



# Gemstone

Photo Editor 16



## Contents

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<b>CHAPTER 1: GETTING STARTED</b> .....	<b>9</b>
Welcome to ACDSee Gemstone Photo Editor 16 .....	9
Multi Document Interface .....	9
RAW Development .....	9
Full Layered Editor .....	10
Interface Overview .....	10
Home Screen .....	10
Editor .....	11
ACDSee RAW .....	12
<hr/>	
<b>CHAPTER 2: GETTING HELP</b> .....	<b>14</b>
Finding Other Resources and Support .....	14
Using the Help Menu .....	14
Online Help and ACDSee Connect .....	14
<hr/>	
<b>CHAPTER 3: HOME SCREEN</b> .....	<b>15</b>
About The Home Screen .....	15
Create a New File Pane .....	15
Template/Presets Section .....	17
Previous Projects Section .....	20
Create a New File Pane .....	20
Template/Presets Section .....	21
Previous Projects Section .....	24
Working with Plug-ins .....	24
Managing Plug-ins .....	25
Viewing Plug-in Properties and Getting Help .....	26
<hr/>	
<b>CHAPTER 4: ACDSEE RAW</b> .....	<b>27</b>
About ACDSee RAW .....	27
Opening files in ACDSee RAW .....	27
ACDSee RAW Interface .....	27
RAW Processing .....	33
Using the Undo/Redo Button .....	38

Copying and Pasting .....	38
Saving Images .....	39
Develop Presets .....	40
Masking with ACDSee RAW .....	44
Using the AI Object Tool .....	49
Using the Develop Brush .....	52
Using the Linear Gradient Tool .....	62
Using the Radial Gradient Tool .....	67
Using the Luminance Range Tool .....	72
Using the Color Range Tool .....	74
Pixel Targeting in ACDSee RAW .....	77
About the Tune Tab .....	90
Making General Adjustments .....	91
Adjusting White Balance .....	92
Adjusting Lighting .....	93
Adjusting Color With Color EQ .....	101
Adjusting Color With the Color Wheel .....	106
Adjusting Tones With the Tone Wheels .....	108
Adjusting Tone Curves .....	111
Adjusting Soft Focus .....	112
Applying Effects .....	113
Using Blend Modes and Opacity .....	115
Color Grading with LUTs .....	117
Adjusting Split Tone .....	118
Adding a Post-Crop Vignette .....	119
Selecting an Output Color Space For RAW Files .....	120
About the Detail Tab .....	120
Sharpening .....	121
Reducing Noise .....	122
Fine-Tuning Skin Tone .....	125
Correcting Chromatic Aberration .....	125
About the Geometry Tab .....	127
Fixing Lens Distortion .....	128

Rotating and Straightening .....	130
Correcting Perspective .....	130
Cropping .....	131
Fixing Lens Vignetting .....	133
About the Repair Tab .....	134
Repairing an Image .....	134
Reducing Red Eye .....	136
<hr/>	
<b>CHAPTER 5: EDITING .....</b>	<b>138</b>
Editor .....	138
Display Area .....	138
Toolbar .....	141
Tool Properties Bar .....	142
Menu Bar .....	142
Editing Pane .....	143
Blending and Opacity .....	146
Edit Brush .....	149
Resize, Rotate, or Flip .....	152
Gradient Tools .....	155
Photoshop® Plug-ins .....	156
Pixel Targeting .....	157
Presets .....	168
Rulers and Guidelines .....	169
Saving Images .....	170
Undo and Redo .....	170
Resizing the Canvas .....	171
Histogram .....	172
Using AI Actions .....	173
Using Selections .....	174
Overlay Options .....	176
Using the Selection Tools .....	177
Combining the Tools .....	182
Targeting Selections .....	183

Edits and Effects .....	184
Smart Eraser .....	185
Channel Selections .....	186
Introduction to Layers .....	187
Layer Editor .....	187
Adjustment Layers .....	192
Frequency Separation .....	198
Layer Effects .....	199
Layer Masks .....	203
Text Layers .....	207
Introduction to Filters .....	209
AI Denoise .....	210
AI Face Edit .....	210
Sky Replacement .....	216
Red Eye .....	217
Removing Flaws .....	218
Skin Tune .....	221
Watermark .....	221
Vignette .....	222
Tilt-Shift .....	225
Grain .....	226
Perspective Correction .....	227
Distortion Correction .....	228
Lens Correction .....	229
Liquify .....	230
Exposure .....	232
Levels .....	234
Auto Levels .....	236
Tone Curves .....	237
Light EQ .....	238
Dehaze .....	248
Dodge and Burn .....	248
White Balance .....	250

Color EQ .....	251
Convert to Black & White .....	255
Split Tone .....	258
Tone Wheels .....	259
Color Wheel .....	260
Color LUTs .....	262
Sharpen .....	264
Blur .....	266
Clarity .....	271
Detail Brush .....	272
Chromatic Aberration .....	273
About Noise and Noise Reduction .....	275
Add Noise .....	276
Remove Noise .....	277
About Special Effect Filters .....	279
Blinds .....	280
Collage .....	281
Colored Edges .....	282
Contours .....	283
Crosshatch .....	284
Dramatic .....	285
Emboss .....	286
Furry Edges .....	287
Gloom .....	288
Glowing Edges .....	289
Grunge .....	290
Lomo .....	291
Orton .....	292
Photo Effect .....	293
Pixel Explosion .....	294
Scattered Tiles .....	295
Sheet Metal .....	296
Stained Glass .....	297

Threshold .....	298
Topography .....	299
Weave .....	299
Wind .....	300
Gradient Map .....	302
Negative .....	303
Posterize .....	303
Solarize .....	304
Bathroom Window .....	305
Bulge .....	306
Jiggle .....	307
Mirror .....	308
Pixelate .....	309
Radial Waves .....	310
Ripple .....	312
Shift .....	313
Slant .....	314
Swirl .....	315
Waves .....	316
Edge Detect .....	317
Outline .....	318
Sobel .....	319
Sunspot .....	320
Clouds .....	320
Granite .....	321
Rain .....	322
Water .....	323
Water Drops .....	324
Bob Ross .....	326
Cartoon .....	327
Crayon Drawing .....	328
Dauber .....	329
Oil Paint .....	330

Pencil Drawing .....	331
Blue Steel .....	331
Childhood .....	332
Old .....	332
Purple Haze .....	333
Sepia .....	334
Seventies .....	334
Somber .....	335
User Defined Convolution .....	335
Combining with Photomerge .....	337
Loading Files into a Stack .....	337
Creating an HDR Image .....	337
Merging with Focus Stacking .....	339
Creating a Panorama with Panoramic Stitching .....	339
Toolbar and Tool Properties Bar .....	341
Drawing Tools .....	354
Color Dialog Box .....	356
<hr/>	
<b>CHAPTER 6: ACDSEE GEMSTONE OPTIONS .....</b>	<b>358</b>
ACDSee Gemstone Photo Editor Options .....	358
ACDSee RAW Options .....	358
Setting the AI Super-Resolution Output Options .....	359
Output File Format Settings .....	360
Color Management .....	363
Display .....	365
Ruler and Guideline Options .....	366
<hr/>	
<b>CHAPTER 7: PRINTING .....</b>	<b>367</b>
Adding Text to Pages .....	367
Custom Print Layouts .....	367
Image Size and Positioning .....	368
Print Adjustments .....	368
Printer Options .....	369
<hr/>	
<b>CHAPTER 8: FILE INFORMATION .....</b>	<b>372</b>

Supported File Formats .....	372
<hr/>	
<b>CHAPTER 9: SHORTCUTS</b> .....	<b>376</b>
Keyboard Shortcuts .....	376
ACDSee RAW Keyboard Shortcuts .....	383
<hr/>	
<b>CHAPTER 10: GLOSSARY</b> .....	<b>387</b>
Glossary .....	388

# Chapter 1: Getting Started



## Welcome to ACDSee Gemstone Photo Editor 16

It's not every day that new software hits the ground running and makes an impactful difference to workflows. So congratulate yourself on choosing to be an integral part of ACDSee's newest groundbreaking product. We are immensely proud of ACDSee Gemstone 16 for the work it represents and the work you will produce with this fast, powerful, and easy-to-use image editor that everyone from beginners to professionals can use and enjoy.

Gemstone includes a feature-rich host of image processing tools, robust RAW support for over 600 cameras, a full layered editor, and our first ever photo editor with a Multi Document Interface (MDI). From the Home Screen you can start new projects from templates, open RAW files in the dedicated ACDSee RAW window, or continue working on previously opened projects. New and exciting to Gemstone are the Color Wheel and Tone Wheels that allow for a finer grade of control over a wider range of colors and tones. For creative additions, Gemstone has added path text, and frame text to for an expanded dimension to image edits.

Attention to detail was not just added to new features, Gemstone has been optimized under the hood for big performance gains when working with large and complex documents. Gemstone also has a blindingly fast start-up and faster RAW decoding times. Some of the other improvements include non-destructive Move and Crop tools, the ability to Rotate to Crop, pan an image without needing to zoom in, less obtrusive watermarks with relative positioning, and a host of more lens correction profiles added to an already impressive list.

### Multi Document Interface

With a Multi Document Interface, users can now have multiple documents open at one time, have two projects open on a split-screen for easy comparison, or have documents open in their own tab to move to another monitor. You can even keep your workspace tidy by easily hiding multiple open documents with the tab feature. Gemstone offers very flexible workflow options allowing customized workflows for each user.

### RAW Development

Gemstone features ACDSee RAW, a dedicated interface for editing RAW files that includes a robust collection of Tune, Detail, Geometry, and Repair tools. Gemstone has optimized the performance of

RAW decoding for faster loading times and supports over 500 cameras. ACDSee RAW also features a Presets pane for saving customized adjustments and easily applying them to future image edits. Once completed, you can move your presets to a category or create a custom category for better organization. RAW also offers a History panel so you can see and access each adjustment made during the editing process.

### Full Layered Editor

Gemstone also offers a full layered editor that allows you to add as many creative elements to your document as you would like such as color backgrounds, image files, masks, and so much more. Edit each layer to your liking to find the perfect outcome. A great way to use the layered editor is to find examples of repeated work, like making posters, and create a poster preset that you can re-use repeatedly and tweak on the fly where necessary. All new in Gemstone is the ability to link and unlink masks.

## Interface Overview

Gemstone features three interfaces:

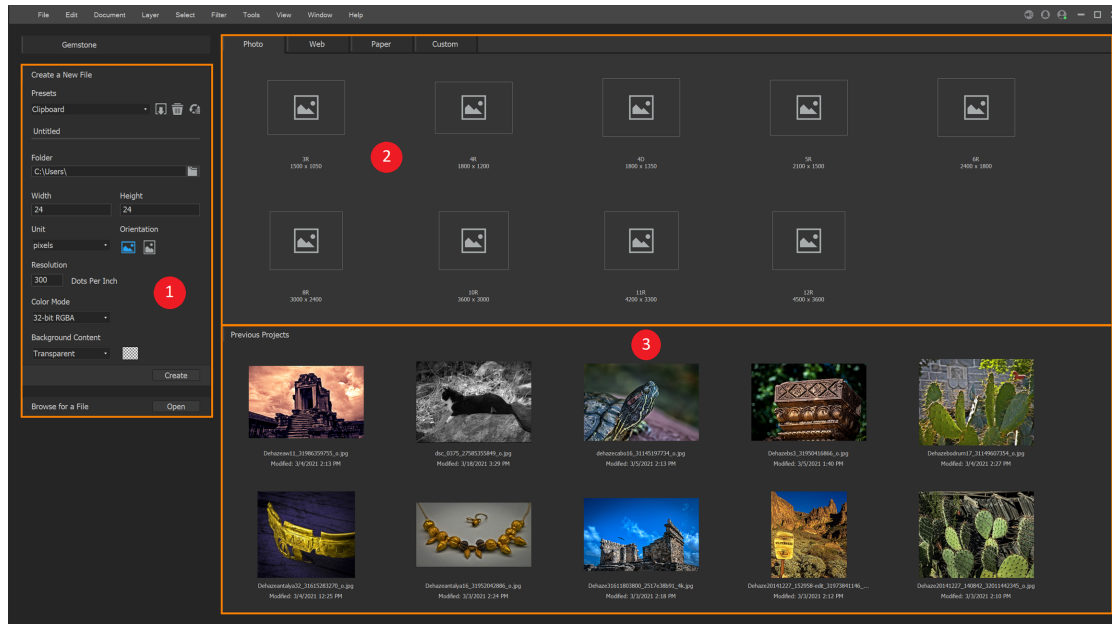
- [Home Screen](#)
- [Editor](#)
- [ACDSee RAW](#)

### Home Screen

The **Home Screen** is the initial screen displayed when Gemstone is opened. From the **Home Screen**, new projects can be started, or pre-existing projects continued.

The **Home Screen** consists of three panes:

1. [Create a New File](#)
2. [Template/Presets](#)
3. [Previous Projects](#)

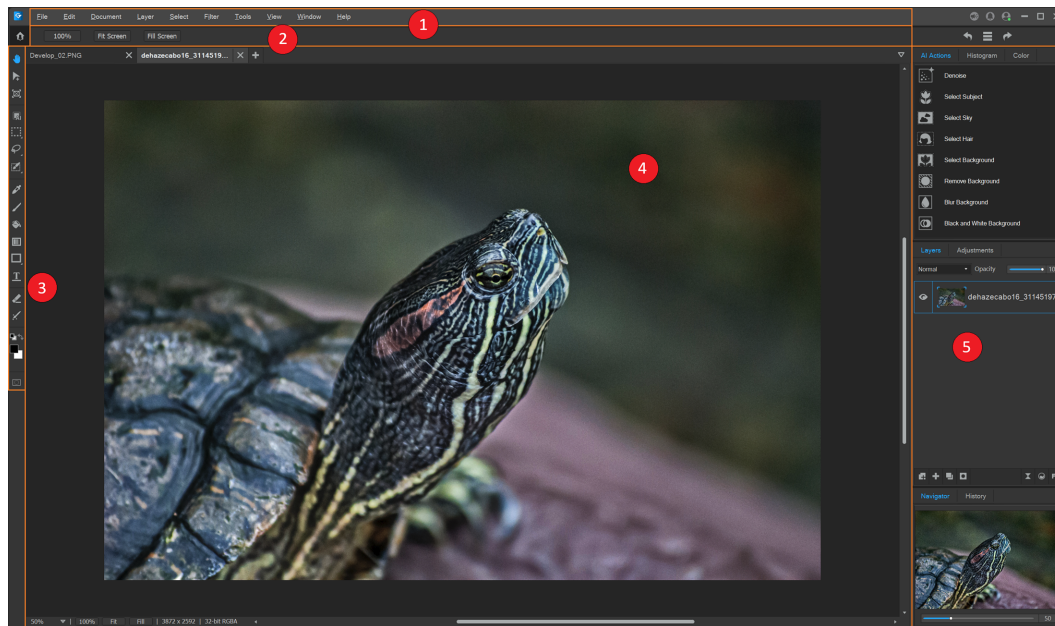


## Editor

The **Editor** displays the open image. Images in the **Editor** are displayed in tabs, allowing easy access to multiple images.

The **Editor** consists of five unique areas:

1. [Menu Bar](#)
2. [Tool Properties Bar](#)
3. [Toolbar](#)
4. [Display Area](#)
5. [Editing Pane](#)

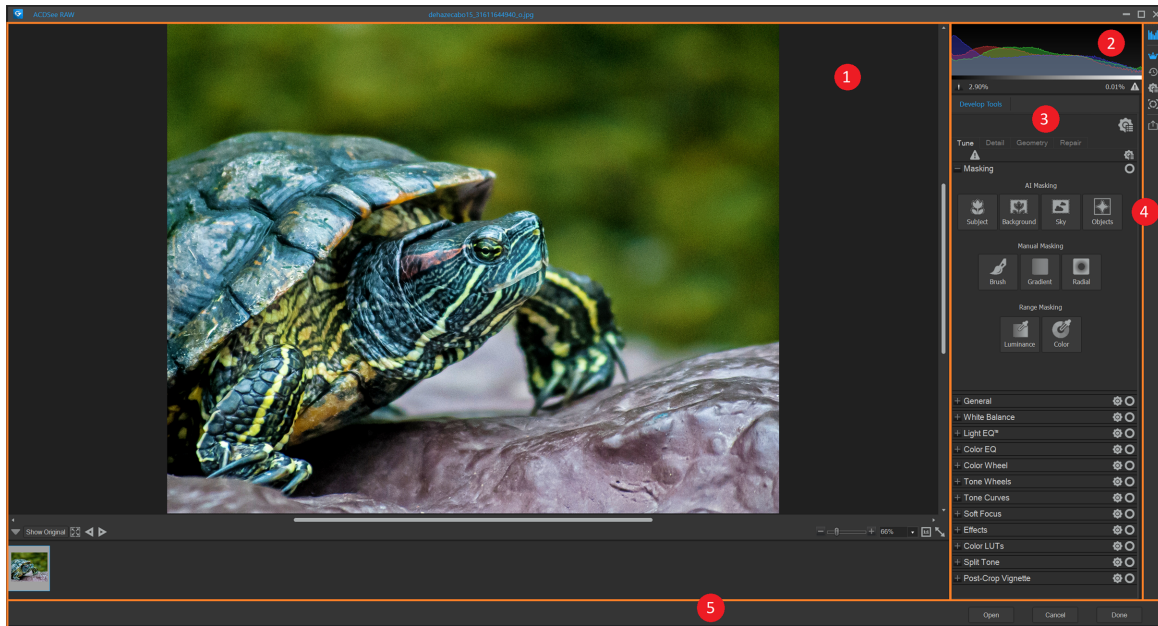


## ACDSee RAW

A dedicated interface for editing RAW files, **ACDSee RAW** can only be accessed by opening a RAW file, or for non-RAW images, by selecting **File | Open in ACDSee RAW...** from the main menu.

The **ACDSee RAW** interface is comprised of 5 panes:

1. [Display Area](#)
2. [Histogram](#)
3. [Develop Pane](#)
4. [Tool Bar](#)
5. [Button Bar](#)



## Chapter 2: Getting Help

### Finding Other Resources and Support

#### Using the Help Menu

The Help menu on the Gemstone menu bar contains options that link you to the ACDSee website where you can find updates, newsletters, and system requirements. Other links take you to the registration page or the forum homepage where you can join the community and participate in the ACDSee forums. The Help menu is also where you can convert a trial version of Gemstone to a full version by entering a license code.

Clicking **Help** displays a menu of links to online and offline help materials including our online help file, that you can open any time you are online by clicking **Gemstone Help** or pressing **Ctrl + H**. From the help menu, you can also access in-app resources such as **About**, which gives you information about your software, your license, and your version.

You will also find a link to [Customer Support](#)

#### Online Help and ACDSee Connect

As well as the links to online help found on the in-app help menu, we also have comprehensive tutorials on our YouTube channel, and have an online forum where you can discuss the software with other ACDSee users. When you visit the [ACDSee Connect](#), you will find tutorial videos and online lessons.

## Chapter 3: Home Screen

### About The Home Screen

The **Home Screen** is the initial screen displayed when Gemstone is opened. The **Home Screen** can also be accessed directly from the **Editor**.

#### To view the Home Screen from the Editor:

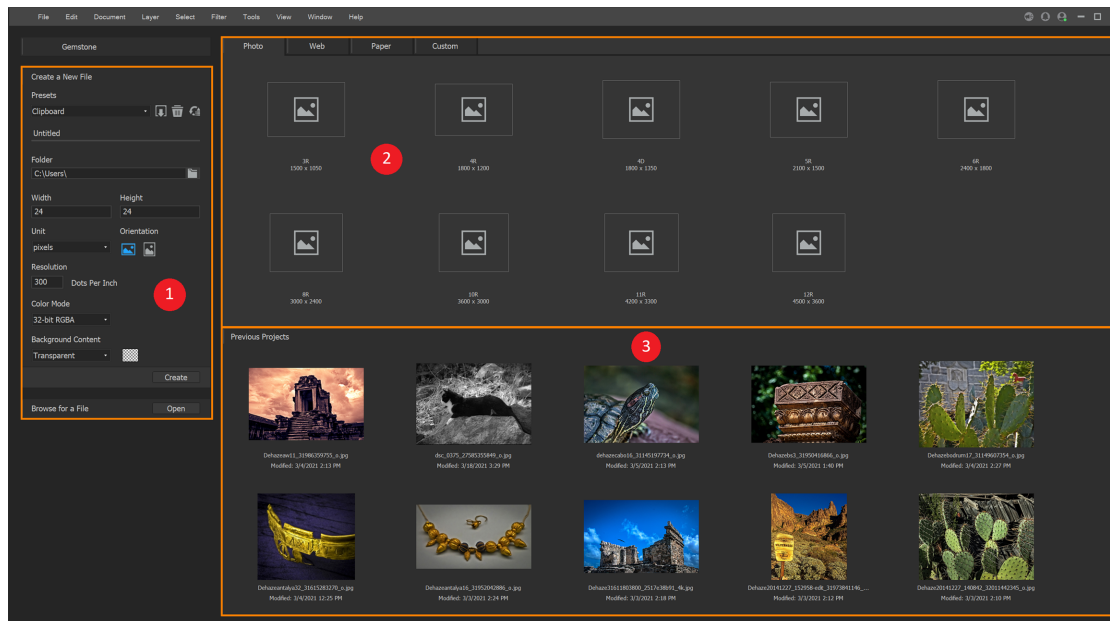
1. Click the **Home Screen** icon  above the toolbar to the left of the **Editor**.

 To return to the **Editor**, click the Home Screen's **Back to images** button.

From the **Home Screen**, new projects can be started, or pre-existing projects continued.

The **Home Screen** consists of three panes:

1. The [Create a New File](#) pane
2. The [Template/Presets](#) pane
3. The [Previous Projects](#) pane



### Create a New File Pane

The **Create a New File** pane occupies the left side of the Home Screen.

### To create a new image:

1. **Optional:** To populate the **Create a New File** pane with values based on templates, make a selection from the four tabs in the "Project Type" section: **Photo**, **Web**, **Paper**, and **Custom**.
2. In the **Create a New File** pane, do one of the following:
  - Use the default parameters
  - Select a preset
  - Customize the image properties
3. Click the **Create** button to open the new image in the new Display Area screen.



To open an existing image that does not appear in the **Previous Projects** section, click the **Open** button in the **Browse for a file** bar to browse and select a pre-existing project.

### Create a New File Options

---

**Presets**
**Presets**

Leave the **Presets** drop-down list set to "Default" to keep all of the settings applied to the Image field set. Or, select a preset from the drop-down list to accept a customized set of image parameters.



Opens the **New Preset** dialog. Enter a name for the preset, then click the **OK** button to populate the new preset into the **Preset** drop-down list. The new preset will be constructed of the parameters set in the **Image** field set. It is recommended to complete any customizations in the **Image** field set before completing the **New Preset** dialog.



Deletes a preset from the **Preset** drop-down list.

---

**Image Field Set**
**Width**

Enter a value to determine the image width.

**Height**

Enter a value to determine the image height.

**Unit**

Make a selection from the drop-down menu to determine the unit of measurement for both the **Width** and **Height** fields. Options include: "Centimeters", "Inches", and "Pixels".

**Orientation**

Click the appropriate icon to specify the image's orientation, either Portrait or Landscape.

**Resolution**

Specifies the Dots Per Inch (DPI) of the image. The higher the DPI the better the image quality and the bigger the image's file size.

**Color Mode**

Specifies the image's color mode. Options include: "32-bit RGBA" and "64-bit RGBA". The higher the bit count the better the image quality and the bigger the image's file size.

**Background Content**

Make a selection from the drop-down menu to determine the composition of the image's background. Options include: "Black", "Custom", "Transparent", and "White". Another method for setting the background content is to use a Color Picker.

---

### Template/Presets Section

The **Template/Presets** pane is located directly above the **Previous Projects** pane and to the right of the **Create a New File** pane.

The **Template/Presets** pane contains four tabs:

- [Photo](#)
- [Web](#)

- [Paper](#)
- [Custom](#)

### Photo Tab

The **Photos** tab contains 9 default options as detailed in the table below.

Photo Sizes	Resolution
3R	1500 x 1050
4R	1800 x 1200
4D	1800 x 1350
5R	2100 x 1500
6R	2400 x 1800
8R	3000 x 2400
10R	3600 x 3000
11R	4200 x 3300
12R	4500 x 3600

### Web Tab

The **Web** tab contains 10 default options as detailed in the table below.

Output Type	Resolution
HD 1080p	1920 x 1080
UHD 4k	3840 x 2160
Instagram Square	1080 x 1080
Instagram Portrait	1080 x 1350
Instagram Landscape	1080 x 566
Instagram Story	1080 x 1920
Facebook cover photo	820 x 312
Facebook newsfeed photo	1200 x 1200
YouTube Channel Cover	2560 x 1440
YouTube Thumbnail	1280 x 720

## Paper Tab


The **Paper** tab contains 23 default options as detailed in the table below.

Output Type	Dimensions
Letter	8.5 x 11 inches
Legal	8.5 x 14 inches
Poster	18 x 24 inches
A0 (letter)	841 x 1189 mm
A1	594 x 841 mm
A2	420 x 594 mm
A3	297 x 420 mm
A4	210 x 297 mm
A5	148 x 210 mm
A6	105 x 148 mm
A7	74 x 105 mm
A8	52 x 74 mm
A9	37 x 52 mm
A10	26 x 37 mm
B2	500 x 707 mm
B3	353 x 500 mm
B4	250 x 353 mm
B5	176 x 250 mm
B6	125 x 176 mm
B7	88 x 125 mm
B8	62 x 88 mm
B9	44 x 62 mm
B10	31 x 44 mm

## Custom Tab

The **Custom** tab is populated with the Default setting, the Last Used (if different than the Default) and any custom designed presets created in the **Create a New File** pane's **Presets** field set.

### To create a new Preset and populate it to the Custom tab:

1. From the **Home Screen**, navigate to the **Create a New File** pane.
2. Make adjustments to affect the file's storage location, dimensions, and resolution, color mode and background.
3. In the **Presets** field set, click the adjacent  icon to open the **New Preset** dialog.
4. Enter a name for the preset, then click the **OK** button. The new preset will populate to the **Custom** tab.

### Previous Projects Section

The **Previous Projects** section is populated with files previously saved in Gemstone. Information related to the image resides below the image, including file name and last modified date and time.

### To open an existing project:

To open an existing project, double-click the project thumbnail image to either open the file in **ACDSee RAW** or the **Editor**, depending on the file type.

### To clear recent projects:

From the **Home Screen**, select **File | Open Recent... | Clear Recent File List** from the main menu.

## Create a New File Pane

The **Create a New File** pane occupies the left side of the Home Screen.

### To create a new image:

1. **Optional:** To populate the **Create a New File** pane with values based on templates, make a selection from the four tabs in the "Project Type" section: **Photo**, **Web**, **Paper**, and **Custom**.
2. In the **Create a New File** pane, do one of the following:
  - Use the default parameters
  - Select a preset
  - Customize the image properties
3. Click the **Create** button to open the new image in the new Display Area screen.



To open an existing image that does not appear in the **Previous Projects** section, click the **Open** button in the **Browse for a file** bar to browse and select a pre-existing project.

## Create a New File Options

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**Presets**
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Leave the **Presets** drop-down list set to "Default" to keep all of the settings applied to the Image field set. Or, select a preset from the drop-down list to accept a customized set of image parameters.



Opens the **New Preset** dialog. Enter a name for the preset, then click the **OK** button to populate the new preset into the **Preset** drop-down list. The new preset will be constructed of the parameters set in the **Image** field set. It is recommended to complete any customizations in the **Image** field set before completing the **New Preset** dialog.



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**Height**

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**Unit**

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A7	74 x 105 mm
A8	52 x 74 mm
A9	37 x 52 mm
A10	26 x 37 mm
B2	500 x 707 mm
B3	353 x 500 mm
B4	250 x 353 mm
B5	176 x 250 mm
B6	125 x 176 mm
B7	88 x 125 mm
B8	62 x 88 mm
B9	44 x 62 mm
B10	31 x 44 mm

## Custom Tab

The **Custom** tab is populated with the Default setting, the Last Used (if different than the Default) and any custom designed presets created in the **Create a New File** pane's **Presets** field set.

### To create a new Preset and populate it to the Custom tab:

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2. Make adjustments to affect the file's storage location, dimensions, and resolution, color mode and background.
3. In the **Presets** field set, click the adjacent  icon to open the **New Preset** dialog.
4. Enter a name for the preset, then click the **OK** button. The new preset will populate to the **Custom** tab.

## Previous Projects Section

The **Previous Projects** section is populated with files previously saved in Gemstone. Information related to the image resides below the image, including file name and last modified date and time.

### To open an existing project:

To open an existing project, double-click the project thumbnail image to either open the file in **ACDSee RAW** or the **Editor**, depending on the file type.

### To clear recent projects:


From the **Home Screen**, select **File | Open Recent... | Clear Recent File List** from the main menu.

## Working with Plug-ins

A plug-in is a software module that adds functionality to a larger program. Gemstone comes standard with many different plug-ins.

## Types of Plug-ins

Plug-in	Description
<b>Image Decode</b>	Converts a file from a binary format to the image displayed in Gemstone. Decode plug-ins allow Gemstone to display images of many different file formats. The files that can be viewed with Gemstone depend on which decoding plug-ins are installed on the host computer.
<b>Image Encode</b>	Converts the image displayed in Gemstone to a binary file format. Encode plug-ins allow Gemstone to save (or convert) images to many different file formats. The files that can be edited and saved with Gemstone depend on which encoding plug-ins are installed on the host computer.
<b>Archive</b>	Allows Gemstone to display and save archives of many different file formats. The archives that can be viewed and created with Gemstone depend on which archive plug-ins are installed on the host computer.
<b>Camera</b>	Allows Gemstone to browse images on a digital camera and transfer them to a hard drive.
<b>Command Extension</b>	Adds functionality to Gemstone. For example, there is a plug-in used to share images over the Internet.
<b>Pane Extension</b>	Adds a pane to Gemstone where tasks can be performed such as order prints of digital images.

 Gemstone cannot ensure the quality of plug-ins that are not certified by ACD Systems. As with any other piece of software, you are trusting that the plug-in is free of viruses and that the company that produced the plug-in is trustworthy.

## Managing Plug-ins

The **Plug-in Settings** dialog box displays a list of all the ACDSee plug-ins installed on the host computer and can also be used to control which plug-ins Gemstone uses.

### To Access the Plug-in Settings Dialog Box:

Select **Tools | Plug-in Settings...** from the menu.

### Disabling a Plug-in

A plug-in listed in the **Plug-in Settings** dialog box can be disabled so that Gemstone no longer uses it.

### To Disable a plug-in:

1. In the **Plug-in Settings** dialog box, select one of the Plug-in tabs.
2. Disable the checkbox adjacent to the name of the plug-in that is no longer required.
3. Click **OK**.

### Changing the Plug-in Order

Some file formats can be supported by more than one plug-in. However, when this happens, Gemstone allows for the control of which plug-in is used to read or write a file format. The order that plug-ins appear in the **Plug-in Settings** dialog box is the order that Gemstone uses to determine which plug-ins read or write to a file.

#### To Change the Plug-in Order:

1. In the **Plug-in Settings** dialog box, select one of the Plug-in tabs.
2. Select a plug-in in the **Plug-ins** list.
3. Do one of the following:
  - Click the **Move up** button to move the plug-in higher in the list.
  - Click the **Move down** button to move the plug-in lower in the list.
4. Click **OK**.

### Viewing Plug-in Properties and Getting Help

Certain plug-ins can be viewed and their properties set.

#### To View Plug-in Properties:

1. In the **Plug-in Settings** dialog box, select one of the Plug-in tabs.
2. Select a plug-in in the Plug-ins list.
3. Click the **Properties** button.

#### To View a Plug-in's Help File:

1. In the **Plug-in Settings** dialog box, select one of the Plug-in tabs.
2. Select a plug-in in the **Plug-ins** list.
3. Click the **Plug-in Help** button.

## Chapter 4: ACDSee RAW

### About ACDSee RAW

ACDSee RAW allows non-destructive processing of RAW, JPEG and other file types. Non-destructive means the changes you make do not permanently change the original image, so they are reversible.

In ACDSee RAW you can:

- Enhance your images with [AI Super-Resolution](#).
- Tune the image using [exposure](#), [white balance](#), [lighting](#), [color](#), [tone curves](#), [soft focus](#), [effects](#), [split tone](#), and [post-crop vignette](#) tools, or set the [output color space](#) of a RAW image.
- Adjust details in your image using the [sharpening](#), [noise reduction](#), [skin tune](#), and [chromatic aberration](#) tools.
- Fix geometry in your image using the [lens distortion](#), [rotate and straighten](#), [perspective](#), [vignette correction](#), and [cropping](#) tools.
- Repair your image with the [Red Eye Reduction](#) tool or [remove flaws](#).

### Opening files in ACDSee RAW

**ACDSee RAW** opens automatically whenever a RAW photo file is selected to be opened. A RAW file is like a negative. RAW files contain all of the data collected by the digital camera's sensor when capturing a photo.

The following options open Raw images in ACDSee RAW:


- Select **File | Open...** from the main menu and select a RAW file to open.
- In the **Home Screen** select a previously opened RAW file in the **Previous Projects** pane

### To open images that are in a different format in ACDSee RAW:

Select **File | Open in ACDSee RAW...** from the main menu.



Gemstone will automatically apply geometry corrections to DNG files that include geometric distortion correction tags. DNG files created from the Adobe DNG Converter© will often generate geometric distortion tags for micro 4/3rds cameras.

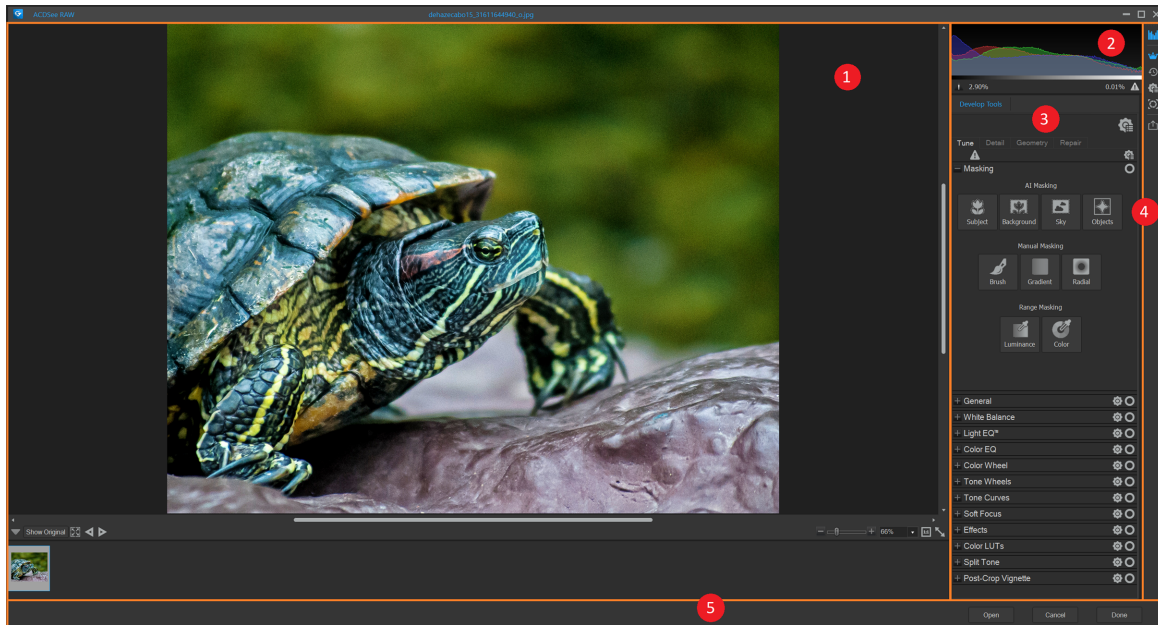
To permanently save changes made to a RAW file, save the changes as a separate file, in a different file format (JPEG, PNG, or TIFF, for example), or export the RAW file by pressing **Ctrl + E** or clicking on the **Export** button  on the right-side toolbar.

### ACDSee RAW Interface

#### ACDSee RAW Interface

The **ACDSee RAW** interface is comprised of 5 panes:







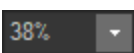


1. [Display Area](#)
2. [Histogram](#)
3. [Develop Pane](#)
4. [Tool Bar](#)
5. [Button Bar](#)



## Display Area



Located in the large central portion of the screen, the **Display Area** is used to display the current state of the opened image.

## Display Area Options

<b>Show Original</b>		Click and hold to view the original image. Release the button to return to the edited image.
<b>Full Screen</b>		Click to display a full screen preview of the final image.
<b>Previous Image</b>		Click to return to the previous image.
<b>Next Image</b>		Click to advance to the next image.
<b>Show Filmstrip</b>		Click to show the filmstrip.
<b>Hide Filmstrip</b>		Click to hide the filmstrip.
<b>Zoom Slide</b>		Move the slide to the right to zoom into the image. Move the slide to the left to zoom out of the image.
<b>Zoom Percentage</b>		Enter a numerical value or select a number from the drop down list to set the zoom level.
<b>Actual Size</b>		Click to return the image to its actual size.
<b>Fit Image</b>		Click to fit the image to the Display Area.

## Histogram

The **Histogram** is a graph that represents the distribution of color intensity for each color channel in an image. The **Histogram**, when enabled, resides at the top of the right-side column of tools.

To enable the **Histogram**, click the  icon in the [Tool Bar](#) or press **H**. To disable the **Histogram** and remove it from view, click the  icon in the [Tool Bar](#).



A proportion of clipped pixels is reported as a percentage value directly below the **Histogram** graph.


## Develop Pane

The **Develop** pane is home to the main body of functionality for **ACDSee RAW**. Residing to the right of the **Display Area**, and directly below the **Histogram**, if enabled, the tools available in the **Develop** pane are driven from selections made in the [Tool Bar](#).

The **Develop** pane has 4 sets of tools:

- [Develop Tools](#)
- [History](#)
- [Develop Presets](#)
- [Snapshots](#)





### Develop Tools

The **Develop Tools** pane is enabled by clicking the crown  icon in the [Tool Bar](#) or pressing **Ctrl + Shift + T**.


The **Develop Tools** pane consists of 4 tabs,

- [Tune](#)
- [Detail](#)
- [Geometry](#)
- [Repair](#)

### Develop Tools Options

<b>Undo</b>		Removes the last action.
<b>Redo</b>		Reinstates the last action removed by an Undo.
<b>Reset to Defaults</b>		
<b>Expand All Groups</b>		Expand all groups under the selected tab.
<b>Collapse All Groups</b>		Collapse all groups under the selected tab.
<b>Auto-Collapse Groups</b>		If enabled, all groups in all tabs will open in a collapsed state.
<b>Adjust develop settings</b>		
<b>Reset to Last Saved</b>		Reset the fields in the selected group to match the last saved settings.
<b>Reset to Defaults</b>		Reset the fields in the selected group to their defaults.
<b>Apply Last Used</b>		Apply the last used field settings to the current image
<b>Presets</b>		Select to view an extensive list of preset image configurations.
<b>Save Preset...</b>		Select to open the <b>Save Develop Settings Preset</b> dialog and select the settings to save in a preset.
<b>Manage Presets...</b>		Select to open the <b>Manage Presets</b> dialog where existing presets can be deleted or named.
<b>Copy Settings...</b>		Select to open the <b>Copy settings</b> dialog where develop settings can be selected and copied to the clipboard.
<b>Paste Settings</b>		Pastes the develop settings selected in the <b>Copy settings</b> dialog into their respective groups.

## History

The **History** pane is enabled by clicking the  icon in the [Tool Bar](#) or pressing **F9**.

The **History** pane is used to view the sequence of changes made to an image, jump around in the editing sequence, or revert back to a previously-applied adjustment. For example, if a series of adjustments were applied to an image, such as color adjustments, followed by sharpening, and exposure tweaking, but you want to revert back several steps to the state the photo was in with just the color adjustment, use the **History** pane to travel back to that point in the edit sequence.


To return to a specific adjustment, select and double-click the desired adjustment in the **History** pane, or click the **Undo All** button at the bottom of the pane to undo all adjustments.

## Develop Presets

The **Develop Presets** pane is enabled by clicking the  icon in the [Tool Bar](#) or pressing **Ctrl + Shift + P**.



To make the Develop process easier, use the **Develop Preset** pane to create, delete, manage, and categorize global presets. (See [Develop Presets](#) for more information).

## Snapshots

The **Snapshots** pane is enabled by clicking the  icon in the [Tool Bar](#) or pressing **P**.

Snapshots allow adjustments to be made at any point during the development workflow. As new adjustments are made, take a snapshot to save the work up to that point. Continue to edit as desired but return to a previous version of the edits by selecting the snapshot. Unlike presets, snapshots save directly to the image and automatically re-enter the Develop workflow where snapshots can be interchanged and further edits applied.

### To take a Snapshot:

1. Make adjustments to an image.
2. Click the **Snapshots** icon. 
3. At the bottom of the **Snapshots** pane, click the  icon.
4. In the **New Snapshot** dialog, enter a name for the snapshot and click **OK**. The saved snapshot will be listed in the **Snapshot** pane.

## Snapshot Options

<b>Update to Current Settings</b>	Applies the currently saved image settings into the snapshot, erasing all previously held settings in the snapshot.
<b>Apply Selected</b>	Applies the snapshot's settings into the image.
<b>Delete Selected</b>	Deletes the snapshot from the <b>Snapshots</b> pane.
<b>Rename Selected</b>	Renames the selected snapshot.

## Tool Bar

The **Tool Bar** resides at the extreme right of the **ACDSee RAW** interface.

The **Tool Bar** contains 5 icons for populating the **Develop** pane:

- [Histogram](#)
- [Tools](#)
- [History](#)
- [Presets](#)
- [Snapshots](#)

## Button Bar

The **Button Bar** resides at the bottom of the **ACDSee RAW** interface.

The **Button Bar** contains 3 buttons for file management in the **Develop** pane:

- **Open:** Saves changes made to the image and opens the image in the **Editor**.
- **Cancel:** Cancels any changes made to the image and closes **ACDSee RAW**.
- **Done:** Saves any changes and exits **ACDSee RAW**.

## RAW Processing

When adjusting images in the **Develop Tools** pane, the original file is never changed. The changes are saved in a separate file and are applied each time the image is opened to allow for non-destructive developing. It is recommended to do most of an image's adjustments in the **Develop Tools** pane.

When opening a developed image in the **Develop Tools** pane, the image is displayed with its previous edits applied. Revisit the image at any time to adjust the previous settings.

For more information on how develop settings are saved, see [How Gemstone Saves Changes to Images](#).

