, how far the corresponding pixel of the image layer will be displaced. A 0 in the displacement matrix is the maximum negative displacement, 255 is the maximum positive displacement and 128 means no displacement at all. The displacement matrix can have one channel (i.e. a gray image) or several (i.e. a RGB image). If it has only one channel, the content of this channel will be used for both x- and y-displacement. If there are several channels, the first one is used for the x-direction and the second one is used for the y-direction. The displacement matrix can be loaded from a file and can be pasted from the clipboard as well. Ideally it is as large as the image layer. If it isn‘t, it can be scaled to the size of the image layer or be repeated like the tiles of a pattern.

At the image borders sometimes pixels from outside the image have to be read. In this case **Replace** means, that those pixels are read from the other side of the image. Using **Repeat** the corresponding border pixel will be repeated.

Intensity controls the maximum displacement. 100% utilizes the full displacement of -128 to +127 pixels.

7.8.28 Shape Tools/Distort With Arrows

This function allows you to distort an image.

You control the distortion with small arrows. You create the arrows by clicking and dragging in the left picture. Only clicking creates fix points. This ensures that a point has the same position in the result. The right picture is a preview.

By clicking on an existing arrow it is selected and can be edited. Selected arrows can be deleted with **delete**, too.

The color field controls the color of the arrows.

Reset deletes all arrows.

Distort With Arrows can create an animation. The Steps text field contains the number of animation steps. If Steps contains a value larger than one, pressing OK will create a layer for each step. You can view the result with ***Web/Animate Layers*** and save the result as animated GIF.
If Steps is less or equal to one, the active layer will be replaced by the result.

7.8.29 Shape Tools/Distort Frame

You can distort the frame of an image layer with this function.
The frame can be edited in the preview window. You can drag the layer by clicking and dragging with the mouse. Clicking on the edge allows moving this edge. The corners can be moved, too.

7.8.30 Shape Tools/Distort Wavy

This function allows distorting an image wavy.
The slider **Waves** controls the number of waves that will be created.
The slider **Intensity** allows you to modify the height of the waves.
If **No animation** is selected, **OK** will replace the active layer with the result. Otherwise PhotoLine will create an animation. **Steps** contains the number of animation steps.

7.8.31 Shape Tools/Morph

This function modifies one image layer step by step, so that it will look like another image layer. This process is called morphing.
This function is only available, if the active document contains 2 image layers. Layer 1 is the source layer, layer 2 is the destination layer.
The left side of the dialog shows the source layer, the right side the destination layer.
In the middle there is a preview if the steps in between. The slider below the preview controls, what step to show.
In order to morph you have to create arrows in the source. You create an arrow by clicking and dragging. By clicking on an existing arrow it is selected and can be modified. A selected arrow can be deleted with **delete**, too.

The arrows that you are creating in the left picture, appear in the right, too. You have to move them to the corresponding positions.

A small example should explain this a bit. We want to morph a face to another. Now we create arrows for all important structures in the source face: the nose, the mouth, the eyes, the eyebrows and the shape of the face. The arrows in the destination are moved to the same structures: the nose, the mouth, and so on.

You can change the color of the arrows with the color field.

File allows loading and saving the arrows.

Steps controls the number of morph steps created.

Reset deletes all arrows.

OK creates the animation and inserts for each step an image layer.

You can view the result with ***Web/Animate Layers*** and save it as animated layers.

7.8.32 Shape Tools/Page Curl

Page Curl simulates turning up the corner of a photo.

The radio buttons around the preview control which corner to modify.

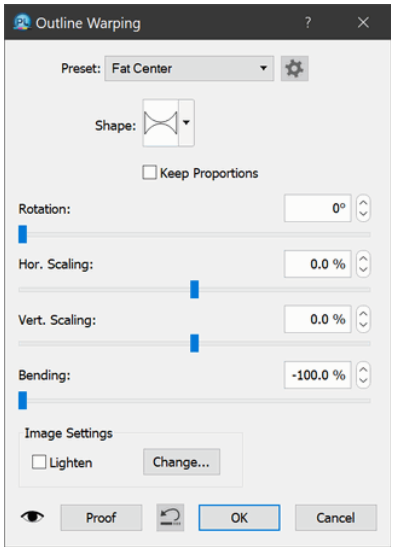
7.8.33 Shape Tools/Bend Image

Bend Image shifts all lines of an image horizontally. How far they are shifted is controlled by a curve field. Double-clicking the curve field allows to edit its content.

Free area created by shiften can be filled in different ways. It is possible to fill it with the background color, to copy the shifted parts or to repeat the edge pixels.

7.8.34 Distort/Outline Warping

Outline Warping is a layer distortion (see chapter 2.6). The active layer will be distorted to fit into an outline given by the user. In contrast to most layer distortions ***Outline Warping*** can be used with image layers, too.

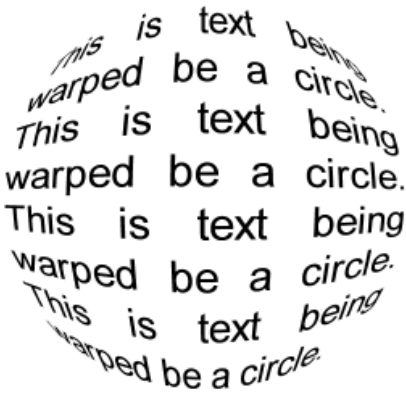


Shape is the outline in which the active layer will be forced. Normally this outline will be scaled to the size of the active layer. This may lead to a distortion of the outline. By selecting **Keep Proportions** the proportions of the outline keep unchanged.

Rotation allows to rotate the outline by any angle. Additionally it is possible to scale the left or right edge of the outline. If **Hor. Scaling** is smaller than 0, the left side will be reduced, otherwise the right size. **Vert. Scaling** works analogous with top and bottom. If there are curves in the outline they can be flattened by using Bending or mirrored, if **Bending** is smaller than 0.

Outline Warping creates a 3D-like effect. Therefore, if the active layer is an image, the result can be lightened.

The following example shows a text layer, that is warped by a circle:



The text is still editable. You can change the color of its characters or modify the font.
If the shape displayed in the dialog above is used to warp an image and the image is additionally lightened, the result may look like this:

7.8.35 Distort/Free Roughen

Free Roughen is a layer distortion (see chapter 2.6). It roughens a text or vector layer by running stepwise along its outline and randomly displacing the points by a certain offset.
Randomness controls how similar consecutive offsets will be. The higher Randomness is, the more jagged will be the result.

Relative, **Absolute**, **Distance** and **Step Size** define how to operate along the outline. **Relative** and **Absolute** are two ways to lay down **Distance** and **Step** Size. If Absolute is turned on, those two values are given in a discrete unit like pixel or inch. If Relative is turned on, they are entered relative to the size of the layer. **Distance** is the maximum offset for the displacement of a point. The higher this value is, the stronger will be the distortion. **Step Size** controls the step size. The higher this value is, the weaker will be the distortion.

7.8.36 Distort/Angled Roughen

Angled Roughen is a layer distortion (see chapter 2.6). Like ***Free Roughen*** (see chapter 7.8.35) it roughens a text or vector layer by running stepwise along its outline and randomly displacing the points by a certain offset, but ***Angled Roughen*** moves the points in a preferred direction.

Randomness controls how similar consecutive offsets will be. The higher Randomness is, the more jagged will be the result.

Relative, **Absolute**, **Distance** and **Step Size** define how to operate along the outline. **Relative** and **Absolute** are two ways to lay down **Distance** and **Step** Size. If Absolute is turned on, those two values are given in a discrete unit like pixel or inch. If Relative is turned on, they are entered relative to the size of the layer. **Distance** is the maximum offset for the displacement of a point. The higher this value is, the stronger will be the distortion. **Step Size** controls the step size. The higher this value is, the weaker will be the distortion.

7.8.37 Distort/Central Roughen

Central Roughen is a layer distortion (see chapter 2.6). Like ***Free Roughen*** (see chapter 7.8.35) it roughens a text or vector layer by running stepwise along its outline and randomly displacing the points by a certain offset, but ***Central Roughen*** moves the points preferable away from the center of the layer.

Randomness controls how similar consecutive offsets will be. The higher Randomness is, the more jagged will be the result.

Relative, **Absolute**, **Distance** and **Step Size** define how to operate along the outline. **Relative** and **Absolute** are two ways to lay down **Distance** and **Step** Size. If Absolute is turned on, those two values are given in a discrete unit like pixel or inch. If Relative is turned on, they are entered relative to the size of the layer. **Distance** is the maximum offset for the displacement of a point. The higher this value is, the stronger will be the distortion. **Step Size** controls the step size. The higher this value is, the weaker will be the distortion.

7.8.38 Distort/Zig Zag

Zig Zag is a layer distortion (see chapter 2.6). It modifies a text or vector layer by running along its outline and alternately displacing the points to the left and to the right.

Kind controls the way of displacement. It is possible to create spikes, gears and waves. **Count** defines how many of them are created.

Relative, **Absolute** and **Distance** define the strength of displacement. If **Absolute** is turned on, the distance is given in a discrete unit like pixel or inch. If **Relative** is turned on, it is entered relative to the size of the layer.

7.8.39 Distort/Twist

Twist is a layer distortion (see chapter 2.6). It roughens a text or vector layer by running stepwise along its outline and displacing the points in such a way that the effect of a twist is created.

Angle is the strength of the twist effect. If **Twist Inside** is turned on, the edges of the layer will be fix and the distortion will be higher towards the center. If **Twist Outside** is turned on, the center of the layer will be fix and the distortion will be higher towards the edges.

7.8.40 Effects/Layer Style

Layer Style opens the style dialog without changing the layer style of the active layer. This means you get the current state of the layer.

In this dialog you can edit the layer style by turning an effect on and off and by changing the settings.

Relative To allows you to set up the reference for angles and sizes. There are three modes:

- Layer
  Angles and sizes are relative to the layer. If a layer with a shadow is rotated, the shadow will be rotated, too. If the layer is scaled, the shadow distance will be scaled, too.
- Group
  The angles and sizes are relative to the group. A shadow placed at the bottom right will stay at the bottom right, even if the layer is rotated. But changing the group will affect the layer style.
- Page
  Similar to Group the angles and sizes are relative to the page.

7.8.41 Layer Style/Layer Shadow outside

Layer Shadow Outside creates a shadow, which is displaced "behind" the layer. As a result the layer seems to be flying over the background.

7.8.42 Layer Style/Layer Shadow Inside

Layer Shadow Inside creates a shadow, which is only visible, where the layer is visible, too. The shadow lies in front of the layer. You can use this for three-dimensional effects.

7.8.43 Layer Style/Layer Glowing Outside

Layer Glowing Outside creates a glowing around a layer. Usually the glowing is getting weaker outwards, but this behavior can be changed by the curve field in **Light**.

7.8.44 Layer Style/Layer Glowing Inside

Layer Glowing Inside creates a glowing inside the layer. Usually the glowing is getting weaker inwards, but this behavior can be changed by the curve field in **Light**.

7.8.45 Layer Style/3D-Shadow

3D-Shadow creates a shadow. Starting at the base line of the layer the shadow “falls” to the front or to the back. As a result the layer seems to stand vertical on the background.

7.8.46 Layer Style/Outline Outside

Outline Outside draws an outline around the content of the layer. This way you can - for example - draw the outline of a text layer with a different color.