## Developing an Image

### To develop an image:

1. Select the **Develop Tools** pane.
2. In the **Tune** tab, make develop adjustments in the following groups:
  - [Masking](#)
  - [General](#)
  - [White Balance](#)
  - [Light EQ™](#)
  - [Color EQ](#)
  - [Tone Curves](#)
  - [Soft Focus](#)
  - [Effects](#)
  - [Color LUTs](#)
  - [Split Tone](#)
  - [Post-Crop Vignette](#)
  - [Output Color Space](#) (For RAW files)
3. In the **Detail** tab, make develop adjustments in the following groups:
  - [Masking](#)
  - [Sharpening](#)
  - [Noise Reduction](#)
  - [Skin Tune](#)
  - [Chromatic Aberration](#)
4. In the **Geometry** tab, make develop adjustments in the following groups:
  - [Lens Correction](#)
  - [Rotate & Straighten](#)
  - [Perspective](#)

- [Crop](#)
  - [Vignette Correction](#)
5. In the **Repair** tab, make develop adjustments in the following groups:
- [Repair](#)
  - [Red Eye Reduction](#)

## Saving and Canceling

After developing an image, choose from one of the many options for saving the image, depending on the next workflow step.

### To save an image:

1. Click **Done**.
2. Select one of the following:
  - **Save**: Save any changes.
  - **Save as**: Save a copy of the developed image with a new name or format.
  - **Discard**: Discard any changes.
  - **Cancel**: Remain on the same image in Develop with all changes intact, without saving the image.

### To discard changes to an image and return to the previous mode:

Click **Cancel**.










It is not possible to directly save changes to a RAW file. Changes to a RAW file must be saved as a different file type.













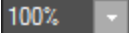
## Histogram and Image Viewing Controls

While developing an image, adjust the magnification with the zoom controls, located in the bottom right corner.



It is extremely useful to have access to both the **Exposure Warning**  and **Histogram** while adjusting exposure. Below the **Histogram**, the percentage of the pixels underexposed and overexposed is shown.

<p><b>Histogram pane</b></p>	<p>Displays the histogram preview for the current image. The histogram pane shows the red, green, and blue color channels of the photo. Keeping the histogram open is particularly useful when adjusting exposure, as the histogram reflects all adjustments as you make them.</p> <p>At the bottom of the histogram, icons appear to notify you if there is a loss in details in the highlights , or loss in details in the dark areas  of the image. Numbers beside these two icons represents the percent of pixels that have lost details in either the shadows or the highlights.</p>
<p><b>Clipped Shadows and Highlights</b></p>	<p> Displays clipped shadows and highlights. Click the icon or press <b>E</b> on the keyboard, to highlight over- and under-exposed areas of the image. When the shadows and highlights tool is enabled the icon is blue, and gray when disabled.</p>
<p><b>Undo/Redo</b></p>	<p> Use the <b>Undo</b> button to discard changes, slider by slider, adjustment by adjustment. Use the <b>Redo</b> button to return to the options that you had selected prior to clicking Undo.</p>
<p><b>Reset Group</b></p>	<p> Discards the selected settings within a group and reverts the group to its default settings. If changes are applied to an image using an individual group, the dedicated <b>Reset Group</b> button for the edited group turns blue. Click the associated <b>Reset Group</b> button to reset the image to its default settings.</p>
<p><b>Reset All Groups</b></p>	<p> Discards the selected settings for all groups and reverts all groups to their default settings. If changes are applied to an image using any individual group, the <b>Reset All Groups</b> button turns blue. Click the <b>Reset All Groups</b> button to reset the image to its default settings.</p>

<b>Preview</b>		Turns on or off changes you have made within the group. This button is available in each group, so you can view the effects of each group's develop settings. When the icon is green the group's changes are visible. A gray icon indicates that the changes are hidden.
<b>Develop Settings</b>		Resets Develop Settings for an individual group to "Last Saved", "Default", or "Last Used". Or, <a href="#">save the settings as a preset</a> , copy, or paste them.
<b>Develop Settings All</b>		Resets Develop All Settings for the image to "Last Saved", "Default", or "Last Used". Or, <a href="#">save the settings as a preset</a> , copy, or paste them.
<b>Show Filmstrip</b>		Toggles the Filmstrip view on or off.
<b>Show Original</b>		Toggles the changes on or off, to compare changes to the original.
<b>Display Full Screen</b>		Displays the image on a full screen. Press <b>F</b> to view full screen. Press any key to return to Develop.
<b>Previous Image</b>		Displays the previous image in the Filmstrip view.
<b>Next Image</b>		Displays the next image in the Filmstrip view.
<b>Actual Size</b>		Returns the current image to its actual size.
<b>Fit Image</b>		Reduces the image to fit within the ACDSee RAW area.
<b>Split View</b>		Toggles split view on or off.
<b>Zoom slider</b>		Increases the size of the image if you drag it to the right, decreases the size if you drag to the left.
<b>Zoom drop-down list</b>		Displays a list of zoom sizes to select.

## Filmstrip

View other images by clicking the Filmstrip at the bottom of the screen.

To view the Filmstrip, click the Show Filmstrip icon . Navigate through the Filmstrip images by using the Previous Image  and Next Image  icons.

If there are no other images in the Filmstrip, click the **Done** button to return to the **Home Screen** and select another image to develop.

To populate multiple images into the Filmstrip, in the **Home Screen** select multiple images and press the **Enter** key. All selected images will be populated to the Filmstrip.

### Filmstrip Right-Click Menu Items

<b>Restore to Original</b>	Removes any changes to the image and restores the image to its original state.
<b>Copy Settings...</b>	Opens the <b>Copy Settings</b> dialog, used to select develop settings to copy.
<b>Paste Settings</b>	Pastes into the selected image the settings selected in the <b>Copy Settings</b> dialog.
<b>Show in File Explorer</b>	Opens the selected file in Windows File Explorer.
<b>Copy as Path</b>	Copies the filepath for the selected file to your clipboard.
<b>AI Super-Resolution...</b>	Click to load the AI Super-Resolution dialog.
<b>Apply Preset</b>	Click to produce a list of available <a href="#">Presets</a> to be applied to the image.
<b>Select All</b>	Select all images in the Filmstrip.

### Previewing ACDSee RAW Changes With Split View

Use the Split view toggle to preview your ACDSee RAW changes. A vertical bar appears over your image, dividing the 'before' view on the left from the 'after' view on the right. Drag the bar left or right to reveal more of the original or more of the edited image.

### Customizing the View

Right-click the body of the **Develop Tools** pane to customize how the groups expand and collapse within the pane by selecting either of the following:

- **Expand all groups:** Expands all the groups in pane.
- **Collapse all groups:** Collapses all the groups that are open.
- **Auto-collapse groups:** Useful for keeping groups in one pane without having to scroll, this default setting automatically collapses groups and keeps the working group open.

### Undo and Redoing

#### Using the History Pane:

Use the **History** pane to view the sequence of changes made to the image. Also, use the **History** pane to jump around in the editing sequence and revert back to a previously-applied adjustment. For example, if a series of adjustments were made to the image, such as color adjustments, followed by sharpening, and exposure tweaking, to revert back several steps to the state the photo was in with just the color adjustment applied, use the **History** pane to navigate to that point in time.

To open the **History** pane, click the  icon in the [Tool Bar](#) or press **F9**.

To return to a specific adjustment, select the desired adjustment in the **History** pane and double-click it. Or, use the **Undo/Redo** buttons to step back through the edits. For a more comprehensive correction, select **Undo All** to undo all of your adjustments.

### Using Color Pickers

When using the color pickers in the **Develop Tools** pane, the RGB values beside the color picker relate to the original image before any edits.

### Using the Undo/Redo Button

Undo and redo changes when editing an image.

#### To undo a change:

In the **Develop Tools** pane, do one of the following:

- Click the **Undo** button found near the top of the right pane.
- Use the keyboard shortcut **Ctrl + Z**.

#### To redo a change:

In the **Develop Tools** pane, do one of the following:

- Click the **Redo** button found near the top of the right pane.
- Use the keyboard shortcut **Ctrl + Y**.

The **History** pane can also be used to Undo/Redo changes. (see [History](#) pane).

### Copying and Pasting

In the **Develop Tools** pane, perform complex adjustments once and have them benefit an unlimited number of images by copying the precise adjustments and apply them to other images.



Settings can be [set as a preset](#) for future use.

#### To copy develop settings from an image and apply them to other images:

1. After adjusting an image in the **Develop Tools** pane, click the **Adjust develop settings** button.
2. Select **Copy Settings...** from the drop-down menu.

3. In the **Copy settings** dialog, select the settings to copy.
4. Click **OK**.
5. In the filmstrip, right-click an image and select **Paste Settings...** from the context menu.
6. Or, switch to another image from the filmstrip and click the **Adjust develop settings** button.
7. Select **Paste Settings...** from the drop-down menu.



A blue square icon appears at the top of the **Tune, Detail, Geometry, and Repair** tabs to indicate that changes have been made.



When copying settings from one image and pasting them to a second image with different dimensions, the settings will be automatically scaled to fit the target image.

## Saving Images

In the Develop Tools pane, changes are non-destructive, so that every time a previously developed image is opened, the adjustments are exactly like they were saved. This allows for a return to the image to undo or further tweak adjustments.

To permanently save any changes made to a RAW file, save the changes as a separate file, in a different file format (JPEG or TIFF, for example).

## Saving Images

After developing an image, choose from one of the many options for saving an image, depending on workflow.

### To save an image:

1. Click **Done**.
2. Select one of the following:

<b>Save</b>	Save any changes.
<b>Save as</b>	Save a copy of the developed image with a new name or format. Depending on the file type, any of the following checkboxes appear in the bottom left corner of the <b>Save as</b> dialog box: <ul style="list-style-type: none"> <li>• <b>Preserve Metadata</b>: Retains metadata with the new image.</li> <li>• <b>Embed Color Profile in Image</b>: Retains color profile selected in <b>Color Management</b> with the new image.</li> </ul>
<b>Discard</b>	Discard any changes.
<b>Cancel</b>	Remain on the same image in <b>Develop</b> with any changes intact, without saving the image.

### To discard changes to the image and return to the previous mode:

Click **Cancel**.



It is not possible to directly save changes to a RAW file. Changes to a RAW file must be saved as a different file type.

### Auto Save

Enable **AutoSave** in order to avoid selecting a saving option each time an image is finished being developed. When **AutoSave** is enabled, clicking **Done**, or selecting another image from the Filmstrip will prompt Gemstone to automatically save any changes. The **Save Changes** dialog will no longer be displayed.

#### To disable AutoSave

1. Select **Tools | Options...** from the main menu.
2. In the **Options** dialog, click **ACDSee RAW**.
3. Disable the **AutoSave all ACDSee RAW adjustments** checkbox.



**Tools | Options** cannot be accessed while ACDSee RAW is open.



AutoSave is not available for RAW images.

### Develop Presets

Save Develop settings as presets to apply the same adjustments to additional images. Presets are used to quickly apply changes to an image without having to repeat the steps each time to apply the same change. For example, if images are always corrected using the **Contrast** tool with the value of 25 and the **Midtones** tool with the value of -8, save these settings as a preset and quickly apply them to change future contrast and midtone settings.

Presets ensure that settings are applied consistently to images and can be created with one or multiple develop settings. It is possible to save presets from all Develop settings across the Tune, Detail, Geometry, and Repair tabs. Or, save presets from the settings from all of the groups within a single tab, such as all of the settings on the **Tune** tab. Or, save presets by individual group only, such as the **Color EQ** group.



To make the Develop experience easier, use the **Develops Preset** pane to create, delete, manage, and categorize global presets.



Apply multiple presets to an image. Each time a preset is added, the settings are applied on top of the previous settings.

### Using the Develop Presets Pane

#### To create a Preset using the Develop Presets pane:

1. Click the **Develop Presets** icon. 
2. Select a tab, and within a group make corrections to the image.
3. Click the **Create new Preset** button at the bottom of the **Develop Presets** pane. 
4. In the **Save Develop Settings Preset** dialog, select the settings to save to the preset and enter a name for the preset.
5. Click **OK**.

#### To rename a Preset using the Develop Presets pane:

1. In the **Develop Presets** pane, right-click on the preset to rename, and select **Rename Preset** from the context menu.
2. In the **Rename Preset** dialog, enter a new name for the preset.
3. Click **OK**.

#### To delete a Preset using the Develop Presets pane:

1. In the **Develop Presets** pane, right-click on the preset to delete, and select **Delete Preset** from the context menu.
2. In the **Delete Preset** dialog, click **Yes** to the prompt.

#### To apply a Preset to an image using the Develop Presets pane:

With an image open in **ACDSee RAW**, click any preset in the **Develop Presets** list. The image is updated with the selected preset.

#### Using Categories in the Develop Presets Pane


Categories in the **Develop Presets** pane are used to organize and manage presets. When first opening ACDSee Gemstone Photo Editor 16, the Develop Presets pane is comprised of a series of organized default categories containing default presets.

#### To create a Category:

1. Right-click on a Category header in the **Develop Presets** pane and select **New Category**.
2. In the **Add a new Category** dialog, enter a **Category name** and click **OK**.

#### To delete a Category:

Do one of the following:

- Right-click an existing category in the **Develop Presets** pane and select **Delete Category**.
- Click the delete icon associated with the category. 

#### To add a Preset to a Category:


1. In the **Develop Presets** pane, right-click a preset.
2. Select **Set Category**.
3. Make a selection from the list of categories to add the preset to the selected category.

#### To remove a Preset from a Category:


1. In the **Develop Presets** pane, right-click a preset.
2. Select **Delete Preset**.

### Other Ways to Create and Apply Presets

#### To create a Preset from a Tab:

1. In the **Develop Tools** pane, select either the **Tune**, **Detail**, **Geometry**, or **Repair** tab.
2. Make edits to an image.
3. Click the **Adjust develop settings** icon  located at the top right of the tab.
4. Select **Save Preset...** from the menu.
5. Select the group settings to save into the preset.
6. In the **Save Develop Settings Presets** dialog, enter a name for the preset.
7. Click **OK**.

#### To create a Preset from a Group:

1. In the **Develop Tools** pane, select either the **Tune**, **Detail**, **Geometry**, or **Repair** tab.
2. Select a group and make edits to an image.
3. Click the **Adjust develop settings for this group** icon  located at the top right of the group.
4. Select **Save Preset...** from the menu.
5. In the **Save Develop Settings Presets** dialog, enter a name for the preset.
6. Click **OK**.

### Applying a Preset to a Single Image

#### To apply a Preset to a Single Image:

1. Click the **Adjust develop settings for this group** icon  at the top of either a pane, tab, or group.
2. Make a selection from the **Presets** menu. The image is updated with the selected preset.




Presets can also be applied to an image in the Filmstrip. Select an image in the Filmstrip, right-click and select **Apply Preset**. Then select the preset to apply to the image. The image is updated with the selected preset.

## Renaming Presets

Presets can be renamed at any time.


### To rename a Preset:

1. Click the **Adjust develop settings** icon  located at the top right of the **Develop Tools** pane.
2. Select **Manage Presets...**
3. In the **Manage Presets** dialog, select a preset and click **Rename**.
4. Enter a new name for the preset.
5. Click **OK** to save and close the dialog.

## Deleting Presets

Delete presets that are no longer needed. Deleting a preset does not affect images that already have the preset applied.


### To delete a Preset:

1. Click the **Adjust develop settings** icon  located at the top right of the **Develop Tools** pane.
2. Select **Manage Presets...**
3. In the **Manage Presets** dialog, select a preset and click **Delete**.
4. Click **OK** to save and close the dialog.

## Importing and Exporting Presets

Share presets with other users by exporting them. Presets made by other users or residing on an old computer can also be imported.

### To export Presets:


1. In the **Develop Presets** pane, navigate to the bottom of the **Develop Presets** pane and click the **Export Presets** icon .
2. In the **Export Presets** dialog, select which Develop presets to export by clicking the plus + signs to expand the tree, and enable/disable the checkboxes to select which presets to export. Global, tab, or group presets can be exported.



Choose to export only specific presets under the branches by checking/unchecking their checkboxes. A gray checkbox indicates that some presets under the branches are selected, but not all.

3. To export ACDSee RAW presets, enable the **Include ACDSee presets** checkbox.
4. Click **Export**.
5. In the **Save As** dialog, browse to specify the destination for the exported presets.
6. Enter a name in the field, and click **Save**.

### To Import Presets:

1. In the **Develop Presets** pane, navigate to the bottom of the **Develop Presets** pane and click the **Import Presets** icon. 
2. In the **Open** dialog, navigate to the location of the presets.
3. Select the presets for import and click **Open**.
4. In the **Import Presets** dialog, click the plus + signs to expand the tree, and enable/disable the checkboxes to select which presets to import. Global, tab, or group presets can be imported.



Choose to import only specific presets under the branches by enabling/disabling their checkboxes. A gray checkbox indicates that some presets under the branches are selected, but not all.

5. Click **Import**. Find the imported presets in the presets menus in their respective groups.

### Masking with ACDSee RAW

You can make local adjustments using one of the single click AI options to mask Subject, Background or Sky. You can also make finer manual adjustments with brush, linear and radial gradient masks.



You can [save your settings as a preset](#) for future use.

### To Mask Your Image in ACDSee Raw:

1. In ACDSee RAW, select the **Tune** or **Details** tab.
2. In the Masking group, use one of the options listed below.



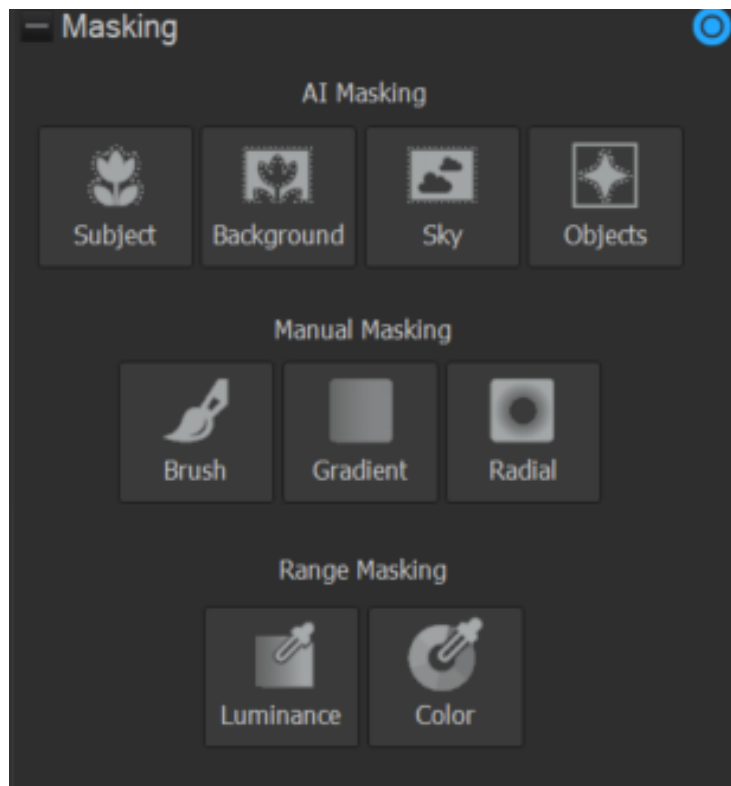
Right-click a slider to reset to the default value.

### Masking Options

<b>AI Subject</b>	Use AI to detect and automatically select the subject in the image and apply a mask over it.
<b>AI Background</b>	Use AI to detect and automatically select the background in the image and apply a mask over it.
<b>AI Sky</b>	Use AI to detect and automatically select the sky in the image and apply a mask over it.
<b>AI Object</b>	Use <a href="#">AI Object</a> to detect and automatically apply a mask over the objects you select.
<b>Brush</b>	Use the <a href="#">Develop Brush</a> to paint a mask onto the image.
<b>Linear Gradient</b>	Create a mask using the <a href="#">Linear Gradient</a> tool.
<b>Radial Gradient</b>	Create a mask using the <a href="#">Radial Gradient</a> tool.
<b>Luminance Range</b>	Create a mask using the <a href="#">Luminance Range</a> tool.
<b>Color Range</b>	Create a mask using the <a href="#">Color Range</a> tool.

 Use the Settings button  to reset sliders to Last Saved or Last Used settings. You can also [save your settings as a preset, copy, or paste them.](#)

 Right-clicking on either a linear gradient, or radial gradient mask will allow you to convert them into a brush mask.



### Adjusting Brush Controls

The [Develop Brush](#) controls can be adjusted once you've begun applying a mask. The options will appear at the bottom of the Masking group and include:

<b>Nib Width</b>	Adjusts the size of the brush. You can use the <b>mouse wheel</b> to adjust nib width or adjust the <b>Nib Width</b> slider.
<b>Pressure</b>	Adjust the slider to control the strength of the brush.
<b>Smart Brushing</b>	use the Smart Brush to target your brushing to specific colors, brightness values, or a combination of color and brightness. For more information see <a href="#">Using the Develop Brush</a> .
<b>Tolerance</b>	Increase or decrease the range of pixels affected by the Smart Brush. For more information see <a href="#">Using the Develop Brush</a> .
<b>Show Mask</b>	Toggle to display the mask. Use the dropdown to set the color that the mask will appear as.
<b>Feathering</b>	Adjust the slider to control the softness of the transition between the brush strokes and the image. Use <b>Ctrl + mouse wheel</b> to adjust the amount of feathering or adjust the <b>Feathering</b> slider.
<b>Shift</b>	Adjust the slider to control the thickness of the brush strokes, allowing you to finely expand or contract the mask and ensure it fits correctly.

**Masking**

General | Color EQ | Tone Curves

Exposure = 0.00 eV  
0

Saturation  
0

Vibrance  
0

Temperature  
0

Tint  
0

Fill Light  
0

Contrast  
0

Clarity  
0

Color Strength 0      Hue 30

Brush controls

Nib Width 10      Feathering 20

Pressure 100

Smart Brushing: Off

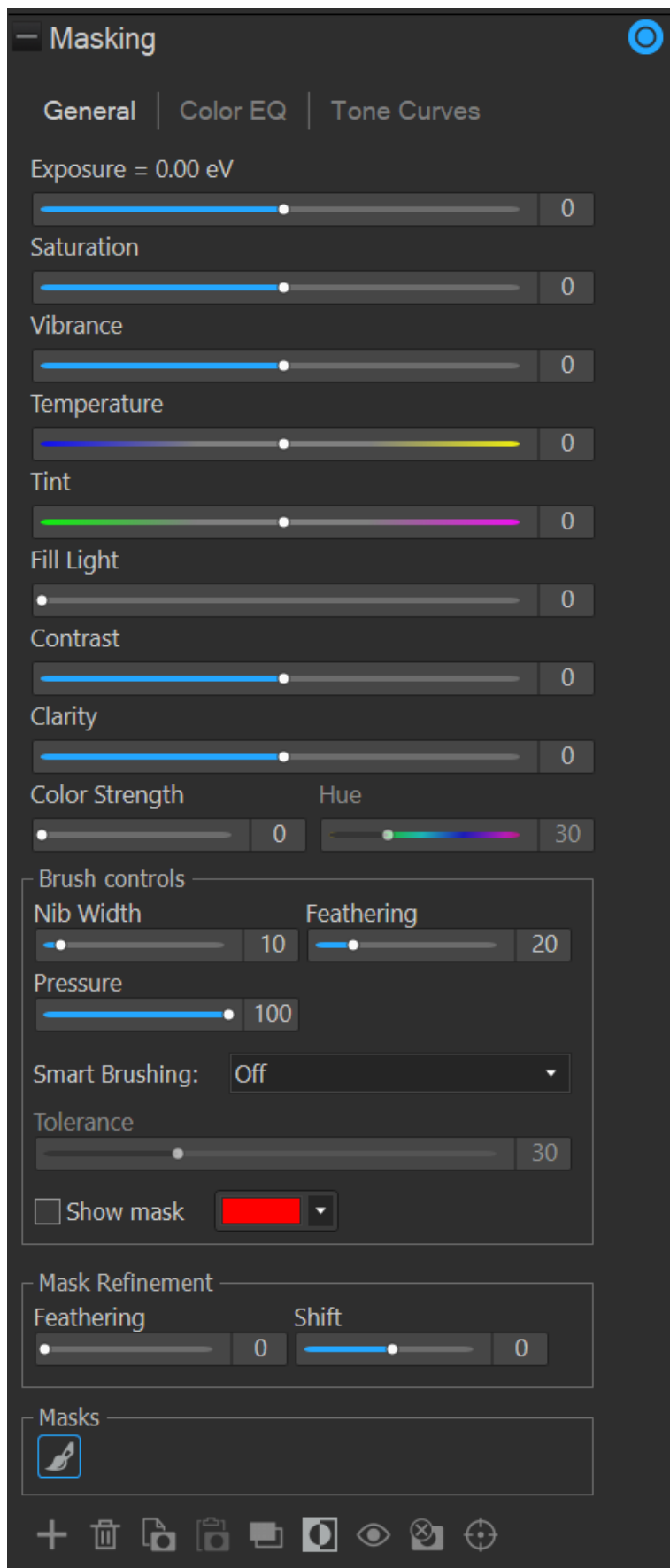
Tolerance 30

Show mask  

Mask Refinement

Feathering 0      Shift 0

Masks



The image shows a software interface for a 'Masking' tool. It features a dark grey background with white text and blue accents. At the top, there's a title bar with a minus sign and a blue circular icon. Below the title, there are three tabs: 'General' (selected), 'Color EQ', and 'Tone Curves'. The 'General' tab contains several sliders for adjusting image properties: Exposure (0.00 eV), Saturation, Vibrance, Temperature, Tint, Fill Light, Contrast, and Clarity, all set to 0. Below these are 'Color Strength' (0) and 'Hue' (30). A 'Brush controls' section includes 'Nib Width' (10), 'Feathering' (20), 'Pressure' (100), 'Smart Brushing' (Off), and 'Tolerance' (30). There's a 'Show mask' checkbox with a red color swatch. A 'Mask Refinement' section has 'Feathering' (0) and 'Shift' (0) sliders. At the bottom, there's a 'Masks' section with a brush icon. A toolbar at the very bottom contains icons for zoom, pan, and other editing functions.

## Managing Masks in ACDSee RAW

Additional masks can be added once you've begun masking by pressing **+** at the very bottom of the **Masking** group. Each mask will appear within the **Masks** section just above the button, and can be switched between quickly by clicking on the mask within the section.

### Copying and Pasting Masks

Masks can be copied by pressing **Copy Selected Mask**, found at the bottom of the **Masking** group. A copied mask can then be pasted by using the **Paste Selected Mask** button found directly to the right of the Copy Selected Mask button.

Copied masks can be taken from one image to the next. If a mask has been copied, a 7th masking choice will display when loading a different image in **ACDSee RAW** called **Paste Copied Mask**. Pressing this button will paste the copied mask as your first mask on this new image. Leaving **ACDSee RAW**, or restarting the application will clear the copied mask.



Masks that have been copied and pasted will be pasted as brush masks, regardless of the original mask type.

### Duplicating Masks

Masks can be duplicated by pressing the Duplicate Selected Mask button to the right of the Copy and Paste buttons.



Masks that have been copied and pasted, or duplicated, will only copy the mask, not the settings.

### Inverting Masks

Masks can be inverted by pressing the Invert Selected Mask button to the right of the Duplicate Selected Mask button.

### Masking Toolbar

At the bottom of the Masking group is the Masking Toolbar. This includes options for:

<b>Add a new mask</b>	Brings up a menu to select a new mask type to apply.
<b>Delete the currently selected mask</b>	Deletes the currently selected mask.
<b>Copy the currently selected mask</b>	Copies the currently selected mask.
<b>Paste mask</b>	Pastes the currently copied mask.
<b>Duplicate the currently selected mask</b>	Creates a duplicate mask of the currently selected mask.
<b>Invert the currently selected mask</b>	Inverts the currently selected mask.
<b>Enable the currently selected mask</b>	Enable or disable the ability to see the currently selected mask.
<b>Clear the currently selected mask</b>	Deselects the currently selected mask.
<b>Pixel Targeting Mask</b>	Opens/closes the Pixel Targeting popup dialog.


### Using the AI Object Tool


The AI Object tool intelligently identifies objects within the area you designate and automatically creates a mask, allowing for quick and accurate adjustments to specific elements in a photo. Adjust settings for the mask such as the **Exposure, Saturation, Vibrance, Temperature, Tint, Fill Light, Contrast, Clarity,** and **Color Strength**, as well as **Color EQ, Tone Curves,** and **Sharpness** in one or a series of selection masks over the photo. For example, instead of adding **Fill Light** to an entire photo, add the fill light to certain areas, such as back-lit subjects.

## AI Object Tool

The **AI Objects** button  is located in the **Masking Group** of **Tune** and **Detail** tabs.

### To Use the AI Object Tool:

1. In the **Develop Tools** pane, in the **Tune** or **Detail** tab, click **Masking**, and then **AI Objects**  in the **Masking Group** to open the control panel and enter **AI Object** masking mode.
2. Specify the **AI Object** settings in the panel as described in the table below.
3. Roughly outline the object(s) you would like to have a mask placed over. To make this clearer, check the **Show mask** checkbox.
4. Adjust the sliders to get the effect you want.

 To apply another mask, (up to 24 are available), click the + on the bottom left of the panel and select a masking option. A new icon (related to the type of mask selected) will appear in the **Masks** section. Your currently selected mask will be outlined in blue. You can reselect any of the masks at any given time by clicking its respective icon.

5. Press **Save** or **Done**.

**Masking**

General | Color EQ | Tone Curves

Exposure = 0.00 eV

Saturation

Vibrance

Temperature

Tint

Fill Light

Contrast

Clarity

Color Strength      Hue

Object Selection Controls

Mask Refinement

Masks

## Object Selection Controls

### Create a new mask



When this option is active, roughly outlining objects will create a new mask and discard any prior masks.

### Add to the current mask



When this option is active, selecting objects will add them to the current mask.

### Subtract from the current mask



When this option is active, selecting objects will subtract them from the current mask.

### Show mask



When this option is checked, your mask will be displayed in the color shown. Alternatively, hold down the **S** key to see the mask on the image.

## Mask Refinement

### Feathering

Adjust the slider to control the softness of the transition between the mask and the image. Use **Ctrl + mouse wheel** to adjust the amount of feathering or adjust the **Feathering** slider.

### Shift

Adjust the edges of a mask by expanding or contracting them. Moving the slider to the right increases its coverage, making the masked area larger, while moving the slider to the left reduces its coverage, tightening the selection.


## Using the Develop Brush


The **Develop Brush** makes a variety of edits to specific areas of a photo. Adjust the **Exposure**, **Saturation**, **Vibrance**, **Temperature**, **Tint**, **Fill Light**, **Contrast**, **Clarity**, and **Color Strength**, as well as **Color EQ**, **Tone Curves**, and **Sharpness** in a photo by brushing on the effects. For example, instead of adding fill light to an entire photo, only add it to certain areas, such as backlit subjects. Apply up to 24 masks to separate areas in an image and assign each with unique effect settings.

## Develop Brush

The **Develop Brush** button  is located in the **Tune** and **Detail** tabs.


### To use the Develop Brush:


1. In the **Develop Tools** pane, in the **Tune** or **Detail** tab, click **Masking**, then **Brush**  in the **Masking Group** to open the control panel and enter **Brush** masking mode.
2. Specify the brush settings in the panel, or while working, as described in the table below.
3. Start painting the effects onto a photo.
4. Adjust the sliders to get the desired effect.

 To apply another mask, (up to 24 are available), press the + button at the bottom and select the masking type. The new mask box will become visible to the right of the previous mask box. Return to any mask by selecting its respective mask icon. A blue outline represents the mask currently selected. Disable or re-enable any mask by using the Disable/Enable Mask buttons.

5. Click **Apply** or **Done**.

|

 Hovering over a brush button will reveal that specific brush's strokes on the image. The brush strokes will appear in the color selected in the drop-down next to the **Show mask** checkbox. (By default, the color is red.) Alternatively, hold down the **S** key to see the brush strokes on the image.

 If all of the sliders are at zero, brush strokes will appear in color, (as selected in the drop-down next to the **Show mask** checkbox), as no changes have been made to the image.

#### To disable a mask:

To disable a mask, select the mask layer you wish to hide, and click on the **Disable Currently Selected Mask** button to hide the mask layer.

#### To re-enable a mask:

To re-enable a mask, select the mask layer you wish to make visible again and click on the **Enable Currently Selected Mask** button to show the mask layer again.

#### Creating Straight Lines:

Hold the **Shift** key while using the **Develop Brush** to lock the direction the brush can move in horizontally, or vertically. For example, holding **Shift**, then clicking and dragging horizontally will lock the cursor into horizontal only so long as shift is being held. Release **Shift** to return to free hand brushing. You can even release **Shift** to return to free hand brushing, then press it again while still drawing the same line to unlock and re-lock the brush at will.







#### Creating Diagonal Lines:

Using the **Develop Brush, Gemstone** can create straight diagonal lines by placing two points on the image. Place the cursor where you want the line to begin, press and hold **Shift**, then **Left-Click** on the image to create a point. Let go of **Shift**, and move the brush to where the line will end, press and hold **Shift**, then **Left-Click** again to create a second point. A straight line will fill in between these two points.

## **Develop Brush Options**

<b>Nib Width</b>	Adjusts the size of the brush. Use the <b>mouse wheel</b> to adjust nib width or adjust the <b>Nib Width</b> slider.
<b>Pressure</b>	Adjust the slider to control the strength of the brush.
<b>Smart Brushing</b>	See the <a href="#">Smart Brushing</a> section below.
<b>Tolerance</b>	Only enabled if a <b>Smart Brushing</b> option is selected, the <b>Tolerance</b> slider increases or decreases the range of pixels affected by the <b>Smart Brush</b> .
<b>Add brush stroke</b>	Brush while holding the <b>left mouse button</b> down.
<b>Erase brush stroke</b>	Brush while holding the <b>right mouse button</b> down.
<b>Show mask</b>	When this option is enabled, the currently selected brush's strokes will be

displayed in the color selected in the adjacent color selection tool. This is helpful when brushing a complex area with a subtle effect because it can be hard to tell which spots have been covered. The color of the brushed area can be changed to stand out from the colors of the image.

<p><b>Mask Preview Color</b></p>	<p>Opens the <b>Colors</b> dialog used to select a color for brush strokes.</p>
<p><b>Add a new mask layer</b></p>	<p> Adds a new mask layer to the project.</p>
<p><b>Delete the currently selected mask</b></p>	<p> Deletes the currently selected mask layer from the project.</p>
<p><b>Copy the currently selected mask</b></p>	<p> Copies the currently selected mask layer onto the clipboard.</p>
<p><b>Paste the currently selected mask</b></p>	<p> Pastes the mask currently saved to the clipboard.</p>
<p><b>Duplicate the currently selected mask</b></p>	<p> Creates a duplicate mask layer using the currently selected mask.</p>
<p><b>Invert the currently selected mask</b></p>	<p> Toggle this</p>

option to invert the brush strokes of the currently selected brush. This makes brushed areas no longer brushed and untouched areas brushed. This is useful for instances where the majority of the image is brushed and a small section untouched. Simply brush only the small area to be left unbrushed, then invert the brush strokes.

**Disable the currently selected mask**



Disables the currently selected mask layer, preventing the layer from being visible.

**Enable the currently selected mask**



Enables the currently selected mask layer, preventing the layer from being visible.

**Clear the currently selected mask**

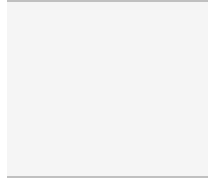


Clears the currently selected mask layer of any brush strokes.

**Pixel Targeting**



Opens the **Pixel Targeting** dialog for precise color



selection. (see [Pixel Targeting](#) for more information)

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## Mask Refinement

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### Feathering

Adjust the slider to control the softness of the transition between the brush strokes and the image. Use **Ctrl + mouse wheel** to adjust the amount of feathering or adjust the **Feathering** slider.

### Shift

Adjust the edges of a mask by expanding or contracting them. Shifting the mask outward increases its coverage, making the masked area larger, while shifting inward reduces its coverage, tightening the selection.

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## Using the Develop Brush on the Tune Tab

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**General**

<b>Exposure</b>	Drag the slider to the right to increase exposure, or drag to the left to decrease exposure. One eV is equivalent to one stop of exposure change. Brush on exposure.
<b>Saturation</b>	Drag the slider to the right to increase saturation, or to the left to decrease saturation. Brush on saturation.
<b>Vibrance</b>	Drag the slider to the right to increase vibrance, or to the left to decrease vibrance. Increasing the vibrance does not affect skin tone in an image. This is unlike saturation, which intensifies all colors equally. Brush on vibrance.
<b>Temperature</b>	Drag the <b>Temperature</b> slider to the left (more blue) or right (more yellow) to select a specific color temperature. Brush on white balance.
<b>Tint</b>	Drag the <b>Tint</b> slider to the left (more green) or right (more magenta) to match the white balance settings that you selected when you took the photo. Brush on white balance.
<b>Fill Light</b>	Drag the slider to the right to add light to the darkest areas of the image. Brush on fill light.
<b>Contrast</b>	Drag the slider to the right to increase contrast, or to the left to decrease contrast. Brush on contrast.
<b>Clarity</b>	The <b>Clarity</b> tool adds subtle definition to the details in your image. Use the <b>Clarity</b> slider to enhance the contrast of midtones, without overpowering the shadows and highlights. Drag the slider to the right to increase clarity, or to the left to reverse clarity. Brush on clarity.
<b>Color Strength</b>	Use the <b>Color Overlay</b> sliders to add tint to your image without affecting brightness levels. Set the <b>Color Strength</b> slider, then move the <b>Color</b> slider to the desired color

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band. With **Color Strength** set to 0, no color will be applied.

Brush on color.

## Color EQ

Drag the color sliders to adjust individual colors' saturation, brightness, hue, and contrast on their respective tabs. Drag the sliders right for more intensity, or left for less intensity. Or, enter a number into the fields for precise adjustments. Select one of the following icons:



Select a precise color to adjust by dragging directly on the image. In order to toggle the **Color Selector** on, click the **Color Selector** icon. Place your cursor on the image for the double arrow icon to appear. Then click and drag up or down to adjust the colors beneath the double arrow icon. The affected color sliders automatically adjust as you move your cursor. However, no change will occur to the image until you brush on the adjustment.

Brush on Color EQ.

## Tone Curves

Move the curve and/or add points by clicking to adjust the tonal range of the image. Select any of the color icons on the right side of the graph to target the adjustment to one of the following color channels:

- **RGB**
- **Red**
- **Green**
- **Blue**

Brush on a tone curves adjustment.

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Delete points on a curve by right-clicking and choosing **Delete point**. Or, delete a point by dragging it off of the graph.

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## Using the Develop Brush on the Detail Tab

<b>Sharpness</b>	Move the slider to the right to brush on sharpness, or move the slider to the left to brush on blur.
<b>Luminance Noise Reduction</b>	Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image. Slide to the right to add <a href="#">Luminance Noise Reduction</a> .
<b>Color Noise Reduction</b>	Color noise is random variations of color in the image. Slide to the right to add <a href="#">Color Noise Reduction</a> .




Right-click a slider to reset to the default value.

## Smart Brushing

Use the **Smart Brush** to target brushing to specific colors, brightness values, or a combination of color and brightness. The **Smart Brush** only affects pixels similar in value to the pixel in the center of the brush stroke, and allows you to apply adjustments to those pixels.

### To use the Smart Brush:

1. In the **Develop Tools** pane, on the **Tune** or **Detail** tab, click the **Brush** button  at the top of the pane to open the control panel and enter Brushing mode.
2. Select an option from the Smart Brushing drop-down menu:

<b>Color</b>	Uses the color of pixels similar in value to the pixel in the center of the brush stroke to determine if they should be brushed on, depending on the <b>Tolerance</b> slider setting.
<b>Brightness</b>	Uses the brightness of pixels similar in value to the pixel in the center of the brush stroke to determine if they should be brushed on, depending on the <b>Tolerance</b> slider setting.
<b>Magic</b>	Uses a combination of the color and brightness values similar to the pixel in the center of the brush stroke to determine which pixels should be brushed on, depending on the <b>Tolerance</b> slider setting.

3. Use the **Tolerance** slider to increase or decrease the range of pixels affected by the **Smart Brush**.
4. Place the cursor over the color or brightness to be selected and begin painting on the effect.
5. Adjust the sliders to get the desired effect.



To apply another brush, (up to eight are available), select the next brush in the sequence at the bottom of the panel. The box above the brush will become enabled. The checkmarks represent the activated smart brushes, while the selected brush icon (highlighted in blue) represents the currently enabled smart brush. Return to any of the brushes at any given time by selecting its respective brush icon. A blue brush represents a smart brush that has been used. Deactivate or re-activate any brush by disabling or re-enabling its respective checkbox.

6. Click **Apply** or **Done**.



Hold down **Ctrl** prior to making a brush stroke to temporarily disable the **Smart Brush**. Use this keyboard shortcut on a stroke by stroke basis.



Erase brush strokes by right-clicking and brushing over the strokes.

### To Turn off Smart Brushing:

Select "Off" from the **Smart Brushing** drop-down menu.


### Using the Linear Gradient Tool

While the Develop tools allow for a variety of adjustments to be made to photos, sometimes it is desirable to have these effects gradually progress across a photo. Adjust the **Exposure**, **Saturation**, **Vibrance**, **Temperature**, **Tint**, **Fill Light**, **Contrast**, **Clarity**, and **Color Strength**, as well as **Color EQ**, **Tone Curves**, and **Sharpness** in one or a series of gradients over a photo. For example, instead of applying exposure adjustments across an entire photo, use the **Linear Gradient** tool to have them be stronger in some areas and weaker or absent from others.

### Linear Gradient Tool

The **Linear Gradient** button  is located in the **Masking Group** of the **Tune** and **Detail** tabs.

### To use the Linear Gradient tool:

1. In the **Develop Tools** pane, in the **Tune** or **Detail** tab, click the **Gradient** button  to open the **Gradient** panel and enter **Gradient** masking mode.
2. Specify the gradient settings in the panel as described in the table below.

3. Position the guides on the photo. Inside the guide boxes, the gradient is transitioning. On either side of the boxes, the effect being applied by the **Linear Gradient** tool is at full strength or not applied at all. To make this clearer, enable the **Show gradient mask** checkbox. Move the boxes to define where the effect will begin or end. Hold down the **Shift** key while positioning the effect to lock to the nearest 45° angle, for straightness.