7.8.47 Layer Style/Outline Inside

Outline Inside draws an outline inside the content of a layer.

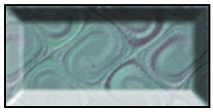
7.8.48 Layer Style/Outer Emboss

Outer Emboss calculates an illumination effect for a layer.
To tell with words, what the effect is doing is difficult. Therefore, here is a small picture:

The text layer with the content “PhotoLine” owns the style Outer Emboss.

7.8.49 Layer Style/Inner Emboss

Inner Emboss is one of the most powerful layer styles. But it is the most time-consuming layer style, too. The layer is not illuminated outside, but inside. This way the layer looks three-dimensional. The following pictures are showing several uses of the style. The first and the second are showing the style used with the text layer with the content “PhotoLine”. The last picture shows the style on a normal, rectangular image.



7.8.50 Layer Style/Special Emboss

Special Emboss is very similar to ***Inner Emboss***, offers much more control over the appearance of the style.

Special Emboss usually creates high-quality results, but note, that using a hair line - a line with the width 0 - as outline may significantly degrade the result.

The following list the main advantages of ***Special Emboss*** in comparison to Inner Emboss. All examples are applied to a simple red rectangle:

- The edge contour can be controlled more precisely.

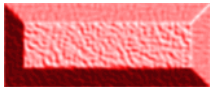
- Shapes with a hole can be created.

- The layer, which the Special Emboss is used on, can be gradually made transparent. In combination with the other new features more sophisticated glass and gel effects can be created.

- Any number of light sources can be used for lighting. The following example uses three: one from above, one from the bottom and one perpendicular above the rectangle.

- Additional to parallel light point-light sources can be used now, too. Point-light allows a more dynamic lighting. The left example shows parallel light, the right point-light.

- Additionally a texture can be applied to create a more dynamic textured on the surfaces. The left example uses a simple pattern, the right side a text.



7.8.51 Layer Style/Stripes

Stripes fills the content of a layer with stripes. You can assign two colors, which are used interchanged to draw the stripes.

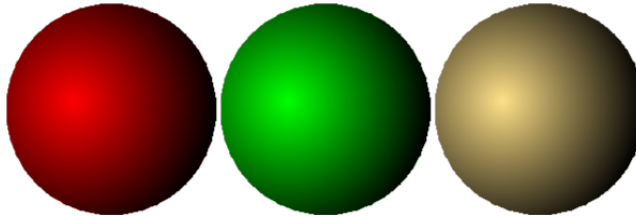
7.8.52 Layer Style/Inner Gradient

Inner Gradient is similar to ***Stripes***. But the content of the layer is not filled with stripes but with a gradient. The following example shows a text layer with an ***Inner Gradient*** from black to white:

7.8.53 Layer Style/Color Overlay

Color Overlay fills all opaque parts of a layer with a color. The color may have transparency. Furthermore a blend mode can be given. The following example shows a text layer with a ***Color Overlay*** that uses a colorful gradient color:

If the gradient color has transparency, you can achieve very special effects. The following images are showing single colored vector circles, that were assigned a gradient color with the attribute “Circle”, colors blending from completely transparent to black:



7.8.54 Layer Style/Create Texture

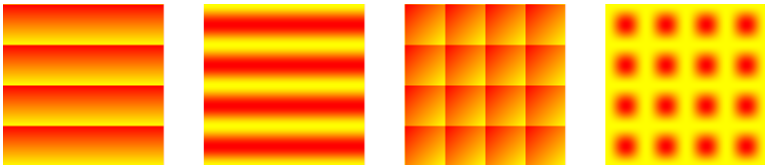
Create Texture is a very powerful style with many options. It is rewarding to play a while with the various settings, because the results are often astonishing.

The style creates a height map for the layer and illuminates it. There are 3 ways for creating the height map:

- The brightness of the layer content is use as height. The option is only useful, if the content of the layer is not single colored, because otherwise the result will be quite boring.
- A pattern color is used as source. This way it is possible to map a texture on to the layer for example a paper pattern.
- PhotoLine is generating a pattern. There are several options to control the result.

7.8.55 Layer Style/Window Shades/Tubes

Window Shades/Tubes covers the active layer with a kind of window shades and tubes. The following pictures demonstrate the style. The style was applied with yellow color on a red square. From left to right they show: window shades, tubes, double window shades, double tubes.



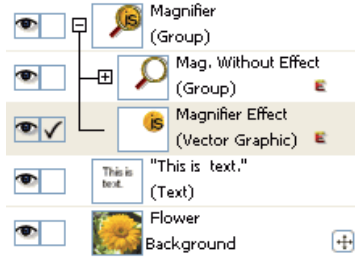
The width, the rotation angle and the intensity of the stripes can be varied.

7.8.56 Layer Style/Magnifier Effect

The ***Magnifier Effect*** scales every layer that is drawn before the current one and that is covered by the current layer. There are 2 modes:

- Layers Of The Same Group
  Using this mode only those layers are scaled that are in the same group as the magnifier layer.
- Layers Of The Parent Group
  If you want to draw a real magnifier, you normally want to place a graphics in document, too, that shows a magnifier, and in the lens area of the magnifier the background should be scaled. This magnifier graphics usually is a group, because this way it can be moved and sized most comfortably. Of course the style layer with the magnifier effect should be part of this group, too, so that it is moved and sized the same way as the graphics. Exactly this is the reason for Layers Of The Parent Group: those layers are scaled, that are at the same hierarchy as the magnifier graphic. Following picture shows an example for this:

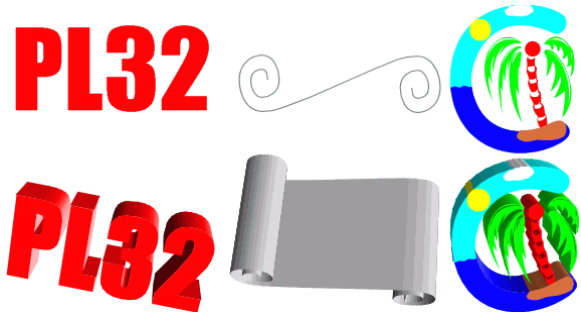
The layers are ordered this way:



The background and the text layer are scaled. The group “Magnifier Graphic” contains the whole magnifier including the magnifier effect layer. “Magnifier Effect” is a vector layer occupying the area of the lens of the magnifier. On this layer the magnifier effect with the option Layers Of The Parent Group was applied. The group “Mag. Without Effect” is a magnifier, but offers no effect.

7.8.57 3D Body

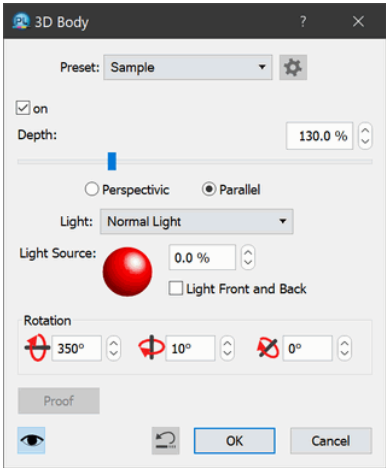
The function ***3D Body*** displays a layer as 3D body. This works with all kinds of layers. The layer itself isn‘t changed and can still be edited normally.



The first line of the picture shows the source layer, the second line shows the same layers as 3D body. The source layers are a text layer, a simple vector layer and a group containing several vector layers.

If used with text layers, the 3D representation defines the text color for displaying the front and the back, the outline color controls the sides. If the text doesn‘t have an outline, the text color is used for the sides, too. With vector layers the fill color is used for front and back, the line color for the sides. If the line color is completely transparent, the fill color is used for the

sides, too. With images the image defines the front and back, the sides are always gray.



In the corresponding dialog the **on**-switch is used to turn the 3D representation on and off. **Depth** controls the distance between front and back. The depth is given in percent relative to the size of the layer.

Perspectivic and **Parallel** are the kind of representation. Using **Perspectivic** parts farer away are smaller than the nearer ones, with **Parallel** there is no size reduction.

Light offers - aside from **Soft Light**, **Normal Light** and **Hard Light** - **Mesh**, too. With **Mesh** no surfaces are filled, instead they outlined.

Light controls the position of the light source. The percent value next to it is the strength of the light source. If **Light Front and Back** is turned off, the brightness of the front and of the back are not changed by the lighting. This is useful, if a gradient already simulating a reflection is used as color.

Rotation controls the position of the 3D body in space.

Finally some tips and hints for working with 3D bodies:

- It isn‘t easy to edit a layer in 3D representation. Therefore, it is usually reasonable to turn it off temporarily by using the Layer Attributes dialog (see chapter 4.11).

- If the text edit tool is activated with a text layer in 3D representation, the normal text will be shown additionally in order to make editing easier. If this additional text is disturbing, just switch to another tool.
- A text layer as 3D body doesn‘t like a text layer anymore, but it still behaves like one. Therefore, if you want to change the size of the 3D body, it is not sufficient to simply resize the layer with the layer tool, because that just changes the space available for text formatting. You will have to scale it by using the Special Scale mode (see chapter 6.2.1).
- Using vector layers you can create bodies with holes, too. To achieve this, the subpath defining the hole has to have a different direction then the outline path, otherwise you may get representation errors. If you see such an error, invert the direction by using the ***Vector Edit Tool*** (see chapter 6.4.1).
- Self-intersecting paths will create an incorrect 3D body. You should simplify these paths first.
- 3D bodies ignore layer styles, but distortions (see chapter 2.6) and path text (see chapter 6.2.12 and chapter 7.4.22) work fine.
- The Layer Tool (chapter 6.2.1) allows to edit 3D bodies. There are the following shortcuts::
  - Alt+arrow up, Alt+arrow down: rotate around x-axis
  - Alt+arrow left, Alt+arrow right: rotate around y-axis
  - Alt+Shift+arrow left, Alt+Shift+arrow right: rotate around z-axis
  - Alt+Shift+arrow up, Alt+Shift+arrow down: change depth

  Holding additionally Ctrl (Windows) or Command (macOS) the value will be changed by a larger step.

7.9 The Web Menu

7.9.1 The Dynamic Animation

7.9.1.1 Basics

Introduction

Animations are an often used element of web pages. ***Dynamic Animation*** is a comparably simple way to create quite complex animations. The layers of a document can be moved, rotated, scaled and faded in and out. This has

been possible with the old Create Animation function, too, but while there all steps of the animation are calculated fix at once, the Dynamic Animation only stores commands, that can be edited later very simply.

In PhotoLine a Dynamic Animation is build from two main parts:

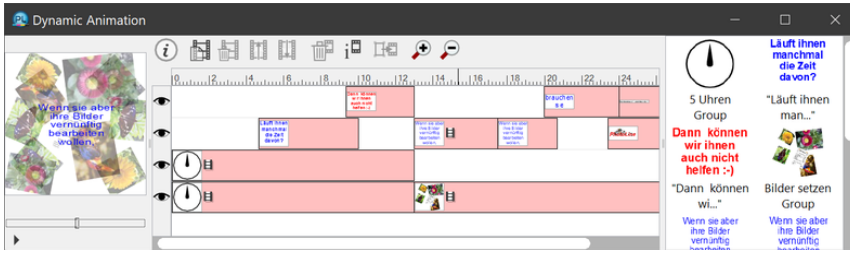
- Tracks
  Tracks have the same meaning in animations, that layers have in normal documents. The first track will be display at the bottom, the second one above it and so on. By using tracks several objects can be animated independently.
- Sequences
  A track consists of sequences. A sequence stores, which layer will be displayed at a certain period. Furthermore it contains commands how to modify the layer in this period.
  If the layer assigned to a sequence is a group, this group can be a Dynamic Animation on its own. Such a group is called subanimation. A subanimation can contain several tracks, too. Subanimations allow to create very complex movements.

PhotoLine can export Dynamic Animations as GIF-, PNG- and as WebP-file. On macOS export as MOV-file is possible, too. On Windows the AVI-Format is also available.

On saving an animation as GIF-file you should use a color reduction scheme (see chapter 7.10.1.14), that replaces transparency by a color (usually white), because this way the resulting file will be smaller.

Very important: if you intend to edit a Dynamic Animation later (you normally want to do that), you have to save the animation as PLD-file, because only the PLD-format can save Dynamic Animations without loosing information. If you save your animation only as GIF-, PNG-, WebP- or MOV-file, you will not be able to edit it later.

The “Dynamic Animation” Dialog



The main dialog of the Dynamic Animation has 3 parts:

- the preview
  This one is at the left edge. Pressing the play-button shows the animation. Above the play-button is a slider, that visualizes the currently shown time. If you click with the mouse in the slider, you can step frame wise through the animation by using the Arrow-Left and the Arrow-Right key. This way it is possible to inspect the timing between tracks.
- the working area
  The working area has an icon bar containing the most important commands at the top. Below that there is the track-list which shows all tracks and sequences of the active animation. This area is where most of the work is done, therefore it is explained more detailed later.
- the layer-list
  At the right edge there is the layer-list containing all layers, that can be used in the animation. A layer here can be clicked and dragged to the track-list. A layer can be dragged to the track-list several times and to different tracks. Then it will be displayed several times, too.

The Working Area

The dominating part of the working area is the track-list. It shows all tracks of the animations. At the top edge of the track-list is a time-bar, that shows the time in second. At the left side of every track there is a small field, where a small eye-icon can be used to turn display of the track on or off. The state of the eye-icon will not be saved, but it will be used for preview and export of the animation.

The sequences are shown as pink bars in the tracks. Every sequence has a small preview of the connected layer. If the connected layer is a subanimation (more of this later), additionally a small film-strip is displayed.

If the mouse is moved to the edge of a sequence, it becomes a ⇹ . This visualizes, that the start- and the end-time of the sequence can be changed. If 2 sequences lie next to each other, the end-time of the first one and the start-time of the second one will be changed synchronously. If you don‘t want this behavior, you will have to manually create a space between the sequences either by moving one of the sequences or by using the Sequence Properties-dialog which will be explained later.

If you click on a sequence, it will be displayed red and a small slider appears at the bottom edge. This way it becomes the active sequence. Additionally the corresponding layer will be selected in the document and in the layer-list. The slider is very important for editing sequences. First it can be used to inspect the behavior of a sequence. By changing its value the layer in the document changes accordingly to the settings of the sequence. If you defined, that a layer should move from the left to the right, the layer will be moved by using the slider, too. Second the slider can be used to transfer the current state of the layer to the sequence for the current slider position. Usually you use this function to define the layer appearance at the sequence start and at the sequence end. But you can create midpoints, too. Midpoints are shown as small rhombs in the slider. This will be described more detailed later. If the length of a sequence is modified, the midpoints will be scaled accordingly. This can be prevented by holding the Ctrl-key.

Sequences have a context menu, too. It contains the following commands:

- Use Transparency, Use Position, Use Scaling
  The given state will be transferred to the sequence for the time defined by the slider.
- Set Rotation Point
  The rotation point set by using the layer tool (see chapter 6.2.1) will be used as rotation point in the sequence. The layer will no longer rotate around its center but around the rotation point.

- Copy Sequence Data, Paste Sequence Data
  The settings of the active sequence are copied and pasted respectively. This applies to all values with the active of the start-time, the end-time and the connected layer.
- Enter Subanimation
  If the current sequence is a subanimation, you can edit it by using this command. Double-clicking the sequence has the same effect.
- Leave Subanimation
  If the currently edited animation is a subanimation, you can edit its parent-animation with this command.
- Update Automatically
  If this entry is selected, the layer in the document will automatically be modified accordingly to the position of the sequence‘s slider.

Beside that there is an icon bar in the working area. It contains the following commands:

- Create/Edit Animation
  Using this command you can create a new animation for a document or a new subanimation for a group. An existing animation can be edited, too (see chapter 7.9.1.2).
- Create New Track
  This function inserts a new track after the active one.
- Delete Active Track
  This function deletes the active track without further request.
- Move Active Track Backward
- Move Active Track Forward
- Delete Active Sequence
  The current/active sequence will be deleted without further request.
- Show Sequence Info
  This command opens a dialog listing the settings of the active sequence (see chapter 7.9.1.3). On creating complex animations this dialog is very important. Furthermore this dialog is the only way of rotating a layer in the animation.
- Use All
  This command transfers the transparency, the position and the scaling of the sequence‘s layer to the sequence. It is a combination of the

commands Use Transparency, Use Position and Use Scaling available in the context menu.

- Zoom In , Zoom Out
  These commands change the zoom of the track-list. It allows to edit the details of an animation and to get an overview.

First Steps

If you want to create a Dynamic Animation, you should first consider the size of the animation, for example typical advertisement banner on web pages have a size of about 400x80 pixels. After that you should create a document with that size. Now you have to use ***Create Edit/Animation*** (see chapter 7.9.1.2). Here you can set up the duration of the animation. After leaving the dialog with OK a single track is created. Furthermore the document will switch to document mode, if it has been in picture mode previously.

If you want to create a small animation containing a text scrolling in from the top, you should proceed like this:

- Create the text layer and fill it with text.
- Move the text layer to the position where it should start scrolling.
- Drag the text layer from the layer-list to the track-list in the working area. This action creates a sequence.
- Set the start- and the end-time of the sequence.
- Select the sequence and move the slider of the sequence to the end.
- In the document move the text layer to the destination position.
- Use the command ***Use All*** to transfer the position to the sequence.

If you now press the play-button in the preview area, you should see the text layer moving accordingly to your commands.

You can fade in and out or make the layer larger and smaller analogously.

Subanimations

Subanimations are needed for more complex animations. Imagine the following: a text rotates around one of its axis and - while doing this - it moves backwards, so that it gets smaller and smaller. This text has to be animated in two ways: it rotates around its axis and it gets smaller. Such cases are solved by using subanimations.

The proceeding is something like this:

- Create the text layer and fill it with text.
- Group the text layer (see chapter 7.5.45 “Group Marked Layers”)
- Select the text layer inside the group.
- Use Create/Edit Animation.
  Using this function makes the group a subanimation. In our example Duration should be the time needed by the text to rotate one time completely around its axis. Leaving the dialog with OK creates a track in the subanimation.
- Drag the text layer to the track
  The sequence for the text layer should fill the whole track bar of the subanimation.
- Rotate the text layer around its axis
  Rotation around an axis is usually simulated by horizontally or vertically - depending on the axis - scaling a layer to -100% and back to 100%. If done with the right progress curve, the rotation looks very realistically. Entering the scaling is easiest by using the Sequence Properties dialog (see chapter 7.9.1.3). Here you can enter -100% as vertical or horizontal destination scaling. The progress curve should be the following: . This is a mirrored and shifted cosine curve which is well suited to simulate circular movements. This curve is already part of the curve list of PhotoLine.
  After entering the scaling and the progress curve you should be able to see rotated text in preview area.
- Leave the subanimation.
  By using the context menu of the track-list you can leave the subanimation most comfortably. Another way is to select the group containing the text layer in the layer list.

- Use Create/Edit Animation.
  This creates the Dynamic Animation.
- Scale group in the document window to your desired start size and move it to the start position
- Drag the group to the track-list and adjust the start- and end-time.
- Move the sequence slider to the end.
- In the document window scale the group to the destination size and move it to the destination position.
- Use Use All

Now your text layer rotating and moving backwards is completed.

7.9.1.2 Animation Info

The dialog Animation Info is used to create or edit animations. The most important option is the duration, that is given in seconds. At the end of an animation there may be a pause.

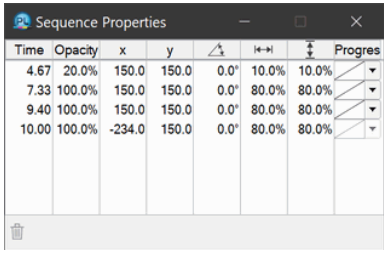
More difficult is the value **Frames Per Sec**. This controls how many pictures are shown per second. This value affects the file size may result in a very large file. When exporting as GIF you should avoid animations covering much space and use a small frame rate.

Repeat Automatically has only an effect, if the animation is exported as GIF, and controls whether the animation is only shown once or multiple times.

The radio-buttons define the condition when to load the destination-URL.

If you don‘t create a new animation but edit an existing one, you can change its length. In this case Existing Animation controls how to deal with the existing sequences. **Scale** scales the sequences appropriately, **Crop** leaves the times alone and deletes the sequences, that lie outside the animation.

7.9.1.3 The Sequence Properties



The Sequence Properties dialog lists all time point of the active sequence and there settings. There are always at least two time points: the start- and the end-time of the sequence. The state of the layer between two time points is calculated by PhotoLine. This is how the actual animation is created. The small waste basket at the bottom edge of the dialog is used to delete a settings line. You must have at least 3 time points to be able to delete one.

The single settings can be edited by double-clicking or by hitting the Return-key.

The Sequence Properties dialog is the only way to rotate a layer in an animation. If you enter 0° as first angle and 360° as next one, the layer will rotate counterclockwise. But if the next angle is -360°, it will rotate clockwise.

The Progress-column lays down, with which “speed” the next state is reached. If you want to modify this curve, you have to keep in mind, that the bottom edge of the curve field represents the start state and the top edge represents the end state. The effect of the curve will be shown by a few examples:

: The animation will be running from the start state to the end state.

: The animation will be running from the end state to the start state.

: The animation will be running from the start state to the end state and back again to the start state.

7.9.2 Export Single Frames

Animate Layers shows

Sometimes it can be useful to have access to the complete frames of an animation (chapter 4.30 and chapter 7.9.1), e.g. if you want to process them in another program.

This is possible with ***Export Single Frames***. It saves all frames as separate files. In the save dialog the base name is defined. Additionally, a numbering is added to the individual filenames.

7.9.3 Tile Image

If you want to use a large image on a web page, loading that web page may last very long. This is quite inconvenient for the viewer. In order to shorten the waiting time there is a trick: splitting up the image. Each of the parts is loaded much faster, so the viewer does see something faster.

Exactly this task is done by ***Tile Image***.

There are three basic ways. The first one is to define the size of one image part. Then the number of tiles is calculated. The second one is to define the number of tiles. Then the size of the parts is calculated. And the last way is to use the guide lines to define the parts.

As a result you get many image windows, each one containing a part of the original. If you turned **Save Automatically** on, you have to enter a filename after leaving the dialog. The partial images will be saved under this name supplemented by a number. For example, if the name is “test.png”, the resulting files will be named “test1.png”, “test2.png”, “test3.png” and so on.

If you turned **Create HTML-Code** on, a HTML-file will be created showing the partial images in the correct order. The name of the HTML-file for the example above would be “test.htm”.