4. Adjust the sliders to get the desired effect.

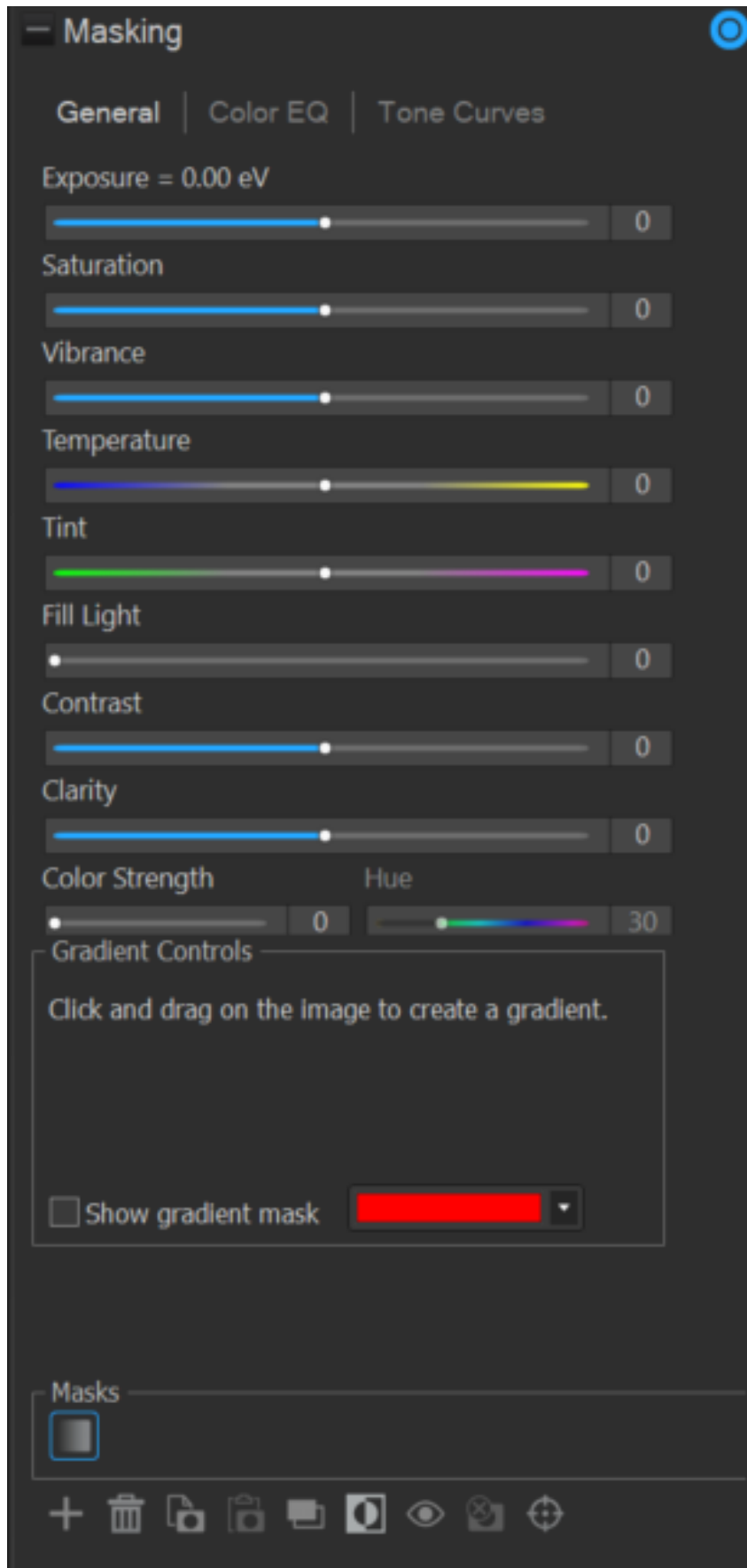


To apply another mask, (up to 24 are available), press the + button at the bottom and select the masking type. The new mask box will become visible to the right of the previous mask box. Return to any mask by selecting its respective mask icon. A blue outline represents the mask currently selected. Disable or re-enable any mask by using the Disable/Enable Mask buttons.

5. Click **Apply** or **Done**.



Hold **Shift** while using the **Linear Gradient Tool** to lock it's movement to up, down, left, right, or on diagonals to create straight masks.













**To disable a mask:**

To disable a mask, select the mask layer you wish to hide, and click on the **Disable Currently Selected Mask** button to hide the mask layer.

**To re-enable a mask:**

To re-enable a mask, select the mask layer you wish to make visible again and click on the **Enable Currently Selected Mask** button to show the mask layer again.

**Linear Gradient Tool Options**

<b>Show gradient mask</b>		When this option is enabled, the gradient mask will be displayed in the color shown. Alternatively, hold down the <b>S</b> key to see the mask on the image. Click the drop-down arrow to select another display color.
<b>Mask Preview Color</b>		Opens the <b>Colors</b> dialog used to select a color for brush strokes.
<b>Add a new mask layer</b>		Adds a new mask layer to the project.
<b>Delete the currently selected mask</b>		Deletes the currently selected mask layer from the project.
<b>Copy the currently selected mask</b>		Copies the currently selected mask layer onto the clipboard.
<b>Paste the currently selected mask</b>		Pastes the mask currently saved to the clipboard.
<b>Duplicate the currently selected mask</b>		Creates a duplicate mask layer using the currently selected mask.
<b>Invert the currently selected mask</b>		Toggle this option to invert the brush strokes of the currently selected brush. This makes brushed areas no longer brushed and untouched areas brushed. This is useful for instances where the majority of the image is brushed and a small section untouched. Simply brush only the small area to be left unbrushed, then invert the brush strokes.
<b>Disable the currently selected mask</b>		Disables the currently selected mask layer, preventing the layer from being visible.
<b>Enable the currently selected mask</b>		Enables the currently selected mask layer, preventing the layer from being visible.
<b>Clear the currently selected mask</b>		Clears the currently selected mask layer of any brush strokes.
<b>Pixel Targeting</b>		Opens the <b>Pixel Targeting</b> dialog for precise color selection. (see <a href="#">Pixel Targeting</a> for more information)

## Using the Linear Gradient Tool on the Detail Tab

<p><b>Sharpness</b></p>	<p>Move the slider to the right to brush on sharpness, or move the slider to the left to brush on blur.</p>
<p><b>Luminance Noise Reduction</b></p>	<p>Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image. Slide to the right to add <a href="#">Luminance Noise Reduction</a>.</p>
<p><b>Color Noise Reduction</b></p>	<p>Color noise is random variations of color in the image. Slide to the right to add <a href="#">Color Noise Reduction</a>.</p>


### Using the Radial Gradient Tool

While the Develop tools can make a variety of adjustments to photos, sometimes it is preferred to have these effects draw attention to a specific area of a photo. Adjust the **Exposure, Saturation, Vibrance, Temperature, Tint, Fill Light, Contrast, Clarity, and Color Strength**, as well as **Color EQ, Tone Curves, and Sharpness** in one or a series of gradients over the photo. For example, instead of applying sharpening across an entire photo, only sharpen the center subject.

### Radial Gradient Tool

The **Radial Gradient** tool button is located at the top of **Tune** and **Detail** tabs.

#### To use the Radial Gradient tool:

1. In the **Develop Tools** pane, in the **Tune** or **Detail** tab, click the **Radial Gradient** button  at the top of the pane to open the **Radial Gradient** panel and enter Radial Gradient masking mode.
2. Specify the **Radial Gradient** panel settings as described in the table below.
3. Position the guides on a photo. Inside the circle, the image is unaltered. At the perimeter of the circle, the effect being applied by the **Radial Gradient** tool is transitioning between not applied at all (inside), and full strength (outside). To make this clearer, enable the **Show gradient mask** checkbox. Move the guides to define where the effect will begin or end. Hold down the **Shift** key while positioning the effect to change the radial gradient to a perfect circle.
4. Adjust the sliders to get the desired effect.

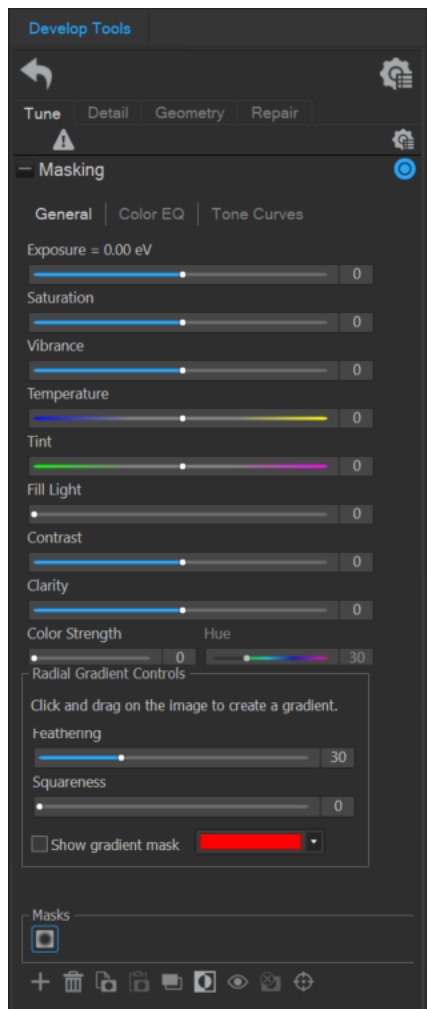


To apply another mask, (up to 24 are available), press the + button at the bottom and select the masking type. The new mask box will become visible to the right of the previous mask box. Return to any mask by selecting its respective mask icon. A blue outline represents the mask currently selected. Disable or re-enable any mask by using the Disable/Enable Mask buttons.

5. Click **Apply** or **Done**.



Hold **Shift** while using the **Radial Gradient Tool** to lock it's movement to up, down, left, right, or on diagonals to create straight masks.











#### To disable a mask:



To disable a mask, select the mask layer you wish to hide, and click on the **Disable Currently Selected Mask** button to hide the mask layer.

#### To re-enable a mask:

To re-enable a mask, select the mask layer you wish to make visible again and click on the **Enable Currently Selected Mask** button to show the mask layer again.

### **Gradient Tool Options**

<b>Feathering</b>		Adjust the slider to control how gradual the transition of the edge of the gradient will be.
<b>Squareness</b>		Adjust the slider to the right to change the shape of the gradient tool from an oval to a square.
<b>Show gradient mask</b>		When this option is enabled, the gradient mask will be displayed in the color shown. Alternatively, hold down the <b>S</b> key to see the mask on the image.
<b>Mask Preview Color</b>		Opens the <b>Colors</b> dialog used to select a color for brush strokes.
<b>Add a new mask layer</b>		Adds a new mask layer to the project.
<b>Delete the currently selected mask</b>		Deletes the currently selected mask layer from the project.
<b>Copy the currently selected mask</b>		Copies the currently selected mask layer onto the clipboard.
<b>Paste the currently selected mask</b>		Pastes the mask currently saved to the clipboard.
<b>Duplicate the currently selected mask</b>		Creates a duplicate mask layer using the currently selected mask.
<b>Invert the currently selected mask</b>		Toggle this option to invert the brush strokes of the currently selected brush. This makes brushed areas no longer brushed and untouched areas brushed. This is useful for instances where the majority of the image is brushed and a small section untouched. Simply brush only the small area to be left unbrushed, then invert the brush strokes.
<b>Disable the currently selected mask</b>		Disables the currently selected mask layer, preventing the layer from being visible.
<b>Enable the currently selected mask</b>		Enables the currently selected mask layer, preventing the layer from being visible.

<p><b>Clear the currently selected mask</b></p>	 Clears the currently selected mask layer of any brush strokes.
<p><b>Pixel Targeting</b></p>	 Opens the <b>Pixel Targeting</b> dialog for precise color selection. (see <a href="#">Pixel Targeting</a> for more information)

## Using the Radial Gradient Tool on the Detail Tab

<p><b>Sharpness</b></p>	<p>Move the slider to the right to brush on sharpness, or move the slider to the left to brush on blur.</p>
<p><b>Luminance Noise Reduction</b></p>	<p>Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image. Slide to the right to add <a href="#">Luminance Noise Reduction</a>.</p>
<p><b>Color Noise Reduction</b></p>	<p>Color noise is random variations of color in the image. Slide to the right to add <a href="#">Color Noise Reduction</a>.</p>




Double-click the + at center of the guides to expand the radial gradient to fill the entire width of the image.


### Using the Luminance Range Tool

The Luminance Range tool allows you to focus adjustments on specific brightness levels within a photo, making it easy to target and enhance particular areas of an image. Adjust the settings for the mask such as the **Exposure, Saturation, Vibrance, Temperature, Tint, Fill Light, Contrast, Clarity, and Color Strength**, as well as **Color EQ, Tone Curves, and Sharpness** in one or a series of luminance masks over the photo. For example, instead of adding **Fill Light** to an entire photo, add the fill light to certain areas, such as back-lit subjects.

### Luminance Range Tool

The **Luminance Range** button  is located in the **Masking Group** of the **Tune** and **Detail** tabs.

#### To Use the Luminance Range Masking Tool:

1. In the **Develop Tools** pane, in the **Tune** or **Detail** tab, click **Masking**, then **Luminance Range**  in the **Masking Group** to open the control panel and enter **Luminance Range** masking mode.
2. Specify the **Luminance Range** settings in the panel as described in the table below.
3. Adjust the **Luminance Range Controls** to set the mask based on the luminance values selected.
4. Adjust the sliders to get the effect you want.



To apply another mask, (up to 24 are available), click the + on the bottom left of the panel and select a masking option. A new icon (related to the type of mask selected) will appear in the Masks section. Your currently selected mask will be outlined in blue. You can reselect any of the masks at any given time by clicking its respective icon.

5. Press **Save** or **Done**.

### Masking

General | Color EQ | Tone Curves

Exposure = 0.00 eV  
0

Saturation  
0

Vibrance  
0

Temperature  
0

Tint  
0

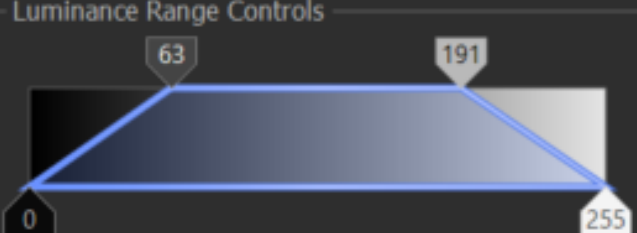
Fill Light  
0

Contrast  
0

Clarity  
0

Color Strength 0    Hue 30

#### Luminance Range Controls



0    63    191    255

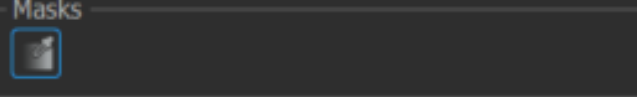
Add Detail 0    Detail Range 30

Show mask  

#### Mask Refinement

Feathering 0    Shift 0

#### Masks



+

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## Luminance Range Controls

<b>Luminance Range</b>	Adjust shadows, midtones, and highlights with the 4 indicating tabs.
<b>Add Detail</b>	Increases the sharpness and clarity of textures and edges within the selected luminance range.
<b>Detail Range</b>	Specifies the range of brightness levels where the detail enhancement is applied.
<b>Show mask</b>	When this option is checked, your mask will be displayed in the color shown.



## Mask Refinement

<b>Feathering</b>	Adjust the slider to control the softness of the transition between the brush strokes and the image. Use <b>Ctrl + mouse wheel</b> to adjust the amount of feathering or adjust the <b>Feathering</b> slider.
<b>Shift</b>	Adjust the edges of a mask by expanding or contracting them. Shifting the mask outward increases its coverage, making the masked area larger, while shifting inward reduces its coverage, tightening the selection.

## Using the Luminance Range Masking Tool on the Detail Tab

<b>Sharpness</b>	Move the Sharpness slider to the right to sharpen the area affected by the mask, or move the slider to the left to blur the area affected by the mask.
<b>Luminance Noise Reduction</b>	Reduces graininess or "noise" in the image by smoothing out variations in brightness (luminance) while preserving detail and texture.
<b>Color Noise Reduction</b>	Reduces unwanted color artifacts or "color noise" in an image by smoothing out random variations in color while maintaining overall image detail.

## Using the Color Range Tool


The Color Range tool enables precise adjustments to specific colors within a photo, allowing you to selectively enhance or modify certain areas based on their color. Adjust the settings for the mask such as the **Exposure, Saturation, Vibrance, Temperature, Tint, Fill Light, Contrast, Clarity, and Color Strength**, as well as **Color EQ, Tone Curves, and Sharpness** in one or a series of color masks over the


photo. For example, instead of adding **Fill Light** to an entire photo, add the fill light to certain areas, such as back-lit subjects.

## Color Range Tool

The **Color Range** button  is located in the **Masking Group** of the **Tune** and **Detail** tabs.

### To Use the Color Range Masking Tool:

1. In the **Develop Tools** pane, in the **Tune** or **Detail** tab, click **Masking**, then **Color Range**  in the **Masking Group** to open the control panel and enter **Color Range** masking mode.
2. Specify the **Color Range** settings in the panel as described in the table below.
3. Adjust the **Color Range Controls** to set the mask based on the color values selected.
4. Adjust the sliders to get the effect you want.

 To apply another mask, (up to 24 are available), click the + on the bottom left of the panel and select a masking option. A new icon (related to the type of mask selected) will appear in the Masks section. Your currently selected mask will be outlined in blue. You can reselect any of the masks at any given time by clicking its respective icon.

5. Press **Save** or **Done**.



## Color Range Controls

<b>Color Range</b>	Adjust the pixel color(s) to be masked.
<b>Smoothness</b>	Controls the degree of softening applied to the edges of a mask. This helps create a smoother transition between the masked and unmasked areas.
<b>Show mask</b>	When this option is checked, your mask will be displayed in the color shown.



## Mask Refinement

<b>Feathering</b>	Adjust the slider to control the softness of the transition between the brush strokes and the image. Use <b>Ctrl + mouse wheel</b> to adjust the amount of feathering or adjust the <b>Feathering</b> slider.
<b>Shift</b>	Adjust the edges of a mask by expanding or contracting them. Shifting the mask outward increases its coverage, making the masked area larger, while shifting inward reduces its coverage, tightening the selection.


## Using the Color Range Masking Tool on the Details Tab

<b>Sharpness</b>	Move the Sharpness slider to the right to sharpen the area affected by the mask, or move the slider to the left to blur the area affected by the mask.
<b>Luminance Noise Reduction</b>	Reduces graininess or "noise" in the image by smoothing out variations in brightness (luminance) while preserving detail and texture.
<b>Color Noise Reduction</b>	Reduces unwanted color artifacts or "color noise" in an image by smoothing out random variations in color while maintaining overall image detail.

## Pixel Targeting in ACDSee RAW

### Targeting Adjustments by Color or Tone

While tools are used to make a variety of global adjustments to an image and the **Develop Brush** makes it possible to adjust specific sections of the image, Pixel Targeting allows for the selection of distinct tones, colors, and skin tones. Pixel Targeting applies a number of adjustments to a photo's individual colors or tones, or just to skin tone. For example, in **ACDSee RAW**, under the **Tune** tab,

expand the **General** tool and note that the **Exposure** slider affects the entire image. However, to only adjust the exposure of a blue sky in an image, apply brush strokes or a gradient to the image to target the sky, then enable Pixel Targeting by clicking the **Develop Brush** icon and clicking the Pixel Targeting Mask  icon. Adjust the Color Range color wheel to the color blue, then use the **General** tool's **Exposure** slider in the **Develop Brush** to only adjust the exposure on the sky.





Pixel Targeting is only available in two tabs of the **Develop Tools** pane:




- [Tune](#)
- [Detail](#)

In the **Tune** and **Detail** tabs, Pixel Targeting is available in the following Local Adjustment Tools:

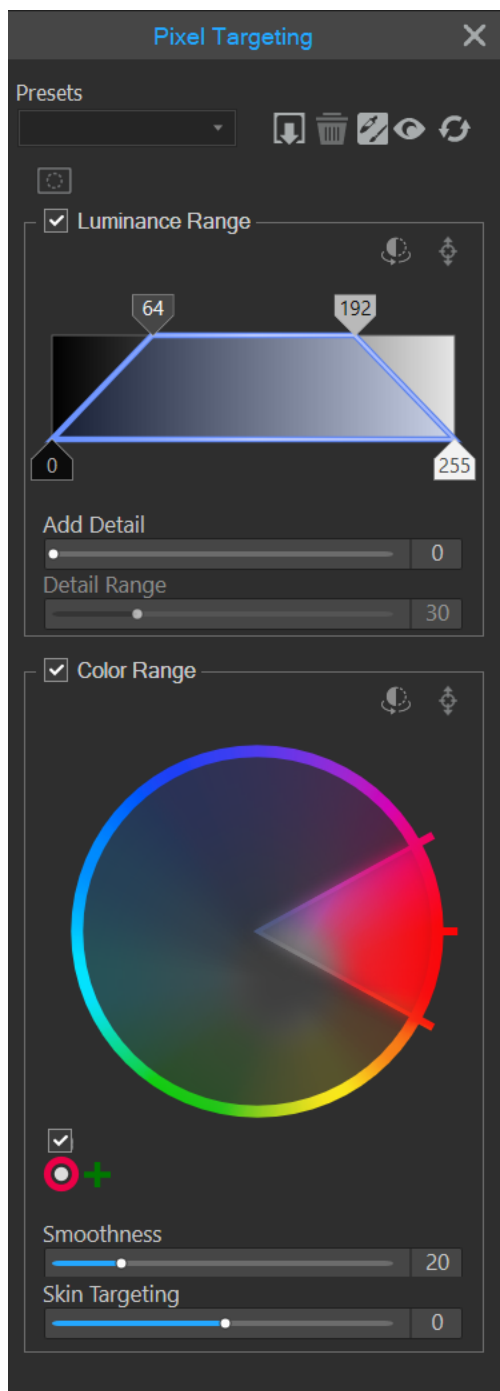
- AI Subject
- AI Background
- AI Sky
- [AI Object](#)
- [Develop Brush](#)
- [Linear Gradient](#)
- [Radial Gradient](#)

### To perform targeted adjustments with Pixel Targeting:

1. Select one of the above tabs in the **Develop Tools** pane (**Tune** or **Detail**).
2. Select one of the above Local Adjustment Tools and apply the tool to the image.
3. Do one of the following:
  - Select the **AI Subject** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.
  - Select the **AI Background** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.
  - Select the **AI Sky** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.
  - Select the **AI Object** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.

- Select the **Develop Brush** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.
  - Select the **Linear Gradient** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.
  - Select the **Radial Gradient** local adjustment tool and click the  **Pixel Targeting Mask** icon on the far right of the bottom options in the **Masking group**.
4. In the **Pixel Targeting** pane, configure the settings for **Luminance Range** and **Color Range** as described below.
  5. Adjust the selected tool's settings. The adjustments will only affect the targeted color or tones, not the entire image.

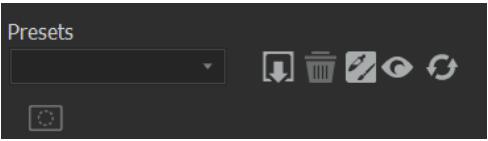





## The Pixel Targeting Pane



The **Pixel Targeting** pane consists of three sections:

- Presets
- Luminance Range
- Color Range

**Pixel Targeting Pane Sections**

Presets	Make a selection from the <b>Presets</b> drop-down list, or click the <b>Save Preset</b> icon to populate the new preset to the <b>Presets</b> drop-down list.	
	<b>Save Preset</b>	 <p>Opens the <b>New Preset</b> dialog. Enter a name for the preset, then click the <b>OK</b> button to add the new preset to the adjacent drop down list.</p>
	<b>Delete Preset</b>	 <p>Select a preset in the adjacent drop down to open the <b>Confirm Delete</b> dialog. Click <b>OK</b> to delete the preset from the drop down list.</p>
	<b>Enable Pan Hand</b>	 <p>Click to enable the cursor to change to a hand used for panning the image.</p>
	<b>Preview</b>	 <p>Click to enable a preview of the preset.</p>
	<b>Reset</b>	 <p>Click the icon to remove all</p>

of the current image edits and return the image to its original state.

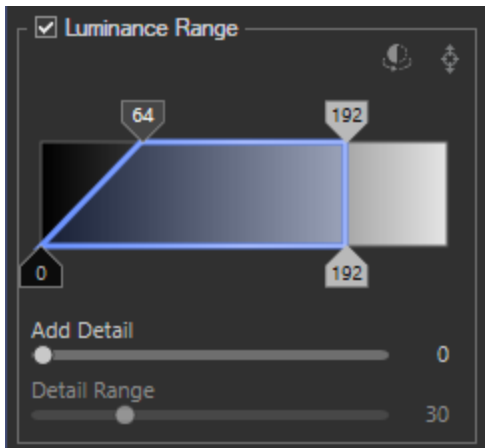
Click the icon to view a preview of the mask that highlights the pixels to be targeted.

**Show Mask Preview**



### Luminance Range

The **Luminance Range** field set is used to target tones of brightness for adjustment. Enable the **Luminance Range** checkbox to enable the associated functionality.



**Invert Selection**



Click the icon to change the selected pixels to the unselected pixels.

**Indicator Line**



Click the icon to add an indicator line to the Tone Grabber display and produce an eye-dropper for indicating where a tone from the image appears in the graph.

**Tone Grabber**

Use the four

slider tabs to make a tonal selection. The area inside the blue box represents the tonal selection. The top two tabs cannot slide past one another. Each of the bottom tabs cannot slide past their own top tab when sliding toward the center. The tonal range is between 0 and 255. A diagonal line between the top and its associated bottom slider tab will produce a feathered selection effect (64 to 0 in the **Luminance Range** example). A straight line connecting the top and associated bottom slider tab

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**Add Detail**

**Detail Range**

**Luminance Range** example). A straight line connecting the top and associated bottom slider tab will produce a hard cut-off (192 to 192 in the **Luminance Range** example).

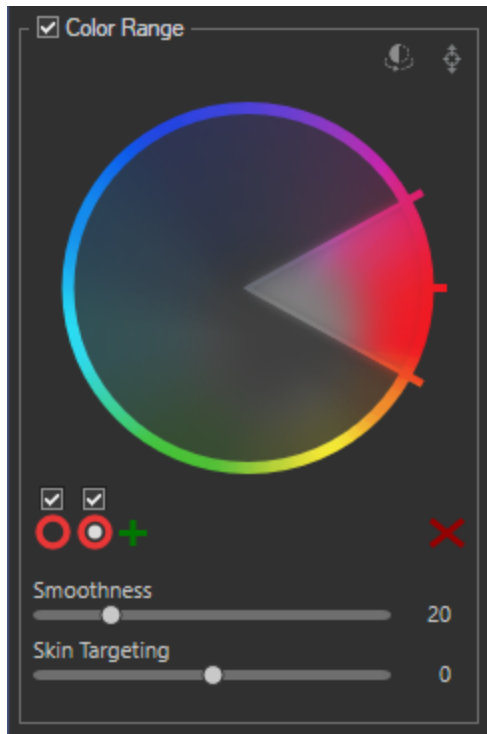
Increase the slide value to sharpen the crispness around the edge of the selection.

If the **Add Detail**

slider has been advanced past a value of "0", the **Detail Range** slide is enabled for controlling the range of the edge detail added by the **Add Detail** slider.

### Color Range

The **Color Range** field set is used to target specific colors for adjustment. Enable the **Color Range** checkbox to enable the associated functionality.



### Invert Color



Click the icon to invert the selected colors on the wheel.

### Color Indicator



Click the icon to display and produce an eyedropper for selecting color pixels in the image. Hold down the **Alt** key and click with the eyedropper to make a color selection.

### Color Wheel

Use the Color Wheel to adjust precise colors in an image. The Color Wheel is particularly useful for common requests like making a blue sky more blue, or brightening dark water that is meant to depict a bright lake. The selected color is

displayed in the circle below the Enable Wheel checkbox. For more information on the Color Wheel, see [Adjusting Color with the Color Wheel](#).

**Enable Wheel**

Located above the Wheel Selection circle displaying the selected color, enable the checkbox to make the associated wheel active.

**Add Wheel**




Click the icon to make changes to another color using an additional color wheel.

**Wheel Selection**

Located directly beneath the **Enable Wheel** checkbox, click the inside circle


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		to select the associated color wheel. The selected color is represented by the wheel.
<b>Delete Wheel</b>		Deletes the currently selected color wheel.
<b>Smoothness</b>		Increase the slider to adjust smoothness, which acts like a feathering tool to soften a color's edges.
<b>Skin Targeting</b>		Using the <b>Skin Targeting</b> slider will disable the rest of the <b>Color Range</b> field set and allow only skin tones to be targeted.

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 Right-click a slider to reset to the default value.

 Click **Reset** to clear changes and reset to default settings.

 Save setting values as a preset for future use. Clicking the **Save Preset** icon on the **Pixel Targeting** pane will only save Pixel Targeting settings, and not the settings on the filter. Filter settings must be saved separately.

## About the Tune Tab

In the **Tune** tab, adjust exposure, white balance, saturation, brightness, hue, color profile and much more.

### To use the Tune tab:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. To develop the image, make changes to any of the following groups:
  - [General](#)
  - [White Balance](#)
  - [Light EQ™](#)
  - [Color EQ](#)
  - [Color Wheel](#)
  - [Tone Wheels](#)
  - [Tone Curves](#)
  - [Soft Focus](#)
  - [Effects](#)
  - [Color LUTs](#)
  - [Split Tone](#)
  - [Post-Crop Vignette](#)
  - [Output Color Space](#)

## Saving and Canceling

After developing an image, choose from one of the many options for saving the image, depending on the next workflow step.

### To save an image:

1. Click **Done**.
2. Select one of the following:
  - **Save:** Save any changes.
  - **Save as:** Save a copy of the developed image with a new name or format.
  - **Discard:** Discard any changes.
  - **Cancel:** Remain on the same image in Develop with all changes intact, without saving the image.

### To discard changes to an image and return to the previous mode:

Click **Cancel**.



It is not possible to directly save changes to a RAW file. Changes to a RAW file must be saved as a different file type.

## Making General Adjustments

In the **General** group, make global adjustments to an image.

 Settings can be set as a preset for future use.

### To develop an image in General:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **General** group, make adjustments as described below.

 Right-click a slider to reset to the default value.

### General Group Adjustment Options

<b>Exposure</b>	Drag the slider to the right to increase exposure, or drag to the left to decrease exposure. One eV is equivalent to one stop of exposure change.
<b>Highlight Enhancement</b>	Drag the slider to the right to recover detail in overexposed areas of the image.
<b>Fill Light</b>	Drag the slider to the right to add light to the darkest areas of the image.
<b>Contrast</b>	Drag the slider to the right to increase contrast, or to the left to decrease contrast.
<b>Saturation</b>	Drag the slider to the right to increase saturation, or to the left to decrease saturation.
<b>Vibrance</b>	Drag the slider to the right to increase vibrance, or to the left to decrease vibrance. Increasing the vibrance does not affect skin tone in an image. This is unlike saturation, which intensifies all colors equally.
<b>Clarity</b>	The <b>Clarity</b> tool adds subtle definition to image details. Use the <b>Clarity</b> slider to enhance the contrast of midtones, without overpowering the shadows and highlights. Drag the slider to the right to increase clarity, or to the left to reverse clarity.
<b>Dehaze</b>	The <b>Dehaze</b> tool restores contrast, detail, and lost color to images. This is especially useful for images that have been captured through a haze. A haze can occur when dust, smoke, or other particles obscure the clarity of the image, particularly the sky. Drag the slider to the right to reduce haze.

 Use the **Adjust develop settings** button  to reset sliders to Last Saved or Last Used settings. Also, save your settings as a preset, copy, or paste them.

## A Brief Technical Explanation of eV

eV stands for **Exposure Value**. When an image is captured, the exposure is determined by several factors — the f-stop (or aperture) shutter speed, and ISO. Typically, the camera automatically determines the optimal exposure based on a built-in light meter and then sets the f-stop and shutter speed accordingly. However, the light meter can be fooled by a bright sky or dark surroundings, leading it to choose an incorrect f-stop and shutter speed. This results in an underexposed or overexposed image. With the **Exposure** slider it is possible to compensate for exposure problems caused by incorrect settings when the image was captured.

## Adjusting White Balance

Use the **White Balance** group to remove unwanted color casts in images. A color cast is a visible color tint that affects an image. Color casts are usually due to the lighting present when the photo was taken. If taking photos indoors, remove the blue tint or remove the yellow tint that indoor lighting can often give.



Settings can be [set as a preset](#) for future use.

### To adjust the White Balance in an image:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **White Balance** group, do one of the following:
  - Automatically adjust white balance by using the White Balance eyedropper to select a portion of the image with neutral gray pixels.
  - Manually adjust white balance with the sliders as described below.



Right-click a slider to reset to the default value.


## White Balance Options

<b>White Balance</b>	<p>For RAW images, select one of the following white balance correction options:</p> <ul style="list-style-type: none"> <li>• <b>As Shot:</b> selected automatically. Applies the camera's white balance setting as stored in the camera when the photo was taken.</li> <li>• <b>Auto:</b> adjusts the color temperature and tint to settings automatically determined by analyzing the image.</li> <li>• <b>Sunny:</b> adjusts the color temperature to 5500K, approximately that of the midday sun.</li> <li>• <b>Cloudy:</b> adjusts the color temperature to 6500K, approximately that of a lightly overcast sky.</li> <li>• <b>Shade:</b> adjusts the color temperature to 7500K, approximately that of a heavily overcast sky.</li> <li>• <b>Tungsten:</b> adjusts the color temperature to 2850K, approximately that of a household light bulb.</li> <li>• <b>Fluorescent:</b> adjusts the color temperature to 3800K, approximately that of a fluorescent light bulb.</li> <li>• <b>Flash:</b> adjusts the color temperature to 5500K, approximately that of a camera flash.</li> <li>• <b>Custom:</b> allows you to specify a specific white balance, by adjusting the Temperature and Tint sliders. You can also hover your mouse over the image until it turns into an eye dropper, and click an area of the image that is a neutral color (gray).</li> </ul> <p>For encodable images, such as JPEGs, select one of the following white balance correction options:</p> <ul style="list-style-type: none"> <li>• <b>As Shot:</b> selected automatically. Applies the camera's white balance setting as stored in the camera when the photo was taken.</li> <li>• <b>Auto:</b> adjusts the color temperature and tint to settings automatically determined by analyzing the image.</li> <li>• <b>Custom:</b> allows you to specify a specific white balance, by adjusting the Temperature and Tint sliders. You can also hover your mouse over the image until it turns into an eye dropper, and click an area of the image that is a neutral color (gray).</li> </ul>
<b>Temperature</b>	<p>Drag the Temperature slider to the left (more blue) or right (more yellow) to select a specific color temperature.</p>
<b>Tint</b>	<p>Drag the Tint slider to the left (more green) or right (more magenta) to match the white balance settings that you selected when you took the photo.</p>
<b>Strength</b>	<p>Drag the slider to the right to increase, or to the left to decrease the white balance adjustment.</p>

## Adjusting Lighting

Use the Light EQ™ tool to adjust tone levels in images that are too dark or too light, without affecting other areas of the photo. Tone level is the average brightness of a pixel and its surrounding pixels.

It is also possible to simultaneously brighten dark areas that are too dark, and darken areas that are too bright. Examples would be a back-lit photo of a person silhouetted against a bright background, such as the sea, or a window. In fact, most photos taken on a dull day, or with a flash, can be improved in various ways with fine adjustments using the Light EQ™ tool.

 Settings can be [set as a preset](#) for future use.

### To reduce lighting in an image:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Light EQ™** group, select **Basic** mode, **Standard** mode, or **Advanced** mode from the drop-down menu at the top of the pane and configure the settings as described below.

 Right-click a slider to reset to the default value.

### Basic Light EQ™

Basic is for very quick and easy adjustments using just three sliders. Click directly on an area of the image to generate automatic settings optimal for that area (usually the subject of the photo).

Do one of the following:

- Click on an area in the image to generate automatic settings optimal for that area.
- Manually adjust the lighting as described below.

### Basic Light EQ™ Options

<b>Shadows</b>	Drag the slider to the right to brighten or drag the slider to the left to darken the shadows.
<b>Midtones</b>	Drag the slider to the right to brighten or drag the slider to the left to darken midtones.
<b>Highlights</b>	Drag the slider to the right to brighten or drag the slider to the left to darken highlights.
<b>Auto</b>	Click the <b>Auto</b> button for Gemstone to automatically adjust the lighting in your image.

### Standard Light EQ™

Standard works like a sound equalizer but with light. Adjust the brightness and contrast of different tone bands (areas of relative brightness or darkness) independently using two sliders for each tone band — one for brightening and one for darkening. A graph shows the amount of brightening or darkening applied throughout the tonal range. The gray areas in the graph are suggested boundaries for adjustment to avoid clipping and loss of detail, and turn pink to indicate where you have adjusted the sliders far enough to cause clipping.

Do one of the following:

- Select an area of the image to adjust, left-click and drag up to brighten or right-click and drag down to darken.
- Manually adjust the lighting as described below.

### **Standard Light EQ™ Options**

<b>Brighten sliders (top)</b>	<p>Drag the sliders up to increase the brightening in each tonal band. The sliders on the left affect dark tones. The sliders on the right affect bright tones. Moving a slider changes the amount of brightening only in that particular tonal band in the image.</p> <p>Or, type a number into the number boxes and increment them slowly to make precise adjustments.</p>
<b>Darken sliders (bottom)</b>	<p>Drag the sliders down to increase the darkening in each tonal band. The sliders on the left affect dark tones. The sliders on the right affect bright tones. Moving a slider changes the amount of darkening only in that particular tonal band in the image.</p> <p>Or, type a number into the number boxes and increment them slowly to make precise adjustments.</p>
<b>Graph</b>	<p>The graph indicates the amount of brightening and darkening applied throughout the tone range of the image. The portion of the graph above the horizontal axis corresponds to brightening, while the portion of the graph below the horizontal axis corresponds to darkening. When both brightening and darkening are applied within the same tonal band, contrast is increased. The area between the top of the brightening graph and the bottom of the darkening graph indicates the relative increase of contrast throughout the tone range of the image. Left-click on the graph or on the image and drag the double-pointed arrow up to brighten or right-click and drag down to darken.</p>
<b># tone bands</b>	<p>Set the number of tone bands you would like to adjust. A greater number of tone bands allows for more precise control, while fewer tone bands make it easier to smooth adjustments quickly.</p>
<b>On Image</b>	
<b>Double-click with left mouse button</b>	<p>Automatically sets <b>Brightening</b> to optimum for that area of the image. A brighter area (e.g. a face) works best.</p>
<b>Double-click with right mouse button (or Shift + double-click with left mouse button)</b>	<p>Automatically sets the <b>Darkening</b> to optimum for that area of the image.</p>
<b>Ctrl + double-click with left mouse button</b>	<p>Modifies the current brightening adjustment curve to optimize it for the area surrounding the tone level you clicked on. In most cases, this will result in increasing the amount of brightness applied to the area surrounding the tone level you clicked on, while decreasing the amount applied to other tone levels.</p> <p>Use this method to make a specific subject or area stand out by brightening.</p>

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<b>Ctrl + double-click with right mouse button</b>	<p>Modifies the current darkening adjustment curve to optimize it for the area surrounding the tone level you clicked on. In most cases, this will result in increasing the amount of darkness applied to the area surrounding the tone level you clicked on, while decreasing the amount applied to other tone levels.</p> <p>Use this method to make a specific subject or area blend in by darkening.</p>
<b>Scroll up or down with the mouse wheel over the image</b>	<p>Increases or decreases the amount of brightening applied at that tone level in the image. Both the image and the graph show the changes.</p>
<b>Shift + scroll with the mouse wheel over the image</b>	<p>Decreases or increases the amount of darkening applied at that tone level in the image.</p>
<b>Hold down "A" + scrolling or + dragging with the left mouse button</b>	<p>Adjusts all of the brighten sliders at once.</p>
<b>Hold down "A" + Shift + scrolling or + dragging with the right mouse button</b>	<p>Adjusts all of the darken sliders at once.</p>
<b>Click and drag up and down on the image (left mouse button)</b>	<p>Increases or decreases the amount of <b>Brightening</b> applied at that tone level in the image. Both the image and the graph show the changes.</p> <p>(Only works if the image is actual size—no zooming.)</p>
<b>Shift + click and drag up and down on the image (left or right mouse button)</b>	<p>Decreases or increases the amount of <b>Darkening</b> applied at that tone level in the image.</p> <p>(Only works if the image is actual size—no zooming.)</p>
<b>Auto</b>	<p>Click the <b>Auto</b> button for Gemstone to automatically adjust the lighting in your image.</p>

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## Advanced Light EQ™

Advanced provides ultimate control of the brightness and contrast in an image. Adjustment curves can be constructed using four sliders, and can manually adjust the curves by clicking and dragging within the graph area or on the image itself.

Do one of the following:

- Select an area of the image to adjust, left-click and drag up to brighten or right-click and drag down to darken.
- Manually adjust the lighting as described below.

### Graph

The top half of the graph corresponds to brightening, and the bottom half corresponds to darkening. Tone levels of the shadows are represented on the left, midtones in the middle, and highlights on the right.

The light gray in the graph shows the amount of brightening or darkening applied throughout the image. The dark gray areas in the graph are suggested boundaries for adjustment, and turn red to indicate where you have adjusted far enough to cause a loss in detail. When the cursor is over the image, the two vertical yellow lines correspond to the lower and upper bounds of the tone level of the area under the cursor and indicate the center of adjustment.

### Adjustment Light EQ™ Options

Area	Action	Result
<b>Sliders</b>		
	<b>Drag Brightening slider</b>	<p><b>To the right:</b> increases the light applied to the darker areas.</p> <p><b>To the left:</b> applies brightening more uniformly to all areas of the image.</p>
	<b>Drag Darkening slider</b>	<p><b>To the right:</b> increases the darkening applied to the brighter areas of the image.</p> <p><b>To the left:</b> applies the darkening more uniformly to all areas of the image.</p>
	<b>Drag Amplitude slider (Brightening)</b>	<p><b>To the right:</b> increases the intensity of the brightening across all areas of the image. The height of the curve increases.</p> <p><b>To the left:</b> reduces the intensity of the brightening and the height of the curve.</p> <p>If the Amplitude slider is 0: no brightening is applied.</p> <p>If the Amplitude is 100-200: proportional amount of clipping increases.</p> <p>In most cases, 100 is the right amount of amplitude. For images with fine detail in the highlights, decreasing brighten amplitude preserves the detail.</p> <p>In most cases it is not necessary to adjust amplitude.</p>
	<b>Drag Amplitude slider (Darkening)</b>	<p><b>To the right:</b> increases the intensity of the darkening across all areas of the image. The height of the bottom orange curve increases.</p> <p><b>To the left:</b> reduces the intensity of the darkening and the height of the curve.</p>
<b>On Graph</b>		
	<b>Drag the graph (top)</b>	<p>The graph changes as you left-click and drag up on the graph itself. The graph represents the brightening adjustments you are making. The dark gray graph represents the maximum amount you can drag the graph before clipping (pink) begins.</p> <p>The height of the graph represents the level of brightening applied at each tone level. (Tone moves from black on left to white on the right.)</p> <p>When you make direct brightening or darkening adjustments on the graph or image, the corresponding Brightening or Darkening slider changes to <b>Custom curve</b>. If you adjust the position of the slider</p>

Area	Action	Result
		<p>after this, it discards all direct curve adjustments.</p> <p>When you make direct brightening or darkening adjustments on the graph or image, the corresponding Brightening or Darkening Amplitude slider changes to indicate the current curve amplitude. (An amplitude of 100 is the maximum amplitude a curve can have without causing clipping.)</p>
	<b>Drag the graph (bottom)</b>	The graph changes as you right-click and drag down on the graph itself. The graph represents the darken adjustments you are making. The dark gray graph represents the maximum amount you can drag the graph before clipping (pink) begins.
	<b>You can use all the shortcuts below that apply to the image, directly to the Graph itself.</b>	Changes the tonal band on the graph itself with a corresponding change in the image. This is useful for making fine adjustments to a specific tonal band.
<b>On Image</b>		
	<b>Double-click with left mouse button</b>	Automatically sets Brightening to optimum for that area of the image. A brighter area (e.g. a face) works best.
	<b>Double-click with right mouse button</b> <b>(or Shift + double-click with left mouse button)</b>	Automatically sets the Darkening to optimum for that area of the image.
	<b>Ctrl + double-click with left mouse button</b>	<p>Modifies the current brightening adjustment curve to optimize it for the area surrounding the tone level you clicked on. In most cases, this will result in increasing the amount of brightness applied to the area surrounding the tone level you clicked on, while decreasing the amount applied to other tone levels.</p> <p>Use this method to make a specific subject or area stand out by brightening.</p>
	<b>Ctrl + double-click with right mouse button</b>	<p>Modifies the current darkening adjustment curve to optimize it for the area surrounding the tone level you clicked on. In most cases, this will result in increasing the amount of darkness applied to the area surrounding the tone level you clicked on, while decreasing the amount applied to other tone levels.</p> <p>Use this method to make a specific subject or area blend in by darkening.</p>

Area	Action	Result
	<b>Scroll up or down with the mouse wheel over the image</b>	Increases or decreases the amount of brightening applied at that tone level in the image. Both the image and the graph show the changes.
	<b>Shift + scroll with the mouse wheel over the image</b>	Decreases or increases the amount of darkening applied at that tone level in the image.
	<b>Hold down "A" + scrolling or + dragging with the left mouse button</b>	Sets the brightening Amplitude slider directly.
	<b>Hold down "A" + Shift + scrolling or + dragging with the right mouse button</b>	Sets the darkening Amplitude slider directly.
	<b>Click and drag up and down on the image (left mouse button)</b>	Increases or decreases the amount of brightening applied at that tone level in the image. Both the image and the graph show the changes.  (Only works if the image is actual size—no zooming.)
	<b>Shift + click and drag up and down on the image (left or right mouse button)</b>	Decreases or increases the amount of darkening applied at that tone level in the image.  (Only works if the image is actual size—no zooming.)