7.9.4 Raster Transparency

The GIF-format is not capable of saving transparency with 256 steps. It can only save the information “transparent” and “not transparent”. If your document contains full transparency, you can’t save it without problems.

But this function allows you to reduce full transparency to two steps and makes it therefore savable in GIF.

7.9.5 Image Map/Assign Command

Image maps are images which are embedded in a HTML page. You can assign a message and a URL to parts of the image. If the mouse cursor stands still over one of that parts, the message is shown as tooltip. By clicking the URL is loaded.

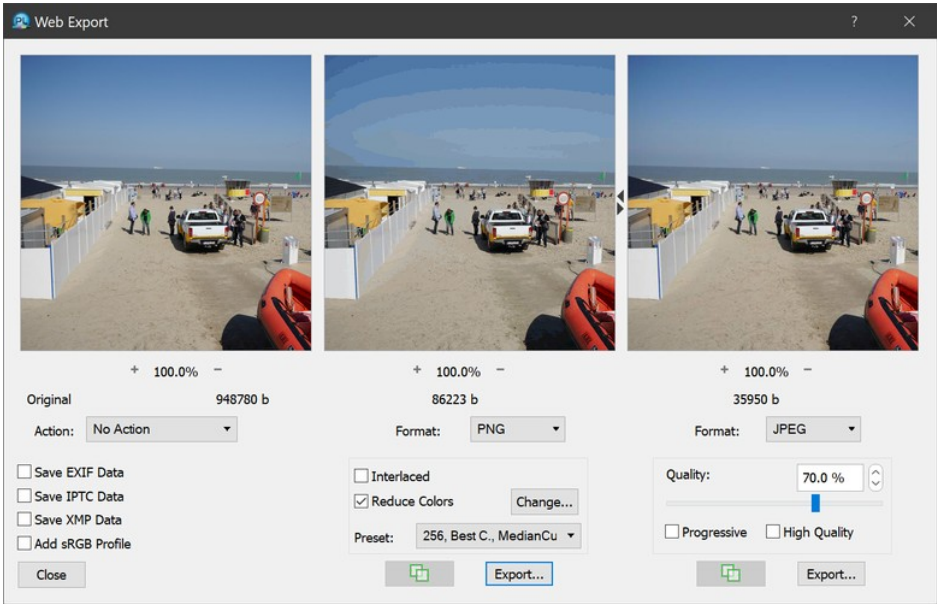
PhotoLine represents these “sensible” parts of the image as layers. You can assign every layer a URL and a message. Sometimes a layer has only been created in order to define an image map entry for the covered area, but the layer itself shall not appear in the resulting image. Therefore, there is the switch **Layer Invisible** which ensures, that the layer is not shown if the picture is exported via ***Image Map/Image Map Export***.

The assigned commands will be used on exporting as PDF-file, too.

7.9.6 Image Map/Image Map Export

By calling this function the file select dialog appears. You can select the file format and the filename for the image. On export a HTML-file with the same name is created, too.

7.9.7 Web Export



Web Export is a simple and comfortable way of saving pictures in a web file format. Web file formats are JPEG, PNG, WebP, JPEG XR, JPEG2000 and GIF. Compared to normal save function Web Export has several advantages. The most obvious advantage is, that a preview of the result is visible immediately. Furthermore there is direct access to the settings of the current file format. In combination with the preview this allows to find the best compromise between file size and image quality very fast. Therefore, the choice of the right export format is made easier.

Additionally ***Web Export*** performs the following tasks:

- Optionally data like IPTC, EXIF or XMP are removed.
- Color images are converted to sRGB.
- The bit depth is reduced to 8 bit per channel if needed.

When used on a web page images usually don‘t need ICC color profiles. Therefore, ***Web Export*** doesn‘t save them in the resulting file. If you really need those, you should save the image by using ***Save as...*** (see chapter 7.1.8).

In the top left of the dialog there is the original image. By clicking and dragging the visible part can be moved. Below that are the buttons the zoom the pictures. Next there is the size in bytes of the original image.
By pressing **Close** ***Web Export*** is left. **Close** does not save in any format.
Beside the original image there are the previews of the two file formats that can be compared. Below every preview there is the resulting file size. **Export...** allows to save the image using the current settings.

7.10 Miscellaneous Functions

7.10.1 Options

The dialog ***Options*** contains all settings needed to configure PhotoLine. The settings are divided up in seven main categories:
- File (chapter 7.10.1.1 and following)
- Working (chapter 7.10.1.17 and following)
- Display (chapter 7.10.1.23 and following)
- Browse (chapter 7.10.1.33 and following)
- Color Management (chapter 7.10.1.37 and following)
- Usage (chapter 7.10.1.39 and following)
- Extended (chapter 7.10.1.44 and following)

7.10.1.1 File/Save Options

Here you can adjust, how PhotoLine handles saving.
If **Create backup file when saving** is activated, on saving a document the original file won‘t be overwritten. It will be renamed and on Windows “bak” will be appended to its filename extender. For example the original file “test.pld” will be renamed to “test.pldbak”. On macOS a “~” will be appended to the filename, so “test.pld” will become “test~.pld”. If there is already a backup file, the existing backup file will be deleted.
Save a PLD file additionally is a safety feature. If turned on, PhotoLine will additionally be saving an equally named PLD file along with the file format, that you have chosen. This way you can ensure, that the composition of your document will stay intact, even if you are using a simple image file format like JPEG. If your document could be saved

without any loss, the PLD file will not be created and an already existing version will be deleted. Accordingly on opening a file PhotoLine will check for a PLD file with the same name and load that if possible. If the modification dates of the given file and the PLD file don't match, you will be warned.

You can define, whether you will be warned, if the chosen file format can't handle all information contained in a document. The warning lists up all features, that are lost on saving. But PhotoLine tries to save the document as correct as possible. Optically there is often no difference. But it can happen, that text layers are converted to image layers or the result is a single image layer.

Another option is, whether to work with the reduced data after saving. Without request the data stay the same.

Additionally you can define a color, that is used as replacement for transparency, if the given file format doesn't support transparency.

Finally you can determine a file format as default file format used for saving. You can choose between PLD, TIFF, JPEG, GIF and PDF. Furthermore you can choose to always use the previously used file format.

But note, that only the PLD-format ensures, that a document is saved without loosing information. Only if you are saving a file as PLD, you can edit it the same way after loading like you did before saving.

With **Auto Save** you can set if and how often PhotoLine automatically saves an edited document while working. Automatic saving does not overwrite the original file; instead, a copy is created in the settings directory (chapter 1.6) in the „AutoSave" subdirectory. If PhotoLine should crash against expectation, you will be offered to load the AutoSave files at the next program start. They are then deleted at the next program end. If you are working with very large files, it may be necessary to turn off **Auto Save** to avoid delays.

7.10.1.2 File/Codecs

Codecs allows to control whether external modules should be used to import or export files.

7.10.1.3 File/PLD

Images without attached JPEG-data are saved as PNG images on saving using the PLD-format. PhotoLine is using the best compression in this case. But sometimes the best compression my be to time-consuming. Therefore, you can reduce the level of compression or can turn off compression at all by using **Image Compression**.

7.10.1.4 File/PDF

Color Space defines how to treat colors and images on saving:

- With Original they are saved the same way they were created.
- With Gray everything is converted to gray.
- CMYK converts to the CMYK color space. This conversion uses the CMYK profile you assigned to the document. If there is no CMYK profile, the settings made in Color Management/Standard (see chapter 7.10.1.38) are used. Only RGB colors and images will be converted, gray data stays unchanged. RGB colors, whose red, green and blue component are equal, will not be converted to CMYK but to gray.
- PDF/X-1a and PDF/X-3
  Print shops often ask for documents in PDF/X-1a or PDF/X-3 format. Both formats have several things in common:
  - They define for which CMYK color space they are created. PhotoLine uses the color profile assigned to the document. If no profile is assigned, the default CMYK profile (see chapter 7.10.1.38) is used. This profile is embedded in the generated PDF file, thus PDF/X-1a and PDF/X-3 files are often significantly larger than “normal” PDF files.
  - Both define how fonts are embedded, and that there must not be any transparency in the document. The corresponding settings are therefore not available.
  - PDF viewer programs usually show PDF/X-1a or PDF/X-3 files including the bleed. Therefore, pages appear larger than they are in reality. But often the viewers can show the real page size, too.

  The main difference between the two formats is, that with PDF/X-1a all color data is converted to CMYK. This does not happen with PDF/X-3.

Here, the original data is preserved, but an attached ICC profile ensures a well-defined appearance.

Sometimes print shops request PDF/X-3 files, but with CMYK color data. This effectively results in PDF/X-1a, so you should use this in such a case.

- PDF/X-4 and PDF/X-4 CMYK
  PDF/X-4 is an evolution of PDF/X-3. The main difference is that PDF/X-4 supports transparency.
  Since print shops who allow PDF/X-4 often request CMYK color information as well, there is also a PDF/X-4 CMYK mode that performs the necessary conversions.
- PDF/A-1b und PDF/A-2u
  PDF/A is a standard for long-term archiving of PDF documents. The main point of PDF/A is that the content of a PDF file can be reproduced unambiguously. Colors must therefore be precisely defined and fonts embedded.
  With PDF/A-2u, text must also be mappable to Unicode.

You can simulate the effect of Color Space on-screen by activating “View > PDF Proof Mode”.

Resolution defines the resolution for images stored in a PDF-file. Note that images will never be enlarged but only scaled down if needed. This value is also used, if a layer having non-PDF-compliant properties has to be converted into an image on saving. Aside from various dpi values there is the setting Document. Using that the layer will be saved in the same quality it was created in the **document**. 72 dpi can be used as screen quality.

Transparency is still a problem in PDF. Since version 1.4 PDF files can contain smooth transparency, but until now most print shops prefer PDF files with version 1.3. But this version of PDF is quite restricted in displaying transparency, because it can only display 1-bit transparency (in contrast to 8-bit transparency of PhotoLine). Therefore, you have the choice to remove the transparency from a document or to replace it by 1-bit. Both ways have disadvantages, but usually it is better to use **Replace Background**, this means removing the transparency completely. Of course it is best to avoid this problem at all by not using transparency, if the document should be saved as PDF.

With **Bleed** you can specify how far beyond the page boundaries PhotoLine creates the document content. This bleed width is usually specified by your print shop. If you activate **Crop**, PhotoLine will create an additional clipping path for the bleed width. Normally this is unnecessary.

In order to ensure a document looks the same on a different computer, fonts contained in a document can be embedded in a PDF-file. But there are two restrictions: PhotoLine can only export TrueType-fonts and this only, if it is permitted by the font. Some fonts forbid to be stored in document files. Note, that font embedding may increase the resulting file size enormously. Due to this **Fonts** offers several ways to treat fonts used in a document:

- No Embedding
  No font will be embedded.
- Convert Forbidden Fonts To Path
  Fonts allowing embedding will be embedded. Text using other fonts will be converted to vector paths. Due to technical reasons only whole text layers will be converted to vector. If there is only one word in a text layer using a forbidden font, the whole text layer will be converted.
- Embed Only Allowed
  Fonts, that allow embedding, will be embedded.
- Convert All To Path
  Every text will be converted to vector paths. No font will be embedded.

Image Compression controls, how to compress images. Which option to use largely depends on desired area of application. If you want to print the document or process it any further, you should use **ZIP quick** or **ZIP best**, if the document is used for viewing onscreen, one of the JPEG variants is suitable, because they lead to smaller files.

Text Compression controls, how to compress page description commands and black/white-images. There is no reason, why you shouldn't always use **ZIP best**.

The command ***Layer/Display/Print Layer*** (see chapter 7.5.33) controls whether a layer is only shown onscreen or is printed, too. By turning on **Export Only Printable Layers** this setting is used for the PDF-export, too.

If a document, that should be saved as PDF, is a slideshow (see chapter 7.1.14), **Start Slide Show In Full Screen Mode** controls whether the resulting PDF opened with Adobe® Reader® will be shown full screen.

7.10.1.5 File/JPEG

JPEG allows to save files progressive. This is useful, if you want to use your files on a web page, because web browsers are able to load and display a ***progressive JPEG*** in parts.

The slider **JPEG Quality** controls the reduction of the JPEG compressor. A value of 100 means minimum compression and highest image quality, a value of 0 means maximum compression and lowest quality. If you save an image for displaying on the screen, a value of 70 is appropriate, for printing you should use 90. But pay attention: JPEG is lossy and you may loose image quality. Information about lossless JPEG editing can be found in chapter 5.5.2 “JPEG-Image in PhotoLine”.

Usually the JPEG format saves color information with a lower quality than brightness. If **High Quality** is turned on, color information will be saved using the same quality.

JPEG files can contain EXIF data. EXIF data store the settings used when taking the photo: time, date, aperture, exposure, ... Apart from this they often contain a preview image, too. **EXIF Preview Image**: controls how to handle this thumbnail. **Save New** creates a new one on saving. **Keep Existing** keeps the EXIF data unchanged and stores them exactly the same way they were loaded. **Don‘t Save** deletes the preview image, if there is one.

7.10.1.6 File/JPEG 2000

The slider **JPEG 2000 Compression** controls the reduction of the JPEG compressor. A value of 100 means minimum compression and highest image quality, a value of 0 means maximum compression and lowest quality. Aside from that it is possible to compress lossless, but this way the file size usually increases remarkably.

7.10.1.7 File/PNG

PNG images can be saved Interlaced. This is useful, if you want to use the image on a web page (see GIF).

Another option is the strength of compression.

By default PhotoLine saves size-optimized PNG files. For this purpose, transparent areas in the image are filled with a uniform color and images with a maximum of 256 colors are saved as palette images. However, there are situations in which this is not desired, so this behaviour can be switched off by **Optimize Size**.

Furthermore you have the option to automatically reduce the number of colors when saving in the PNG-format. You have also the choice to turn on **Ask**. In this case on saving the Color-Reduce dialog is shown, otherwise the reduce scheme selected in **Preset** will be used for reduction (see chapter 5.7.2).

7.10.1.8 File/TIFF

TIFF is a very flexible file format. Therefore, you have several different settings.

Format for Saving allows to choose the compression for saving. You have the choice between TIF unpacked, TIF LZW-packed, TIF JPEG-packed, TIF Packbits, TIF Class 3, TIF Class 4 and TIF ZIP.

The slider **JPEG Compression** controls the reduction of the JPEG compressor. A value of 100 means minimum compression and highest image quality, a value of 0 means maximum compression and lowest quality. If you save an image for displaying, on the screen a value of 70 is appropriate, for printing you should use 90. But pay attention: JPEG is lossy and only few applications are able to read TIF files that are compressed with JPEG.

Using **Save Layer/Page Images** the saving of pictures consisting of several layers is controlled. If **Normal Image** is activated, the picture will be reduced to one layer and this one will be saved. With **Save Layers** each layer will be saved as a separate image in the TIFF-file. But note, that many applications interpret TIFF-files with several images as multi-page documents. If you turn on **Ask**, on saving you will be asked whether to reduce the picture to one layer.

There are TIFF-files, that contain several images. If you select **Open Multipage TIFFs on Pages**, PhotoLine will create a single page for every image in the file. Otherwise you will get one page with several layers.

7.10.1.9 File/BMP

Here you can define the color depth of the resulting BMP file. The color depth is the number of bits per pixel. The default setting is **Automatic** which means PhotoLine is calculating the color count in the image and uses the optimal color depth. But if you have a special usage, it may be necessary to set a fix color depth.
Furthermore you have the option to **automatically** reduce the number of colors when saving in the BMP-format. You may also turn on **Ask**. In this case on saving the Color-Reduce dialog is shown, otherwise the reduce scheme selected in **Preset** will be used for reduction (see chapter 5.7.2).

7.10.1.10 File/JPEG XL

Here you can set the default quality for the JPEG XL file format. Higher percentage values correspond to better image quality. If the quality is 100%, the image is saved losslessly.

7.10.1.11 File/JPEG XR

Here you can control the quality used for saving JPEG XR (formally HDPhoto) files. Higher percent values correspond to a better quality.
Usually JPEG XR is a lossy file format. This means, that you are losing certain details on saving. But by turning on **Lossless,** JPEG XR will become a lossless file format.

7.10.1.12 File/DDS

Here you can choose whether you want to save size-reduced versions of the image, too.

7.10.1.13 File/PCD

Here you can set the size for loading Photo CD images.
You can choose between Base / 16, Base / 4, Base, Base * 4, Base * 16 and Base * 64.
These formats are placeholders for pixel sizes and go from Base / 16 (128 x 192 pixel) to Base * 16 (2048 x 3072 pixel). Pay attention, that Base * 16 need already more than 18 MB memory.

The Base * 64 is used for commercial purposes and not available on all Photo CDs. An image in this format needs 72 MB memory.

7.10.1.14 File/GIF

Here you can define, if you want to save your GIF images interlaced. You should save them interlaced, if you want to use them in the web, because interlaced images can be loaded and displayed stepwise.
You also can control, how often an animated GIF is shown. A value of 0 means endless repetition.
You can setup PhotoLine to reduce layer images to one layer (**Normal Image**) or to save as **Animated GIF** or to **Ask** how to save.
The GIF-format does only support images with up to 256 different colors. Therefore, you can assign a predefined reduce scheme (see chapter 5.7.2). You have also the choice to turn on **Ask**. In this case on saving automatically the Color-Reduce dialog is shown, if the image contains more than 256 colors. Because of that it is usually not necessary to reduce the colors manually before saving.

7.10.1.15 File/WebP

Quality controls the quality of the resulting file. 100% will produce a lossless compressed file, meaning a file identical to the original. Values smaller than 100% will produce a lossily compressed file: the result is only similar to the original. A smaller value produces a smaller file, but the differences to the original will be larger.

7.10.1.16 File/Raw

Some digital cameras offer raw, unchanged image data. PhotoLine is able to interpret those data of some cameras. Because these data are unchanged - which means “not enhanced”, you can turn on actions, that will be executed automatically after loading and that will enhance the quality of the data.
A raw file is imported into PhotoLine as a document with layers. The background layer is the original raw file. In addition, there are two adjustment layers: The first one converts the raw image from the color space of the camera into a common color space and eliminates problems

that can arise from overexposure. The second one adjusts the brightness and contains further adjustments to improve the image.
Activating **Automatic White Point** optimizes brightness after loading. Use **Camera White Point** applies the white point stored in the Raw file, if there is one.
If the mode Support of **Special Sensors** is activated, Raw files containing more than one image (this is currently only concerning digital cameras from Fujifilm) are imported as a document with two image layers. The bottom image will be the one with normal brightness, the top one will be underexposed. You can use the two layers to correct overexposed parts in the normal brightness image.
With **Action** you can execute an action after loading the raw file (see chapter 4.27). For example, you can reduce the document to a background layer or perform additional processing steps.
Alternatively, you can also define an action specifically for a camera type. The list box at the bottom of the dialog is used for this purpose. To do this, proceed as follows:

- Before calling the Settings dialog, open a raw file of the camera to which you want to assign an action.
- Now open the Raw settings.
- Create a new record by clicking on the plus sign.
- The first column now shows the name of the camera with which the raw file was created. In the second column you can select an action that will be applied after opening.

Load as controls how the original raw file is inserted into the new document. There are three choices:

Image
This is classic mode.
Advantages:

- The document is independent of the original file.
- The background layer can be edited directly.

Disadvantages:

- The generated document takes up a lot of space on the hard disk.
- Dynamic filters cannot be applied.

Embedded Placeholder

The data of the raw file is inserted as a placeholder layer.

Advantages:

- The document is independent of the original file.
- Dynamic filters can be applied.

Disadvantages:

- The generated document takes up a lot of space on the hard disk.

File-based Placeholder

The raw file is inserted as a placeholder layer that refers to the original file.

Advantages:

- Dynamic filters can be applied.
- The generated document takes up little space on the hard disk.

Disadvantages:

- The document can only be displayed if the original raw file exists.

7.10.1.17 Working/Brush

Only Draw Once means, that PhotoLine draws only once at every place as long as you don't release the mouse button. This option is useful, if you are drawing with an intensity of - for example - 50%, because painting twice on one place doesn't result in a higher intensity.

You can also setup to connect the drawing points with a line.

7.10.1.18 Working/Special

Special contains many different settings:

The Layer Tool allows to select several layers at once by using a rubber rectangle. A layer will be selected, if its bounds are touched by the rubber rectangle. This behaviour can be modified by activating **Rectangle Selection: Only If Completely Inside**.

If **Color information from active layer** is selected, the color picker and the color information in the Picture Info (see chapter 4.24) only reads a color value, if the mouse is over an image layer. If this option isn't selected, colors are read from all layer types. If used with very complex documents, this option may make PhotoLine a bit slow.

Sample Size allows to control the size of the area used by Picture Info to read color values. Aside fixed values like 1x1 pixel or 3x3 pixel there is the mode **Auto**. Using this mode PhotoLine calculates the size by itself depending on the current zoom factor of the document. A zoom factor of 100% or larger results in a 1x1 pixel area. On smaller zoom factors a 3x3 pixel or 5x5 pixel area is used.

If **Read Colors in HSV Mode** is activated, the color picker converts all read colors to HSV. This way it is easier to edit the colors with the color editor (see chapter 3.4).

Usually the ***Color Picker*** (see chapter 6.2.18) has a small window showing the read color values. **Show color beside the Color Picker** allows to turn that window off.

The Layer List (chapter 4.7) automatically activates the document after any action. This behavior allows seamless editing of the document, but prevents controlling the Layer List via keyboard. Users who prefer keyboard control, can activate it with the switch **Layer list with keyboard support**.

7.10.1.19 Working/Vector

Here you can set the optimization when entering freehand vector lines.

Since you would get thousands of vector points when entering freehand vector lines, PhotoLine will automatically optimize those lines.

You can setup here the precision of the optimization or you can disable it by using a value of 0.

7.10.1.20 Working/Undo

Here you can set the number of undoable steps. A maximum of 500 is allowed.

On editing large images a single undo step may consume many megabytes of memory and only a few undo steps may be sufficient to exceed the capacity of modern computers. Therefore, you can enter an additional limit

which defines the maximum amount of memory used for undo of a document.

7.10.1.21 Working/Cursor

Here you are able to - separately for drawing tools and the other tools - choose, whether a precise cursor (a small cross) or a special tool cursor is used.