## Auto

Click the **Auto** button for Gemstone to automatically adjust the lighting in your image.

## Adjusting Color With Color EQ

Color EQ makes color adjustments for **Saturation**, **Brightness**, **Hue**, and **Contrast**. Make adjustments to the entire image in **Standard** mode using the vertical slider, or adjust on a color by color basis in **Standard** or **High Quality** mode. For an explanation of the controls, see below.



Settings can be [set as a preset](#) for future use.

**To adjust color:**

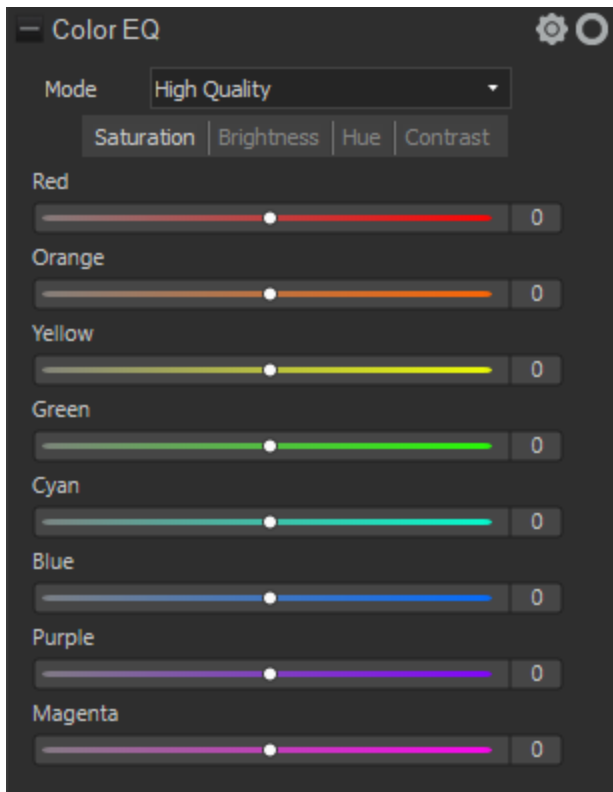
1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Color EQ** group, select the **Saturation, Brightness, Hue,** or **Contrast** tab, and adjust them according to the options described in the table below.

 Right-click a slider to reset to the default value.

### Color EQ Options

Select **High Quality** mode or **Standard** mode from the **Mode** drop-down menu. To adjust colors individually, left-click a color in the image and drag up or down to alter. The changes are reflected in the **Saturation, Brightness, Hue,** and **Contrast** tabs color sliders in **High Quality** mode and the graph in **Standard** mode, respectively. This works in the **Saturation, Brightness, Hue,** and **Contrast** tabs.

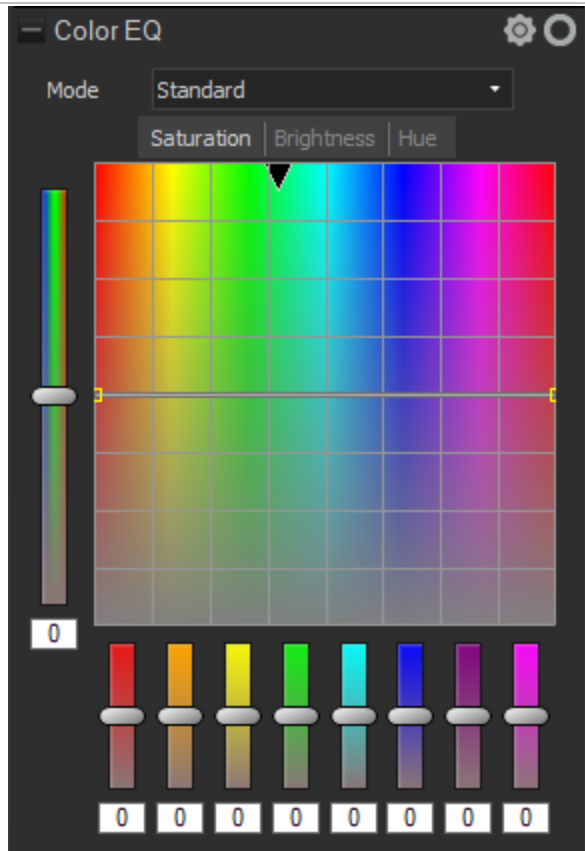
## High Quality



Adjust image colors individually. High Quality uses the newer, more modern color models, allowing for a visually perceptive and higher quality adjustment.

Adjust each color individually by dragging sliders right for more intensity, or left for less intensity. Or, enter a number into the fields for precise adjustments. Select a precise color to adjust by placing the cursor on the image for the double arrow icon to appear. Then, click and drag up or down to adjust the colors beneath the double arrow icon. The affected color sliders automatically adjust as the cursor is moved.

## Standard



Supports previously developed images. Adjust colors individually or make global adjustments.

### Vertical slider

Apply adjustments to the entire image. A slider on the left has the following effects on the tabs:

- **Saturation:** Adjusts from saturation to grayscale.
- **Brightness:** Adjusts the light or dark tones in the image.
- **Hue:** Changes to a different color.

Or, enter a number into the field for precise adjustments.

### Individual color sliders

Adjust each color with individual sliders. Select the color to adjust and click and drag the sliders. Or, enter a number into

**Direct image adjustments**

the fields for precise adjustments.

Place the cursor on the image for the double arrow icon to appear. Then click and drag up or down to adjust the colors beneath the double arrow icon. The curve control and the affected color sliders automatically adjust as the cursor is moved. The black down arrow on the graph indicates the color being adjusted in the image.

The curve appears black in the graph, and cannot be directly adjusted. To apply further adjustments, alter the white curve. When adjusting the white curve, the black curve automatically changes with

it. Or, enter a number into the fields for precise adjustments.

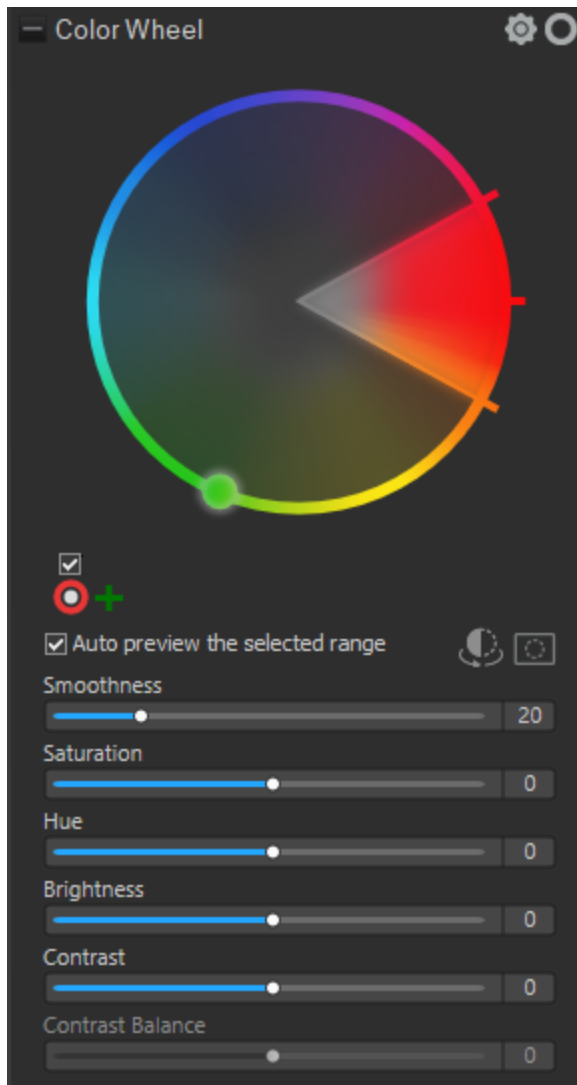
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### Adjusting Color With the Color Wheel

In the **Develop Tools** pane and the **Editor**, use the color wheel to adjust precise colors in an image. The Color Wheel changes a precise color's saturation, hue, brightness, contrast, and contrast balance. The Color Wheel also adjusts smoothness, which acts like a feathering tool to soften a color's edges. The Color Wheel is particularly useful for common requests like making a blue sky more blue, or brightening dark water that is meant to depict a bright lake.

#### To adjust color using the Color Wheel:

1. Open the Color Wheel using one of the following options:
  - In the **Develop Tools** pane, navigate to the **Color Wheel** group under the **Tune** tab.  
**Note:** To use the Color Wheel in the **Develop Tools** pane, under the **Tune** tab expand the **Color EQ** group and set the **Mode** drop-down to "High Quality".
2. Choose a color to edit by clicking and dragging the section of the color wheel around, or by using the eyedropper on the image itself. In the eyedropper, a dot, known as the hue indicator, moves around the wheel to show where the color being hovered over sits on the wheel.
3. Refine the selection. Increase or decrease the color selection size by clicking and dragging the double arrows at the edge of the selection on the wheel. Also refine the color saturation of the selection by clicking and dragging the selection away from the edges of the wheel, or away from the center of the wheel. The less saturated colors are in the center of the wheel and the more saturated colors are towards the edge of the wheel.



 To invert the selected colors, click the **Invert the selected colors on the wheel** icon. 

 To view the selected colors, click and hold the **Preview selection mask** icon. 

4. Adjust the edge of the selection by using the **Smoothness** slider. This tool softens or sharpens the edges of selections, working similarly to feathering, to soften or sharpen the cut off point.
5. Use the sliders to adjust the selected colors in the image. The individual sliders will have the following effects:
  - **Saturation:** Slide left to decrease saturation and slide right to increase saturation.
  - **Hue:** Slide left or right to adjust hue.

- **Brightness:** Slide left to decrease brightness and slide right to increase brightness.
- **Contrast:** Slide left to decrease contrast and slide right to increase contrast.
- **Contrast Balance:** After adjusting the contrast, adjust the contrast balance, which changes whether the contrast is applied to the lighter or darker colors in the image.



To see the original image without the edit, click the **Show Previous** button in the **Editor**, or click the **Show Original** button below the image in **ACDSee RAW**.



To reset any changes, right-click on either the relevant slider, or the wheel to reset all changes.

6. Click **Done** to save any changes and exit the Color Wheel.

### To adjust multiple colors using the Color Wheel:

After making the initial color wheel edits, make changes to other colors using additional color wheels.

To do this, click the green plus **+** symbol next to the Color Wheel icon.

### To delete edits made using the Color Wheel:

Delete color wheel edits until saving the image as a new file in the **Develop Tools** pane, or until clicking the **Apply** or **Done** buttons in the **Editor**.

To do this, click the red **X** to the lower right of the Color Wheel.

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### See also:

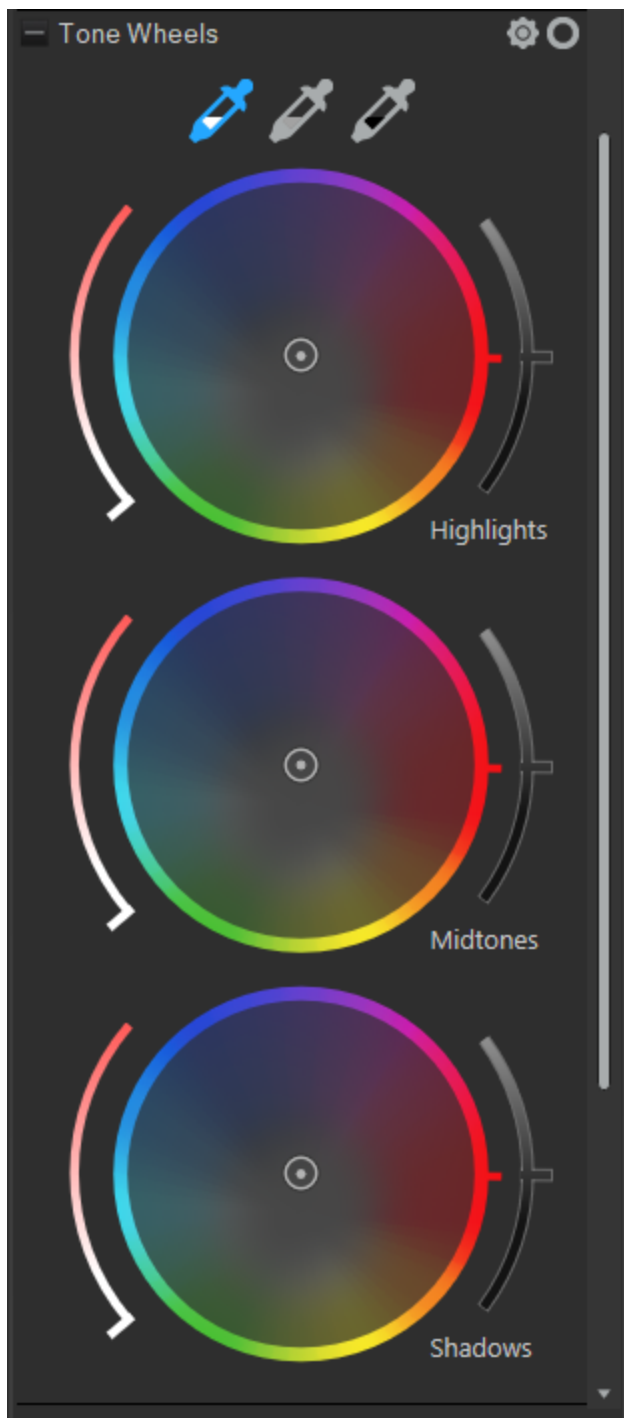
- [Adjusting Tone Curves](#)
- [Adjusting Tones With the Tone Wheels](#)
- [Adjusting Color with Color EQ](#)


## Adjusting Tones With the Tone Wheels

Colors in every image are split into highlights, midtones, and shadows. Use the tone wheels in the Develop Tools pane and the Editor to add color tints to certain tones in an image. There are two curved sliders with each tone wheel. The curved slider on the left is the saturation slider, the slider on the right is the brightness slider. The tone wheels themselves allow pinpointing hues to adjust.

### To adjust color using the Tone Wheels:

1. Open the Tone Wheels using one of the following options:
  - In the **Develop Tools** pane, choose **Tone Wheels** in the **Tune** tab.  
**Note:** to use the **Tone Wheels** in the **Develop Tools** pane, the **Color EQ** must be set to "High Quality". To ensure this, open **Color EQ** and select "High Quality" from the drop down menu.
2. Choose a hue to edit by clicking and dragging the target point within the tone wheel, or by using the relevant eyedropper on the image itself. Move the eyedropper around the image and take note of a dot, known as the hue indicator, then move around the wheel to show where the color being hovered over sits on the wheel. The three eyedroppers relate to the relevant tone wheels. Refine the saturation of the selection by clicking and dragging a selection away from the edges of the wheel, or away from the center of the wheel. The less saturated colors are in the center of the wheel and the more saturated colors are towards the edge of the wheel.



 Moving the target point towards the outside of the wheel increases tone saturation. Moving it towards the inside of the wheel decreases tone saturation.

3. With a hue selected, increase saturation and/or brightness for the selected tones.
4. Click **Done** to exit the Color Wheel.



To reset any changes, right-click on either the relevant slider, or the wheel to reset all changes.

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### See also:

- [Adjusting Tone Curves](#)
- [Adjusting Color with the Color Wheel](#)
- [Adjusting Color with Color EQ](#)

### Adjusting Tone Curves

In the **Develop Tools** pane, use the **Tone Curves** tool to change the tonal range of an image. Select the RGB color channel to adjust the entire range of the image, or select a specific color.



Settings can be set as a preset for future use.

### To adjust the brightness curves in an image:

1. In the **Develop Tools** pane, select the **Tone** tab.
2. In the **Tone Curves** group, adjust the curves as described below.



Right-click the number field or the arrow for Blacks, Midtones, or Whites to reset it to the default setting. Or, double-click the number field or on the arrows to use automatic settings.

### Tone Curves Options

<b>Curve</b>	Select a curve to apply to an image. <b>Standard</b> curve is the default. Use <b>Camera</b> to use the curve generated by Gemstone to produce a curve suitable for the image. The <b>Curve</b> drop-down list is only available for RAW files.
<b>Channel</b>	Specify the color channels to adjust.
<b>Histogram</b>	Displays a graphic of the color information levels in the image, based on the selected channel. Click and drag the line to manipulate the curve. Each time the curve is clicked, a new point is added. Drag the points up and down the curve. To delete a point, right-click it and choose <b>Delete point</b> . Or, delete a point by dragging it off of the top or the bottom of the graph.
<b>Blacks</b>	Click and drag the black triangle or click it to automatically set the black point. Or, enter a number into the fields or use the up or down arrow buttons to set an exact black point.
<b>Midtones</b>	Click and drag the gray triangle or click it to automatically set the midtone point. Or, enter a number into the fields or use the up or down arrow buttons to set an exact midtone point.
<b>Whites</b>	Click and drag the white triangle or click it to automatically set the white point. Or, enter a number into the fields or use the up or down arrow buttons to set an exact white point.
<b>Auto</b>	Automatically sets the points for blacks, midtones, and whites.
<b>Color Picker</b>	A color picker is available when a point is selected on the histogram curve and the cursor dragged onto the image.

### Adjusting Soft Focus

Use the **Soft Focus** tool to add a dreamy quality to an image. This softening can be applied across the entire tonal range or limited to the image's midtones. To target the **Soft Focus** effect to a specific tonal range within your image or the entire tonal range, use the **Tonal Width** slider.



Settings can be [set as a preset](#) for future use.

#### To add Soft Focus to an image:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Soft Focus** group, make adjustments as described below.

### Soft Focus Options

<b>Strength</b>	Adjusts the amount of soft focus. Move the slider to the right to intensify the effect.
<b>Brightness</b>	Drag the slider to the right to increase brightness.
<b>Contrast</b>	Drag the slider to the right to increase contrast.
<b>Tonal Width</b>	Drag the slider to the right to increase the tonal width of the soft focus and affect a wider range of shadows, midtones and highlights, or to the left to decrease the tonal width by limiting the soft focus' affect to a smaller range of shadows, midtones and highlights.

 Right-click a slider to reset to the default value.

### Applying Effects

A number of effects can be applied to images in the **Develop Tools** pane.


 Settings can be set as a preset for future use.

### Photo Effect

Use the **Photo Effect** drop-down menu to apply a variety of filters to images.

#### To apply a Photo Effect:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Effects** group, enable the **Photo Effect** checkbox.
3. Select a filter from the **Photo Effect** drop-down menu.

 Use the Opacity slider and Blend Modes drop-down menu to adjust how the selected effect blends with the image. To access these tools, click the arrow button to the right of the **Photo Effect** drop-down menu.

### Color Overlay

Use the **Color Overlay** drop-down menu to apply a color over an image.

#### To apply a color to an image:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Effects** group, enable the **Color Overlay** checkbox.
3. Select a color from the **Color Overlay** drop-down menu.



Use the [Opacity slider and Blend Modes](#) drop-down menu to adjust how the selected effect blends with the image. To access these tools, click the arrow button to the right of the **Photo Effect** drop-down menu.

## Gradient Map

Use the **Gradient Map** effect to add colors to the dark and light parts of an images. The **Gradient Map** effect maps shadows to one color, and highlights to another based on the lightness value of each pixel. Give the darker parts of an image a completely different color from the lighter parts.

### To apply a Gradient Map effect:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Effects** group, enable the **Gradient Map** checkbox.
3. In the **Shadows** drop-down menu, specify a color to be added to the dark parts of the image. In the **Highlights** drop-down menu, specify a color to be added to the lighter parts of the image.



Use the [Opacity slider and Blend Modes](#) drop-down menu to adjust how the selected effect blends with the image. To access these tools, click the arrow button to the right of the **Photo Effect** drop-down menu.

## Add Grain

Use the **Grain** effect to make images look like they were printed in a newspaper. It is also useful to use the **Grain** tool in combination with other effects to achieve a general vintage look.

### To apply a Grain effect:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Effects** group, adjust the **Add Grain** settings as described below.

### Grain Options

<b>Grain Amount</b>	Specifies the strength of the grain.
<b>Grain Smoothing</b>	Specifies the smoothness of the grain.
<b>Grain Size</b>	Specifies the size of the grain.

## Cross Process Effect and Lomo

A popular film photography technique in the '80s and '90s involved processing film in a solution that was intended for another type of film. This cross processing gave photos a boost in saturation and contrast, and shifted colors towards greenish-yellow highlights and bluish shadows. Simulate these

retro-effects with the **Cross Process** tool. Using **Cross Process** along with **Post-Crop Vignette** creates an effect called **Lomo**.

#### To apply the Cross Process effect:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Effects** group, drag the **Cross Process** slider to the right to increase the retro-effect.



Right-click a slider to reset to the default value.

### Using Blend Modes and Opacity

When using a tool from the **Effects** group in the **Develop Tools** pane, adjust the Blend Mode and Opacity tools to customize how the effect blends with the image.

#### Opacity

The **Opacity** slider changes the opacity of the effect being applied to the image and provides control over how much of the effect should be visible on the image. Access the **Opacity** slider by clicking the arrow button to the right of the effect's drop-down menu.

#### Blend Modes

The ability to control how the effects and the image merge means that other blend modes besides opacity can be used to affect the final image.

#### Blend Mode Types

<b>Normal</b>	Pixels in the developed image are combined with those in the original. Only opacity affects this blend.
<b>Screen</b>	Combines the developed image color with the inverse of the original photo color, resulting in a color that is the same or lighter.
<b>Multiply</b>	Combines the developed image color with the original photo to produce a darker color. Multiplying any color with black produces black; multiplying any color with white leaves the color unchanged.
<b>Dodge</b>	Combines the developed image color with the original pixels in the photo to produce a lighter color.
<b>Burn</b>	Combines the developed image color with the original pixels in the photo to produce a darker color.
<b>Overlay</b>	Preserves the shadows and highlights of the lower layers while applying either Multiply or Screen blend mode based on the original image area's color values.
<b>Difference</b>	Subtracts the developed image color from the color of the original photo. Any white in the developed image produces a true negative of the color in the image, while black produces no effect.
<b>Darken</b>	Applies pixels in the developed image that are darker than the original image. Pixels in the developed image that are lighter than the original image disappear (based on RGB values).
<b>Lighten</b>	Applies pixels in the developed image that are lighter than the original image. Pixels in the developed image that are darker than the original image disappear (based on RGB values).
<b>Hard Light</b>	Adds strong highlights or shadows by applying Multiply or Screen based on the original image area's color values.
<b>Soft Light</b>	Adds soft highlights or shadows by darkening or lightening based on the original image area's color values.
<b>Hue</b>	Applies the hue value of colors in the developed image to the color of the original image areas.
<b>Saturation</b>	Applies the saturation value of colors in the developed image to the color of the original image areas.
<b>Color</b>	Applies the hue and saturation of the developed image to the image. This blend does not affect the luminance of the original image.
<b>Luminosity</b>	Applies the lightness value of colors in the developed image to the color of the original image areas.
<b>Dissolve</b>	Applies some pixels from the developed image layer onto the original image, resulting in specks of color. The Opacity slider controls the amount of speckling.

<b>Exclusion</b>	Like Difference, but with less contrast, Exclusion subtracts the blend color from the color of the underlying photo. Any white in the blend color produces a true negative of the color in the image, while black produces no effect.
<b>Vivid Light</b>	Combines the blend color with the underlying pixels in the photo by increasing or decreasing contrast to produce a lighter or darker color, as determined by the blend color.
<b>Pin Light</b>	When the light source is lighter than 50% gray, the pixels darker than the light source are replaced. Pixels lighter than the light source remain the same. When the light source is darker than 50% gray, the pixels lighter than the light source are replaced. Pixels darker than the light source remain the same.
<b>Linear Light</b>	Dodges or burns by lightening or darkening the brightness value, depending on the blend color.
<b>Hard Mix</b>	Applies red, green, and blue channel values of the blend color to the RGB values of the image.
<b>Subtract</b>	Subtracts the blend color from the image (base) color in each channel.
<b>Divide</b>	Divides the blend color from the image (base) color.
<b>Darker Color</b>	From the blend color and the image (base) color, the lower channel values are chosen.
<b>Lighter Color</b>	From the blend color and the image (base) color, the higher channel values are chosen.

### Color Grading with LUTs

"Color LUT" stands for Color Lookup Table. Color LUTs are lists that instruct Gemstone or related programs to map specific RGB values to other specific color values. LUTs can be imported to use as filters in ACDSee. LUTs can also be created in the [Editor](#) for use in the **Develop Tools** pane. Apply a Color LUT in the same way as using any other effect in the **Develop Tools** pane. Color LUT supported file types are .3DL and .CUBE.

#### To apply a Color LUT to an image:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Color LUTs** group, do one of the following:
  - Select a LUT from the drop-down menu. The LUT is immediately applied.
  - Click the **Import LUTs** button. In the **Open** dialog, browse to the location of the LUT files, and click **Open**.

 If an imported LUT file's location has changed, reload it using the Color LUTs panel.

### To remove Color LUTs:

1. In the **Color LUTs** group, click the **Remove LUTs** button.
2. In the **Remove LUTs** dialog, enable/disable the checkboxes next to the LUTs to be deleted.
3. Click **Remove LUTs**.

### To refresh the list of Color LUTs:

Refresh the list of available LUTs to reveal moved or deleted files.

In the **Color LUTs** group, click the **Refresh List** button.

 **Color LUTs** created in the Editor using adjustment layers will automatically become available in the **Color LUTs** group in the **Develop Tools** pane.

### Adjusting Split Tone

Split toning is a powerful technique originating in film photography to tint the highlights and shadows.

The **Split Tone** tool provides creative control over the **Hue** and **Saturation** of highlights and shadows.

Use the sliders to adjust the balance of tones in the highlights and shadows of photos. Split toning allows for adding a creative element to RAW conversion and non-destructive editing in Gemstone.

 Settings can be set as a preset for future use.

### To adjust highlights and shadows:

1. In the **Develop Tools** pane, select the **Tune** tab.
2. Navigate to the **Split Tone** group.
3. Drag the sliders to apply colored highlights and shadows as described in the table below.

 Right-click a slider to reset to the default value.

### Adjustment Options

**Highlights**

<b>Hue</b>	Drag the slider to the right to select a highlight color.
<b>Saturation</b>	Drag the slider to the right to increase saturation of the color in the highlights of the image.

**Shadows**

<b>Hue</b>	Drag the slider to the right to select a shadow color.
<b>Saturation</b>	Drag the slider to the right to increase saturation of the color in the shadows of the image.

**Balance**

Drag the slider to the right to emphasize the highlight color; drag the slider to the left to emphasize the shadow color. For example if the slider is set to the maximum at 50, then full emphasis is applied to the highlight color; if the slider is set to the minimum -50, then full emphasis is applied to the shadow color.



Create a Sepia tone effect by first reducing the saturation of the photo with the **Advanced Color** tool and then apply a reddish brown hue with the **Split Tone** tool. Or, create a monochromatic black and white photo with a slight tint of hue.

**Adding a Post-Crop Vignette**

Use the **Post-Crop Vignette** effect to add a frame around a subject, or control the appearance of the border. Use the **Post-Crop Vignette** tool after an image is cropped to give more control over the focal point of the image.



Settings can be set as a preset for future use.

**To apply a Vignette Effect:**

1. In the **Develop Tools** pane, select the **Tune** tab.
2. In the **Post-Crop Vignette** group, make adjustments as described below.



Right-click a slider to reset to the default value.

**Post-Crop Vignette Options**

<b>Strength</b>	Drag the slider to the right to add a white vignette, or drag to the left to add a black vignette.
<b>Radius</b>	Adjusts the distance from the corners of the image where the pixels will be softened. The higher the radius, the further from the center the pixels will be before the softening begins.
<b>Feathering</b>	Feathering controls how soft or hard the edge of the vignette is. Drag the slider to the right to increase the softness of the vignette transition.
<b>Roundness</b>	Drag the slider to the right to increase the roundness of the vignette, or to the left to make it more rectangular.

### Selecting an Output Color Space For RAW Files

Select the output color space to use when developing RAW files. This option is only available for RAW files.

#### To Set the Output Color Space for a RAW File:

1. In the **Develop Tools** pane, select the **Tune** tab.



Look to the **Histogram** to help determine the best Output Color Space for an image. The **Histogram** provides a graphical representation of the intensity level of pixels within each color channel. Spikes at either end of the graph indicate clipped colors. Aim for an output color space that provides the widest gamut of colors possible while minimizing spikes at either end of the graph.

2. In the **Output Color Space** group, select a color space.
3. Enable **Set as Default** to use this same color space as the default color space for developing RAW files from the **Develop Tools** pane.



When saving RAW images, the dialog box will have the **Embed Color Profile in Image** option selected by default. Deselecting this option will prevent the Output Color Space from being embedded in the file.

### About the Detail Tab

In the **Detail** tab, sharpen, reduce noise, or correct chromatic aberration in photos.

#### To use the Detail tab:

1. In the **Develop Tools** pane, select the **Detail** tab.
2. To develop the image, make changes in the following groups:
  - [Sharpening](#)
  - [Noise Reduction](#)

- [Skin Tune](#)
- [Chromatic Aberration](#)

## Saving and Canceling

After developing an image, choose from one of the many options for saving the image, depending on the next workflow step.

### To save an image:

1. Click **Done**.
2. Select one of the following:
  - **Save**: Save any changes.
  - **Save as**: Save a copy of the developed image with a new name or format.
  - **Discard**: Discard any changes.
  - **Cancel**: Remain on the same image in Develop with all changes intact, without saving the image.

### To discard changes to an image and return to the previous mode:

Click **Cancel**.



It is not possible to directly save changes to a RAW file. Changes to a RAW file must be saved as a different file type.

## Sharpening

Use the **Sharpening** tool to define details and fine-tune images.



Settings can be [set as a preset](#) for future use.

### To sharpen an image:


1. In the **Develop Tools** pane, select the **Detail** tab.
2. In the **Sharpening** group, adjust the sliders as described below.





Right-click a slider to reset to the default value.

## Sharpening Options

<b>Amount</b>	Specifies the amount of sharpening applied by increasing contrast around the edges.
<b>Radius</b>	Controls the number of pixels to adjust around each edge. Higher values increase the number of sharpened pixels and tend to bring out coarser detail, while lower values reduce the number of sharpened pixels and tend to bring out finer detail.
<b>Mask</b>	Allows the targeting of edges, while suppressing the sharpening of noise and texture. To view the areas the mask affects, press the <b>Alt</b> key when moving the mask slider. Areas affected by sharpening appear white.
<b>Detail</b>	Suppresses the halo, (the light border that forms around edges with extreme sharpening), by reducing its intensity. The higher the value, the stronger the reduction.
<b>Threshold</b>	Specifies how different the pixel lightness values within an edge must be before the pixels within the edge are sharpened. Higher values sharpen only stronger edges but minimize the appearance of noise. Lower values sharpen both strong and weaker edges, but can increase the appearance of noise. We recommend you set the threshold to enhance edges while keeping background noise to a minimum.

 View the effects of the changes in the preview window, located at the top of the **Detail** pane. Move the overlay square on the image to change the area the preview window displays.

 Set the default sharpening for RAW files by clicking the **Adjust develop settings for this group** icon  in the **Sharpening** group and selecting **Save New Default**.

## Reducing Noise

Reduce noise in images caused by high ISO settings or long exposure.

 Settings can be [set as a preset](#) for future use.

### To reduce noise in an image:

1. In the **Develop Tools** pane, select the **Detail** tab.
2. In the **Noise Reduction** group, adjust the sliders as described below.

 Right-click a slider to reset to the default value.

## Noise Reduction Options

<b>Luminance</b>	Drag the slider to the right to reduce the visibility of lighting noise. Apply a setting that is proportional to the noise in the image and refer to the preview window to ensure that you balance the level of noise reduction with loss of detail. Hold down the <b>Alt</b> key while using the slider to see the remaining noise in the image.
<b>Strength</b>	Drag the slider to the right to control how aggressively to reduce noise. Prevent the loss of detail by balancing Luminance with Strength.
<b>Color Noise Reduction</b>	Drag the slider to the right to remove color noise from the image. Hold down the <b>Alt</b> key while using the slider to see the remaining color noise in the image.
<b>Tonal Range</b>	<p>Tonal Range refers to a range of average brightness values in an image. For example, the tonal range of a photo taken in a dark cavern would be low, whereas a sunny sky would be high.</p> <p>The <b>Tonal Range</b> slider increases in value from left to right, increasing from a low tonal range on the left to a high tonal range on the right. The <b>Tonal Range</b> slider is used to focus noise reduction to areas of the images that have a corresponding tonal range. For example, the left-most position would reduce the noise in a cavern more than a sky.</p> <p>Tonal Range only affects luminance noise reduction.</p>
<b>Frequency Range</b>	<p>The <b>Frequency Range</b> slider adjusts the noise pattern. High frequency noise looks like fine static while low frequency noise looks like coarse grain or "splotches". Move the <b>Frequency Range</b> slider to the left to limit noise reduction to high frequency noise.</p> <p>Frequency Range affects both luminance and color noise reduction.</p>

### Noise Reduction Applied With the Develop Brush

For targeting specific areas of noise reduction within an image, use the [Develop Brush](#) to apply the noise reduction.

#### To apply Noise Reduction with the Develop Brush:

1. Open an image in **ACDSee RAW**.
2. In the **Develop Tools** pane, select the **Detail** tab.
3. In the **Detail** tab, select the **Develop Brush**.
4. Adjust the noise reduction options as described below.

## Develop Brush Noise Reduction Options

<b>Sharpness</b>	Move the slider to the right to brush on sharpness, or move the slider to the left to brush on blur.
<b>Luminance Noise Reduction</b>	Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image. Slide to the right to add <a href="#">Luminance Noise Reduction</a> .
<b>Color Noise Reduction</b>	Color noise is random variations of color in the image. Slide to the right to add <a href="#">Color Noise Reduction</a> .

### Noise Reduction Applied With the Linear Gradient

For targeting specific areas of noise reduction within an image, use the [Linear Gradient](#) tool to apply the noise reduction.

#### To apply Noise Reduction with the Linear Gradient tool:

1. Open an image in **ACDSee RAW**.
2. In the **Develop Tools** pane, select the **Detail** tab.
3. In the **Detail** tab, select the **Linear Gradient** tool.
4. Adjust the noise reduction options as described below.

## Linear Gradient Noise Reduction Options

<b>Sharpness</b>	Move the slider to the right to brush on sharpness, or move the slider to the left to brush on blur.
<b>Luminance Noise Reduction</b>	Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image. Slide to the right to add <a href="#">Luminance Noise Reduction</a> .
<b>Color Noise Reduction</b>	Color noise is random variations of color in the image. Slide to the right to add <a href="#">Color Noise Reduction</a> .

### Noise Reduction Applied With the Radial Gradient

For targeting specific areas of noise reduction within an image, use the [Radial Gradient](#) tool to apply the noise reduction.

#### To apply Noise Reduction with the Radial Gradient tool:


1. Open an image in **ACDSee RAW**.
2. In the **Develop Tools** pane, select the **Detail** tab.
3. In the **Detail** tab, select the **Radial Gradient** tool.
4. Adjust the noise reduction options as described below.

## Radial Gradient Noise Reduction Options

<b>Sharpness</b>	Move the slider to the right to brush on sharpness, or move the slider to the left to brush on blur.
<b>Luminance Noise Reduction</b>	Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image. Slide to the right to add <a href="#">Luminance Noise Reduction</a> .
<b>Color Noise Reduction</b>	Color noise is random variations of color in the image. Slide to the right to add <a href="#">Color Noise Reduction</a> .

## Fine-Tuning Skin Tone

Use the **Skin Tune** tool to even skin tone and smooth away blemishes and flaws.

 Settings can be [set as a preset](#) for future use.


### To correct skin tone:

1. In the **Develop Tools** pane, select the **Detail** tab.
2. In the **Skin Tune** group, adjust the sliders as described below.

 Right-click a slider to reset to the default value.

## Skin Tune Options

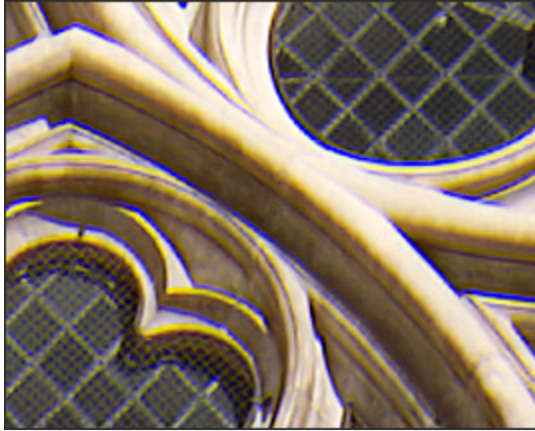
<b>Smoothing</b>	Drag the slider to the right to refine skin by suppressing texture detail.
<b>Glow</b>	Drag the slider to the right to increase the brightness of skin while subtly smoothing.
<b>Radius</b>	Specifies the scale of the texture detail that is affected by the effect. Drag the slider to the left to enhance small details. Drag the slider to the right to enhance larger details.

 View the effects of the changes in the preview window, located at the top of the **Detail** pane. Move the overlay square on the image to change the area the preview window displays.

## Correcting Chromatic Aberration

Chromatic aberration is a lens artifact that can result in fringes in high contrast areas of some photos. The camera lens can cause different wavelengths of light to focus differently, which appears in photos as colored fringing or colored lines on the borders of high contrast areas. Purple fringing can also occur when there is a bright spot of light in front of the lens.

This zoomed-in image shows an example of blue/yellow fringing.



Use the Defringe and Chromatic Aberration tools in the **Develop Tools** pane to reduce the appearance of colored fringes. Chromatic aberration can be especially useful for photos with architectural details. For best results, it's recommended to use the Chromatic Aberration sliders first, and then the Defringe sliders.

 Settings can be [set as a preset](#) for future use.

#### To reduce fringing in an image:

1. In the **Develop Tools** pane, select the **Detail** tab.
2. In the **Chromatic Aberration** group, adjust the sliders as described below.


 Right-click a slider to reset to the default value.

#### Chromatic Aberration Options

<b>Fix Red/Cyan</b>	Adjust the red and cyan channels to reduce red/cyan fringing.
<b>Fix Blue/Yellow</b>	Adjust the blue and yellow channels to reduce blue/yellow fringing.

#### Defringe Options

<b>Defringe strength</b>	Adjust the amount of fringe color you want to remove from high contrast edges. A setting of zero means that defringing is off.
<b>Defringe radius</b>	Adjust the number of pixels surrounding an edge that will be defringed.
<b>Color</b>	Adjust the color to remove from high contrast edges.

 View the effects of the changes in the preview window, located at the top of the **Detail** pane. Move the overlay square on the image to change the area the preview window displays.

## About the Geometry Tab

The **Geometry** tab is used to correct lens distortion and perspective, or rotate and straighten images. It is also possible to use the **Crop** tool to change the composition of the image.

 Settings can be set as a preset for future use.

### To use the Geometry tab:

1. In the **Develop Tools** pane, select the **Geometry** tab.
2. Develop the image by expanding and editing any of the following:
  - [Lens Correction](#)
  - [Rotate & Straighten](#)
  - [Perspective](#)
  - [Crop](#)
  - [Vignette Correction](#)

## Saving and Canceling

After developing an image, choose from one of the many options for saving the image, depending on the next workflow step.

### To save an image:

1. Click **Done**.
2. Select one of the following:
  - **Save**: Save any changes.
  - **Save as**: Save a copy of the developed image with a new name or format.
  - **Discard**: Discard any changes.
  - **Cancel**: Remain on the same image in Develop with all changes intact, without saving the image.

### To discard changes to an image and return to the previous mode:

Click **Cancel**.



It is not possible to directly save changes to a RAW file. Changes to a RAW file must be saved as a different file type.



Gemstone will automatically apply geometry corrections to DNG files that include geometric distortion correction tags. DNG files created from the Adobe DNG Converter© will often generate geometric distortion tags for micro 4/3rds cameras.

## Fixing Lens Distortion

Correct barrel and pincushion distortion in digital photographs. In barrel distortion, the photo appears to bulge outwards from the center. In pincushion distortion, the photo appears to shrink inwards toward the center. Barrel and pincushion distortion are common in photos taken with wide angle or zoom lenses.

Gemstone offers the option of using manual correction via the **Manual Correction** slider, or enabling lens correction via the lens profile. Select the make, model, and lens of the camera used to take the image. The **Lens Correction** tool can apply automatic adjustments based on the distortion inherent to the lens used, or enable lens correction for each image manually. After a lens profile has been mapped to an EXIF profile, the **Make** and **Model** drop-down menus will be pre-populated with the camera used to take the image based on its EXIF information. The **Lens Correction** tool contains a database of camera makes, models, and their possible lenses. The possible lenses for the selected camera will be available in the **Lens** drop-down menu, unless there is only one possible lens, in which case, that lens will be pre-selected.

The name of the lens used in the EXIF information of the image is usually accurate. However, the lens value displayed in the EXIF may not be reliable in the case of third-party lenses, as the camera itself may only recognize the third-party lens as an ID number. If possible, recover the correct lens value and select it from the **Lens** drop-down menu.

It is also possible to map the correction specific to the lens, (the lens profile), to the camera make, model, and lens combination. Mapping the lens profile will apply the correction to all images with the same camera-lens combination that opened in the **Develop** pane **Lens Correction** tool.

Use the **Manual Correction** slider for further adjustments after using automatic correction, or on its own.

Use the lens profile to correct chromatic aberration, if it is available.



Settings can be [set as a preset](#) for future use.



For quick viewing of the available lens profiles, [go to Lensfun](#).

### To fix lens distortion using the lens profile:

1. In the **Develop Tools** pane, select the **Geometry** tab.
2. In the **Lens Correction** group, enable the **Enable Lens Profile** checkbox.
3. If the displayed camera make and model are not correct, select the correct options from the **Make** and **Model** drop-down menus.
4. From the **Lens** drop-down menu, select the lens used to take the image. Find this information displayed in the EXIF panel in the lower right corner of **Develop** pane. The correction will occur automatically.
5. For further adjustments, move the **Manual Correction** slider to the left for a bulge effect, or to the right to stretch the edges of the image.



Right-click a slider to reset to the default value.



Click the **Show Grid** button  to display a grid over the image. This tool is useful when fixing alignment in images. When the grid is not activated, it is gray .

### To save lens profile as a default for future use:

Save the camera and lens combination's correction profile and use it as a default for other images taken with the same camera/lens combination. This will ensure that every time an image is opened from a particular camera make, model, and lens combination in the **Lens Correction** tool, the **Lens** field will be pre-populated with the lens mapped to that camera. It is also possible to automatically apply this lens profile to other images taken with the same camera/lens combination upon entering the **Develop** pane.



As this function relies on EXIF data, this can mainly be performed with JPEG, DNG, RAW, and TIFF images.

1. With the desired camera and lens combination selected in the **Make**, **Model**, and **Lens** drop-down menus, click the **Map Default** button.
2. Enable the **Auto-apply this mapped profile when entering ACDSee RAW** checkbox to apply the mapped default to future images upon entering **ACDSee RAW**.
3. In the **Map Default** dialog box, click **OK** to save, or **Cancel** to abort.


### To manage saved defaults:

1. Click the **Manage Defaults** button.
2. In the **Manage Mapped Defaults** dialog, do one of the following:
  - Select a default option and click the **Delete Mapped Default** button.
  - Enable the **Auto-apply the selected mapped profile when entering ACDSee RAW** checkbox to apply the selected mapped default to future images taken with the same camera/lens combination upon entering **ACDSee RAW**.
3. Click **OK** to continue, or click **Cancel** to keep the mapped default.

### To fix Chromatic Aberration using the lens profile:

Chromatic aberration occurs due to the properties of a given lens. Therefore, use the lens profile to automatically correct it. The **Chromatic Aberration** checkbox will be enabled if the selected lens has a corresponding chromatic aberration correction available.

1. In the **Develop** pane, select the **Geometry** tab.
2. In the **Lens Correction** group, enable the **Enable Lens Profile** checkbox.
3. Enable the **Chromatic Aberration** checkbox.
4. Navigate to the **Detail** tab to view the corrected image.

 Save the lens profile with the Chromatic Aberration checkbox enabled to ensure that chromatic aberration will always be corrected.

## Rotating and Straightening




Straighten a crooked photo in the **Develop Tools** pane by rotating the photo at a custom angle.

 Settings can be set as a preset for future use.



### To correct a crooked photo:

1. In the **Develop Tools** pane, select the **Geometry** tab.
2. In the **Rotate and Straighten** group, adjust the image as described below.




 Right-click a slider to reset to the default value.

 Click the **Show Grid** button  to display a grid over the image. This tool is useful when fixing alignment in images. When the grid is not activated, it is gray .

### Rotate Options

90 degrees to the left		Rotates image 90 degrees to the left.
90 degrees to the right		Rotates image 90 degrees to the right.

### Straighten Options

Slider		Adjusts the horizontal angle of the image. Move the slider left or right until the image appears straightened.
-5 Degrees left		Adjusts the image -5 degrees to the left.
+5 Degrees right		Adjusts the image +5 degrees to the right.
Straighten tool		Straightens the image. Use the cursor to draw a line along the crooked horizon. Release the cursor to automatically straighten the horizon.

## Correcting Perspective




Perspective issues, which can occur if the camera is not held horizontal or perpendicular to the object of the photo, can be common in images taken with wide angle lenses. For example, if a photo of a tall

building were taken looking up from street level, the building can appear to bend in the photo. Correct perspective issues using the tools in the **Perspective** group.

 Settings can be [set as a preset](#) for future use.

#### To correct Perspective:

1. In the **Develop Tools** pane, select the **Geometry** tab.
2. In the **Perspective** group, set the options as described below.

 Click the **Show Grid** button  to display a grid over the image. This tool is useful when fixing alignment in images. When the grid is not activated, it is gray .

#### Perspective Options

<b>Vertical</b>	Drag the slider to the left or right to identify the center of the image on the vertical axis.
<b>Horizontal</b>	Drag the slider to the left or right to identify the center of the image on the horizontal axis.
<b>Vertical Shear</b>	Drag the slider to the left or right to identify the center of the image on the vertical and diagonal axis.
<b>Horizontal Shear</b>	Drag the slider to the left or right to identify the center of the image on the horizontal and diagonal axis.

 Right-click a slider to reset to the default value.

#### Cropping

Use the **Crop** tool to remove unwanted parts of images, or to reduce the image canvas to a particular size.

 Settings can be [set as a preset](#) for future use.

#### To crop an image:

1. In the **Develop Tools** pane, select the **Geometry** tab.
2. In the **Crop** group, [resize](#) the crop window, and position it over the desired area of the image. See below for more details.

 Click the **Preview Cropped Image** button  at the top of the **Geometry** tab or press **E** to preview the image when cropped.



Click the **Show Grid** button  to display a grid over the image. This tool is useful when fixing alignment in images. When the grid is not activated, it is gray .

## Resizing the Crop Window

Resize the crop window in the following ways:

- Drag the edges of the crop window to the desired size.
- Specify an exact size for the crop window.
- Apply a ratio to constrain to the crop window proportions.
- Use the arrow keys to manipulate the size of the crop window.

### To resize the crop window by dragging:

1. Position the cursor over the edge or corner of the crop window until it changes into a double-pointed arrow.
2. Drag the crop window's border to the desired size.

### To maximize crop area:

1. Click the **Maximize crop area** button. The crop selection expands to the outer edges of the image.
2. Drag the crop window's border to the desired size.

### To specify an exact size for the crop window:

1. Type the desired crop window proportions into the **Width** and **Height** spin boxes.
2. In the **Units** drop-down list, select a unit of measurement.
3. Use the **Dots per inch** spin box to specify a resolution.

### To constrain the crop window to a ratio:

1. Enable the **Constrain proportion** checkbox.
2. Select a ratio from the drop-down list.
3. Position the cursor over the edge of the crop window until it changes into a double-pointed arrow, and then drag the edge of the crop window to the desired size.

### To delete a proportion:

1. Select a proportion from the **Constrain proportion** drop-down list.
2. Click the down arrow button beside the drop-down list, and select **Delete**.
3. Click **Yes**.

**To set a proportion as default:**

1. Enable the **Constrain proportion** checkbox.
2. Select a ratio from the drop-down list.
3. Click the down arrow button beside the drop-down list, and select **Set as Default**.

**Crop Options**

<b>Constrain proportion</b>	Enable this option to constrain the crop area to a specified proportion. Select the proportion from the drop-down list.
<b>Maximize crop area</b>	Click to expand the crop area to the entire image, and then click and drag the crop borders. To redo your crop selection, click the <b>Maximize crop area</b> button to expand the selection to the entire image again, and make the crop adjustments.
<b>Rotate the cropping area</b>	Click to rotate the crop area.

**Fixing Lens Vignetting**

Vignetting, an unusual darkness in the corners of images, is the result of the inability of the lens to distribute light into the corners of the image. Fix lens vignetting in the **Develop Tools** pane by brightening the corners of the image.

 Settings can be set as a preset for future use.




**To fix vignetting:**

1. In the **Develop Tools** pane, select the **Geometry** tab.
2. In the **Vignette Correction** group, adjust the image as described below.

 Right-click a slider to reset to the default value.

**Vignette Correction Options**

<b>Strength</b>	Adjust how much the corners of the image will be brightened.
<b>Radius</b>	Adjust the distance from the corners of the image that pixels will be brightened. The higher the radius, the closer to the center of the image pixels will be brightened.

 Click the **Show Grid** button  to display a grid over the image. This tool is useful when fixing alignment in images. When the grid is not activated, it is gray .

## About the Repair Tab

Use the **Repair** tab to reduce red eye and repair images.

### To use the Repair tab:

1. In the **Develop Tools** pane, select the **Repair** tab.
2. Select the [Red Eye Reduction](#) or [Repair](#) tool.

## Saving and Canceling

After developing an image, choose from one of the many options for saving the image, depending on the next workflow step.

### To save an image:

1. Click **Done**.
2. Select one of the following:
  - **Save:** Save any changes.
  - **Save as:** Save a copy of the developed image with a new name or format.
  - **Discard:** Discard any changes.
  - **Cancel:** Remain on the same image in Develop with all changes intact, without saving the image.

### To discard changes to an image and return to the previous mode:

Click **Cancel**.



It is not possible to directly save changes to a RAW file. Changes to a RAW file must be saved as a different file type.

## Repairing an Image

Use the **Repair** tool to remove flaws, such as:

- Skin blemishes
- Telephone wires and other unwanted objects
- Flash flares from snowflakes or windows
- Lens scratches and water drops
- Shadows cast on the sensor by dust

There are three options available for the **Repair** tool: the **Heal** brush, the **Blended Cloning** tool, and the **Clone** brush.

When selecting the **Heal** brush, it copies pixels from one area of a photo to another, but analyzes the pixels in the source area before copying them. The **Heal** brush also analyzes the pixels in the target area, and then blends the pixels of both source and target, to match the surrounding area. This ensures that the lighting and color of the replacement pixels integrate with the surrounding area. The **Heal** brush works particularly well with photos that involve complicated textures like skin or fur.

When selecting the **Clone** brush, the tool copies the exact pixels from one area of a photo to another, creating an identical image area. The **Clone** brush is more effective for photos that have strong, simple textures or uniform colors, as it is more difficult to identify the copied pixels in the finished photo.


When selecting the **Blended Clone** tool, the **Repair** tool copies the exact pixels from one area of a photo to another, but analyzes the pixels in the target area and blends them with the copied pixels.

 Settings can be [set as a preset](#) for future use.

 To achieve the best results, perform any geometric operations on the image before using the **Heal** brush.

### To Remove Flaws from a Photo:

1. In the **Develop Tools** pane, in the **Repair** tab's **Repair** group, select one of the following:
  - **Heal**: Copies the pixels from the source area to the target area, and blends pixels into the surrounding image area.
  - **Clone**: Copies the pixels from the source area to the target area.
  - **Blended Clone**: Copies the pixels from the source area to the target area, then analyzes the pixels in the target area and blends them with the copied pixels.

 Right-click on the image to set the source area and display a preview of the source area within the cursor.
2. Drag the **Nib Width** and **Feathering** sliders as described in the table below.
3. Right-click the image to set a source location. Pixels will be copied from this location and used in the target location.
4. Click and drag over the area to cover. If selecting the **Heal** brush, Gemstone analyzes and replaces the pixels when releasing the mouse button. If selecting the **Blended Clone** tool, Gemstone analyzes, replaces, and blends the pixels when releasing the mouse button.
5. Do one of the following:
  - Click **Done** to apply your changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

 Scroll to adjust the brush size, or press the **Shift** key while scrolling to adjust feathering.

 For the most accurate preview, zoom the image to 100% while healing or cloning.



Red Eye Reduction and selective adjustments, such as the Develop Brush and gradients, are the only adjustments that cannot be healed or cloned.

### Drawing Straight Lines:

Hold the **Shift** key while using any of the repair tools to draw horizontal or vertical lines. For example, holding **Shift**, then clicking and dragging horizontally will lock the cursor into horizontal only so long as shift is being held. Release **Shift** to return to free hand brushing. You can even release **Shift** to return to free hand brushing, then press it again while still drawing the same line to unlock and re-lock the brush at will.

### Drawing Diagonal Lines:

Using any of the repair tools, you can create straight diagonal lines by placing two points on the image. Place the cursor where you want the line to begin, press and hold **Shift**, then **Left-Click** on the image to create a point. Let go of **Shift**, and move the brush to where the line will end, press and hold **Shift**, then **Left-Click** again to create a second point. A straight line will fill in between these two points.

### Repair Tool Options

<b>Nib Width</b>	Sets the width of the brush. The maximum brush width is relative to the size of your image.
<b>Feathering</b>	<p>Sets the amount to feather on the edge of the brush to prevent sharp transitions between the original and healed part of the photo.</p> <p>Feathering is set as a percentage of the nib width, not as a specific number of pixels. This means that you do not have to adjust the feathering when you reset the <b>Nib Width</b>, as it automatically adjusts to a percentage of the new nib width. This option is not available with the <b>Blended Clone</b> tool.</p>



Right-click a slider to reset to the default value.

### Reducing Red Eye

Use the **Red Eye Reduction** tool in the **Develop Tools** pane to correct red eye in digital photographs. The **Red Eye Reduction** tool specifically targets red pixels. Nearby pixels are unaffected.

#### To correct Red Eye:

1. In the **Develop Tools** pane, select the **Repair** tab.
2. Use the **Zoom** tools at the bottom right corner of the **Display Area** to enlarge and center the eye to be corrected.
3. Click within the red portion of the eye.
4. In the **Red Eye Reduction** group, adjust the sliders as described below.


 Right-click a slider to reset to the default value.

### Red Eye Reduction Options

<b>Size</b>	Drag the slider to the right to increase the size of the area being darkened, or to the left to decrease.
<b>Darkening</b>	Drag the slider to the right to darken the corrected portion of the eye.

Correct as many red eyes as necessary. Simply keep clicking the image to add a new eye-definition. Move the eye-definitions by clicking and dragging, or delete them by pressing **Delete**.

 Scroll with the mouse to adjust the size of the area to darken at any time.

 Show or hide the red eye outline by toggling On or Off the eye  icon, located at the top left corner of the **Red Eye** group.

 Press **Delete** to remove the currently selected red eye adjustment.

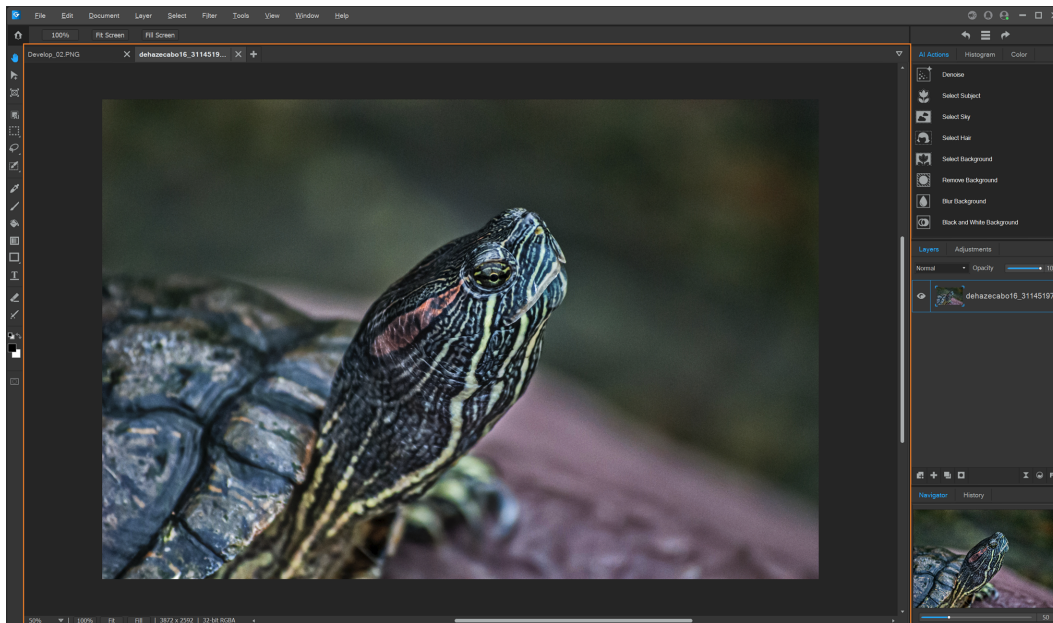
## Chapter 5: Editing

### Editor

The **Editor** consists of five unique areas:

- [Display Area](#)
- [Toolbar](#)
- [Tool Properties Bar](#)
- [Menu Bar](#)
- [Editing Pane](#)

### Display Area




The **Display Area** occupies the large central portion of the **Editor** and is where images are displayed. The image residing in the **Display Area** will change in appearance to reflect edits made through Gemstone filters and tools.

The open image file name is displayed in the image's tab, located left-justified above the image. Each image tab has a right-click menu as described below.

### Image Tab Right-Click Options

<b>Save</b>	Saves the image as a .gsd file in the ACDSee database without the ability to edit the file name.
<b>Save As...</b>	<p>Opens the <b>Save Image As</b> dialog.</p> <p>Saves a copy of a developed image with a new name or format.</p> <p>Saves a copy of an edited image with a new name or format.</p> <p>Depending on the file type, any of the following checkboxes appear in the bottom left corner of the <b>Save Image As</b> dialog box:</p> <ul style="list-style-type: none"> <li>• <b>Preserve Metadata:</b> Retains metadata with the new image.</li> <li>• <b>Preserve database information:</b> Maintains your catalog information, such as ratings.</li> <li>• <b>Preserve develop settings for original image:</b> Applies changes to the original image, as well as the copy being saved.</li> <li>• <b>Embed Color Profile in Image:</b> Retains color profile selected in Color Management with your new image.</li> <li>• <b>Preserve 16-bit data:</b> Retains 16-bit data in the image.</li> </ul>
<b>Close</b>	Closes the current tab with a Save prompt.
<b>Close All</b>	Closes all images with a Save prompt.
<b>Close All Unmodified</b>	Closes all unmodified images without a saving prompt.
<b>Close All But This</b>	Except for the current tab, closes all images without a saving prompt.
<b>New Document...</b>	Opens the <b>New Image</b> dialog for setting a new document's parameters.
<b>Open Document...</b>	Opens the <b>Open</b> dialog for selecting existing images to open in ACDSee Gemstone 16
<b>Reveal In Explorer...</b>	Opens the file's storage location in an instance of Explorer.

### To open another image from an open image:

1. Click the plus icon to open the **New Document** dialog. 
2. Make a selection from the four tabs in the left hand section of the dialog: **Photo**, **Web**, **Paper**, and **Custom**.
3. In the **Create a New File** pane, do one of the following:
  - Use the default parameters,
  - Select a preset, or

- Customize the image properties.
4. Click the **Open** button to open a new image in a new Display Area tab.



To create a new blank image follow the above steps but click the **Create** button in Step 4.

## New Document Dialog Options

### Presets

#### Presets

Leave the **Presets** drop-down list set to "Default" to keep all of the settings applied to the Image field set. Or, select a preset from the drop-down list to accept a customized set of image parameters.



Opens the **New Preset** dialog. Enter a name for the preset, then click the **OK** button to populate the new preset into the **Preset** drop-down list. The new preset will be constructed of the parameters set in the **Image** field set. It is recommended to complete any customizations in the **Image** field set before completing the **New Preset** dialog.



Deletes a preset from the **Preset** drop-down list.

### Image Field Set

#### Width

Enter a value to determine the image width.

#### Height

Enter a value to determine the image height.

#### Unit

Make a selection from the drop-down menu to determine the unit of measurement for both the **Width** and **Height** fields. Options include: "Centimeters", "Inches", and "Pixels".

#### Orientation

Click the appropriate icon to specify the image's orientation, either Portrait or Landscape.

#### Resolution

Specifies the Dots Per Inch (DPI) of the image. The higher the DPI the better the image quality and the bigger the image's file size.

#### Color Mode

Specifies the image's color mode. Options include: "32-bit RGBA" and "64-bit RGBA". The higher the bit count the better the image quality and the bigger the image's file size.

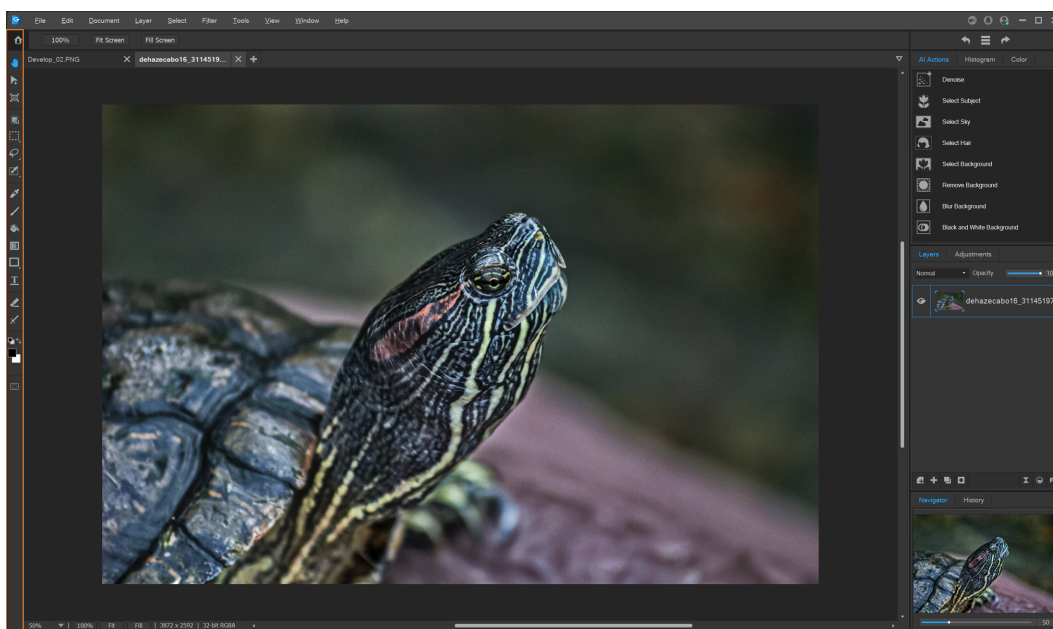
#### Background Content

Make a selection from the drop-down menu to determine the composition of the image's background. Options include: "Black", "Custom", "Transparent", and "White". Another method for setting the background content is to use a Color Picker.

### To change the Display Area tooltip type:

1. In the **Editor**, select **Tools | Options...** from the main menu.
2. In the **Options** dialog, select **Display** from the left pane.
3. In the **Display** pane, navigate to the **Tab Tooltips** field set.
4. Enable one of the following to change the tooltip type:
  - **File Name**: No tooltip is displayed.
  - **File Location**: The tooltip displays the file location.
  - **File Name**: No tooltip is displayed.
5. Click the **OK** button.

### Toolbar



Located to the left of the **Display Area**, the **Toolbar** contains:

- The **Home Screen** toggle
- All of Gemstone's editing, movement, and selection tools
- The **Foreground/Background** color toggle

### Home Screen Toggle

Located at the top of the **Toolbar**, the **Home Screen** toggle flips between the image's **Editor** screen and the **Home Screen**. The **Home Screen** carries the same functionality as the [New Document](#) dialog, documented above.

## Editing, Movement, and Selection Tools




The editing, movement, and selection tools, and their associated **Tool Property** fields, are documented in the [Toolbar and Tool Properties](#) bar section.

## Foreground/Background Color Toggle

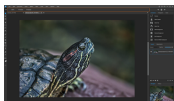
The **Foreground/Background** color toggle is located at the bottom of the **Toolbar** and consists of three components:

- Reset Colors
- Swap Colors
- Color Pickers

### Foreground/Background Color Toggle Components

	<b>Reset Colors</b>	Resets the foreground and background colors to their defaults. Black is the foreground color default. White is the background color default.
	<b>Swap Colors</b>	Replaces the background color with the foreground color.
	<b>Color Picker</b>	Click the foreground square to open the <b>Foreground Color</b> picker. Click the background square to open the <b>Background Color</b> picker. In either dialog, select a color from either the <b>Standard</b> or <b>Custom</b> tab, or click the <b>Select...</b> button to use an eyedropper to pick a color from an open image.

## Tool Properties Bar



The bar directly above the **Display Area** is referred to as the **Tool Properties** bar and is dynamically populated with the editable fields associated with the tool selected in the toolbar. The **Tool Property** fields for each tool are documented in the [Toolbar and Tool Properties](#) bar section.

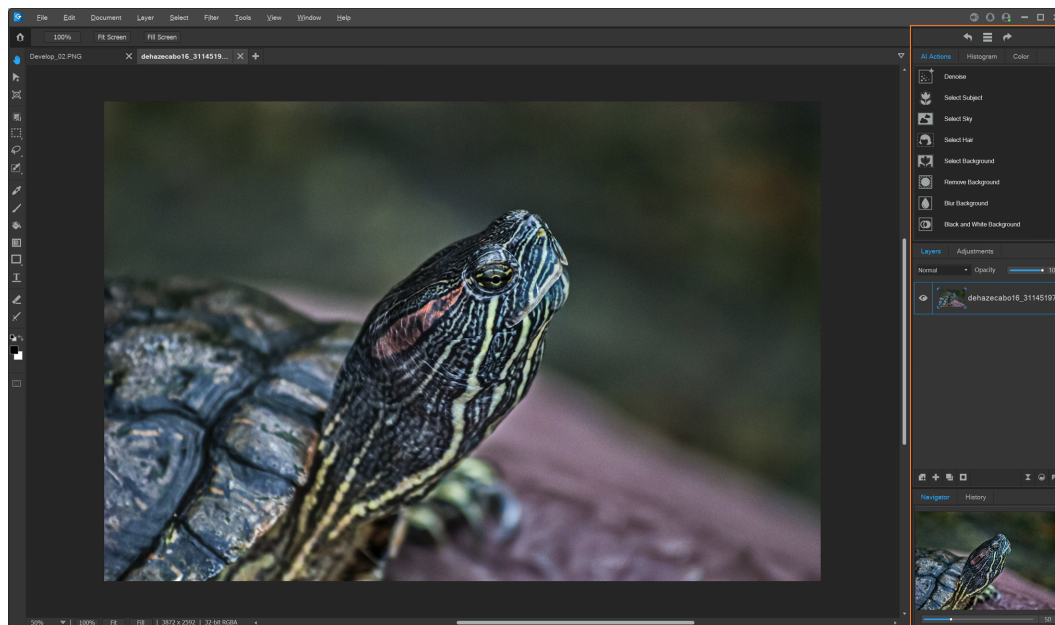
## Menu Bar

The menu bar is a horizontal bar located at the top of the screen that contains drop-down menus for Gemstone's functionality.

The menu bar is populated with the following menu headings:

- File
- Edit
- Document
- [Layer](#)
- [Select](#)
- [Filter](#)
- [Tools](#)
- View
- Window
- Help

## Editing Pane



The **Editing** pane consists of four unique sections:

- [Undo/Redo Settings](#)
- [AI Actions/Histogram/Color](#)
- [Layers/Adjustments](#)
- [Navigator and History](#)




## Undo/Redo Settings Bar

The **Undo/Redo Settings** bar sits atop the **Editing** pane and consists of three icons:

- **Undo** icon
- **History Window** icon

- **Redo** icon

## Undo/Redo Settings Icons

	<b>Undo</b>	Click to remove the last change made to the image. There are no restrictions on the number of Undo clicks.
	<b>History Window</b>	Click to open the <b>History Window</b> . Use the <b>Undo All</b> button to clear the image's history.
	<b>Redo</b>	Adds back into the image the changes from the most recent undo.

## AI Actions/Histogram/Color Pane

The **AI Actions/Histogram/Color** pane resides below the **Undo/Redo Settings** pane and above the **Layers/Adjustments** pane and consists of three tabs:

- [AI Actions](#) tab
- [Histogram](#) tab
- [Color](#) tab

### AI Actions Tab

The **AI Actions** tab contains pre-built tools for performing common tasks with one click. The AI Action options are described below.

### AI Actions Tab Options

<b>Denoise</b>	Reduces noise in the image.
<b>Select Subject</b>	Selects the subject only.
<b>Select Sky</b>	Selects the sky.
<b>Select Hair</b>	Selects the subject's hair only.
<b>Select Background</b>	Selects the background of the image.
<b>Remove Background</b>	Click to isolate the subject with a masked adjustment layer and remove the background. The subject is not selected.
<b>Blur Background</b>	Click to create a masked adjustment layer to blur the background. The subject is not selected.
<b>Black and White Background</b>	Click to create a masked adjustment layer to change a colored background to a black and white background. The subject is not selected.

## Histogram Tab

A histogram is a graph that represents the distribution of color intensity for each color channel in an image. Histograms provides a graphical representation of the intensity level of pixels within each color channel. Spikes at either end of the graph indicate clipped colors. Keeping the histogram open is particularly useful when adjusting exposure, as the histogram reflects all recent adjustments.

### To display and use the histogram:

1. Select **Windows | Histogram** from the main menu.
2. In the **Histogram** tab, enable or disable the following checkboxes:
  - **R**: Shows or hides the red color channel.
  - **G**: Shows or hides the green color channel.
  - **B**: Shows or hides the blue color channel.
  - **L**: Shows or hides the lightness of the image.

## Color Tab

The **Color** tab consists of a color selection tool that can be used to select color values. Use the slider to change the color type and move the selector within the color window to select a color.

### To use the color selection tool:

1. With any of the drawing tools selected in the [toolbar](#), adjust the color slider in the **Color** tab to find the desired color group.
2. Fine tune the color selection by moving cursor in the adjacent color window.
3. Use the drawing tool to see the selected color applied to the image.

## Layers/Adjustment Pane

The **Layers/Adjustment** pane resides below the **Histogram/Color** pane and above the **History** pane and consists of two tabs:

- The [Layers](#) tab
- The [Adjustments](#) tab

## Navigator and History Pane

The **Navigator and History** pane consists of two tabs:

- **Navigator** tab
- **History** tab

## Navigator Tab

The **Navigator** tab displays the zoomed portion of the image in relation to the entire original image. If the image is not zoomed, only the original image appears in the **Navigator** tab. If the image is zoomed, a marquee highlights the zoomed portion.

To perform a zoom operation in the **Navigator** tab, move the slider below the image to the right to zoom in, and to the left to zoom out, or enter a numeric value in the adjacent field for a more precise level of zoom.

### Navigator Tab Right-Click Options

<b>Floating</b>	Allows the <b>Navigator</b> tab to float in a separate window.
<b>Docking</b>	Attaches a floating <b>Navigator</b> tab back into the Editing pane.
<b>Hide</b>	Removes the <b>Navigator</b> tab from view. To return the <b>Navigator</b> tab to the <b>Editing</b> pane, select <b>Window   Navigator</b> from the main menu.

### History Tab

The **History** tab resides at the bottom of the **Editing** pane and consists of a list of previous actions performed on the image. Double-click a **History** tab list item to delete it from the list.

The **History** tab can be used to view the sequence of changes made to the image. The **History** tab can also be used to jump around in the editing sequence and revert back to a previously-applied adjustment. For example, if a series of adjustments were applied to an image, such as color adjustments, followed by sharpening, and exposure tweaking, revert back several steps to the state the photo was in with just the color adjustment by using the **History** tab.

To display the **History** tab in the **Editing** pane, select **Window | History** from the main menu.

To return to a specific adjustment, select the desired adjustment in the pane and double-click it. Or select **Undo All** to undo all of the adjustments.



The **Histogram/Color** pane, the **Layers/Adjustments** pane, and the **Navigator and History** pane can all be docked and undocked from the Editing Pane.

### Blending and Opacity

When using a filter, the **Blending** and **Opacity** tools appear in the [Tool Properties Bar](#). The **Blending** and **Opacity** tools provide creative control and can be combined to create an entirely new image. Apply blend modes and opacity to the whole image or to a selected part of an image.

#### Opacity

The **Opacity** slider changes the opacity of the edited image and gives control over how much of the edit should be visible on the image.

#### Blending

The **Blending** drop-down controls how the edits and the image merge, meaning that other blend modes besides opacity can be used to affect the final image.

### Blending Options

<b>Normal</b>	Pixels in the edited image are combined with those in the original. Only opacity affects this blend.
<b>Screen</b>	Combines the edited image color with the inverse of the original photo color, resulting in a color that is the same or lighter.
<b>Multiply</b>	Combines the edited image color with the original photo to produce a darker color. Multiplying any color with black produces black; multiplying any color with white leaves the color unchanged.
<b>Dodge</b>	Combines the edited image color with the original pixels in the photo to produce a lighter color.
<b>Burn</b>	Combines the edited image color with the original pixels in the photo to produce a darker color.
<b>Overlay</b>	Preserves the shadows and highlights of the lower layers while applying either <b>Multiply</b> or <b>Screen</b> blend mode based on the original image area's color values.
<b>Difference</b>	Subtracts the edited image color from the color of the original photo. Any white in the edited image produces a true negative of the color in the image, while black produces no effect.
<b>Darken</b>	Applies pixels in the edited image that are darker than the original image. Pixels in the edited image that are lighter than the original image disappear (based on RGB values).
<b>Lighten</b>	Applies pixels in the edited image that are lighter than the original image. Pixels in the edited image that are darker than the original image disappear (based on RGB values).
<b>Hard Light</b>	Adds strong highlights or shadows by applying <b>Multiply</b> or <b>Screen</b> based on the original image area's color values.
<b>Soft Light</b>	Adds soft highlights or shadows by darkening or lightening based on the original image area's color values.
<b>Hue</b>	Applies the hue value of colors in the edited image to the color of the original image areas.
<b>Saturation</b>	Applies the saturation value of colors in the edited image to the color of the original image areas.
<b>Color</b>	Applies the hue and saturation of the edited image to the image. This blend does not affect the luminance of the original image.
<b>Luminosity</b>	Applies the lightness value of colors in the edited image to the color of the original image areas.

<b>Dissolve</b>	Applies some pixels from the edited image layer onto the original image, resulting in specks of color. The <b>Opacity</b> slider controls the amount of speckling.
<b>Exclusion</b>	Like <b>Difference</b> , but with less contrast, <b>Exclusion</b> subtracts the blend color from the color of the underlying photo. Any white in the blend color produces a true negative of the color in the image, while black produces no effect.
<b>Vivid Light</b>	Combines the blend color with the underlying pixels in the photo by increasing or decreasing contrast to produce a lighter or darker color, as determined by the blend color.
<b>Pin Light</b>	When the light source is lighter than 50% gray, the pixels darker than the light source are replaced. Pixels lighter than the light source remain the same. When the light source is darker than 50% gray, the pixels lighter than the light source are replaced. Pixels darker than the light source remain the same.
<b>Linear Light</b>	Dodges or burns by lightening or darkening the brightness value, depending on the blend color.
<b>Hard Mix</b>	Applies red, green, and blue channel values of the blend color to the RGB values of the image.
<b>Subtract</b>	Subtracts the blend color from the image (base) color in each channel.
<b>Divide</b>	Divides the blend color from the image (base) color.
<b>Darker Color</b>	From the blend color and the image (base) color, the lower channel values are chosen.
<b>Lighter Color</b>	From the blend color and the image (base) color, the higher channel values are chosen.



Use the **Edit Brush** to paint an effect onto specific areas of an image, then set the **Blending** drop-down and **Opacity** slider to change the way the effect is applied.

The **Blending** and **Opacity** tools are enabled in many of the editing tools and special effects filters. When a tool or filter does not warrant the use of the the **Blending** and **Opacity** tools , they are unavailable.

The **Blending** and **Opacity** tools are not available in the following filters:

- Detail Brush
- Distortion Correction
- Dodge and Burn

- Lens Correction
- Liquify
- Perspective Correction
- Red Eye Reduction
- Repair Tool
- Vignette
- Watermark

The **Blending** and **Opacity** tools are also not available in the following:

- Crop
- Flip
- Resize
- Rotate
- Selections
- Text

### Edit Brush

Tools are effective for making a variety of global adjustments, but are not ideal for adjusting specific areas of a photo. For example, instead of blurring an entire photo, it may be more desirable to blur certain areas, such as the background. To do this, and other local adjustments, use the **Edit Brush** tool.

The **Edit Brush** tool selectively edits photos by simply brushing on the effects. The **Edit Brush** tool is essentially creating a mask that is used to determine which pixels will be affected by the current settings of the chosen operation.

### Edit Brush

The **Edit Brush** button resides at the top of the editing dialog associated with all applicable filters.



### To use the Edit Brush:

1. Select a filter from the **Filters** main menu item.
2. Click the **Edit Brush** button to display the brush controls in the filter dialog.
3. Specify the brush settings in the panel or on the fly as described below.
4. Start painting the effects on the photo.
5. Adjust the sliders to get the desired effect.

6. Do one of the following:

- Click **Apply** to apply any changes and set options on another tab.
- Click **OK** to apply any changes and close the tool.
- Click **Cancel** to discard all changes and close the tool.

## Edit Brush Controls

Control	Description
<b>Nib Width</b>	Adjusts the size of the brush. Use the <b>mouse wheel</b> to adjust nib width or adjust the <b>Nib Width</b> slider.
<b>Feathering</b>	Adjust the slider to control the softness of the transition between the brush strokes and the image. Use <b>Shift + mouse wheel</b> to adjust the amount of feathering or adjust the <b>Feathering</b> slider.
<b>Pressure</b>	Adjust the slider to control the strength of the brush.
<b>Smart Brushing</b>	See <a href="#">Smart Brushing</a> section below.
<b>Tolerance</b>	Use the slider to determine the Color, Brightness, or Magic range of selected pixels. Values range from 0 to 100. A lower value selects fewer pixels. A higher value selects a broader range of pixels.
<b>Show mask</b>	When this option is enabled, brush strokes will be displayed in the color shown. This is helpful when brushing a complex area with a subtle effect, as it can be difficult to tell missed spots. Alternatively, hold down the <b>S</b> key to see the brush strokes on the image.
<b>Clear all brush strokes</b>	Removes all brush strokes from the image.
<b>Invert all brush strokes</b>	Toggle this option to invert brushed strokes. This makes brushed areas no longer brushed and untouched areas brushed. This is useful to use if the majority of the image brushed needs to be brushed and a small section left untouched. Brush only the small area and invert the brush strokes to apply to the larger area.
<b>Load last applied brush strokes</b>	Applies effects to the area most recently brushed and applied.

### Creating Straight Lines:

Hold the **Shift** key while using the **Edit Brush** to lock the direction the brush can move in horizontally, or vertically. For example, holding **Shift**, then clicking and dragging horizontally will lock the cursor into horizontal only so long as shift is being held. Release **Shift** to return to free hand brushing. You can even release **Shift** to return to free hand brushing, then press it again while still drawing the same line to unlock and re-lock the brush at will.

### Creating Diagonal Lines:

Using the **Edit Brush**, **Gemstone** can create straight diagonal lines by placing two points on the image. Place the cursor where you want the line to begin, press and hold **Shift**, then **Left-Click** on the image to create a point. Let go of **Shift**, and move the brush to where the line will end, press and hold **Shift**, then **Left-Click** again to create a second point. A straight line will fill in between these two points.



Brush strokes need to be applied in order to see adjustments.



To exit Brushing mode, toggle the **Edit Brush** button.



Undo and redo each brush stroke individually using the **Undo** and **Redo** buttons at the bottom of the Filter dialog.



Use the Edit Brush with [Blend Modes](#) and [Selections](#) to alter the way the effect is applied.

The **Edit Brush** tool is enabled in many of the editing tools and special effects filters. When a tool or filter does not warrant the use of the **Edit Brush** tool, it is grayed-out.

The **Edit Brush** tool is not available in the following filters:

- Detail Brush
- Distortion Correction
- Dodge and Burn
- Lens Correction
- Liquify
- Perspective Correction
- Red Eye Reduction
- Repair Tool
- Vignette
- Watermark

The **Edit Brush** tool is also not available in the following:

- Crop
- Flip
- Resize
- Rotate

- Selections
- Text

## Smart Brushing

The Smart Brush is used to target brushing to specific colors, brightness values, or a combination of color and brightness. The Smart Brush only affects pixels similar in value to the pixel in the center of the brush stroke, and only allows adjustments to be applied to those similar pixels.

### To use the Smart Brush:

1. Select a tool from the **Filter** main menu list.
2. Click the **Edit Brush** to enter Brushing mode and display the Brush controls.
3. Select an option from the **Smart Brushing** drop-down menu:

<b>Color</b>	Uses the color of pixels similar in value to the pixel in the center of the brush stroke to determine if they should be brushed on, depending on the <b>Tolerance</b> slider setting.
<b>Brightness</b>	Uses the brightness of pixels similar in value to the pixel in the center of the brush stroke to determine if they should be brushed on, depending on the <b>Tolerance</b> slider setting.
<b>Magic</b>	Uses a combination of the color and brightness values similar to the pixel in the center of the brush stroke to determine which pixels should be brushed on, depending on the <b>Tolerance</b> slider setting.

4. Use the **Tolerance** slider to increase or decrease the range of pixels affected by the Smart Brush.
5. Place the cursor over the desired color or brightness and begin painting on the effect.
6. Adjust the sliders to get the desired effect.
7. Click **OK** to apply the brush strokes.



Hold down **Ctrl** to temporarily disable the Smart Brush.



Erase brush strokes by right-clicking and brushing over strokes.

### To turn off Smart Brushing:

Select **Off** from the Smart Brushing drop-down menu.

## Resize, Rotate, or Flip

### Resize

Resizing can be applied to both the Document and the Canvas.

### To resize the Document:

1. Select **Document | Resize Document...** from the main menu.
2. In the **Crop** dialog, enter values in the **Width** and **Height** fields then navigate to the **New Dimensions** field set and select one of the following measurement unit options from the drop-down:
  - **Pixels:** Resizes the image to specific dimensions in pixels.
  - **Inches:** Resizes the image to specific dimensions in inches.
  - **Centimeters:** Resizes the image to specific dimensions in centimeters.
  - **Percent:** Resizes the image to a percentage of the original.
3. To maintain a specific width to height ratio, navigate to the **Aspect Ratio** drop-down and select any value other than "Aspect ratio not preserved". The following options from the **Aspect Ratio** drop-down list will preserve or set an aspect ratio:
  - **Original:** Maintains the original image's width to height ratio.
  - **1 x 1:** Forces the width and height to be equal.
  - **2 x 3:** Forces a width to height ratio of 2:3.
  - **3 x 2:** Forces a width to height ratio of 3:2.
  - **3 x 5:** Forces a width to height ratio of 3:5.
  - **5 x 3:** Forces a width to height ratio of 5:3.
  - **Custom...:** Applies a custom ratio. Enter a width to height ratio in the **Custom Aspect Ratio** dialog box. Custom ratios are automatically saved to the **Aspect Ratio** drop-down list after clicking the **OK** button in the **Custom Aspect Ratio** dialog box.
4. Optional: From the **Anchor** field, select an anchor to dictate the resizing starting point.
5. In the **Resolution** field, enter a Dots Per Inch value to set image quality (the lower the number, the less quality).
6. Do one of the following:
  - Click **OK** to apply any changes and close the Resize tool.
  - Click **Cancel** to discard all changes and close the tool.



**Resize Document** is a non-destructive scaling operation.

### To resize the Canvas:

1. Select **Document | Resize Canvas...** from the main menu.
2. In the **Crop** dialog, navigate to the **New Dimensions** field set and adjust the options as described below.
3. Click the **OK** button.



For more information, see [Resizing the Canvas](#).

## Resizing Options

<b>Width</b>	Enter a numerical value for the image width.
<b>Units</b>	Select a unit of measurement. Options include "pixels", "inches", "cm", and "percent".
<b>Anchor</b>	For resizing the canvas only, select an anchor point for the resizing.
<b>Height</b>	Enter a numerical value for the image height.
<b>Aspect Ratio</b>	Make a selection from the drop down to either keep the image's original aspect ratio, to not preserve the aspect ratio, select a pre-defined ratio, or create a custom ratio.