If possible PhotoLine is using the mouse cursors of the operating system. On Windows some of these system mouse cursors aren‘t drawn but they are inverting the screen content. If the screen content is gray, this may lead to an invisible mouse cursor. Therefore, PhotoLine offers with **Use System Mouse Cursor** a way to switch to mouse cursors defined in PhotoLine which don‘t have this problem.

If **Clear with right mouse button** is turned on, while drawing the right mouse button doesn’t show the context menu, but activates the eraser tool. Drawing is one of the following tools from the toolbar: painting, eraser, stamp, filter brush, copy brush, finger, water, brighter tool and darker tool. Using this mode the copy brush and the healing brush allow to set the source point with the right mouse button.

If **Scroll Image Content by Mouse Wheel** is deactivated, using the mouse wheel doesn‘t scroll the window but scales the window content. Holding the ***Ctrl***-key (Windows) or ***Command***-key (macOS) allows to access the functionality turned off by this switch.

7.10.1.22 Working/Spell Checker

Here you can manage the exception dictionaries used by the spell checker (see also chapter 6.2.12). There is always the User Dictionary which is applied to all documents. Aside from that there is “Ignored Words”. This one is only used for the active document and will be saved along with it.

On Windows these options allow to choose the language used by the spell checker, too. On macOS the language is set in the system's built-in spell checker dialog.

7.10.1.23 Display/Transparency

PhotoLine is showing transparent areas as little, colored boxes. This colors can be set in this dialog. The size of the boxes is adjustable, too.

7.10.1.24 Display/Mask

Here you can set the color and the intensity used for displaying the mask of an image.

7.10.1.25 Display/Extreme Values

These settings allow to set-up the color and intensity of the marking of extreme color values (see chapter 7.3.18). Furthermore it allows to define a limit which a color has to exceed in order to be an extreme value. By using the values 0% and 100% nothing is marked.
Using the single channel mode areas will already be marked, if a single color channel exceeds the limits, otherwise all channels have to lie outside the valid range.

7.10.1.26 Display/Document

Documents are displayed with a border outside the page. This free space eases editing of layers lying partly or completely outside a page. The color of this border can be adjusted separately for document and picture mode (see chapter 2.11). This color is also used to hide the contents of the border area (see chapter 7.3.24). Furthermore you can setup, whether the size of a document window is adjusted after zooming in or out.
Deactivating **3-D Document Frame** draws the page border as simple line.
PhotoLine is able to show the printable area in documents. **Color of Print Frame** controls the color used for drawing the printable area.
After opening an image or document it will be zoomed to show its complete content. Documents are always zoomed freely. By activating **Fix Zoom Images When Opening images** additionally allow to the restrict the zoom factor to even fraction like 50%, 25% and so on.
On macOS with a screen with Retina resolution there is also the setting **Use Retina Resolution**. If you turn this off, the screen output will be in a slightly reduced resolution. If you are doing image processing, the

differences to full resolution are hardly noticeable, but the screen output is much faster.

7.10.1.27 Display/Layer

The text flow markers in text layers are sometimes annoying. Because of that, you can turn them off with **Show Text Flow Marker**. But note, that then you are no longer able to create a text flow.

Screen Quality of Vector Graphics allows to define the quality of vector graphics in documents. You may choose between **low**, **middle** and **high**. **Low** draws vector graphics without any antialiasing, **middle** uses weak smoothing and **high** offers the best quality but is the slowest, too. This option is used only, if antialiasing is turned on (see chapter 7.2.16). But attention: hair lines, that means lines with a width of 0, are never smoothed.

Show Layer Frames defines, that some layer types are always surrounded by a frame and not only, when they are selected.

7.10.1.28 Display/Formatting Marks

If you have activated “View > Show Formatting Marks”, you can define here which formatting characters should be displayed. You can also set their color.

How to enter the respective formatting characters is explained in the Text tool (Chapter 6.2.13).

7.10.1.29 Display/Grid

You can set the origin and the distance between the grid knots here. The grid can be displayed with lines, with points and with small crosses.

Usually the grid is drawn in the exclusive-or-mode. But you can choose to draw the grid with a free choosable color.

Furthermore you can adjust the color of the pixel grid (see chapter 7.3.31).

7.10.1.30 Display/Guides

Distance is the maximum distance for snapping to guides, and **Guide Color** controls their color.

Aside from normal guides there are automatic guides. You don't create automatic guides, instead they are controlled by the content of the document. There are three types of automatic guides:

- the document borders
- the layer frames
- the paths of vector layers

You can decide for each of these types whether they should be used for snapping. Additionally you can control their color.

Nearly all functions allow to temporarily modify the snapping behavior by pressing the ***Alt key***. With **Alt-key inverts snapping on:** you can define which alignment helpers should be influenced by ***Alt***.

7.10.1.31 Display/Screen Resolution

Here you can define the screen resolution which is the number of pixels per inch (dpi). PhotoLine always assumes, that the screen pixels are quadratic, so their width must be equal to their height. The screen resolution is important in order to display documents at original size (see chapter 7.3.13).

In order to simplify the calculation of the screen resolution, a red bar is displayed. If the length of this bar is entered in **Length:**, PhotoLine calculates the corresponding screen resolution. Like in every unit field the unit of the length field can be changed by using its context menu.

7.10.1.32 Browse/Preview Images

Preview Images controls how large images are displayed in the **browse overview** (see chapter 5.4) and which additional information are shown.

Size is the size of a preview image in the browse overview.

Show Information is used to turn on and off additional info**.**

7.10.1.33 Display/User Interface

Here you can adjust the user interface to your preferences.

Under **User Interface** you can set the brightness of the dialogs and controls. If **Activate Black Mode** is not selected, the colors are defined by your operating system. **Selection Color** controls the color of selected items in list fields. If this color is transparent, a default color will be used.

Under **Icons** you can adjust the appearance of the icons in the toolbars. You can choose between colored and gray, with or without shadows. Additionally, you can adjust the size of icons.

7.10.1.34 Browse/Settings

This subdialog allows to modify where and how browse files are saved. Browse files are files with the extension ".plb". They are used to speed up the Browse-function (see chapter 5.4 and chapter 7.10.1.30) by caching the generated preview pictures.

Overwrite Existing Images has only an effect, if the size of the browse images has been changed in ***Browse/Preview Images***. If this option is selected, a new browse image will be created, even if there already is an up to date version, but has the wrong size.

Browse File controls whether and where a browse file will be saved. If **Don't save** is chosen, browse files will not be saved. Therefore, the next browse will last as long as the first. **Save in image folder** is the default setting and the most efficient one. The browse file is saved in the browsed directory. **Save in user folder** means that all browse files are stored at a central location. On Windows this is usually on the boot drive in the folder "Documents and Settings". In this folder there is a folder named like the current user and in the user folder there is a folder named "Application Data". Here you can find a folder called "Application Data", which contains the folder "PhotoLine", and this one contains a folder named "Browse". In this folder the browse files will be stored. An example of the complete path of the user directory is "Documents and Settings\Martin\Application Data\PhotoLine\Browse". Note that this folder is maybe only visible, if the folder option "Show all files and folders" of the Explorer is checked. On macOS this directory is in the preferences folder in the folder "PhotoLine". For best performance this option should be set to **Save in image folder**.

Save Browse File for Read Only Volumes controls whether PhotoLine should save browse files, if the browsed directory is write-protected. If this option is checked, the browse files will be saved in the user directory (see above).

Some users want to work with a browse window as large as possible. Therefore, it is possible to minimize or to close the browse window after opening a file.

If **On Opening Add Files To Recent File List** is activated, files opened by double-clicking will be added to the recent file list.

On macOS there is the additional option to save a preview image directly in a document file. But note that this option may enlarge small files significantly. Furthermore you can control, whether the browse window should behave like a document window or like a dialog.

7.10.1.35 Browse/Creation

Some file formats are very demanding and it is very time-consuming to create a preview image for them. Therefore, it is possible to set up special rules for those formats.

PDF and digital camera raw files are very time consuming, but they may already contain a preview image. In this case PhotoLine is able to use this preview image and to use the standard icon of the operating system otherwise.

7.10.1.36 Browse/Icon Bar

Browse/Icon Bar allows to customize the icon bar in browse windows (see chapter 5.4).

Menu Entries is listing all entries, that can be incorporated in the icon bar. These are the same functions, that are accessible through the **Functions** menu. Additionally there is **Separator**, that allows to visually group the content of the icon bar.

Buttons shows the current content of the icon bar. It can be sorted here, too. **Delete** removes single entries.

7.10.1.37 Color Management/Devices

In ***ColorManagement/Devices*** the color management inside PhotoLine is activated or deactivated. Furthermore input and output devices can be calibrated by using ICC color profiles. ICC color profiles are a standard way to achieve a correct color reproduction.

If there are more than one scanners or printers connected to your computer, every device can have a profile on its own. You just have to make the device the standard device. For scanners use ***File/Import/Select Scanner***. For printers you have to use ***File/Print Setup*** on Windows.

On macOS you can't change the screen profile in this dialog, because on macOS the system wide defined profile is used. This can be changed by using the System Preferences.

On Windows the printer profiles offer the option **System**. Choosing that, the printer driver will handle the color management and PhotoLine won't change its settings.

Additionally you can define a proof profile. The proof profile allows to emulate the output of a certain device on your screen and on your printer. In order to do this you have to activate ***Proof Mode*** in the View menu.

7.10.1.38 Color Management/Standard

Color Management/Standard allows to assign ICC color profiles to color spaces. This profiles will be used, if an image doesn't have a profile (see chapter 7.6.15).

PhotoLine normally uses the CMS (color management system) of the operating system on which it runs. Optionally it can also use the Open Source CMS ***Little CMS***.

On Linux and WINE ***Little CMS*** is enabled by default.

If you modify this setting, you will have to quit and restart PhotoLine.

7.10.1.39 Usage/Keyboard Layout

Keyboard Layout allows to assign a shortcut to every menu entry, every tool in the toolbar and every action.

7.10.1.40 Usage/Context Menu

PhotoLine has a context menu whose content can be determined by the user. At the left side there are all menu commands of PhotoLine. At the right side there is the content of the context menu. By pressing >> the currently selected menu command is added to the context.

On Windows the user-defined context menu can be accessed by ***pressing the middle mouse button*** or by using the ***Shift+right mouse click***. On macOS this context menu is shown by holding ***Shift*** while opening it.

7.10.1.41 Usage/Toolbars

PhotoLine allows to customize the content of its toolbars. **Bar** shows the available toolbars. **Reset** redoes all changes made. **Menu Entries** is listing all menu entries, that can be put in a toolbar. Additionally there is the point **Separator**, that is used to divide the content of a toolbar into groups. Beneath every menu entry there is its icon, if it has one.

Buttons shows all entries currently in the toolbar. Those entries can be sorted here, too. If an entry has no icon, it gets a default icon: .

Delete allows to remove entries from a toolbar.

7.10.1.42 Usage/Zoom Fix

Zoom contains the predefined zoom steps for the ***View/Zoom*** submenu.

7.10.1.43 Usage/Recent File List

You can setup here the number of recent files in the file menu. The initial value is 4. You can setup up to 16 entries here. The value will take affect after restarting PhotoLine.

7.10.1.44 Extended/System

System controls if and how often PhotoLine checks for a new program version. The default setting is every 7 days.

Furthermore, on Windows you can control here, what to do on copying. If you want to use the data in another application, you should turn **Write WMF to clipboard** on. If you are only copying inside PhotoLine, you should turn it off, because this way copying is much faster.