## Resizing Tips

Maintain image quality by reducing images only by 33%, 50%, or 66%. Other percentages can distort the aspect ratio.

Avoid resizing an image repeatedly. Each resizing places image pixels using a slightly different orientation. As a result, multiple resizes can change the overall color and appearance of the image. If a first resize attempt does not produce the desired result, click the Undo button.

Avoid increasing the size of an image. Increasing image size makes the image's pixels more apparent, causing a grainy effect.

## Rotate

The document can be rotated to predefined angles or rotated to custom settings.

### To rotate the document:

1. Select **Document | Rotate** from the main menu.
2. Make selection from options described below.

## Rotating Options

<b>180°</b>	<b>Rotates the image 180 degrees.</b>
<b>90°Clockwise</b>	Rotates the image 90 degrees in a clockwise direction.
<b>90°Counter Clockwise</b>	Rotates the image 90 degrees in a counter clockwise direction.
<b>Arbitrary...</b>	Opens the <b>Rotate Canvas</b> dialog where a custom angle for rotation can be entered and a rotation direction set.

## Flip

Image's canvas can be flipped along the horizontal or vertical axis.

### To Flip a canvas:

Depending on the type of flip desired, do one of the following,

- Select **Document | Flip Canvas Horizontal** from the main menu.
- Select **Document | Flip Canvas Vertical** from the main menu.

## Gradient Tools

Tools are effective for making a variety of global adjustments, but are not ideal for gradually adjusting specific areas of a photo. For example, instead of blurring an entire photo, it may be more desirable to have a blur advance across the image, or advance over a section of the image.

Use Gradient Tools to gradually progress an effect across an image. Gemstone features two Gradient Tools:


- Linear Gradient Tool
- Radial Gradient Tool

Both Gradient Tools reside in the Filter dialog's Edit Brush drop-down menu.


### To use a Gradient Tool:

1. Make a selection from the **Filter** main menu drop-down list.
2. Right-click the **Edit Brush** icon to produce the **Brush Type** drop-down.
3. Click either the **Linear Gradient Tool** icon or the **Radial Gradient Tool** icon to change the **Filter** dialog's properties and place the Gradient Tool on the image.
4. Click and drag the Gradient Tool guides to adjust the gradient. Inside the guide boxes, the gradient is transitioning. On either side of the boxes, the effect being applied by the Gradient Tool is at full strength, or not applied at all. To make this clearer, enable the **Show gradient mask** checkbox. Move the boxes to define where the effect will begin or end. Hold down the **Shift** key while positioning the effect to lock to the nearest 45° angle, for straightness.
5. For the **Radial Gradient Tool**, adjust the **Feathering** slider to fine-tune the gradient transition.
6. Click the **OK** button.

## Gradient Tool Options

<b>Feathering</b>		For the <b>Radial Gradient Tool</b> , adjust the <b>Feathering</b> slider to fine-tune the gradient transition.
<b>Squareness</b>		For the <b>Radial Gradient Tool</b> , increase the slider to gradually transform the default oval shape of the radial to a square.
<b>Show gradient mask</b>		When this option is checked, a gradient mask will be displayed in the color shown. Alternatively, hold down the <b>S</b> key to see the mask on the image. Click the drop-down arrow to select another display color.
<b>Invert gradient</b>		Toggle this option to invert the gradient. By clicking the <b>Invert</b> button after applying a gradient beginning at the top of the image, the gradient would begin at the bottom, and vice-versa.
<b>Alternating between the Gradient tool and cursor-applied tools</b>		For filters that involve drawing or clicking on the image, such as the <b>Light EQ™</b> filter and the <b>White Balance</b> filter, hold down the <b>Alt</b> key to switch from Gradient mode to using the tool.

 To exit the either Gradient Tool, click the **Cancel** button.

 To maintain a gradient mask while switching to the [Edit Brush](#), hold down **Shift** and click the **Edit Brush** button to add to the gradient mask or erase parts of it.

## Photoshop® Plug-ins

Gemstone supports 64-bit Adobe Photoshop™ plug-ins. 32-bit Photoshop® plug-ins will not work in Gemstone.

 Not all plug-ins will work exactly as they do in Photoshop®.

### To apply a Photoshop® plug-in:

With an image open, select **Tools | Photoshop Plug-ins | [your plug-in]** from the menu.

 Effects made with the plug-in can be undone by performing an [Undo](#) operation.

 The same plug-in cannot be opened in two Gemstone windows at the same time.

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**Photoshop is a registered trademark of Adobe Inc.**

## Pixel Targeting


### Targeting Adjustments by Color or Tone

While tools are used to make a variety of global adjustments to an image, and the **Edit** brush makes it possible to adjust specific sections of the image, Pixel Targeting allows for the targeting of distinct tones, colors, and skin tones for selection. A number of adjustments can be applied to a photo's individual colors or tones, or just to skin tone, by using Pixel Targeting. For example, open an image in the **Exposure** tool and note that the exposure is adjusted over the entire image. However, to only adjust the exposure of the blue sky in the image, use Pixel Targeting to target the color blue, and thereby only increase the exposure on the sky.

Pixel Targeting is available in the following filters:

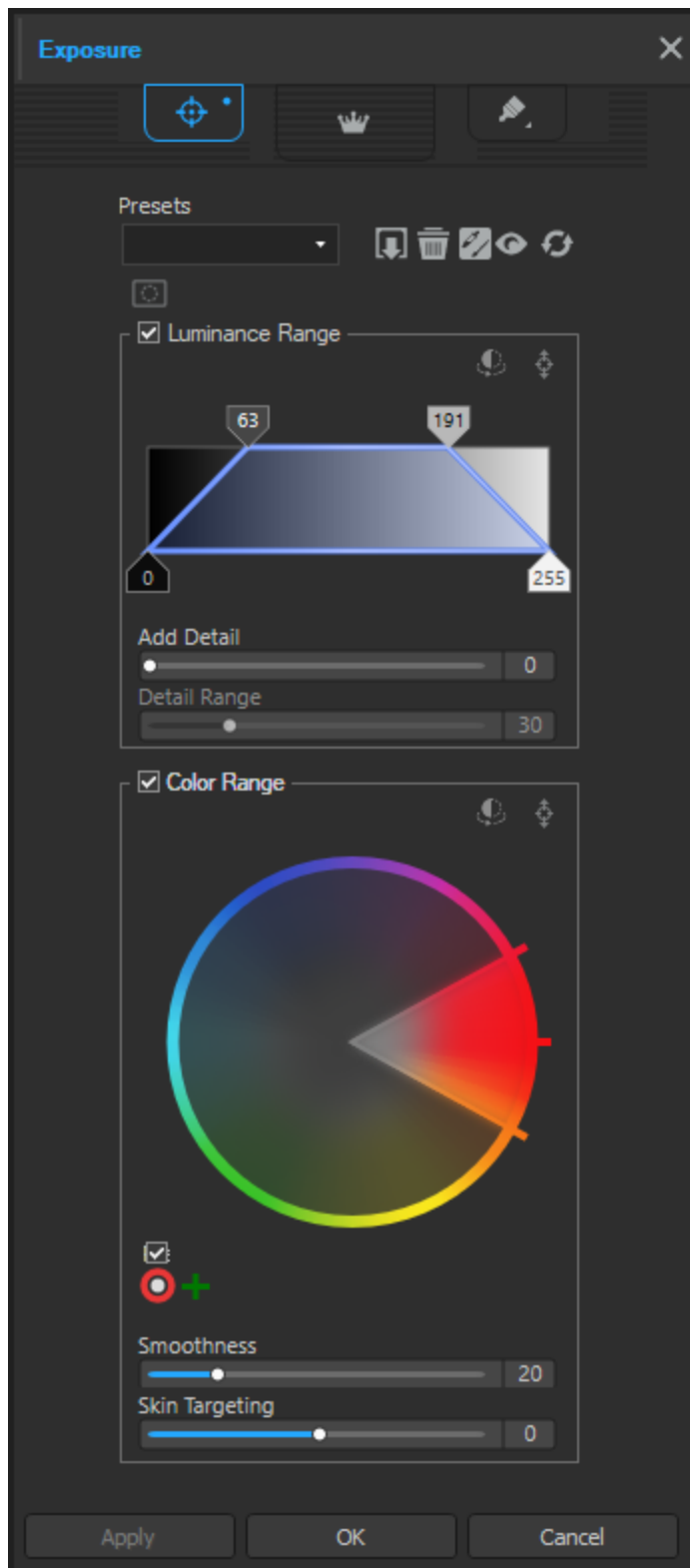
- [Skin Tune](#)
- [Chromatic Aberration](#)
- [Vignette](#)
- [Special Effects](#)
- [Grain](#)
- [Exposure](#)
- [Levels](#)
- [Auto Levels](#)
- [Tone Curves](#)
- [Light EQ](#)
- [Dehaze](#)
- [White Balance](#)
- [Color EQ](#)
- [Convert to Black & White](#)
- [Split Tone](#)
- [Tone Wheels](#)
- [Color Wheel](#)
- [Color LUTs](#)
- [Sharpen](#)
- [Blur](#)
- [Noise](#)
- [Clarity](#)

#### To perform targeted adjustments with Pixel Targeting:

1. Open any of the above tools under the **Filter** main menu item.
2. At the top of the dialog associated with the selected tool, click the **Pixel Targeting** button. 

3. Configure the settings for **Luminance Range** and **Color Range** in the **Pixel Targeting** panel, as described below.
4. Adjust the selected tool's settings. The adjustments will affect the targeted color or tones.

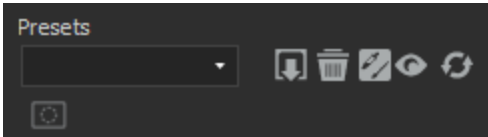





## The Pixel Targeting Pane



The **Pixel Targeting** pane consists of three sections:

- Presets
- Luminance Range
- Color Range

### **Pixel Targeting Pane Sections**

Presets	Make a selection from the <b>Presets</b> drop-down list, or click the <b>Save Preset</b> icon to populate the new preset to the <b>Presets</b> drop-down list.	
	<b>Save Preset</b>	 <p>Opens the <b>New Preset</b> dialog. Enter a name for the preset, then click the <b>OK</b> button to add the new preset to the adjacent drop down list.</p>
	<b>Delete Preset</b>	 <p>Select a preset in the adjacent drop down to open the <b>Confirm Delete</b> dialog. Click <b>OK</b> to delete the preset from the drop down list.</p>
	<b>Enable Pan Hand</b>	 <p>Click to enable the cursor to change to a hand used for panning the image.</p>
	<b>Preview</b>	 <p>Click to enable a preview of the preset.</p>
	<b>Reset</b>	 <p>Click the icon to remove all</p>

of the current image edits and return the image to its original state.

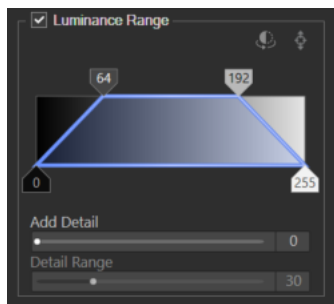
Click the icon to view a preview of the mask that highlights the pixels to be targeted.

**Show Mask Preview**



### Luminance Range

The **Luminance Range** field set is used to target tones of brightness for adjustment. Enable the **Luminance Range** checkbox to enable the associated functionality.



**Invert Selection**



Click the icon to change the selected pixels to the unselected pixels.

**Indicator Line**



Click the icon to add an indicator line to the Tone Grabber display and produce an eye-dropper for indicating where a tone from the image appears in the graph.

**Tone Grabber**

Use the four

slider tabs to make a tonal selection. The area inside the blue box represents the tonal selection. The top two tabs cannot slide past one another. Each of the bottom tabs cannot slide past their own top tab when sliding toward the center. The tonal range is between 0 and 255. A diagonal line between the top and its associated bottom slider tab will produce a feathered selection effect (64 to 0 in the **Luminance Range** example). A straight line connecting the top and associated bottom slider tab

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**Add Detail**

**Detail Range**

**Luminance Range**

example). A straight line connecting the top and associated bottom slider tab will produce a hard cut-off (192 to 192 in the

**Luminance Range** example).

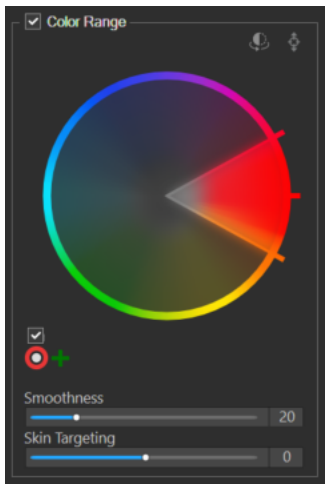
Increase the slide value to sharpen the crispness around the edge of the selection.

If the **Add Detail**

slider has been advanced past a value of "0", the **Detail Range** slide is enabled for controlling the range of the edge detail added by the **Add Detail** slider.

### Color Range

The **Color Range** field set is used to target specific colors for adjustment. Enable the **Color Range** checkbox to enable the associated functionality.



**Invert Color**



Click the icon to invert the selected colors on the wheel.

**Color Indicator**



Click the icon to display and produce an eyedropper for selecting color pixels in the image. Click with the eyedropper to



### **Color Wheel**

make a color selection.

Use the Color Wheel to adjust precise colors in an image. The Color Wheel is particularly useful for common requests like making a blue sky more blue, or brightening dark water that is meant to depict a bright lake. The selected color is displayed in the circle below the Enable Wheel checkbox. For more information on the Color Wheel, see [Adjusting Color with the Color Wheel](#).

### **Enable Wheel**

Located above the Wheel Selection circle displaying the selected

		color, enable the checkbox to make the associated wheel active.
<b>Add Wheel</b>		Click the icon to make changes to another color using an additional color wheel.
<b>Wheel Selection</b>		Located directly beneath the <b>Enable Wheel</b> checkbox, click the inside circle to select the associated color wheel. The selected color is represented by the wheel.
<b>Delete Wheel</b>		Deletes the currently selected color wheel.
<b>Smoothness</b>		Increase the slider to adjust smoothness, which acts like a feathering tool to soften a

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color's edges.

### Skin Targeting


Using the **Skin Targeting** slider will disable the rest of the **Color Range** field set and allow only skin tones to be targeted.

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 Right-click a slider to reset to the default value.

Pixel Targeting becomes even more powerful when paired with [Selections](#) or the [Edit Brush](#). These tools in combination with Pixel Targeting make it possible to target very precise areas, such as only the blue of a person's eyes, rather than all of the blue in the image.

 Click **Reset** to clear changes and reset to default settings.

 Save setting values as a [preset](#) for future use. Using the **Save Preset** button on the **Pixel Targeting** panel will only save Pixel Targeting settings, and not the settings on the tool. Tool settings must be saved separately.

## Presets

Many Gemstone filters allow for saving presets. This is convenient for frequently used settings associated with a particular filter or effect.

For most filters, Gemstone automatically saves the last option settings applied to an image after clicking the **Apply** or **Done** buttons. This preset is called "Last Used".

 The **Save Preset** and **Delete** buttons are located at the top of a filter's panel.

### To save a preset:

1. Select a tool and specify its settings.
2. Click the **Save Preset** button.

3. In the **New Preset** dialog box, enter a name for the preset.
4. Click **OK**. The new preset will appear in the tool's **Presets** drop-down list.

#### To use a previously saved preset:

1. Select a tool with a previously created preset.
2. Click the **Presets** drop-down list and select the desired preset.

#### To delete a preset:

1. Select a tool with a previously created preset.
2. Click the **Presets** drop-down list and select the preset to be deleted.
3. Click the **Delete** button.
4. In the **Confirm Delete** dialog box, click **Yes**.

## Rulers and Guidelines

Rulers and Guidelines are used to accurately place layers, text, and objects.

#### To enable rulers:

Select **View | Rulers** from the main menu, or press **Ctrl + T**.

#### To customize ruler units of measurement:

Right-click a ruler and select a new unit of measurement from the context menu: "Inches", "Centimeters", "Pixels", and "Percent".

#### To draw guidelines:

With **Rulers** enabled, click a ruler and drag the guideline to a desired location on the image.



Enable the **Move** tool in the toolbar to move previously placed guidelines.

#### To enable snapping to guidelines:

Snap layers, objects, and text layers to guidelines for precise positioning. When snapping is enabled, move the edge of a layer near a guideline and it will snap to the guideline.

Select **View | Snap to Guidelines** from the main menu, or press **Ctrl + Shift + G**.

#### To remove guidelines:

Select **View | Clear all Guidelines** from the main menu, or press **Ctrl + Shift + ;**.

### To lock guidelines in place:

Select **View | Lock Guidelines** from the main menu, or press **Ctrl + Alt + ;**.

### To hide guidelines:

Select **View | Hide Guidelines** from the main menu, or press **Ctrl + ;**.



To set Rulers and Guidelines options, see [Rulers and Guidelines Options](#).

## Saving Images

Choose one of the following options for saving an image, depending on workflow.

### Save Types and Options

<b>Save</b>	Save any changes.
<b>Save as</b>	<p>Save a copy of a developed image with a new name or format.</p> <p>Save a copy of an edited image with a new name or format.</p> <p>Depending on the file type, any of the following checkboxes appear in the bottom left corner of the <b>Save as</b> dialog box:</p> <ul style="list-style-type: none"><li>• <b>Preserve Metadata</b>: Retains metadata with the new image.</li><li>• <b>Embed Color Profile in Image</b>: Retains color profile selected in Color Management with your new image.</li></ul>



To AutoSave all ACDSee RAW adjustments, select **Tools | Options... | ACDSee RAW Settings** from the main menu.

## Undo and Redo

Changes when editing an image can be undone or redone.

### To undo a change:

Do one of the following:

- Click the **Undo** button found at the bottom of the **History** pane.
- Click the **Undo** button found in the **Undo/Redo Settings** bar above the **Histogram/Color** pane.

- Use the keyboard shortcut **Ctrl + Shift + Z**.
- Select **Edit | Undo** from the main menu.

### To redo a change:

Do one of the following:

- Click the **Redo** button found at the bottom of the **History** pane.
- Click the **Redo** button found in the **Undo/Redo Settings** bar above the **Histogram/Color** pane.
- Use the keyboard shortcut **Ctrl + Y**.
- Choose **Edit | Redo**.

## Resizing the Canvas

The **Resizing the Canvas** tool crops or expands the size of a canvas to fit layered content.


 Changes made to the canvas are non-destructive.

## Resizing by Dragging


The Resizing and Dragging method resizes the canvas in the following ways:

- By dragging the edges of a photo to expand the canvas to a desired size.
- By specifying an exact size for the canvas using pixels, inches, centimeters, or a percentage.
- By applying a ratio to constrain the canvas proportions.

### To resize the canvas by dragging:

1. Select the **Crop** tool from the Toolbar. 
2. Position the cursor over the edge or corner of an image until the corner changes into a double-pointed arrow.
3. Drag the canvas' border to the desired size.
4. In the Tool Properties bar, click the **OK** button.

For more information on the **Crop** tool's options available in the Tool Properties bar, see [Crop Tool](#).

 Use the Arrow keys to move the canvas around pixel by pixel.

## Resizing and Positioning

The Resizing and Positioning method resizes the canvas in the following ways:

- By specifying an exact size for the canvas using pixels, inches, centimeters, or a percentage.
- By applying a ratio to constrain the canvas proportions.

### To resize the canvas:

1. Select **Document | Resize Canvas...** from the main menu.
2. In the **Resize Canvas** dialog, configure the settings as described below.
3. Click **OK**.

### Crop Options

<b>Current Dimensions</b>	Displays the current file size and dimensions of the layer.
<b>New Dimensions</b>	Enter the desired canvas size in the <b>Width</b> and <b>Height</b> fields, or customize the unit of measurement with the drop-down menu. As the canvas size is altered, the file size is updated adjacent to <b>New Dimensions</b> .
<b>Anchor</b>	<b>Anchor</b> buttons lock layers to a specific region, such as the top left corner. The canvas will expand around the anchor.
<b>Aspect Ratio</b>	Select a ratio from the drop-down list or define a custom ratio using the <b>Custom</b> option. Ratios can be deleted by selecting them in the drop-down and clicking the <b>Delete</b> button.
<b>Resolution</b>	Use the <b>Dots Per Inch</b> field to specify a resolution.

### Histogram

The Histogram displays a graphical representation of the distribution of intensity levels of pixels for each color channel in an image.

### To Display and Use the Histogram:


1. Click **Panes | Histogram**.
2. On the Histogram, select or clear the following checkboxes:
  - **R**: Shows or hides the red color channel.
  - **G**: Shows or hides the green color channel.
  - **B**: Shows or hides the blue color channel.
  - **L**: Shows or hides the lightness of the image.

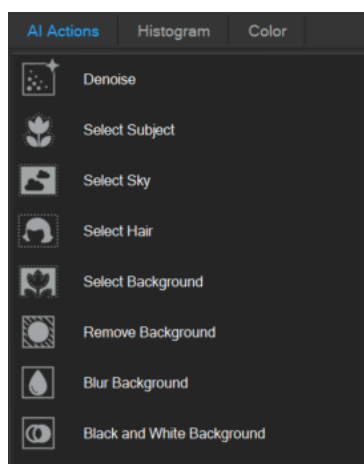
## Using AI Actions

Use AI Actions to perform complicated edits such as selecting subjects, backgrounds, skies and more with the press of a button.

### To use AI Actions:

1. Select an image and bring it in to the **Editor**.
2. In **Editor**, choose one of the 8 **AI Actions** from the **AI Actions pane** in the top right.

 If the AI Actions pane is not visible, it can be accessed by either press F11, or selecting Window at the top and clicking on AI Actions.



 Selections made with AI can be further refined by clicking **Select | Refine**.

### AI Action Tools:

There are 8 AI Actions that can be performed:

<b>Denoise</b>	Reduces noise in the image.
<b>Select Subject</b>	Selects the subject only.
<b>Select Sky</b>	Selects the sky.
<b>Select Hair</b>	Selects the subject's hair only.
<b>Select Background</b>	Selects the background of the image.
<b>Remove Background</b>	Click to isolate the subject with a masked adjustment layer and remove the background. The subject is not selected.
<b>Blur Background</b>	Click to create a masked adjustment layer to blur the background. The subject is not selected.
<b>Black and White Background</b>	Click to create a masked adjustment layer to change a colored background to a black and white background. The subject is not selected.

 In addition to the AI Actions pane, **Select Subject**, **Select Sky**, **Select Hair**, and **Select Background** can be accessed via the **Select** menu.

## Using Selections

Use selections to isolate an area of a photo in order to apply edits or filters to only that area, rather than the whole photo. Selection tools are enabled from the toolbar.

There are seven Selection tools, each for selecting an area of a photo in a unique way:

- [Rectangle](#) selection tool
- [Ellipse](#) selection tool
- [Lasso](#) selection tool
- [Polygon](#) selection tool
- [Brush](#) selection tool
- [Magic Wand](#) selection tool
- [AI Object](#) selection tool








The controls available for each Selection tool change depending on the selected tool.

Selection tools can be used with the following Edit tools:

- **Enhance:** Skin Tune
- **Add:** Vignette, Special Effects, Tilt-Shift, Drawing tools, Grain

- **Exposure/Lighting:** Exposure, Levels, Auto Levels, Tone Curves, Light EQ™, Dehaze, Dodge and Burn
- **Color:** White Balance, Color EQ, Color Balance, Convert to Black and White, Split Tone
- **Detail:** Sharpen, Blur, Noise, Clarity, Detail Brush, Chromatic Aberration

## Selection Tools

<b>Rectangle</b>		Click and drag either a rectangle that begins at the point of first click and ends where the mouse is released. Hold <b>Shift</b> when using the <b>Rectangle</b> Selection tool to make it into an equilateral <b>Square</b> shape.
<b>Ellipse</b>		Click and drag either an ellipse that begins at the point of first click and ends where the mouse is released. Hold <b>Shift</b> while using the <b>Ellipse</b> Selection tool to make it into an equilateral <b>Circular</b> shape.
<b>Lasso</b>		Click the left mouse button and drag the cursor to draw around the area to select. While drawing, a line appears showing drawn areas. Release the mouse, the end of the line automatically joins to the start of the line to complete the selection. The entire selection animates with a marching ants treatment.
<b>Polygon</b>		Click any area of the image to begin the selection. As the mouse is moved, the selection will follow the cursor. To change the direction of the selection line, click the left mouse button. Double-click to complete the selection.
<b>Brush</b>		Use the <b>Brush</b> selection tool to target a selection based on color, brightness, or a combination of both color and brightness. Select "Color", "Brightness", or "Magic" from the drop-down menu in the context bar to define the selection. Then, align the center of the brush with the color, brightness, or combination to be targeted, and begin brushing. Increase the <b>Tolerance</b> slider to include a wider range of pixels in the selection. The lower the <b>Tolerance</b> slider value, the more similar a pixel has to be to the one clicked in order to be included. You can erase the selection by right-clicking.
<b>Magic Wand</b>		Click any area of an image and all of the pixels of the same color are included in the selection. Choose whether to select only the same color pixels that are actually touching the clicked pixel, or select all the pixels in the photo that are similar. Increase the threshold to include more pixels in the selection. The lower the threshold, the more similar a pixel has to be to the one clicked in order to be included. The greater the threshold, the more different a pixel can be and still be in the selection.
<b>AI Object Selection</b>		Click and drag the cursor and loosely draw around the area that you wish to select. As you draw, a line appears showing where you have drawn. When you release the mouse, the end of the line joins to the start automatically to complete the selection. The AI will detect any object(s) within the drawn area, and create well-defined, tight selections around the objects.

## Overlay Options

The visual representation of a selection, known as an overlay, can be customized to find a visualization best suited to the selection task.

### To customize the selection overlay:


1. Select from the main menu **Select | Overlay Options....**
2. In the **Overlay Options** dialog, select one of the following overlay options:

<b>Marching Ants</b>	This option outlines the selection with animated dashes.
<b>Selection Highlighted</b>	This option highlights the selection area in the color selected from the drop-down menu. Customize the transparency of the color overlay by adjusting the <b>Opacity</b> slider.
<b>Selection Exposed</b>	This option highlights the non-selected area of an image in the color selected from the drop-down menu. Customize the transparency of the non-selected area by adjusting the <b>Opacity</b> slider.


3. Click **OK**.

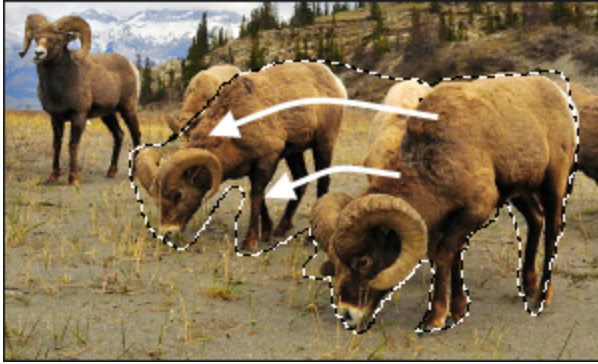
### Using the Selection Tools


#### To use the Lasso:

1. Select the **Lasso** button from the toolbar. 
2. On the image, click and hold down the left mouse button, then draw around the area to select.
3. Release the mouse button to complete the selection.




4. To clear the selection, click anywhere on the unselected part of the image (for the Lasso , Rectangle, or Ellipse selection).
5. To add to an existing selection, hold down **Shift**, or click the  **Add to selection** icon in the [Tool Properties](#) bar above the image, then draw a shape that includes any part of the original selection line. After releasing the mouse, the original selection expands to include the outer edge of the addition.



6. To add to an existing selection, hold down **Shift**, or click the  **Add to selection** icon in the [Tool Properties](#) bar above the image, and draw around any part of the image.

As long as the original selection is avoided, several separate additions can be added to an original selection.



7. To subtract from a selection, hold down **Ctrl**, or click the  **Subtract from selection** icon in the [Tool Properties](#) bar above the image, and draw a shape that includes part of the original selection, or encircles it completely.
8. To apply edits or effects to the outside areas of the image, select from the main menu **Select | Inverse** to reverse the selected area.

Inverse selection includes all of the area outside of the initial selection.






Preview the selection mask by holding down the **Preview** button.



Editing tools or special effects can be [applied to the selection](#).

### To use the Magic Wand:

1. Select the **Magic Wand** button in the toolbar. 
2. Click any color in the image.
3. Do any of the following:
  - In the Tool Properties bar above the image, slide the **Threshold** slider to adjust the number of pixels to be included or excluded. The Threshold slider sets how similar a pixel needs to be to the one originally clicked in order to be included in the selection.
  - In the Tool Properties bar above the image, enable the **Connected** checkbox to include only pixels touching the initially clicked pixel.
  - Hold down **Shift** and click around the selection to include more pixels.
  - Hold down **Ctrl** and click around the selection to remove pixels from the selection.
4. From the **Wand type** drop-down list in the Tool Properties bar, select one of the following:
  - **Brightness**: Selects pixels similar in brightness to the clicked area of the image.
  - **Color**: Selects pixels similar in hue and brightness to the clicked area of the image.



Color is generally the best option for the **Magic Wand** tool.

- **RGB**: Selects pixels with a red, green, and blue combination similar to the clicked area of the image





Preview the selection mask by holding down the **Preview** button.






Editing tools or special effects can be [applied to the selection](#).

### To use the Rectangle or Ellipse selection tool:

1. Select either the **Rectangle** or **Ellipse** button from the toolbar.  or 
2. Click and drag to draw the selection on the image.

3. Do any of the following:





- To add to an existing selection, hold down **Shift**, or click the  **Add to selection** icon in the [Tool Properties](#) bar above the image, then draw a shape that includes any part of the original selection line. After releasing the mouse, the original selection expands to include the outer edge of the addition.
- To add multiple areas to a selection, hold down **Shift**, or click the  **Add to selection** icon in the [Tool Properties](#) bar above the image, and draw around any part of the image.
- To subtract from a selection, hold down **Ctrl**, or click the  **Subtract from selection** icon in the [Tool Properties](#) bar above the image, and draw a shape that includes part of the original selection, or encircles it completely.



Preview the selection mask by holding down the **Preview** button. 

Editing tools or special effects can be [applied to the selection](#).

### To use the Polygon selection tool:

1. Select the **Polygon** button from the toolbar. 
2. Click anywhere on the image to start a selection.
3. Click again to change the direction of the selection line.
4. Double-click to complete the selection.
5. Do any of the following:
  - To add to an existing selection, hold down **Shift**, or click the  **Add to selection** icon in the [Tool Properties](#) bar above the image, then draw a shape that includes any part of the original selection line. After releasing the mouse, the original selection expands to include the outer edge of the addition.
  - To add multiple areas to a selection, hold down **Shift**, or click the  **Add to selection** icon in the [Tool Properties](#) bar above the image, and draw around any part of the image.
  - To subtract from a selection, hold down **Ctrl**, or click the  **Subtract from selection** icon in the [Tool Properties](#) bar above the image, and draw a shape that includes part of the original selection, or encircles it completely.



Preview the selection mask by holding down the **Preview** button. 

Editing tools or special effects can be [applied to the selection](#).

### To use the Brush selection tool:

1. Select the **Brush Selection** button from the toolbar.
2. In the [Tool Properties](#) bar above the image, select an option from the **Smart Brushing** drop-down list:

<b>Color</b>	Selects pixels based on how similar they are to the color value of the pixel in the center of the brush, depending on the Tolerance setting.
<b>Brightness</b>	Selects pixels based on how similar they are to the brightness value of the pixel in the center of the brush, depending on the Tolerance setting.
<b>Magic</b>	Selects pixels based on how similar they are to the combination of the color and brightness values in the center of the brush, depending on the Tolerance setting.

3. Adjust the **Tolerance** slider to increase or decrease the range of pixels selected.
4. Place the cursor over the desired color or brightness, and click and/or drag on the image to create a selection.



To remove areas from the selection, right-click and drag over the area to deselect.




To use the brush as a regular selection tool, hold down **Shift** while brushing.

You can select an editing tool or a special effect to [apply to the selection](#).




Right-click a slider to reset to the default value.

### To Use AI Object Selection:

1. Select the **AI Object Selection** button, or press **Ctrl + U**.
2. On the image, click and hold down the left mouse button as you draw around the object(s) you want to select.
3. Release the mouse button to complete the selection.
4. To add to an existing selection, hold down **Shift**, or press the **Add to selection** button in the Context bar, and draw a shape that includes any part of the original selection line. 

When you release the mouse, the original selection expands to include the outer edge of your addition.

5. To subtract from a selection, hold down **Ctrl**, or press the **Subtract from selection** button in the Context bar, and draw a shape that includes part of the original selection, or encircles it completely. 

### To use Select Background:

You can use the **Select Background** tool to automatically select the background in your image.

Click **Select | AI Select Background**, or press **Ctrl + Shift + J**.

#### To use Select Subject:

You can use the **Select Subject** tool to automatically select the subject in your image.

Click **Select | AI Select Subject**, or press **Ctrl + Shift + K**.

#### To use Select Sky:

You can use the **Select Sky** tool to automatically select the sky in your image.

Click **Select | AI Select Sky**, or press **Ctrl + Shift + Q**.

#### To use Select Hair:


You can use the **Select Hair** tool to automatically select the hair on the subject in your image.

Click **Select | AI Select Hair**, or press **Ctrl + Shift + H**.

### Combining the Tools

Selection tools can be used separately or in combination. For example, use the **Magic Wand** to select most of a particular color, then switch to the **Lasso** to add to, or subtract from, the selection. Or, use the **Rectangle** selection to select a large general area, then refine it using the **Lasso**.

#### To combine selection tools:

1. Select a tool from the toolbar and perform a selection on the image.
2. Select a second tool from the toolbar.
3. Click the **Add to selection** icon. 
4. Perform additional selections on the image.

#### Saving selections as presets:

Save customized settings as a preset for future use. After making a selection, select from the main menu **Select | Save Selection...**

To use a previously saved selection, select from the main menu **Select | Load Selection...**

To delete a saved selection, select from the main menu **Select | Manage Selections...**

#### To cut and paste selections:

1. Make a selection on an image.
2. Do one of the following:
  - Press **Ctrl + C**.
  - Select **Edit | Copy** from the main menu.
3. Do one of the following:
  - Press **Ctrl + P**.
  - Select **Edit | Paste** from the main menu.

The selection pastes onto a new layer above the selected (active) layer in the **Layer Editor** pane.

#### To delete selected pixels:

1. Make a selection on the image.
2. Select from the main menu **Select | Delete Selected Pixels**, or press **Alt + Delete**.



To retrieve deleted pixels, use the **Undo** button.

#### To create a layer mask from a selection:

See [Layer Masks](#).

#### To add or subtract a mask from a selection:

See [Layer Masks](#).

#### To intersect a mask with a selection:

See [Layer Masks](#).

### Targeting Selections

Selections can be targeted to specific color tones and brightness values, as well as skin tones.

#### To select pixels by color or tone:

1. Select from the main menu **Select | Luminance/Color Range...**
2. In the **Luminance/Color Range** dialog, configure the settings as described below.
3. Press **OK**. Your targeted color(s) or tone(s) will be selected.

#### Pixel Targeting Dialog

<b>Presets</b>	Select a saved preset from the drop-down list, or click the <b>Save</b> icon to save the settings as a new preset.
<b>Luminance Range</b>	The <b>Luminance Range</b> sliders target tones of brightness for selection.
<b>Color Range</b>	The <b>Color Range</b> wheel targets specific colors for selection.
<b>Smoothness</b>	Refines skin by suppressing texture detail.
<b>Skin Targeting</b>	<p>The <b>Skin Targeting</b> slider is used to specifically target skin tones for selection. To target skin tones, move the slider to the right to values between 0 and 100, depending on the desired intensity.</p> <p>When moving the <b>Skin Targeting</b> slider, all other colors (except for skin tones) are excluded and cannot be altered.</p> <p>To exclude unwanted skin tones from the selection, move the slider to the left to values between 0 and -100.</p>

## Channel Selection

Create a selection based on the brightness in the image. The brighter a pixel is, the stronger the selection will be on that pixel.

### To select pixels by brightness:

Select from the main menu **Select | Channel Selection**.

## Subject Selection

Isolates and selects the subject from the image's background.

### To select an image subject:

Select from the main menu **Select | Select Subject**.

## Edits and Effects

After an area of an image is selected with one of the Selection tools, apply any of the editing tools, such as color and exposure, or any of the special effects filters, to the selected area. An active selection in an image looks like a line of marching ants.

### To apply an edit or effect to a selection:

1. Use a [Selection tool](#) to make a selection.
2. From the **Filter** main menu item, select a tool to use from any of the following groups:
  - Exposure/Lighting
  - Color

- Detail
  - Add (Special Effects)
3. Use the tool to edit the image.

For the above filters, special selection options are available right-justified in the [Tool Properties Bar](#).

### Special Selection Options

<b>Use Selection</b>	Click to use the selection or apply the edit or effect to the whole image. Edit just the selection, then deselect <b>Use Selection</b> and apply another edit to the whole image without clearing the selection.
<b>Invert Selection</b>	Click to invert the selection.
<b>Feathering</b>	<p>Drag to increase or decrease the blurring between the edge of the selection and the edit or effect.</p> <p>Feathering prevents an unnatural or sharp transition between the selection and the rest of the image as it blends the edges. This control also makes it unnecessary for the selection to be perfectly on the edge of the area you want to select.</p>

### Smart Eraser

Remove unwanted objects from images by selecting or brushing them and using the **Smart Erase** tool. Smart Erase will analyze the image and predict how to best fill in the brushed or selected area. The Smart Erase prediction is based on what the image would most likely look like without the selected or brushed object(s).


- ! Smart Erase will not work as intended if more than 25% of the image is selected or brushed.

#### To erase and fill a selection:

1. Select a Selection tool from the toolbar.
2. Select the area of the image to be filled by the Smart Eraser.
3. Select from the main menu **Select | Smart Erase** to apply the Smart Eraser.
4. Repeat until the desired look is achieved.

- ! When using the **Brush selection tool**, the **Strength** slider must be set to 50 or more.

#### To erase and fill using the Smart Erase brush:

1. Select the **Smart Erase brush** from the toolbar. 
2. Brush over the area to be filled.
3. Release the mouse button to apply the fill.
4. Repeat until the desired look is achieved.

## Channel Selections

Images store color information in Color Information Channels.

### Color Information Channels

When a new image is opened, Color Information Channels are automatically created. The number of color channels created is determined by the image's color mode. Each color of an RGB image, for example, has a channel for each color (Red, Green, and Blue).

 To preserve an image's Color Information Channels, save files in a format that supports the image's color mode.

### To open the Channel Selection dialog:

In the **Editor**, select from the main menu **Select | Channel Selection...** or press **Ctrl + Alt + L**.

### Channel Selection Dialog Interface

The **Channel Selection** dialog interface is divided between four distinct areas:

- **Channel Type**
- **Levels**
- **Preview**
- Button bar

The **Channel Type** field set lists all channels in the image grouped by type:

- **RGB** (Red Blue, Green)
- **CMYK** (Cyan, Magenta, Yellow, Black)
- **LAB** (L for perceptual lightness, A and B for Red, Green, Blue and Yellow)
- **HSL** (Hue, Saturation, Lightness)

The **Levels** group contains a three-tabbed slider and associated graph for displaying adjustments made to the selected channel type. An **Invert** check box is available for selecting the inverse polarity of the image.

The **Preview** pane displays the latest mask for the original image. Directly below the image are a zoom slider, a numeric input zoom field, a Full Screen icon, and a 1:1 icon for displaying the original image with its original dimensions.

The button bar resides at the bottom of the dialog and contains a **Help** button, the **Set as selection** button, and the **Cancel** button. See the table below for an explanation of the button functionality.

<b>Set as selection</b>	Makes the edits in the <b>Channel Selector</b> the current selection in the <b>Preview</b> pane.
<b>Cancel</b>	Closes the <b>Channel Selection</b> dialog without taking any action.

### To edit an image through Channel Selection:

1. Select from the main menu, **Select | Channel Selection...**, or press **Ctrl + Alt + L**.
2. In the **Channel Selection** dialog, enable a **Channel Type**.
3. Make fine adjustments in the **Levels** group.
4. Do one of the following:
  - Click the **Set as selection** button,
  - Click the **Cancel** button.

### Introduction to Layers

Layers allow work to be done on a single element of an image without disturbing the others. The **Layers** pane is used to add effects and shapes to an image, each in their own layer, as well as perform photo manipulations, create composite images, and much more. Using sliders, layers can be made transparent or opaque by subtle degrees. Layers are stacked and ordered above an image to achieve the level of desired visibility for the elements added to each layer. Layers can also be hidden.

Layers can be used in conjunction with image effects and adjustment tools, drawing tools, text, and more. Effects and adjustments will be applied to the layer selected in the **Layers** pane. A blank image can also be created and other elements layered on top of it.



Geometry adjustments are applied to all layers.



Watermarks can be added to new layers.

### Layer Editor

The **Layers** pane is used to add effects and shapes to photos in layers, perform photo manipulations, create composite images, and much more. Layers allow work to be performed on a single element of an image without disturbing other layers. Layer attributes such as transparency and opacity are adjustable, and when layers are stacked, the desired level of visibility can be achieved in a non-destructive arrangement.

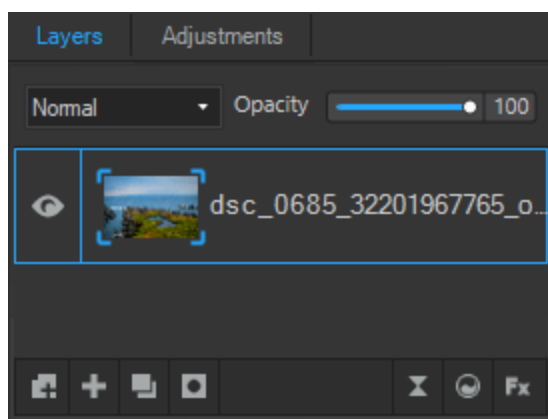
Layers can also be hidden or employed in conjunction with image effects and adjustment tools, drawing tools, text, and more. Effects and adjustments are applied to the layer selected in the **Layers** pane. For better visibility of difficult elements, create a blank image and layer the transparencies or elements of a similar color range on top of the blank.

 Geometry adjustments are applied only to the selected layer.

 Watermarks can be added to new layers.


### To open the Layers pane:

1. With an image open, select **Window | Layers** from the main menu.
2. In the **Layers** pane, the opened image is represented as "Layer 1".
3. Either edit the original photo, or add additional layers containing other photos or drawing elements, such as shapes.
4. Optionally, create a [mask](#) to hide or reveal portions of the layers below.




### Adding Layers

#### To add a layer:

1. Do one of the following:
  - Click the **Add blank layer** button at the bottom of the **Layers** pane. 
  - Select **Layer | New Blank Layer** from the main menu.
2. Edit a layer by first selecting the layer in the **Layers** pane.

#### To add another image to the Layers pane:

Do one of the following:

- Click the **Add a File as a Layer** button at the bottom of the **Layers** pane. 
- Select **Layer | Add a File as a Layer...** from the main menu.

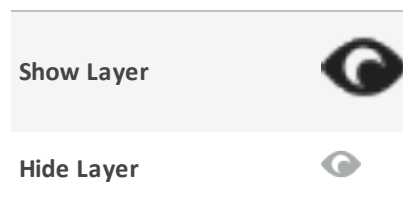
## Layer Visibility

### To set layer visibility:

To show or hide all layers, do one of the following:

- Select **Layer | Show All Layers** from the main menu, or press **Shift + J**.
- Select **Layer | Hide All Layers** from the main menu, or press **Ctrl + Shift + Y**.