Furthermore you can define what to do with data on the clipboard, when quitting PhotoLine. You have the choice between **Destroy**, **Ask** and **Save**.

There are three modes for pasting layers from the clipboard. The newly inserted layer can be centered in the window, it can keep its position, that is the position it had on copying, and its top, left corner can be placed at the

mouse position. If there is already a layer at that position, you can define an offset for the new layer.

7.10.1.45 Extended/External Programs

External Programs allows to define a list of applications. These applications can be started by using the context menu of the browse window. On starting, the application gets the names of the selected files as parameter.

In order to create a new entry you have to set the path to the application using **Browse...** first. After that you can create the entry with the "+" button. The list allows to modify the program name anytime.

You can use the external programs in combination with the active document or active layer by using the ***Filter*** menu, too. In that case you can set up the file format, that should be used for data exchange. Aside from standard file formats, there is **None**. If you choose that, the application won't get any file. This is useful in combination with file managers. Additionally you can choose which data you want to use:

- Layer
  The active layer will be saved in a temporary file, and this temporary file will be opened with the external program. If you save the file, PhotoLine will automatically replace the active layer with its content and will delete the temporary file afterwards.
  There is a special behavior in combination with placeholder layers: If the file format of the placeholder data fits the file format of the extern program, the placeholder data will be used directly without any conversion.
- Reduce
  The whole document will be saved as a simple one-layer file. Aside from that, the behavior is the same as with Layer.
- Original
  Original is a bit different compared to the other options. The file will not be saved, instead the file, the current document is based on, will be transferred to the external program. Please note, that this file may have a different content than your document, if you already have edited your document.

- Ask
  On executing the application PhotoLine is asking which of the 3 previous options you want to use.

7.10.1.46 Extended/Plug-In-Modules

PhotoLine can load and use standard plug-in filter modules.
The symbol + creates a new entry for a folder to load plug-ins from. The symbol − deletes the active entry.
The symbol can be used to assign a new path to an entry.
If you turn on the **Activate** switch, after leaving the Options PhotoLine will load any plug-in it finds in the given path.
If **Subfolders** is checked, not only the selected directory is searched, but also all directories in it.
Pay attention: some plug-ins are performing illegal actions and may lead to a crash of PhotoLine. In this case remove this plug-ins from your plug-in directory.

7.10.1.47 Extended/Periphery

The switch **Support pressure sensitive tablet** controls, whether PhotoLine supports the pressure information of a pressure sensitive tablet.
If you are having problems while scanning, you can change the way, PhotoLine gets its data from the scanner.
Default means that PhotoLine uses the data transfer, that the scanner prefers. **Memory** has the effect, that PhotoLine gets the data via main memory. With **Native** the data are transferred in an OS-specific format: on Windows as BMP, on macOS as PICT.
If a document, that contains parts which can't be printed directly (for example transparent colors or layer styles), is to be printed, PhotoLine has to convert it to an image. Because modern printers offer a resolution up to 2400 dpi, it is not a good idea to compute the image with the same resolution as the printer. Using 2400 dpi a colored DIN A4 page consumes more than 1.5 GByte memory. Therefore, **Max. Output Resolution** allows to lay down the resolution used for rendering print images. The default value is 600 dpi. Even with this resolution a colored DIN A4 page needs 100 MByte. But this is an amount of memory, that modern computers can

handle quite comfortably. If you want to print larger documents you may need to reduce this value.

Only on Windows there is the setting **Automatic Picture Transfer**. If you are using the command ***File/Import/From Scanner or Camera*** for transferring pictures from a digital camera or an USB storage device, these pictures will be copied to the path given here. Afterwards this path will be browsed.

7.10.1.48 Extended/Language (only Windows)

Here you can change the language, which PhotoLine uses for its user interface.

At the moment there are six options: system language, English, German, French, Italian and Chinese.

7.10.1.49 Extended/DigiCam Focal

Usually the focal length of a digital camera can't be compared directly to the focal length of a miniature camera. Therefore, ***DigiCam Focal*** allows to enter conversion factors for the focal length. Each type of camera needs its own factor and the name of camera as stored in the EXIF data.

On listing the EXIF data of a file PhotoLine will use these conversion factors to display additionally to the stored focal length the corresponding miniature camera value.

7.10.1.50 Extended/Font Replacement

PDF and PSD files can contain formatted text. If a font, that is not installed on the computer, is used in this text, PhotoLine is asking for a replacement font. Each font replacement is stored internally, so that PhotoLine doesn't have to ask once more for the same font.

With ***Font Replacement*** the current replacement list can be viewed and edited.

7.10.2 Register

In this dialog you can enter your PhotoLine registration number. The registration number consists of two numbers with several digits. The first number has to be entered in the left text field, the second in the right one.

If you don‘t have a registration number, you can order one by using **Order Number.** The following dialogs ask you to enter the information needed to process your order and tell you the price of that order. After finishing an e-mail is created which you can send by using your e-mail application.

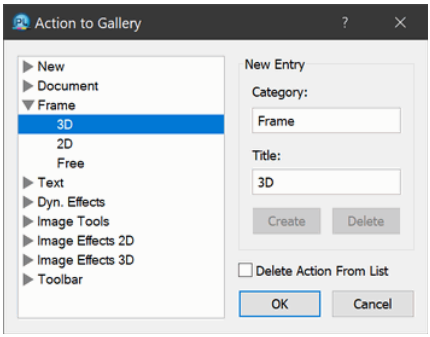
7.10.3 Search for Update

Search for Update connects to the internet and looks on the PhotoLine website, whether there is a new version of PhotoLine. If so, you get a message and can download the new version.

7.10.4 Window/Align All

Align All sets the zoom and the visible area of all document windows to the same value.

7.10.5 Action to Gallery



The context menu entry ***Action to Gallery*** transfers the action currently selected in the Action dialog to the Gallery (see chapter 4.26 and chapter 4.27). In order to do this a group in the list at the left side has to be selected. The Action will be inserted in this group. If you want to insert the action in a new group, you can create one by using **New Entry**. You have to enter a category and a title for the new group. The category can be entered by clicking on an existing one or by typing a new name. By clicking **Create** the new group will be created. If you created a new group by accident, you can delete it by using **Delete**.

If **Delete Action From List** is selected, the action will be removed from the Action dialog when leaving. The action will therefore only be in the Gallery.

7.10.6 Harmony

From time to time there may be the need to find colors contrasting to or being in harmony with a given start color.
This task is solved with the ***Harmony*** dialog. Here is a short description of its concept:

The primary colors are positioned on the edge of a circle. The “light colors” red, green and blue have the same angular distance to each other, so they optically form a triangle. At the opposing positions are their complementary colors, the “print colors” cyan, magenta and yellow. The center of the circle has no saturation: it is black, gray or white, depending on the current lightness. The space between these basic colors is blended continuously.
The color harmony is based on the theory, that equal angular distances between colors and equal distances from the center of the color circle correspond to “nice” color combinations.

PhotoLine offers several methods for creating color combinations. The whole creation is based on the HSV color model. If you are modifying the position of a color marker in the color circle, you can (depending on the chosen method) change the color angle (hue) and the saturation for this or for all colors. By holding Ctrl (Windows) or Command (macOS) only the hue is changed, by holding Shift only the saturation. The slider at the bottom controls the lightness (value).

The created colors can be added to the active color list by using **to color list**.

8. Frequently Asked Questions

8.1 A Tool Is Missing

I am searching for the rectangle or circle lasso, but I can only find the free lasso.

PhotoLine offers so many tools, so that they don't fit in the toolbar at the same time. Therefore, some icons have a small red triangle at the right bottom. These icons are used multiply. By clicking and holding with the left mouse button a pop-up appears showing a selection of available tools. Now you can select one of them.

The lasso tools are used this way.

8.2 Tools are missing

I can't find a certain tool in the toolbar.

PhotoLine only shows that tools, which can be used with the current layer. If a text layer is active, you don't have access to the drawing tools.

If you can't find a certain tool and you have ensured, that it isn't a multiple icon, check, whether you have selected the right layer.

8.3 Setting Up Units

Every text field in PhotoLine shows values in pixel. But I want other units like inches.

You can change the units of every size field and of the rulers in PhotoLine (see also chapter 3.3.7). Right-click (on Windows) or Ctrl-click (on macOS) on the field and you will get a popup with the selectable units.

8.4 Crop An Image

I want to crop an image, but I don't know how.

First of all you have to create a lasso around the area, that you want to crop. Then you press ***Crop*** in the Tool Settings or in the context menu. You can create a Soft Edge with the corresponding setting in the Tool Settings.

8.5 Starting PhotoLine From An USB-Stick

You can start PhotoLine from an USB-stick without any problem. First you have to copy the installed PhotoLine folder from your hard disk to the USB-stick. Now you can start PhotoLine from the USB-Stick, but the settings are still saved to the hard disk. In order to fix this, you have to create a folder named "PhotoLineSettings" on your USB-stick. On Windows this folder has to be directly in the application folder, on macOS it can be either in the application package in "Contents/Resources" or in the application packages's folder.

If PhotoLine finds "PhotoLineSettings" on starting, it will read and write its settings to it. Of course it must not be write-protected.

8.6 Clear An Image

How do I clear the complete content of an image?

Choose the eraser tool in the toolbar and click **Apply To Entire Image** in the Tool Settings. If there is a lasso, select ***Edit/Deselect*** before.

8.7 Create An Alpha Channel/Transparency

I want the eraser to make the image transparent. How do I do that?

The eraser usually uses the background color. But if an image has an alpha channel/transparency, using the eraser makes an image transparent. An alpha channel/transparency is created in the Layer Attributes (see chapter 4.11).

8.8 Drawing Lines

How can I draw straight lines?

All drawing tools (painting, eraser, stamp, finger, ...) are able to draw lines. Simply hold ***Shift*** and drag a line.

8.9 Rotating Layers

How can I rotate a layer (not the background layer) or a lasso?

Place the mouse cursor a little bit outside the handle and you will see the cursor for rotating. Press and hold the mouse to rotate.

8.10 Changing the Size of An Image

How can I change the size of an image, so that there is additional space aside or below it?

If you want to resize an image layer, you can use the command ***Layer/Change Layer Size***.

If you are editing a document and want to resize the document, you can use ***Layout/Document/Change Document Size***. You can use the Crop Tool (see chapter 6.2.17), too.

8.11 My Plug-In Filters Don't Appear

My plug-in filters don't appear!

First check, whether you have set the right directory in ***Options/Extended/Plug-In Filter*** and whether the filters are activated.

On Windows some filters need the files PLUGIN.DLL and MSVCRT10.DLL. They should reside in the Windows system directory.

8.12 Create A Screen Snapshot

Why is there no snapshot function in PhotoLine?

Windows has a built-in snapshot function. Press ***Print*** to copy the whole screen into the clipboard, and ***Alt+Print*** to copy the active window. After that you can insert the clipboard content in PhotoLine.

On macOS ***Shift+Command+3*** copies the whole screen and ***Shift+Command+4*** copies a selection. If you press additionally the ***Ctrl*** key, you will get the image on the clipboard.

8.13 Red Frame and Sound Using Text Layers

„There is a red frame or red rectangle respectively around my text layer. Furthermore every time I hit a key I hear a sound.“

If the above is happening, then the text layer is to small for its text. PhotoLine will show the text nevertheless, but it is marking the layer with red to signal the error.