To show or hide individual layers, select the layer and click the **Show/Hide Layer** button.



## Layer Manipulation

### To delete a layer:

Select the layer and click the **Delete Layer** button. 

### To duplicate a layer:

Select the layer to be duplicated and click the **Duplicate** button. 

### To move a layer:

In the **Layers** pane, select the layer and drag it up or down.

### To name a layer:

1. To rename a layer from "Layer 1", etc, select the layer and right-click.
2. Select **Rename Layer** from the context menu.
3. In the **Rename Layer** dialog, enter a layer name.
4. Click **OK**.

## Layer Merge and Flatten

### To merge a layer:

Merge a layer with the layer below.

1. Select the top layer, or a layer above another.

2. Click the **Merge Layer Down** button. 

### To flatten an image:

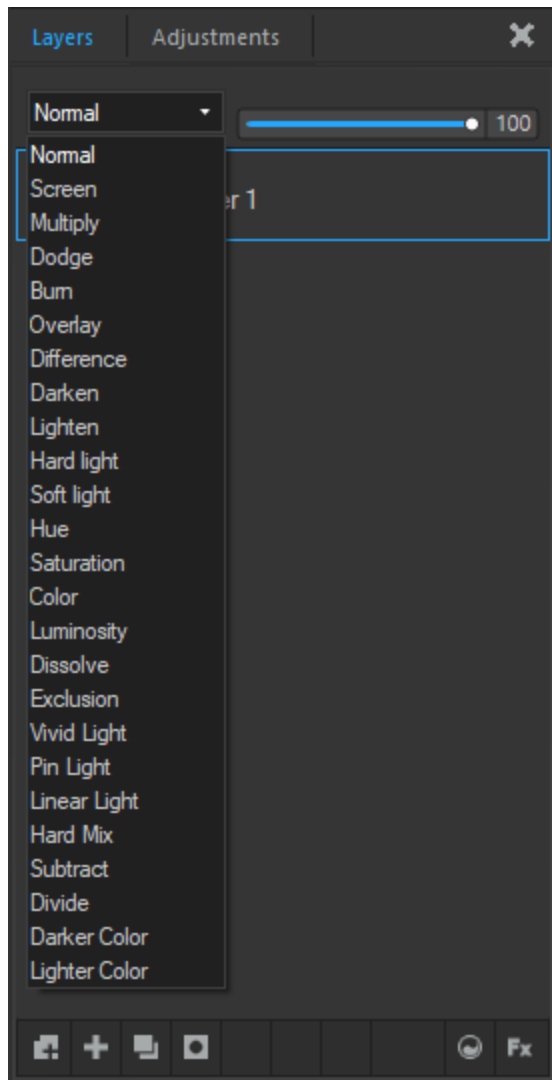
To merge all layers into a single image, do the following:

- Select **Layer | Flatten Image** from the main menu.

### Layer Blend Mode and Opacity

#### To change a layer's Blend Mode and Opacity:

Blend modes determine how the layers blend together. Blending is assigned to the layer it is applied to, regardless of the layer order being changed. Opacity determines the layer's transparency.



1. Select a layer.
2. Select a **Blend Mode** from the drop-down menu at the top of the **Layers** pane.
3. Move the **Opacity** slider at the top of the **Layers** pane.

### Saving Layered Images

When saving a layered image, the **Save Image As** dialog opens with the file format set to *.gsd* by default. By saving in the *.gsd* file format, layers will remain accessible if re-opening the image in Gemstone in the future.



The *.gsd* file format will not be displayed in the **Save Image As** dialog by default if the image has been flattened or all layers merged.

The *.gsd* file format saves in 8 bits per channel by default for all bit depth images. Save in 16 bits per channel for images that already have 16 bits per channel data, such as RAW files, 64-bit TIFF files, etc. This will allow for a higher quality image, but will also create a larger file size. To save in 16 bit, enable the **16 bit per channel data** checkbox in the **Save Image As** dialog box. When using the 16-bit option to save images that have lower than 16 bits per channel data, the image will be saved as 8 bits per channel.

To add a layer mask, see [Layer Masks](#).

## Adjustment Layers

The **Adjustments** tab of the **Layers** pane can be used to non-destructively adjust and add effects to images. Adjustment layers stack in the **Layers** pane, allowing individual layers to be revisited at any time and for adjustments to be made to each effect. Each adjustment layer includes a mask by default.


By saving an image with adjustment layers as an *.gsd* file, the file can be reopened and adjustments made for each effect at any time.



For best results, make all global adjustments prior to adding adjustment layers.

### To add an Adjustment Layer:

With an image open, do one of the following:

- Select **Layer | New Adjustment Layer** from the menu.
- In the Layers pane, select the **Adjustments** tab, then click an adjustment layer icon. 

The adjustment layer is added above the image in the Layers pane. The adjustment layer settings appear at the bottom of the panel. Configure the settings as described below.

### To apply an Adjustment Layer to a particular image:

If there are multiple images in the Layers pane, adjustment layers can be restricted to a specific image.

To apply an adjustment layer only to the closest image layer below it, enable the **Clipping** button.



Clipping off



Clipping on

Enable multiple clipping buttons to apply multiple adjustment layers to one particular image layer.

## Adjustment Layers and Settings

### Exposure

<b>Exposure</b>	Drag the slider to the right to increase exposure, or drag to the left to decrease exposure.
<b>Contrast</b>	Drag the slider to the right to increase contrast, or drag to the left to decrease contrast.

### Levels

- Use the buttons on the right of the Levels panel to select Luminance, Red, Green, or Blue as the channel to adjust.
- Use the arrows at the bottom of the panel to adjust the shadows, midtones, and highlights. Move the shadows arrow to define the blackest area of the image. Move the midtones arrow to define the midtone. Move the highlights arrow to define the whitest area of the image.

### Curves

Use the buttons on the right of the Curves panel to select the RGB, Red, Green, or Blue color channel to adjust.

See [Adjusting Tone Curves](#).

### Light EQ™

<b>Brighten</b>	Drag the slider to increase the brightness of dark areas in your image.
<b>Darken</b>	Drag the slider to decrease the brightness of light areas in your image.

### White Balance

<b>Temperature</b>	Adjusts the warmth of the correction, from blue to yellow.
<b>Tint</b>	Adjusts the tint of the correction, from magenta to green.

### Vibrance

<b>Vibrance</b>	Drag the slider to the right to increase vibrance, or to the left to decrease vibrance. Increasing vibrance does not affect skin tone in an image. This is unlike saturation, which intensifies all colors equally.
<b>Saturation</b>	Drag the slider to the right to increase saturation, or to the left to decrease saturation.
<b>Hue</b>	Adjusts the hue of the image. Drag the slider to the right to increase or drag to the left to decrease hue.
<b>Lightness</b>	Adjusts the image brightness. Drag the slider to the right to increase or drag to the left to decrease the image's brightness.

## Color EQ

Choose the Saturation, Hue, or Brightness tab and adjust colors individually by dragging the sliders.

<b>Vibrance</b>	Drag the slider to adjust the vibrance of the image without affecting skin tones.
<b>Saturation</b>	Adjusts from saturation to grayscale.
<b>Hue</b>	Changes the color's hue.
<b>Brightness</b>	Adjusts the light or dark tones in the image.

## RGB

Adjust the Red, Green, or Blue sliders to balance or heighten the RGB channels in the image.

## Add Color

- Select a color to add to your image.
- Use the Density slider to specify the strength of the added color.

## Black And White

Adjust the Red, Green, or Blue sliders to add color back into the black and white image.

<b>Brightness</b>	Adjusts the brightness of the colors in the image.
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## Negative

The **Negative** adjustment layer creates a negative out of the image. There are no settings for this adjustment layer.

## Photo Effect

Select a photo effect from the drop-down menu to change the look and feel of your image.



Use the mouse wheel to quickly scroll through the photo effects.

## Skin Tune

<b>Smoothing</b>	Refines skin by suppressing texture detail.
<b>Glow</b>	Increases the brightness of skin while subtly smoothing.
<b>Radius</b>	Specifies the scale of the texture detail that is affected by the effect. A lower value enhances small details, while a large value enhances larger details.

## Sharpen

<b>Strength</b>	Specifies the strength of the sharpening applied by increasing contrast around edges.
<b>Radius</b>	Controls the number of pixels to adjust around each edge. Higher values increase the number of sharpened pixels and tend to bring out coarser detail, while lower values reduce the number of sharpened pixels and tend to bring out finer detail.
<b>Detail</b>	Suppresses the halo, (the light border that forms around edges with extreme sharpening), by reducing its intensity. The higher the value, the stronger the reduction.
<b>Threshold</b>	Specifies how different the pixel lightness values within an edge must be before the pixels within the edge are sharpened. Higher values sharpen only stronger edges but minimize the appearance of noise. Lower values sharpen both strong and weaker edges, but can increase the appearance of noise. We recommend you set the threshold to enhance edges while keeping background noise to a minimum.

## Blur

Select the Gaussian or Directional button to select the type of blur.

<b>Gaussian</b>	Produces an even, smooth blur.
<b>Strength</b>	Specifies the strength of the blur. Move the slider to the right to intensify the effect.
<b>Directional</b>	Produces a blurring effect that gives the illusion of movement.
<b>Strength</b>	Specifies the strength of the blur. Move the slider to the right to intensify the effect.
<b>Angle</b>	Specifies the direction of the blur effect.

## Noise Reduction

<b>Luminance</b>	Removes the random variations of brightness in the noise.
<b>Strength</b>	Drag the slider to the right to control how aggressively to reduce noise. Prevent the loss of detail by balancing Luminance with Strength.
<b>Color</b>	Reduces the random variations of color in the noise.
<b>Tonal Range</b>	<p>Tonal Range refers to a range of average brightness values in an image. For example, the tonal range of a photo taken in a dark cavern it would be low, whereas a sunny sky would be high.</p> <p>The Tonal Range slider increases in value from left to right, increasing from a low tonal range on the left to a high tonal range on the right. The Tonal Range slider is used to focus noise reduction to areas of the image that have a corresponding tonal range. For example, the left-most position would reduce the noise in a cavern more than a sky.</p> <p>Tonal Range only affects luminance noise reduction.</p>
<b>Frequency Range</b>	<p>The Frequency Range slider adjusts the noise pattern. High frequency noise looks like fine static while low frequency noise looks like coarse grain or "splotches". Move the Frequency Range slider to the left to limit noise reduction to high frequency noise.</p> <p>Frequency Range affects both luminance and color noise reduction.</p>

## Split Tone

<b>Highlights Hue</b>	Drag the slider to the right to select a highlight color.
<b>Highlights Saturation</b>	Drag the slider to the right to increase saturation of the specified color in the highlights of the image.
<b>Shadows Hue</b>	Drag the slider to the right to select a shadow color.
<b>Shadows Saturation</b>	Drag the slider to the right to increase saturation of the specified color in the shadows of the image.
<b>Balance</b>	Drag the slider to the right to emphasize the highlight color; drag the slider to the left to emphasize the shadow color. For example if the slider is set to the maximum at 50, then full emphasis is applied to the highlight color; if the slider is set to the minimum -50, then full emphasis is applied to the shadow color.

## Clarity

<b>Clarity</b>	Drag the slider to the right to enhance texture in the image. Drag the slider to the left to smooth out texture in the image.
<b>Orton</b>	Drag the slider to enhance local contrast while subtly smoothing texture.
<b>Soft Light</b>	Drag the slider to increase brightness while subtly smoothing texture.
<b>Tonal Width</b>	Drag the slider to control the amount shadow and highlights are affected by the Clarity, Orton, and Soft Light sliders. Choose a value of 0 to restrict the adjustments to midtones. Choose a value of 100 to apply the adjustments equally in all tones.
<b>Radius</b>	Drag the slider to control the scale of the texture detail being affected. Choose a value of 0 to enhance small details, or a value of 100 to enhance larger details.
<b>Enhanced edge processing</b>	Select this checkbox to reduce the appearance of halos around edges with enhanced texture, and to minimize the softening of edges when texture is smoothed.

### **Dehaze**

Drag the slider to adjust the strength of the contrast, detail, and color correction.

### **Gradient Map**

<b>Shadows</b>	Specify the color to be added to the dark parts of the image.
<b>Highlights</b>	Specifies the color to be added to the light parts of the image.

### **Vignette**

<b>Strength</b>	Specifies the size and intensity of the vignette.
<b>Distance</b>	Specifies the size of the clear area around the focal point in the portrait. Drag the slider to the left to reduce the size of the clear area. Drag the slider to the right to increase the size of the clear area.
<b>Shape</b>	Specifies the shape of the frame.

### **Posterize**

See [Applying a Posterize Effect](#).

### **Threshold**

Use the slider to select a brightness level. All pixels brighter than that brightness will become white, and every darker pixel will become black.

## Color LUTs Layer Options

Select a Color LUT from the drop-down menu. Or click the **Import LUTs** button to import a new LUT.

### Frequency Separation

By separating images into high frequency and low frequency layers, Frequency Separation negates image imperfections while retaining detail and texture.

#### To Apply Frequency Separation:

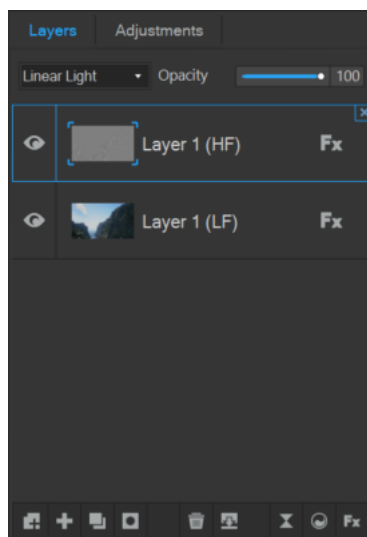
1. With an image selected in the **Layers** pane, do one of the following:
  - Right-click the layer and select **Frequency Separation**.
  - Select **Layer | Frequency Separation** from the main menu.
  - Press **Ctrl + Shift + F**.
2. In the **Frequency Separation** pane, adjust the **Blur Radius** slider to determine how much detail is visible in the high frequency layer, and, by contrast, to determine the blur level of the low frequency layer. Toggle the view of each layer using the **High Frequency** and **Low Frequency** radio buttons. Please note that these buttons do not impact the **Blur Radius** setting.



It is recommended to select a setting in which the details just become visible in the high frequency layer.

3. Click **Done**.

A frequency separated image is separated into two layers: High Frequency (HF) and Low Frequency (LF). The Low Frequency layer contains the tones, colors, and shadows of the image, and will appear blurry on its own. This is because the texture information is stored on the High Frequency layer.



## Retouching Images

By isolating adjustments to one layer or the other, it is possible to repair flaws while maintaining a natural look.

Approach retouching with Frequency Separation in two ways:

- Low Frequency Layers
- High Frequency Layers

### Low Frequency Layer

Use blurring on the Low Frequency layer to smooth out lighting inconsistencies and splotchiness. With the Low Frequency layer selected, use the **Detail Brush** or **Blur** tool, or apply blurring to specific areas by using a selection tool or brush.

### High Frequency Layer

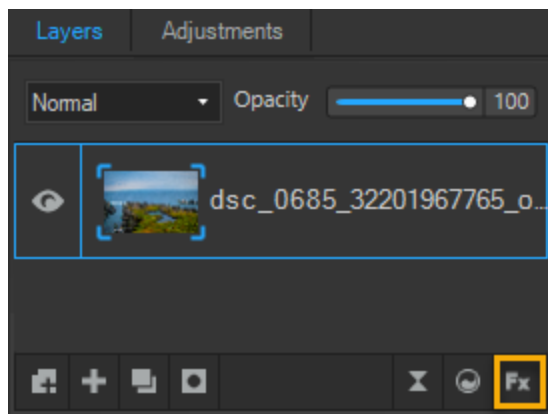
Use cloning on the High Frequency Layer to even texture and correct detail-related flaws. With the High Frequency layer selected, use the **Repair** tool to apply cloning.



Increase sharpening by duplicating the high frequency layer one or more times.


## Layer Effects

Layer effects added to either regular images or text layers appear between layers. Layer effects cannot be added to any adjustment layer, regardless of the layer type. Saving a images with layer effects as *.gsd* files allows the images to remain editable for future work using Gemstone.



### To add layer effects:

1. In the **Layers** pane, select the layer to add effects.
2. Do one of the following:

- At the bottom of the **Layers** pane, click the **Layer Effects** button. 
  - In the **Layers** pane, right-click the layer and select **Layer Effects...** from the context menu.
  - Select **Layer | Layer Effects...** from the main menu.
  - Press **Ctrl + Alt + X**.
3. In the **Layer Effects** dialog, enable the checkboxes of desired effects. Configure the settings as described below.
  4. Click the **Close** button. Closing the **Layer Effects** dialog does not remove or disable layer effects. By saving a layered image as an *.gsd* file, the image can be re-opened in Gemstone for future work.

### Layer Effects Options

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**Inner Glow**

<b>Thickness</b>	Specifies the thickness of the glow effect. Drag the slider to set the thickness.
<b>Blur</b>	Blurs the edges of the glow. Drag the slider to determine how much blur is applied.
<b>Opacity</b>	Specifies the opacity of the glow. Type a number from 1 to 99 or drag the slider to adjust the opacity of the glow. The higher the opacity, the more visible the glow is.
<b>Blend Mode</b>	Specifies how the effect blends with the layer. Select a blend mode from the drop-down menu.
<b>Color</b>	Specifies the color of the glow. Click the color picker to select a different color. See <a href="#">Using the Color Dialog Box</a> .

**Inner Shadow**

<b>Blur</b>	Blurs the edges of the shadow. Drag the slider to determine how much blur is applied.
<b>Distance</b>	Specifies the size of the shadow according to the angle setting. Drag the slider to adjust how far the shadow encroaches on the layer.
<b>Opacity</b>	Specifies the opacity of the shadow. Type a number from 1 to 99 or drag the slider to adjust the opacity of the shadow. The higher the opacity, the more visible the shadow is.
<b>Blend Mode</b>	Specifies how the effect blends with the layer. Select a blend mode from the drop-down menu.
<b>Angle</b>	Specifies the angle of the shadow. Type a number from 1 to 360 or drag the arrow to adjust the angle.
<b>Color</b>	Specifies the color of the shadow. Click the color picker to select a different color. See <a href="#">Using the Color Dialog Box</a> .

**Bevel**

<b>Elevation</b>	Specifies the visibility of the bevel effect. As the Elevation slider is reduced, the layer darkens, making the effect stand out more.
<b>Radius</b>	Specifies how spread out the bevel is.
<b>Light Source</b>	Specifies an imaginary light source. Click and drag the glow on the ball to reposition the imaginary light source.

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**Outline**

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<b>Thickness</b>	Specifies the thickness of the outline effect. Drag the slider to set the thickness.
<b>Blur</b>	Blurs the edges of the outline. Drag the slider to determine how much blur is applied.
<b>Opacity</b>	Specifies the opacity of the outline. Type a number from 1 to 99 or drag the slider to adjust the opacity of the outline. The higher the opacity, the more visible the outline is.
<b>Color</b>	Specifies the color of the outline. Click the color picker to select a different color. See <a href="#">Using the Color Dialog Box</a> .

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<b>Blur</b>	
<b>Strength</b>	Specifies the strength of the blur. Move the slider to the right to intensify the effect.

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<b>Shadow</b>	
<b>Blur</b>	Blurs the edges of the shadow. Drag the slider to determine how much blur is applied.
<b>Distance</b>	Specifies the size of the shadow according to the angle setting. Drag the slider to adjust how far the shadow encroaches on the layer.
<b>Opacity</b>	Specifies the opacity of the shadow. Type a number from 1 to 99 or drag the slider to adjust the opacity of the shadow. The higher the opacity, the more visible the shadow is.
<b>Angle</b>	Specifies the angle of the shadow. Type a number from 1 to 360 or drag the arrow to adjust the angle.
<b>Color</b>	Specifies the color of the shadow. Click the color picker to select a different color. See <a href="#">Using the Color Dialog Box</a> .

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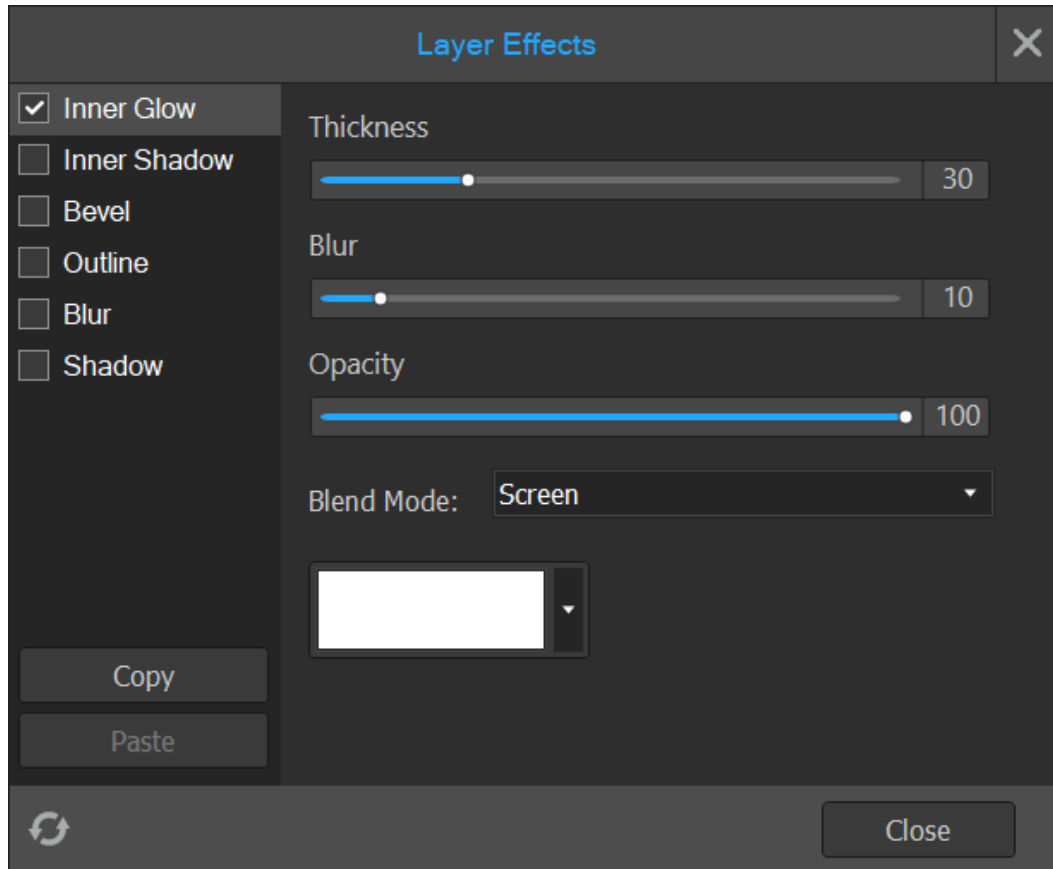
 When clipping an [Adjustment Layer](#) to a text or image layer with layer effects applied to it, the layer effects will not be affected.




To continue to edit an image's Layer Effects at a future date, when rasterizing a text layer with layer effects applied, do not rasterize its layer effects.

**To copy and paste layer effects:**

1. Configure the desired layer effects settings in the **Layer Effects** dialog.
2. Click the **Copy** button.
3. Select another image or text layer. (The bottom layer cannot be selected.)
4. In the **Layer Effects** dialog, click the **Paste** button.



### To reset all layer effects settings:

In the **Layer Effects** dialog, click the **Reset** button. 

### Layer Masks

Layer masks control a layer's level of transparency. While it is easy to control the opacity of a layer globally using the **Opacity** slider, layer masks are useful for targeting a particular part of a layer. Use layer masks to hide or reveal portions of the layer beneath. Layer masks are effective for combining multiple images into a single image or for making localized adjustments.


### Layer Mask Example

To help understand how masks are related to layers, start with a black layer mask completely covering the layer below it. Paint the black layer mask with a white brush to brush "holes" through the mask,

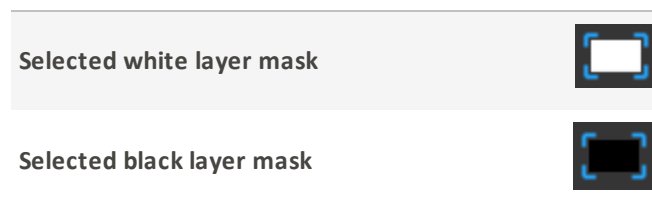
allowing the layer below mask to become visible through the holes. Conversely, a white layer mask is transparent and completely displays the layer below it and painting on the white layer mask with a black brush will mask the image, covering the layer below.

### To create a layer mask:

Do one of the following:

- In the **Layers** pane, right-click a layer to add a layer mask to and select **Set Mask White** or **Set Mask Black**.
- Select **Layer | Mask | Set Mask White** or **Set Mask Black** from the main menu.
- At the bottom of the **Layers** pane, click the **Add layer mask** button. 

The layer mask appears in the **Layers** pane as a white or black box adjacent to the thumbnail of the selected layer. To perform actions on the layer mask, select the mask in the **Layers** pane. Alter the opacity of the layer mask by dragging the Opacity slider at the top of the **Layers** pane. Adjustment tools can also be applied to selected layer masks.



### To disable a mask:

1. Select the mask in the **Layers** pane.
2. Do one of the following:
  - Right-click the mask and select **Disable mask** from the context menu.
  - In the **Layers** pane, after selecting the mask, click the **Disable mask** button.
  - Select **Layer | Mask | Disable Mask** from the main menu.
  - Press **Ctrl + Shift + M**.

### To enable a mask:

1. Select the mask in the **Layers** pane.
2. Do one of the following:
  - Right-click the mask and select **Enable mask** from the context menu.
  - In the **Layers** pane, after selecting the mask, click the **Enable mask** button.

- Select **Layer | Mask | Enable Mask** from the main menu.
- Press **Ctrl + Shift + M**.

## Mask Properties

The properties of each layer mask on each individual layer are adjusted in the **Mask Properties** panel. Adjustments made in the **Mask Properties** panel are non-destructive, meaning adjustments can be made at any time throughout the editing process.

### To access the Mask Properties panel:

Select the mask in the **Layers** pane. The **Mask Properties** panel is displayed as a movable pane adjacent to the selected mask in the **Layers** pane.

The following adjustments can be made to a layer mask:

<b>Feathering</b>	Non-destructively feathers the mask to avoid sharp edges or a stark contrast between the mask and the layer. Move the slider to blur the edges of the mask.
<b>Show Overlay</b>	Displays the overlay as a visual indicator residing on top of the image.
<b>Disable/Enable Mask</b>	Toggles between disabling the mask and enabling the mask.
<b>Invert</b>	Non-destructively inverts the mask. Turns a white mask black, and a black mask white.

### Displaying a mask overlay:

Make masks easier to see by enabling the **Show Overlay** checkbox in the **Mask Properties** panel.

### To customize the Mask Overlay:

1. Right-click a mask in the **Layers** pane and select **Mask Overlay Options...** from the context menu.
2. In the **Mask Overlay Options** dialog, select one of the following overlay options in the left-hand section:

<b>Mask Highlighted</b>	Highlights the mask in the selected color. Select a color from the drop-down menu and customize the transparency of the mask overlay by using the Opacity slider in the right-hand section of the dialog.
<b>Mask Exposed</b>	Highlights the non-masked areas of a layer in the selected color. Select a color from the drop-down menu and customize the transparency of the unmasked area by using the Opacity slider in the right-hand section of the dialog.

3. Click **OK**.



The mask overlay is only visible when the layer is selected.

### To edit a layer mask:

Select the layer mask in the **Layers** pane, then choose any adjustment, drawing, or selection tool.

### Mask Flexibility

Create or modify selections from masks.

### To create a layer mask from a selection:

1. Make a selection in the Display Area.
2. Go to **Layer | Mask | Add Mask to Selection**.

Or:

1. Make a selection in the Display Area.
2. Click the **Add layer mask** button. Or add any adjustment layer by selecting one of the icons from the bottom of the **Layers** pane to automatically make a mask from the selection.

Or:

1. Make a selection in the Display Area.
2. Right-click the layer in the **Layers** pane and select **Mask From Selection** from the context menu.

### To add a mask to a selection:

1. With the mask selected in the **Layers** pane, make a selection.
2. Right-click the mask and select **Add Mask To Selection**.

### To subtract a mask from a selection:

1. With the mask selected in the **Layers** pane, make a selection.
2. Right-click the mask and select **Subtract Mask From Selection**.

### To select the area common to the mask and the selection:

1. With the mask selected in the **Layers** pane, make a selection.
2. Right-click the mask and select **Intersect Mask With Selection**.

### To delete selected mask pixels:

See [Using Selections](#).

## Creating Layer Masks From Specific Colors and Tones

Create masks from specific targeted colors and/or tones, including skin tones.

### To create a layer mask by targeting colors or tones:

1. Select a layer and [set a white or black mask](#).
2. Right-click the mask and select **Pixel Targeting...** from the context menu.
3. In the **Pixel Targeting** panel, [configure the settings](#).
4. Click **OK**. The mask is created from the targeted color(s) and/or tone(s).

## Creating Layer Masks From Images

Copy color images and paste them as grayscale (luminance) masks on other layers, including adjustment layers.

### To create a mask from an image:

1. Do one of the following:
  - Right-click an image in the **Layers** pane and select **Copy** from the context menu.
  - With an image selected in the **Layers** pane, select **Edit | Copy** from the main menu.
2. Select a layer in the **Layers** pane and do one of the following:
  - Right-click the layer and select **Paste as Mask** from the context menu.
  - Select **Edit | Paste as Mask** from the main menu.
  - Select **Layer | Mask | Paste as Mask** from the main menu.

## Text Layers


Add text as a layer by using the **Text** tool. Adjusting the opacity of the text creates a watermark effect, which is useful for placing copyright information on photos.

Images with text layers can be saved as *.gsd* files, which allow layers to remain editable for future work on the image using Gemstone.



[Layer effects](#) can be added to text layers.

### To add text as a layer:

1. Select the **Text** tool from the Toolbar. 
2. Click a text destination area in the image. A text box is added to the image and a text layer appears at the top of the **Layers** pane.

3. Click and drag the text marquee to reposition the text anywhere on the image, or drag the marquee's handles to resize the text. In the **Context** bar above the image, select or enter a specific point size in the **Size** field.



Press the **Shift** key while resizing to transform the text without maintaining aspect ratio.

4. Type a text message in the text box. Each time another text box is added, a new text layer is added to the **Layers** pane. Selecting a text layer on an image also selects the layer in the **Layers** pane.
5. In the **Context** bar, use the drop-down menus to specify the font and formatting options, such as italics or justification, and the color of the text.
6. At the top of the **Layers** pane, drag the **Opacity** slider to specify the transparency of the text.
7. At the top of the **Layers** pane, select an option from the **Blend Mode** drop-down list to specify the amount of blend between the text and the underlying image.



Filters cannot be entered while a text layer is selected. Trying to enter a filter will prompt a warning asking to rasterize the text layer. The text layer will no longer be editable after rasterizing.



While text layers cannot be merged with other text layers, text can be merged with regular image layers, which rasterizes the text. The text layer will no longer be editable after rasterizing.



Adjustment layers can be added above text layers and clipped directly to text layers. See Using Adjustment Layers.



It is possible to add a mask to a text layer, but if the text layer is moved, only the text layer will be moved.



Select the text layer to modify a text layer, including customizing style settings.

Typical keyboard shortcuts, such as **Ctrl + C**, **Ctrl + V**, **Ctrl + A**, etc, will work in text boxes. It is also possible to use **Home**, **End**, **Ctrl + Home**, and **Ctrl + End** to move the cursor to the beginning or end of the text.

Use **Ctrl + Z** to undo recent changes when editing within a text box. However, using the **Undo/Redo** buttons will undo and redo entire text actions, such as adding a text box.

Apply **Alt** codes in text boxes using the following keyboard shortcuts to add copyright information to your images:

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® (Registration symbol)	Alt + 0174
© (Copyright symbol)	Alt + 0169
™ (Trademark Symbol)	Alt + 0153

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## Rasterizing Text

It is good practice to select multiple text layers and rasterize once, rather than rasterizing layer by layer.

### To rasterize text:

With a text layer selected, do one of the following:

- Select **Layer | Rasterize Text Layer** from the main menu.
- Press **Ctrl + Shift + T**.
- Right-click a text layer in the **Layers** pane and select **Rasterize Layer** from the context menu.

## Introduction to Filters

While it is true that some filters use complex algorithms, others are almost identical to their equivalent adjustment layers.

There are two defining characteristics of filters:

- They allow for much greater control and customization than adjustment layers do.
- They are destructive operations.

Filters in Gemstone are accessed by selecting **Filter** from the main menu.

Filters are categorized under the following sub-menu headings:

- AI
- Enhance
- Add
- Geometry
- Exposure and Lighting
- Color
- Detail

## AI Denoise

AI Denoise is an advanced noise reduction tool that uses machine learning to reduce grain and sensor noise in photos, especially those taken in low-light or high ISO conditions. This feature intelligently distinguishes between image detail and noise, preserving edges, textures, and color accuracy.

### How to Apply AI Denoise:

AI Denoise can be applied in the Editor.

#### Applying AI Denoise:

With an image open in the **Editor**, perform one of the following:

- Click on **Denoise** within the **AI Actions** pane.
- Press **Ctrl + Alt + K**.
- Click on **Filter** in the top dropdown menu and select **AI | Denoise**.



Processing time depends on your system hardware and the size of the image selected.

#### Settings:

There are five option settings:

<b>100% Preview</b>	Click on the preview to compare the image before and after filtering.
<b>Strength</b>	Adjust the slider to increase or decrease the amount of influence the AI has in the enhancement.
<b>Pixel Targeting</b>	Enables the Pixel Targeting pane.
<b>Blending</b>	Sets the currently active blending mode.
<b>Opacity</b>	Sets the opacity of the denoise.

## AI Face Edit

Using ACDSee Gemstone Photo Editor 16's AI Face Edit tool, you can make fine-tuned adjustments to a variety of facial features.



You can [save your settings as a preset](#) for future use.

#### To Use AI Face Edit:

Click on **Filter | AI | Face Edit**, or press **Ctrl + Alt + G**. This will load face data that you can adjust.

Press the + to expand and - to collapse a group. Use the sliders within a group to make adjustments to each feature.

<b>Section</b>	<b>Option</b>
<b>Face</b>	<b>Face Width</b>
	<b>Jawline</b>
	<b>Jaw Length</b>
	<b>Chin Size</b>
	<b>Forehead</b>
	<b>Cheekbones</b>
<b>Eyes</b>	<b>Size Left</b>
	<b>Size Right</b>
	<b>Height Left</b>
	<b>Height Right</b>
	<b>Width Left</b>
	<b>Width Right</b>
	<b>Spacing</b>
	<b>Direction Horizontal</b>
	<b>Direction Vertical</b>
	<b>Sharpen</b>
<b>Whitening</b>	



Next to some of the features under Eyes, such as Size Right and Size Left, you'll notice a chain-link icon. Selecting this locks left and right options together to ensure that any adjustment made to one side will be symmetrically applied to the other side.

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<b>Eyebrows</b>	<b>Inner Length Left</b>
	<b>Inner Length Right</b>
	<b>Outer Length Left</b>
	<b>Outer Length Right</b>
	<b>Thickness</b>
	<b>Tapering</b>
<b>Nose</b>	<b>Height</b>
	<b>Width</b>
	<b>Tip Length</b>
	<b>Tip Width</b>
	<b>Contouring</b>
<b>Mouth</b>	<b>Smile</b>
	<b>Whiten Teeth</b>
	<b>Upper Lip Thickness</b>
	<b>Lower Lip Thickness</b>
<b>Hair</b>	<b>Color Wheel</b>
	<b>Limit to natural hair colors</b>
	<b>Temperature</b>
	<b>Tint</b>
	<b>Saturation</b>
	<b>Shadows</b>
	<b>Midtones</b>
	<b>Highlights</b>
<b>Sharpness</b>	

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<b>Skin</b>	<b>Smooth Wrinkles Left</b>
	<b>Smooth Wrinkles Right</b>
	<b>Smooth Crows Feet Left</b>
	<b>Smooth Crows Feet Right</b>
	<b>Smoothing</b>
	<b>Glow</b>
	<b>Spotch Removal</b>
<b>Makeup</b>	<b>Lip Saturation</b>
	<b>Lip Hue</b>
	<b>Blush</b>
	<b>Upper Eyeshadow</b>
	<b>Lower Eyeshadow</b>

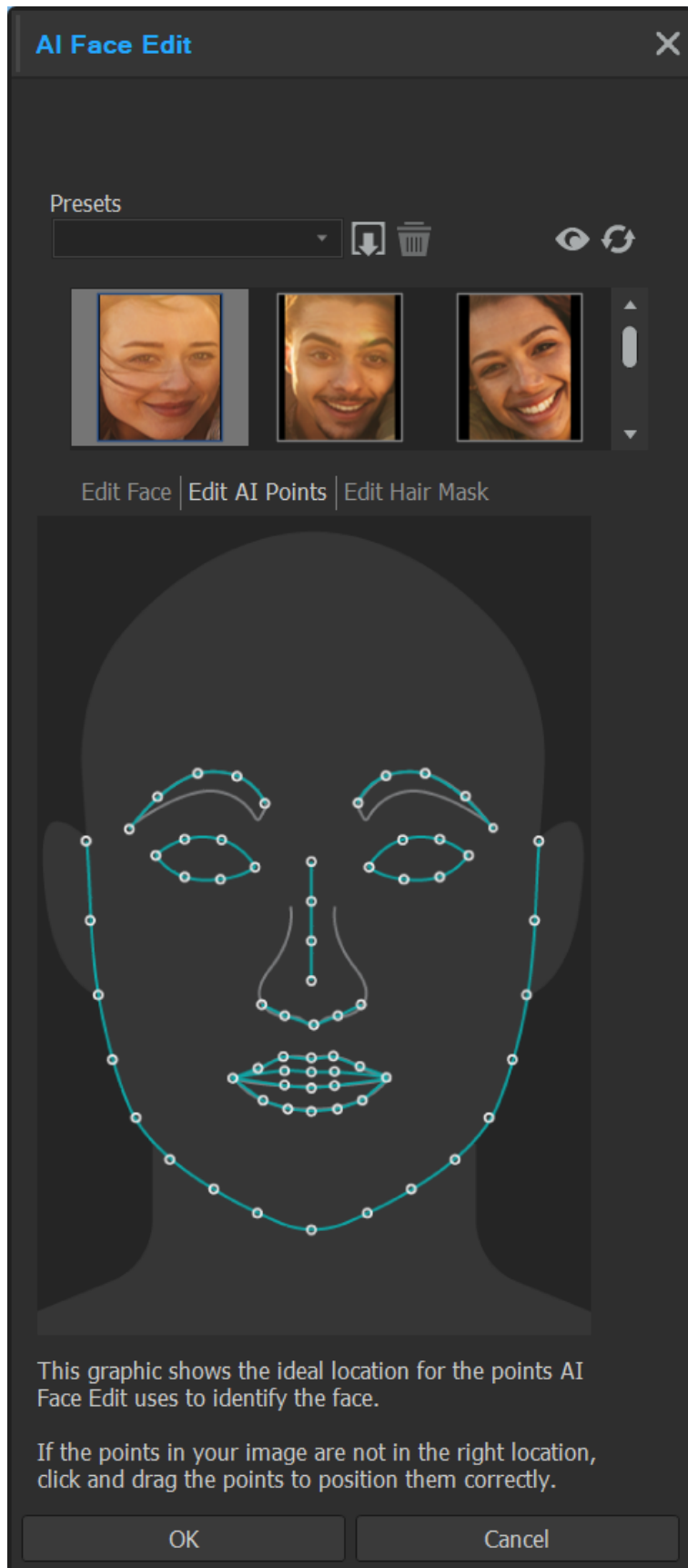
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### Editing Multiple Faces in One Image

When more than one face is detected, each instance is displayed in the Face Edit pane at the top. Click between the faces displayed to quickly switch the focus to a different face. Sliders are locked to whichever face is selected, ensuring that you won't accidentally make any edits to someone you don't mean to.

### Adjusting Face Data

AI detects points on a face to identify facial features in the image. These points may not be in the correct position. To fix this, click on the **Edit AI Points** tab. This tab shows a graphic with the ideal locations for the points. Follow the graphic to manually click and drag to adjust the points to the ideal locations.





If face data is not available, then an error message will appear: Failed to detect any faces. If you encounter this error, please try another image.

## Editing Hair Masks

When **AI Face Edit** detects a face, it automatically masks the subject's hair for editing. You can adjust this mask by clicking **Edit Hair Mask** below **Presets** in the **AI Face Edit** tool. This opens the hair mask editor, where you can view existing masks, brush on new ones, modify current masks, or erase unwanted areas or entire masks.

## Sky Replacement

Using ACDSee Gemstone Photo Editor 16's Sky Replacement tool, you can replace any sky with the press of a single button, or customize the sky to perfection.



You can [save your settings as a preset](#) for future use.

### To Use Sky Replacement:

Click on **Filter | AI | Sky Replacement** in the dropdown menu, or press **Ctrl + Shift + Alt + R**.

Sky Replacement allows you to select from a wide range of pre-installed skies, or import your own skies to use. Make adjustments to the position, mask refinement, opacity and color, foreground lighting, reflections, and more.

### Selecting a Sky:

Click on the Category dropdown to select from different skies, such as Blue Sky, Night Sky, and more. Click on any sky in the list below the Category and the sky will be automatically applied to your image. To change the selected sky, simply click on a different sky and the image will update accordingly.

### Adding Custom Skies:

To add your own custom skies, open **Sky Replacement** and click the **+** button to the right of the **Category** dropdown. This will open a dialog allowing you to add your own images. These skies will be saved under the **Category** named **Custom**.

### Making Adjustments to Skies:

Skies can be adjusted in a number of ways:

- **Position:** Adjusts elements related to the physical placement and size of the sky image.
  - **Vertical:** Adjusts the vertical placement of the sky.
  - **Horizontal:** Adjusts the horizontal placement of the sky.

- **Scale:** Adjusts the scale of the sky image.
- **Flip:** Toggling this will flip the sky horizontally.
- **Mask Refinement:** Adjusts how the edge of the mask interacts with the image.
  - **Shift Edge:** Shifts the edge of the mask for the sky inwards or outwards.
  - **Fade Edge:** Adjusts how much the sky fades at the edge of the mask.
- **Sky Adjustments:** Adjusts lighting and color elements related to the sky image.
  - **Opacity:** Adjusts the opacity of the sky image.
  - **Brightness:** Adjusts the brightness of the sky image.
  - **Temperature:** Adjusts the temperature of the colors in the sky image.
  - **Tint:** Adjusts the tint of the colors in the sky image.
  - **Strength:** Adjusts the strength of the colors in the sky image.
- **Foreground Adjustments:** Adjusts lighting and color elements in the foreground of the image.
  - **Lighting Blend Mode:** Set the blend mode for the lighting.
  - **Foreground Lighting:** Adjust the strength of the foreground lighting.
  - **Edge Lighting:** Adjust the strength of the edge lighting.
  - **Color Adjustment:** Select the color used in color adjustment.
- **Reflections:** Toggle this to enable realistic reflections.
  - **Blend Mode:** Set the blend mode.
  - **Amount:** Adjust the strength of the reflections.
  - **Shift Vertical:** Adjust the vertical position of the reflections.
- **Output as Layers:** Toggle to output changes as layered changes.