To solve the problem simply enlarge the text layer or reduce the text size.

8.14 How To Use The Functions

PhotoLine has so many functions, but I don't know how to use them.

The first way to get information about a function is to read the description in the status bar when the mouse is above the function. If this is not enough, press the Help key (on Windows: F1) and get the online help.

You should also try to read the Tutorial of PhotoLine. You can find it at www.pl32.com

It shows many basic functions of PhotoLine.

9. Index

3D-Shadow 318
Actions 118
Activate First Layer 258
Activate Last Layer 258
Activate Next Layer 258
Activate Previous Layer 258
Activate Text Shortcuts 232
Active Brush 88
Adaptive Sharpen 280
Adaptive Soften 281
Address 28
Adjustment Layers 46
Airbrush 189
Align
  Bottom 241
  Horizontal Center 241
  Left 240
  Right 241
  Top 241
  Vertical Center 241
Align to Grid 222
Align to Guides 223
Alpha Channel 37
Angled Roughen 315
Animated GIFs 154
Animation 325
Antialias 216
Aquarell 308
Assign Command 335
Automask 185
Automatic Lasso 183
Autorubber 185
Autotransparency 185
Background Color 88
Barcode 244
Basics of Image Processing 32
Basics 58
Batch Converting 207
Beautify 307
Bend Image 312
Bitmap 34
Blend 190
BMP 52, 344
Border Mask 271
Brighter Tool 197
Brightness 116
Bring Forward 244
Bring to Front 244
Browse 131, 207
Brush Editor 71
Brush Field 59
Brush List 112
Brush 347
Calendar, create 203
Central Roughen 315
Chalk 184
Change Channels 276
Change Document Size 224
Change Hue 71
Change Layer Size 250
Change Page Size 225
Channel Mixer 277
Chromatic Aberration 292
CIE Lab 33
Circle Lasso 181
Clear An Image 364
Clip Previous 255
Clipping Layers 44
Clipping Width 255
Close 205
Clouds 305
CMYK Image 35
CMYK 32

Coal 184
Color Balance 264
Color Blend 190
Color Editor 63
Color Field 59
Color Filter 257
Color List 109
Color Management
  Devices 354
  Keyboard Layout 355
  Proof Profile 355
  Standard 355
Color Management 354f
Color Overlay 320
Color Picker 180
Color Select Field 127
Color Temperature 287
Context Menu 58, 355
Contract Mask 271
Contrast 116
Convert Lasso to Layer 273
Convert Layer to Lasso 273
Convert Layer Type 247
Convert Selection to Layer 273
Convert To Clipping Layer 274
Convert Vector Points 201
Convert With Color Profile 270
Copy Brush 193
Copy Group Reverse 260
Copy Ruler Settings 229
Copy 356
Correct Highlights 253
Count Colors 261
Create An Alpha Channel 364
Create HTML File 135
Create Line 178
Create Structure 321
Crop An Image 364
Crop Tool 179
Crop 273
Cursor 349
Curve Editor 75
Curve Field 60
Curve List 113
Curves 275
Custom 303
Cut Vector Path 201
Cut 214
Darker Tool 197
Date
  Update Date 228
Datenbank Einstellungen
  Effects 296
  Font 225
  Layer Frames 220
  Raw Image Data 212
DDS 344
Deinterlace 295
Delete Layer 259
Delete Mask 270
Delete Vector Points 200
Delete 215
Descreen 148, 285
Deselect 215
Devices 354
Dialogs 85
Distort Frame 311
Distort Wavy 311
Distort With Arrows 310
Distorting Layers 157
Distribution Concept 25
Document Information 247
Document Mode 48, 98
Document Templates 205
Document 350
Drawing Filter 301

Drawing Lines 365
Duplicate Document 224
Duplicate Layer Virtually 259
Duplicate Layer 259
Dynamic Animation 325
Dynamic Text Layer 168
E-Mail 28
Edit Mask 89
Edit Menu 214
Edit Text Shortcuts 232
Edit Vector Points 197
Effects 296
Emboss Filter 300
EMF 54
Enter Group 259
Eraser 184
Even/Odd-Fill Mode, Non-Zero-Winding Number-Fill Mode 90
EXIF 55, 342
Expand Mask 271
False Color 264
Favourites 141
Feature Overview 25
File Menu 203
Fill And Line Color 90
Fill With Background 272
Fill With Foreground 272
Filter Brush 196
Filter 278
Filters 42
Find Next 214
Find/Replace 214
Find 214
Finger 196
Fix Layer 256
Flip Horizontal 252
Flip Vertical 252
Flood Fill 192
Font 225
Foreground Color 88
Form Field 231
Form Lasso 272
Free Lasso 181
Free Roughen 314
Frequently Asked Questions 363
Full View 217
Full Width 218
Gallery 116
Gaussian Blur 281
General Bar 87
Generate Pattern 308
GIF 51, 345
Grain 286
Gray Image 34
Gray Mixer 277
Grid 351
Group Marked Layers 259
Group 38
Guide Lines 160
Guides 222
HDR-Image 287
Healing Brush 194
Hide/Show Lasso 89
Hide/Show Panels 217
High Pass 293
Histogram 122
Homepage 25
Horizontal Filter 293
Horizontal Lasso Line 181
HSV 33
Hue/Saturation 263
Hyphenation 173
Image Into Active Layer 212
Image Layer 37
Image Layers 42
Image Map 335

Impressum 28
Inner Blend 320
Inner Emboss 318
Insert Vector Points 200
Introduction 25
Invert Mask 270
Invert 261
IPTC 55
Join Vector Paths 201
JPEG 2000 52f
JPEG Compression 237
JPEG 52, 342
JPEG2000 342
Keyboard Layout 355
Keyword 55, 141
Lab 33
Language 359
Lasso 42
Layer Align Bottom 242
Layer Align Center 242
Layer Align Hor. Center 241
Layer Align Left 241
Layer Align Right 242
Layer Align Top 242
Layer Align Ver. Center 242
Layer Distortions 43
Layer Effects 43
Layer Frames 220
Layer Glowing Inside 317
Layer Glowing Outside 317
Layer Mask
Apply to Mask 255
Apply 254
Convert for Previous 254
Create from Alpha 254
Create from Mask 255
Create 254
Layer Masks 45
Layer Menu 247
Layer Move Tool 157
Layer Shadow Inside 317
Layer Shadow outside 317
Layers 36
Layout 223
Leave Group 259
Lens Flares 306
Levels 274
Light/Shadow 286
Lightning 299
Lights 299
Line Color 90
Line Editor 76
Line Style Field 60
Line Style 90
Line Width 90
Liquify 163
Load Layer 258
Load Mask 271
Mac OS Installation 29
Magnifier Effect 322
Magnifier 162
Make Circular 309
Mark All Layers 260
Mask add to Alpha 271
Mask from Alpha 270
Mask to Alpha 270
Mask 42, 350
Maximum Filter 294
Measurement 162
Median Filter 294
Menu Filter 278
Merge Marked Text Layers 229
Merge Marked Vector Layers 233
Merged Copy 214
Minimum Filter 294
Morph 311

Mosaic 298
Motion Blur 281
Move Layer Content 295
Moving Hand 163
New Document 203
New Layer 247
New Picture 203
Open 205
Optimize Contrast 284
Optimize HDR 278
Optimize Vector Layer 233
Options Web 325
Options 337
Original Size 218
Outer Emboss 318
Outline Color 89
Outline Filter 293
Outline Inside 318
Outline Outside 318
Outline Style 90
Overflow Symbol 171
Page
  Copy 224
  Delete 225
  New 224
  Next 224
  Previous 224
Page Curl 312
Painting 184
Paste As Document 215
Paste As Selection 215
Paste as Virtual Copy 215
Paste Ruler Settings 229
Path Groups 40
Path Painting 238
Path Text 38, 169
Path 35
PCD 53, 344
PCX 53
PDF 51, 339
Pencil 184
Periphery 358
Perspective Tiling 306
Perturbation 305
Photo CD 53
PICT 54
Picture Catalog 133
Picture Info 115
Picture Mode 48, 98
Picture Types 33
Pixel Mode 218
Pixelize 285
PLD 50
Plug-In Filters Don’t Appear 365
Plug-In Modules 296
Plug-In Paths 296
Plug-In-Modules 358
PNG 53, 342
Presets 80
Print Border 220
Print Document 246
Print Markers 245
Print 213
Printing 155
Projection 300
Proof Mode 219
Proof Profile 355
Radial Blur 281
Raster Transparency 334
Raw Image Data 212
Recent File List 356
Rectangle Lasso 181
Redo 214
Reduce Colors 150, 265
Register 359
Registration 30

Relief 308
Remove Dust/Scratches 285
Remove Waste 285
Replace Color Brush 196
Replace Colors 262
RGB Image 34
RGB 32
Ripple 308
Rotate 90° 140, 251
Rotate 180° 140
Rotate 270° 140
Rotate Document 223
Rotate Layer 251
Rotate Page 225
Roughen Filter 285
Save All 206
Save as 206
Save Layer 259
Save Mask 271
Save 206
Scale Document 223
Scale Layer 248
Scale Page 225
Scan 211
Scanning 146
Screen Resolution 352
Screen Setup 85
Select All 215
Select Colors 266
Select Scanner 211
Selection 42
Selective Color Correction 268
Send Backward 244
Send to Back 244
Sequences 326
Set Base Color 71
Set Color Profile 269
Set Hotspot 239
Setup 29
Shake 283
Shape Flow 171
Sharpen 280
Show All Layers 257
Show Grid 222
Show Guides 223
Show Image 137
Show Layer 258
Show Mask 89
Show Only Active Layer 257
Show Ruler 221
Single Step 257
Slideshow 208
Soften Filter 281
Software License 26
Special Emboss 319
Special 347
Speckle Blend 71
Spell Checker 232, 349
Split Vector Layer 233
Sponge 285
Spray 189
Stamp 192
Standard 355
Starting PhotoLine 30
Status Bar 86
Stripes 320
Subanimations 330
SVG 54
Swirl 308
Table Of Contents 231
Tear Paper 303
Terminating PhotoLine 31
Text And Outline Color 89
Text Flow Marker 171
Text Flow Symbol 171
Text Flow 170

Text in Path 228
Text Layers 37
Text on Path 226
Text Register 220
Text Ruler 170
Text Shortcuts 232
Text Styles 58
Text to Picture 245
Text Tool 168
Textflow 202
Threshold 268
TIF 343
TIFF 51
Tile Image 334
Tool Bar 157
Tool Is Missing 363
Tool Menu 261
Tool Settings 91
Toolbox 87
Tracks 326
Transparency 37, 350
TWAIN 147
Twist 316
Undo List 108
Undo 214, 348
Unit Text Fields 61
Unmark All Layers 260
Unsharp Masking 280
Use Mask 89
User Interface Elements 58
Vault 309
Vector Drawing 177
Vector Graphics 35
Vector Layers 38
Vector 348
Vertical Filter 293
Vertical Lasso Column 181
View 100% 218
Virtual Copies 39
Virtual Copy
  Create Real Layer 239
  Show Source Layer 239
Wand 185
Water 196
Waves 309
Web Export 336
White Point 286
Window Shades/Tubes 321
Windows installation 29
WMF 54
Zig Zag 316
Zoom In 217
Zoom Out 217
Zoom 356