## Red Eye

The **Red Eye Reduction** filter corrects red eye in digital photographs.





### To correct red eye:

1. Select **Filter | Enhance | Red Eye Reduction** from the main menu.
2. Use the **Zoom** tools in the bottom left corner to enlarge and center the eye to be corrected.

3. Click within the red portion of the eye.
4. In the **Red Eye Reduction** group, adjust the sliders as described below.

## Red Eye Reduction Options

Crown Icon	
<b>Size</b>	Drag the slider to the right to increase the size of the area being darkened, or to the left to decrease.
<b>Darkening</b>	Drag the slider to the right to intensify the fill color, or to the left to lighten.
<b>Show outline</b>	Shows or hides the outline of the darkened area.

-  Right-click a slider to reset to the default value.
-  Scroll with the mouse to adjust the size of the area to darken.
-  Show or hide the outline of the darkened area by toggling the **Show Outline** checkbox.
-  Use the **Delete** key to remove the currently selected red eye adjustment.

## Removing Flaws

Use **Repair Tools** to remove flaws, such as:

- Skin blemishes
- Telephone wires and other unwanted objects
- Flash flares from snowflakes or windows
- Lens scratches and water drops

There are four types of repairs available:

- Heal
- Clone
- Blended Clone
- Smart Erase

## Repair Tool Types

<b>Heal</b>	Enabling the <b>Heal</b> radio button evokes the Healing Brush. The Healing Brush copies pixels from one area of a photo to another, but analyzes the pixels in the source area before copying. The Healing Brush also analyzes the pixels in the target area, and then blends the pixels of both source and target to match the surrounding area, ensuring that the lighting and color of the replacement pixels integrate with the surrounding area. The Healing Brush works particularly well with photos that involve complicated textures, like skin or fur.
<b>Clone</b>	Enabling the <b>Clone</b> radio button evokes the Cloning Brush. The Cloning Brush copies the exact pixels from one area of a photo to another, creating an identical image area. The Cloning Brush is more effective for photos that have strong, simple textures or uniform colors, as it is more difficult to identify the copied pixels in the finished photo.
<b>Blended Clone</b>	The Blended Clone tool copies the exact pixels from one area of a photo to another, but it analyzes the pixels in the target area and blends them with the copied pixels.
<b>Smart Erase</b>	For information on Smart Erase, see the <a href="#">Smart Erase</a> section below.



Repair settings can be saved as presets for future use.

### To remove flaws from a photo:

1. Select **Filter** | **Enhance** | **Repair Tools** from the main menu.
2. Select one of the following:
  - **Heal**: Copies the pixels from the source area to the target area, and blends pixels into the surrounding image area.
  - **Clone**: Copies the pixels from the source area to the target area.
  - **Blended Clone**: Copies the pixels from the source area to the target area, then analyzes the pixels in the target area and blends them with the copied pixels.
  - **Smart Erase**: Analyzes pixels and fills in the brushed area based on what the image would most likely look like without the brushed object. See the "Smart Erase" on page 220 section below.
3. Drag the **Nib Width** and **Feathering** sliders as described in the table below.
4. Right-click the image to set a source location. Pixels will be copied from this location and used in the target location.
5. Click and drag over the area that you want to cover. If you selected the healing brush, Gemstone analyzes and replaces the pixels when you release the mouse button. If you selected the blended clone tool, Gemstone analyzes, replaces, and blends the pixels when you release the mouse button.

6. Do one of the following:

- Click **OK** to apply your changes and close the tool.
- Click **Cancel** to discard all changes and close the tool.



Click **Reset** to reset the sliders. If you saved your changes, you cannot reset your settings.



Scroll with your mouse to adjust the brush size on the fly, or press the **Shift** key while you scroll to adjust feathering.

## Repair Options

<b>Nib Width</b>	Sets the width of the brush. The maximum brush width is relative to the size of your image.
<b>Feathering</b>	<p>Sets the amount to feather on the edge of the brush to prevent sharp transitions between the original and healed part of the photo.</p> <p>Feathering is set as a percentage of the nib width, not as a specific number of pixels. This means that you do not have to adjust the feathering when you reset the Nib Width, as it automatically adjusts to a percentage of the new nib width. This option is not available with the Blended Clone tool.</p>
<b>Show preview in cursor</b>	Enable this checkbox to display a preview of your selected source point in the cursor.



Right-click a slider to reset to the default value.

## Smart Erase

Remove unwanted objects from images by brushing an image area while using the **Smart Erase** filter. The **Smart Erase** filter analyzes the image and predicts how to best fill in the brushed area. This is based on what the image would most likely look like without the brushed object(s).

1. Select **Filter | Enhance | Repair Tools** from the main menu.
2. In the **Repair** dialog, enable the **Smart Erase** radio button.
3. Drag the **Nib Width** slider or adjust the mouse wheel to set the width of the brush.
4. Brush over the area to be filled with the mouse button depressed. After releasing the mouse button, the fill will be applied. Repeat until the desired look is achieved.

## Skin Tune

Use the **Skin Tune** filter to even skin tone and smooth away blemishes and flaws.

### To correct Skin Tone:

1. Do one of the following:
  - Click **Filter | Enhance | Skin Tune**.
  - Press **K**.
2. In the **Skin Tune** dialog, adjust the settings as described below.
3. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Skin Tune Options

<b>Smoothing</b>	Refines skin by suppressing texture detail.
<b>Glow</b>	Increases the brightness of skin while subtly smoothing.
<b>Radius</b>	Specifies the scale of the texture detail that is affected by the effect. A lower value enhances small details, while a large value enhances larger details.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



## Watermark

The **Watermark** filter adds a watermark to a photo. The watermark can be moved to any position on the photo, or the blend mode and opacity of the watermark can be changed.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

A watermark image will need to be created before adding a watermark to a photo.

### To add a watermark to an image:

1. Select **Filter | Add | Watermark** from the main menu, or press **Ctrl + Alt + W**, to open the **Watermark** dialog and display a default watermark on the image.
2. In the dialog's **Watermark** field set, select a watermark from the drop-down list, or click the **+ Add** button and browse to open a new watermark.
3. Click and drag the watermark to reposition it anywhere on the image, or in the **Positioning** field set, make a selection from the **Anchor Point** field to use a pre-defined location, or enter customized values in the **Horizontal** and **Vertical** fields.
4. Drag the marquee handles to resize the watermark image.
5. Select **Maintain aspect ratio when resizing** to resize the watermark image without distorting it.
6. Select an option from the **Blend Mode** drop-down list to specify how you want the watermark to blend into the underlying image.
7. Drag the **Opacity** slider to specify the transparency of the watermark.
8. Enable **Add watermark as new layer** to have the watermark added to the image as a new, separate layer in the **Layer Editor**.
9. Enable **Apply Alpha Channel** to apply the alpha channel if it is present in the watermark. (Only TIF and ICO watermark files can have an alpha channel.)
10. Select **Apply Transparency** to make a color in the watermark transparent.  
The default color is black. Use the color picker to select a customized color.
11. Do one of the following:
  - Click **Apply** to add the watermark to the image, and keep the Watermark tool open.
  - Click **OK** to add the watermark to the image, and leave the tool.
  - Click **Cancel** to discard any changes and leave the tool.



Right-click a slider to reset to the default value.

## Vignette

The **Vignette** filter adds a frame around a subject, such as a person or a bouquet of flowers, which can help to enhance the focal point of the portrait. The appearance of the Vignette border is customizable.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent **Save** icon.

### To apply a vignette filter:

1. Select **Filter | Add | Vignette** from the main menu, or press **Shift + Alt + V**.
2. Set the options as described below.

3. Do one of the following:

- Click **OK** to apply any changes and close the tab.
- Click **Cancel** to discard all changes and close the tab.

## **Vignette Options**

<b>Horizontal</b>	Specifies the focal point of the portrait on the horizontal axis. A value of 500 places the center in the middle of the photo.
<b>Vertical</b>	Specifies the focal point of the portrait on the vertical axis. A value of 500 places the center in the middle of the photo.
<b>Clear zone</b>	Specifies the size of the clear area around the focal point in the portrait. Drag the slider to the left to reduce the size of the clear area. Drag the slider to the right to increase the size of the clear area.
<b>Transition zone</b>	Specifies the width of the transition area between the clear zone and the frame. Drag the slider to the left to narrow the transition area. Drag the slider to the right to widen the transition area.
<b>Stretch</b>	Stretches the vignette horizontally to make the shape elliptical rather than round.
<b>Shape</b>	Specifies the shape of the frame: <ul style="list-style-type: none"><li>• <b>Round</b>: Select "Round" for a round frame.</li><li>• <b>Rectangular</b>: Select "Rectangular" for a rectangular frame.</li></ul>
<b>Show outline</b>	Select <b>Show outline</b> to display an outline that shows the outside edge of the clear zone and the inside edge of the frame.
<b>Frame</b>	Applies the following special effects to the vignette frame area around the focal point: <ul style="list-style-type: none"><li>• <b>Color</b>: Changes the color of the frame area to the color selected in the color picker.</li><li>• <b>Saturation</b>: Removes color from the people or objects in the vignette frame so they are gray scale.</li><li>• <b>Blur</b>: Blurs the vignette frame area.</li><li>• <b>Clouds</b>: Applies a <b>Clouds</b> effect to the frame area.</li><li>• <b>Edges</b>: Applies an <b>Edges</b> effect by tracing the lines and details of people or objects with neon colors.</li><li>• <b>Radial Waves</b>: Creates the appearance of waves radiating from the focal point into the frame area.</li><li>• <b>Radial Blur</b>: Creates a Radial Blur that rotates and stretches the frame area.</li><li>• <b>Zoom Blur</b>: Applies a Zoom Blur to the frame area.</li><li>• <b>Crayon Edges</b>: Applies the <b>Crayon Edges</b> effect by tracing the lines and details around people or objects with crayon.</li><li>• <b>Dauber</b>: Creates the impression that the people or objects around the focal point were painted with a brush.</li></ul>

- **Pixelate:** Applies a pixel effect to the frame.
- **Old:** Applies an aging effect to the frame to make it look like an old photo.
- **Glowing Edges:** Applies glowing edges to all the strong lines in the frame area.
- **Ripple:** Adds ripples to the frame so that it looks like liquid ripples moving outwards from the focal area.

#### Color Settings

Select a color from the drop-down list to produce a Color Picker for selecting the vignette color.



Right-click a slider to reset to the default value.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



### Tilt-Shift

The **Tilt-Shift** filter creates emphasis on specific subjects in a photo, or makes photos look like miniature landscapes.

#### To use the Tilt-Shift filter:

1. Select **Filter | Add | Tilt-Shift** from the main menu, or press **Shift + Alt + X**.
2. In the **Tilt-Shift** dialog, set the options as described below.
3. Do one of the following:
  1. Click **OK** to accept any changes and close the panel.
  1. Click **Cancel** to discard any changes and close the panel.

#### Tilt-Shift Options

Use the guides on the image to place the effect. The inside boxes represent the points where the focus is transitioning to blur. Complete blur occurs at the outside boxes. Move the boxes to define where the effect will begin or end. Hold down the **Shift** key while positioning the effect to lock to the nearest 45° angle, for straightness.

#### Tilt-Shift Options

## Blurring

<b>Blurring</b>	Use the drop-down list to select the type of blur. Options include: <ul style="list-style-type: none"> <li>• Lens Blur</li> <li>• Gaussian Blur</li> </ul> See <a href="#">Blur Types</a> for more information.
<b>Amount</b>	Specifies the amount of blur applied.
<b>Bokeh Frequency</b>	Specifies how often the bokeh shapes occur.
<b>Bokeh Brightness</b>	Specifies how bright the bokeh shapes appear.
<b>Bokeh Sides</b>	Defines the number of sides the bokeh shape will have.

## Saturation

Drag the slider to the right to intensify the effect.



Use the [Edit Brush](#) to paint this effect onto specific areas of the image.



Use the [Gradient](#) tool to transition this effect across specific areas of the image.



Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point.



## Grain

The **Grain** filter gives images a stylized look, like old film grain. The **Grain** filter can also be used in combination with other filters to achieve a generic vintage look.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a grain filter:

1. Select **Filter | Add | Grain** from the main menu, or press **Alt + G**.
2. Set the options as described below.

3. Do one of the following:

- Click **OK** to apply any changes and close the tab.
- Click **Cancel** to discard any changes and close the tab.

## Grain Options

<b>Amount</b>	Specifies the strength of the grain.
<b>Smoothing</b>	Specifies the smoothness of the grain.
<b>Size</b>	Specifies the size of the grain.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Perspective Correction

The **Perspective Correction** filter corrects perspective distortion in digital photographs. Perspective distortion is caused by wide-angle and telephoto lenses, which distort the perspective of large or far-away objects. For example, when taking a photo of a tall building, the building may appear to be narrower at the top even though the building is the same width from top to bottom.

### To correct Perspective Distortion:

1. Select **Filter** | **Geometry** | **Perspective Correction** from the main menu, or press **Ctrl + Alt + D**.
2. An outline displays around the image. The outline has yellow handles at all four corners, and in the middle of all sides. Drag the handles to change the perspective.
3. Set the options as described below.

4. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

## Perspective Correction Options

<b>Background color</b>	When correcting distortion in a photo, the edges of the photo may bulge outwards or shrink inwards. Use the <b>Background color</b> color picker to select a color for filling-in gaps in the corners or sides of a corrected photo. Enable the <b>Transparent</b> checkbox to use transparency to fill-in gaps in the corners or sides of a corrected photo.
<b>Show Grid</b>	Enable the <b>Show Grid</b> checkbox to display a grid over the photo, which is useful for assessing whether objects in the photo are straight.

## Distortion Correction

The **Distortion Correction** filter corrects barrel, pincushion, and fisheye distortion in digital photographs. In barrel distortion, the photo appears to bulge outwards from the center. In pincushion distortion, the photo appears to shrink inwards toward the center. In fisheye distortion, the photo appears to bulge outwards from the center, as if the photo were wrapped around a sphere.

Barrel, pincushion, and fisheye distortions are common in photos taken with wide angle or zoom lenses.

Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To correct distortion:

1. Select **Filter | Geometry | Distortion Correction** from the main menu, or press **Alt + Z**.
2. In the **Distortion Correction** dialog, make a selection from the **Presets** drop-down list, or set the options as described below
3. Optional: Save any customized settings as a new preset.
4. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

## Distortion Correction Options

<b>Horizontal Center</b>	Drag the slider to the left or right to identify the center of the image on the horizontal axis.
<b>Vertical Center</b>	Drag the slider to the left or right to identify the center of the image on the vertical axis.
<b>Correction Strength</b>	Drag the slider to the right until the objects in the photo appear to be straight.
<b>Scale</b>	Drag the slider to the left or right to change the scale of the photo.
<b>Background Color</b>	When correcting distortion in a photo, the edges of the photo may bulge outwards or shrink inwards. Use the <b>Background color</b> color picker to select a color for filling-in gaps in the corners or sides of a corrected photo. Enable the <b>Transparent</b> checkbox to use transparency to fill-in gaps in the corners or sides of a corrected photo.
<b>Type of Distortion</b>	Enable either the <b>Barrel</b> , the <b>Pincushion</b> , or <b>Fisheye</b> radio buttons to change the distortion type effect on the image.
<b>Show Grid</b>	Enable the <b>Show Grid</b> checkbox to display a grid over the photo, which is useful for assessing whether objects in the photo are straight.



Right-click a slider to reset to the default value.

## Lens Correction

In Gemstone, lens distortion can be managed by using manual correction via the **Manual Correction** slider, or corrected based on the lens profile by selecting the make, model, and lens of the camera used to take the image.

The **Lens Correction** filter contains a database of camera makes, models, and their possible lenses. The possible lenses for the selected camera will be available to choose from the **Lens** drop-down menu, unless there is only one possible lens, in which case, that lens will be pre-selected.

The name of the lens used to take the photo can be found in the **Current Lens Information** section.

The lens profile can also be used to correct chromatic aberration, if it is available.

Use the **Manual Correction** slider for further adjustments after using automatic correction, or on its own.



For quick viewing of the available lens profiles, [go to Lensfun](#).

### To fix lens distortion using lens profile:

1. Select **Filter | Geometry | Lens Correction** from the main menu, or press **Ctrl + Shift + C**.
2. In the **Lens Correction** dialog, enable the **Enable Lens Profile** checkbox.

3. If the displayed camera make and model are not correct, select the correct options from the **Make** and **Model** drop-down menus.
4. From the **Lens** drop-down menu, select the lens used to take the image. This information is displayed in the **Current Lens Information** section. The correction will occur automatically.
5. To make further adjustments, move the **Strength** slider in the **Manual Correction** section to the left for a bulge effect, or to the right to stretch the edges of the image.



Right-click a slider to reset to the default value.



Enable the **Show Grid** checkbox to display a grid over the image, useful for fixing alignment issues in an image.

### To fix chromatic aberration using lens profile:

Chromatic aberration occurs due to the properties of a given lens. Therefore, use the lens profile to automatically correct it. The **Chromatic Aberration** checkbox will be enabled if the selected lens has a corresponding chromatic aberration correction available.

1. Select **Filter | Geometry | Lens Correction** from the main menu, or press **Ctrl + Shift + C**.
2. Enable the **Enable Lens Profile** checkbox.
3. Enable the **Chromatic Aberration** checkbox.

### To fill-in the edges of a manually corrected image:

Some manual adjustments may affect the edges of the image. Choose the color to be used to fill the discrepancies created by the lens correction. Alternatively, opt for transparency in the fill-in area by enabling the **Transparency** checkbox.

## Liquify

The **Liquify** filter moves pixels without altering them.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To liquify an image:

1. Select **Filter | Geometry | Liquify** from the main menu, or press **Ctrl + Shift + Alt + L**.
2. In the **Distortion Tools** section of the **Liquify** dialog, select the type of distortion to apply.
3. Set the options as described below.

4. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

### Drawing Straight Lines:

Hold the **Shift** key while using **Liquify** to draw horizontal or vertical lines. For example, holding **Shift**, then clicking and dragging horizontally will lock the effect so it only affects left to right so long as **Shift** is being held.. Release **Shift** to return to free hand brushing. You can even release **Shift** to return to free hand brushing, then press it again while still drawing the same line to unlock and re-lock the brush at will.

### Creating Diagonal Lines:

Create straight diagonal lines by placing two points on the image. Place the cursor where you want the line to begin, press and hold **Shift**, then **Left-Click** on the image to create a point. Let go of **Shift**, and move the brush to where the line will end, press and hold **Shift**, then **Left-Click** again to create a second point. A straight line will fill in between these two points.

### Liquify Options

**Distortion Tools** Distort images by moving the cursor, essentially brushing on the effect by pushing and pulling pixels around the image.



Use the **Shift** tool to push pixels in images.



Use the **Pinch** tool to condense pixels towards a center point.



Use the **Bulge** tool to expand pixels outward.



Use the **Restore** tool to brush the pixels back to their original position.



Hold down the right mouse button to activate the **Restore** tool while using any of the other Distortion tools.

**Nib Width** Adjusts the size of the brush. Use the mouse wheel to adjust nib width or adjust with the **Nib Width** slider.

**Density** Adjusts the size of the area affected. Within the inner circle of the nib, the effect is being applied at 90% or more. The area between the inner and outer circle, the effect is transitioning between 90%-0% at the outer edge.



Use **Shift + mouse wheel** to adjust the density.

**Strength** Adjusts the intensity of the overall effect. Move the slider to the right to intensify the effect.

**Fill color** When distorting the image to the point where its edges are pulled in past the canvas line, use the **Fill color** picker to select the background color.

**Transparent** When distorting the image to the point where its edges are pulled in past the canvas line, enable the **Transparent** checkbox to make the bare canvas portions transparent.

**Reset** Undo all brush strokes made during the current use of **Liquify**. Note: Brush strokes will not be reset if they have been saved by clicking **Done** and closing the **Liquify** tool.

## Exposure

The **Exposure** filter adjusts an image's exposure, contrast, and fill light.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent **Save** icon.

### To adjust an image's exposure:

1. Select **Filter | Exposure / Lighting | Exposure** from the main menu, or press **Alt + X**.
2. Set the options as described below.
3. Do one of the following:
  - Click **Apply** to apply any changes and set options on another tab.
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

### Exposure Options

<b>Exposure</b>	Drag the slider to the right to increase the exposure, or drag to the left to decrease exposure.
<b>Auto</b>	Click the <b>Auto</b> button to automatically adjust the exposure level.
<b>Contrast</b>	Drag the slider to the right to increase contrast, or drag to the left to decrease contrast.
<b>Fill Light</b>	Drag slider to the right to increase the amount of light in the darkest areas of the image, or drag to the left to decrease fill light. Fill light brightens dark areas of the image.



Right-click a slider to reset to the default value.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Levels

The **Levels** filter precisely adjusts an image's contrast and light levels.






Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To adjust an image's levels:

1. Select **Filter | Exposure / Lighting | Levels** from the main menu, or press **L**.
2. Do one of the following:
  - Set the options as described below to adjust the contrast and light levels manually.
  - Click **Auto...** and select a menu option to automatically adjust image properties.
3. Do one of the following:
  - Click **Apply** to apply any changes.
  - Click **OK** to apply any changes and close the **Levels** tool.
  - Click **Cancel** to discard all changes and close the tool.

### Levels Options

<b>Channel</b>	Specifies the brightness or color channel to adjust.
<b>Shadows</b>	<p>Specifies the black point of an image.</p> <p>Move the slider or type a number from 0 to 255 into the spin box to define the blackest area of an image. As the value increases, the dark colored areas of the image become darker. As an alternative to using the spin box, click the arrows to manually set it to where the black point starts in the image.</p>
<b>Midtones</b>	<p>Specifies the midtones in an image.</p> <p>Move the slider or type a number into the spin box to set the midtone. Higher values make the image appear brighter, while lower values make the image appear darker. As an alternative to using the spin box, click the arrows to manually set it to the midtone of the image.</p>
<b>Highlights</b>	<p>Specifies the white point of an image.</p> <p>Move the slider or type a number from 0 to 255 into the spin box to define the whitest area of an image. As the value increases, the light colored areas of the image become lighter. As an alternative to using the spin box, click the arrows to manually set it to where the highlights start in the image.</p>
<b>Auto</b>	<p>Select one of the following options:</p> <ul style="list-style-type: none"> <li>• <b>Adjust Contrast:</b> Automatically analyzes and adjusts image contrast.</li> <li>• <b>Adjust Color and Contrast:</b> Automatically analyzes and adjusts each color channel independently, and then adjusts the contrast.</li> <li>• <b>Adjust Color and Brightness:</b> Automatically analyzes and adjusts image color and brightness.</li> <li>• <b>Tolerance:</b> Opens the <b>Tolerance</b> settings dialog box. Specify the maximum clipping percentage for black and white levels, and click <b>OK</b>. Gemstone adjusts the image levels automatically.</li> </ul>
<b>Black Point picker</b> 	Click the <b>Black Point</b> picker, and then click the image area to set as the black point.
<b>Mid Point picker</b> 	Click the <b>Mid Point</b> picker, and then click the image area to set as the mid point.
<b>White Point picker</b> 	Click the <b>White Point</b> picker, and then click the image area to set as the white point.



When clicking the image with a selected eye dropper the RGB numbers change to reflect the RGB values of the pixel under the eye dropper. The RGB values represent the source pixel (unprocessed) and the current pixel as it appears on the screen.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Auto Levels

The **Auto Levels** filter automatically corrects the exposure levels of an images. Using the **Auto Levels** filter makes the darkest image pixels darker, and the brightest pixels brighter.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To automatically correct image levels:

1. Select **Filter | Exposure / Lighting | Auto Levels** from the main menu, or press **Alt + J**.
2. Select one of the following options:
  - **Auto Contrast and Color:** Adjusts color differences, brightness, and balances RGB channels.
  - **Auto Contrast:** Adjusts the color differences and brightness only.
  - **Auto Color:** Balances the RGB channels in the image, without changing the brightness or contrast.
3. Use the **Strength** slider to fine tune the amount of exposure to apply.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.



Right-click a slider to reset to the default value.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).





Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Tone Curves

The **Tone Curves** filter changes the tonal range of an image. Select the RGB color channel to adjust the entire range of the image, or select a specific color.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To adjust image curves:

1. Select **Filter | Exposure / Lighting | Tone Curves** from the main menu, or press **Ctrl + Shift + A**.
2. Set the options as described below.
3. Do one of the following:
  - Click **Apply** to apply any changes.
  - Click **OK** to apply any changes and close the **Tone Curves** tool.
  - Click **Cancel** to discard all changes and close the tool.

### Tone Curves Options

<b>Channel</b>	Specifies the color channels to adjust.
<b>Show Histogram</b>	Toggles the histogram display on and off.
<b>Histogram</b>	Displays a graphic of the color information levels in the image, based on the selected channel. Click and drag the line to manipulate the curve. A new node is added each time the curve is clicked. Drag the nodes up and down the curve to change the settings. To remove a node, drag the node up and out of the graph, or down and out of the graph.
<b>Color Picker</b>	Drag the cursor onto the image to change the cursor to a color picker that provides the RGB value of the picker's current location. Click the image at a desired tone to add a corresponding point to the adjustment curve.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Light EQ

The **Light EQ™** filter adjusts areas in an image that are too dark or too light, without affecting other areas of the photo. An effective benefit of the **Light EQ™** filter is the ability to simultaneously lighten dark areas that are too dark, and darken areas that are too bright. Examples would be a photo of a person silhouetted against a bright background like the sea, or a window. In fact, most photos taken on a dull day, or with a flash, can be improved in various ways with fine adjustments.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

The **Light EQ™** filter features four tabs — each tab is associated with an adjustment technique that achieves results in different ways. In addition, there are several keyboard and mouse shortcuts for making adjustments on specific areas of the photo itself.

The four **Light EQ™** tabs include:

- **1-Step** tab: For an instant, effortless exposure adjustment.
- **Basic** tab: Is for very quick and easy adjustments using three sliders. Gemstone analyzes the photo and varies the adjustment throughout the image automatically. For example, darker images are brightened more. By clicking the **Auto** button, Gemstone fully analyzes the photo and sets the slider positions automatically. It is also possible to directly click an area of the image to generate automatic settings optimal for that area, (usually the subject of the photo).
- **Standard** tab: Works like a sound equalizer but with light. Adjust the brightness and contrast of different tone bands (areas of relative brightness or darkness) of the image independently using a slider for each tone band. A graph shows the amount of brightening or darkening applied throughout the tonal range. The gray areas in the graph are suggested boundaries for adjustment to avoid clipping and loss of detail, and turn red to indicate where the sliders have been adjusted far enough to cause clipping.
- **Advanced** tab: Provides ultimate control of the brightness and contrast in an image. Basic adjustment curves can be constructed using four sliders, and the curves can be manually adjusted by clicking and dragging within the graph area or on the image itself.

### To open the Light EQ™ filter:

Select **Filter** | **Exposure / Lighting** | **Light EQ™** from the main menu, or press **Q**.

### The 1-Step Tab

When opening an image in the **Light EQ™** filter, the **1-Step** tab is set by default and automatically adjusts the image's exposure. Further adjustments can be made using the **Amount** slider.

### The Basic Tab

#### To darken areas that are too bright:

1. Drag the **Shadows** slider to the right to lighten and return detail to areas that are too dark.
2. Adjust the settings using any of the controls in the table below.

#### To adjust midtones that are too light or dark:

1. Drag the **Midtones** slider to the right to lighten and return detail to areas that are too dark.
2. Adjust the settings using any of the controls in the table below.

#### To add light to dark areas:

1. Drag the **Highlights** slider to the right to add light to the dark parts of the photo.
2. Adjust the settings using any of the controls in the table below.

### Light EQ™ Controls

<b>Right-click on a slider</b>	Right-click on a slider to reset it.
<b>Auto</b>	Click to allow the software to analyze the photo and apply optimal settings based on the amount of light and dark pixels in the photo. Darker photos are brightened more than photos that are already bright.
<b>OK</b>	Click to apply any changes and close the tool.
<b>Cancel</b>	Click to discard all changes and close the tool.

## The Standard Tab



The **Standard** tab has two sets of sliders. The top set is for brightening. The lower set is for darkening. The dark-to-light gradient on each slider indicates which tone band will brighten when the slider is moved up (top row of sliders) or tone band will darken when the slider is moved down (bottom row).

Between the two sets of sliders are two horizontal bars graded from black to white. These bars indicate that sliders on the far left affect the dark tonal bands. The sliders on the right affect light tonal bands. Moving a slider changes the light in that particular tonal band.

In the middle of the bands are two graphs that change as the sliders are adjusted to represent the amount of darkening and lightening throughout the tonal range of the image. The two gray graphs show the maximum amount of brightening or darkening that can be applied before clipping begins. If a slider is pushed too far, the clipping is shown in bright pink.

To increase contrast within a tonal band, apply brightening and darkening simultaneously in equal amounts by dragging the upper and lower sliders up and down, respectively. The area between the

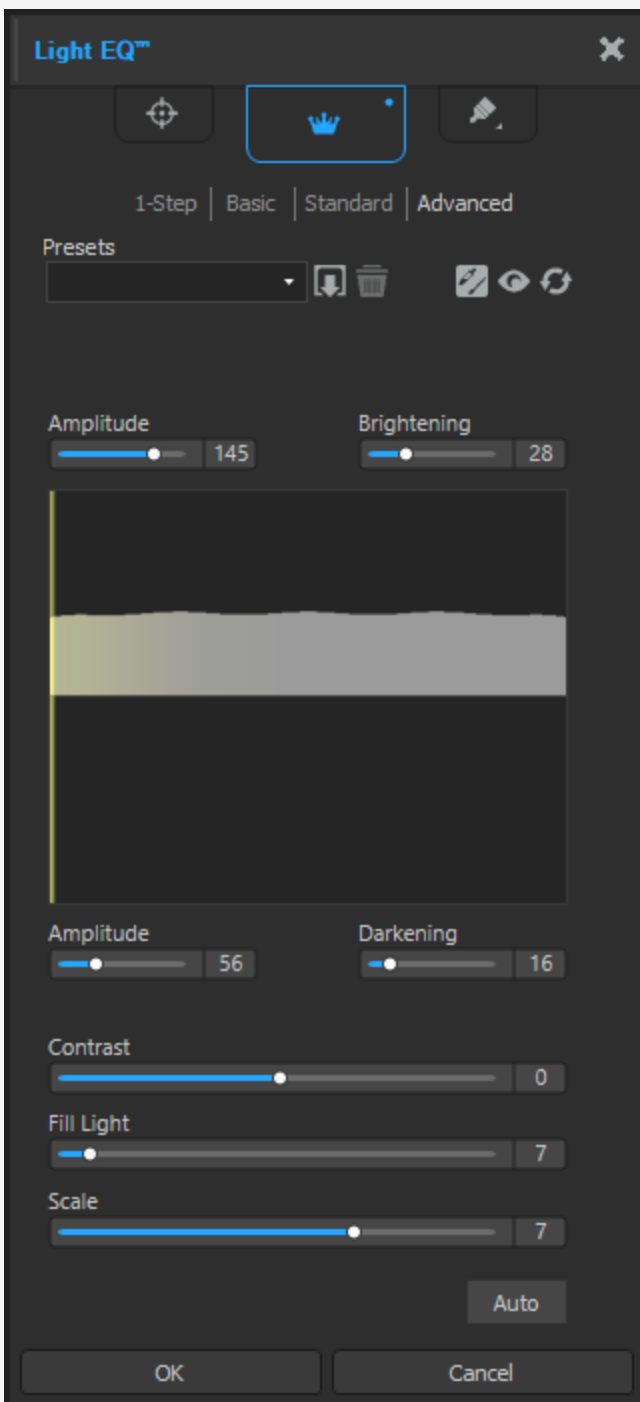
top of the upper graph and the bottom of the lower graph indicates the amount by which contrast is increased.

**To use the Standard tab:**

1. Do one of the following:
  - Drag the tone band sliders up or down depending on which light bands you want to adjust.
  - Type the exact number into the number boxes or increment the numbers to make precise adjustments.
  - Click the **# Tone Bands** drop-down list to increase or decrease the number of tone band sliders.
  - Click the **Auto** button to apply settings automatically.
  - Drag the **Brightening** slider to lighten the dark areas of the image.
  - Drag the **Darkening** slider to darken the light areas of the image.
  - Drag the **Contrast** slider to increase the contrast in the image.
  - Drag the **Fill Light** slider to lighten dark areas of the image.
  - Left-click and drag upwards to brighten the dark areas of the photo. Try to prevent clipping (shown in pink on the graph).
  - Right-click and drag downwards to darken the bright areas of the photo. Try to prevent clipping (shown in pink on the graph).
2. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## The Advanced Tab

### Sliders



The **Advanced** tab has two sliders for brightening (**Amplitude** and **Custom curve**) and two for darkening (**Amplitude** and **Custom curve**). The **Custom curve** sliders control the shape of the adjustment curves, while the **Amplitude** sliders control the height of the curves.

The more brightening or darkening, the more the balance of the dark against the light areas is increased in the image. The **Amplitude** sliders increase the intensity of the effects of brightening or darkening.

The **Scale** slider at the bottom of the tool adjusts the overall adjustment sensitivity to local variation in brightness. Moving this slider to the left makes the adjustment more sensitive to smaller areas of brightness variation, which may be beneficial in some images. For most images, however, leaving the slider in the default position gives the best result. Adjust the **Contrast** slider to decrease or increase contrast, or use the **Fill Light** slider to lighten dark areas of the image.

### Graphs

Between the Brightening and Darkening controls are two gray graphs that indicate the maximum amount of lightening or darkening that can be applied before clipping begins (shown as bright pink).

Two colored curves appear and change when dragging the Brightening, Darkening and Amplitude sliders — these curves indicate the amount of brightening and darkening applied throughout the tonal range of the image. Darker tonal areas are on the left, and brighter tonal areas are on the right. Moving the cursor over the image, a vertical line in the graph indicates the tone level of the area under the cursor within the tonal range. At times there are two lines because the tone levels for brightening and darkening are not necessarily the same. This is because brightening is sensitive to maximum color values while darkening is sensitive to minimum color values.

The **Advanced** tab is unique in that you can adjust the curves manually, either on the graph itself, or on the actual photo. Adjustments made on the photo are reflected in the curve on the graph. Adjustments made on the graph are reflected on the photo.

To increase contrast within a tonal range without changing the brightness, apply brightening and darkening simultaneously in equal amounts by dragging the upper and lower curves up and down, respectively. The area between the top of the upper graph and the bottom of the lower graph indicates the amount by which contrast is increased.

### To use the Advanced tab:

1. Do one of the following:
  - Drag the Brightening or Darkening sliders to adjust the bright or dark pixels. While dragging, a gray curve appears to indicate the adjustments.
  - Left-click and drag upwards to brighten the dark areas of the photo. Try to prevent clipping (shown in pink on the graph).
  - Right-click and drag downwards to darken the bright areas of the photo. Try to prevent clipping (shown in pink on the graph).
  - Drag the **Scale** slider to the right to make your adjustments more sensitive to smaller areas of brightness variation.
  - Drag the **Contrast** slider to increase or decrease contrast in your image.
  - Drag the **Fill Light** slider to add light to the dark areas in your image.
  - Make adjustments using any of the options in the table below, including on the image itself.
2. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.


### Adjustment Options - Advanced Tab

Area	Action	Result
<b>Sliders</b>		
	<b>Drag Brightening</b>	<p><b>To the right:</b> Increases the lightening applied to the darker areas.</p> <p><b>To the left:</b> Applies brightening more uniformly to all areas of the image.</p> <p>(The name of the slider changes to <b>Custom curve</b> when changing the curve manually or making adjustments on the image.)</p>
	<b>Drag Darkening</b>	<p><b>To the right:</b> Increases the darkening applied to the brighter areas of the image.</p> <p><b>To the left:</b> Applies the darkening more uniformly to all areas of the image.</p>
	<b>Drag Amplitude (Brightening)</b>	<p><b>To the right:</b> Increases the intensity of the brightening across all areas of the image. The height of the curve increases.</p> <p><b>To the left:</b> Reduces the intensity of the brightening and the height of the curve.</p> <p>If the <b>Amplitude</b> slider is 0, no brightening is applied.</p> <p>If the <b>Amplitude</b> is 100 - 200, the proportional amount of clipping increases.</p> <p>In most cases it is not necessary to adjust amplitude.</p>
	<b>Drag Amplitude (Darkening)</b>	<p><b>To the right:</b> Increases the intensity of the darkening across all areas of the image. The height of the bottom curve increases.</p> <p><b>To the left:</b> Reduces the intensity of the darkening and the height of the curve.</p>
	<b>Drag Scale</b>	<p><b>To the left:</b> Makes the tool more sensitive to smaller areas of brightness variation.</p> <p>This means that smaller areas can be adjusted independently. Generally the default scale of 10 gives the best result, but if an image contains small details that need brightening, a lower scale might give better results.</p>
<b>On Graph</b>		
	<b>Drag the graph (top)</b>	Clicking and dragging up on the graph itself changes the graph. The graph represents brightening adjustments. The dark gray graph represents the maximum amount the

Area	Action	Result
		<p>graph can be dragged before clipping begins (displayed as pink).</p> <p>The height of the graph represents the level of brightening applied at each tone level. (Tone moves from black on the left to white on the right.)</p> <p>When you make direct brightening or darkening adjustments on the graph or image, the corresponding Brightening or Darkening slider changes to <b>Custom curve</b>. Adjusting the position of the slider after changing to <b>Custom curve</b>, discards all direct curve adjustments.</p> <p>When make direct brightening or darkening adjustments on the graph or image, the corresponding Brightening or Darkening <b>Amplitude</b> slider changes to indicate the current curve amplitude.</p>
	<b>Drag the graph (bottom)</b>	The graph changes as you right-click and drag down on the graph itself. The graph represents the darken adjustments you are making. The dark gray graph represents the maximum amount you can drag the graph before clipping (pink) begins.
	Use all the shortcuts below that apply to the image, directly to the graph itself.	Changes the tonal band on the graph itself with a corresponding change in the image. This is useful for making fine adjustments to a specific tonal band.
<b>On Image</b>		
	<b>Double-click with left mouse button</b>	Automatically sets Brightening to optimum for that area of the image. A brighter area (e.g. a face) works best.
	<b>Double-click with right mouse button (or Shift + double-click with left mouse button)</b>	Automatically sets the Darkening to optimum for that area of the image.
	<b>Ctrl + double-click with left mouse button</b>	<p>Increases the amount of brightening around that tone level while decreasing the brightening in the rest of the image.</p> <p>Use this method to quickly brighten a specific subject or area to bring it out of the image.</p>
	<b>Ctrl + double-click with right mouse button</b>	Increases the amount of darkening around that tone level while decreasing the amount of darkening in the rest of the image.

Area	Action	Result
	<b>Scroll up or down with the mouse wheel above the image</b>	Increases or decreases the amount of brightening applied at that tone level in the image. Both the image and the graph show the changes.
	<b>Shift+ scroll with the mouse wheel above the image</b>	Decreases or increases the amount of darkening applied at that tone level in the image.
	<b>Hold down "A" + scrolling or + dragging with the left mouse button</b>	Sets the brightening Amplitude slider directly.
	<b>Hold down "A" + Shift + scrolling or + dragging with the right mouse button</b>	Sets the darkening Amplitude slider directly.
	<b>Click and drag up and down on the image (left mouse button)</b>	Increases or decreases the amount of brightening applied at that tone level in the image. Both the image and the graph show the changes.  (Only works if the image is actual size - no zooming.)
	<b>Shift + click and drag up and down on the image (left mouse button)</b>	Decreases or increases the amount of darkening applied at that tone level in the image.  (Only works if the image is actual size - no zooming.)

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Dehaze

The **Dehaze** filter restores contrast, detail, and lost color to images. This tool is especially useful for images that have been captured through a haze. A haze can occur when dust, smoke, or other particles obscure the clarity of the image, particularly the sky.

### To dehaze an image:

1. Select **Filter | Exposure / Lighting | Dehaze** from the main menu, or press **Ctrl + Alt + H**.
2. Drag the **Amount** slider to adjust the strength of the correction.
3. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 


 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Dodge and Burn

Enhance photos and improve contrast by controlling the light and intensity of color in select areas. Dodge, burn, saturate and desaturate photos to accentuate and define shapes, magnify and fade color, and add shadows and highlights.

The **Dodge and Burn** tool lightens or darkens areas in a photo without affecting other areas. The tool is often used to lighten underexposed areas or darken overexposed areas.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### Dodging and Burning Parts of an Image

#### To open the Dodge and Burn tool:

Select **Filter | Exposure / Lighting | Dodge and Burn** from the main menu, or press **D**.

### To Lighten or Darken Areas of a Photo:

1. In the **Operation** field set, enable the **Dodge** tool to lighten areas, or the **Burn** tool to darken areas.
2. In the **Tool settings** field set, enable the area to adjust: **Shadows, Midtones, or Highlights**.
3. Drag the **Range** slider to fine-tune targeted areas within the shadows or highlights. Increasing the range broadens the affected range of tones, while decreasing the range narrows the affected range of tones.
4. In the **Brush settings** field set, select from the following preference settings:
  - Drag the **Nib Width** slider to select a brush size.
  - Drag the **Feathering** slider to soften stroke edges.
  - Drag the **Strength** slider to adjust the stroke intensity.
5. Draw over the areas of the image to lighten or darken.
6. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.



When adjusting the **Range** slider, a preview of the areas of the image that will be affected by brushing will be shown as a grayscale image. The brighter the pixels are in the preview image, the more they will be affected by brush strokes. Areas that are pure white will be affected with full strength, and areas that are black will be completely unaffected. For best results, move the **Range** slider until the pixels to dodge or burn are white, and areas to be left unaffected are black.



Scroll with your mouse to adjust the brush size on the fly, or use **Shift + mouse scroll** to adjust feathering.

### To saturate or desaturate areas of a photo:

1. Enable the **Saturate** tool to intensify colors, or the **Desaturate** tool to fade colors.
2. In the **Tool settings** field set, enable the **Vibrance** checkbox to target the less saturated colors and to prevent skin tones from becoming over-saturated.
3. In the **Brush settings** field set, enable from the following preference settings:
  - Drag the **Nib Width** slider to select a brush size.
  - Drag the **Feathering** slider to soften the edges of your strokes.
  - Drag the **Strength** slider to adjust the intensity of your strokes.
4. Draw over the areas of the image to lighten or darken.


5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

 Right-click a slider to reset to the default value.

## White Balance

The **White Balance** filter removes unwanted hue from an image. For example, if a sunset photo has an unwanted reddish hue, use the **White Balance** tool to remove it.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To remove a color cast from an image:

1. Select **Filter** | **Color** | **White Balance** from the main menu, or press **A**.
2. Set the options as described below.
3. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.


## White Balance Options

<b>Temperature</b>	Drag the <b>Temperature</b> slider to the left (more blue) or right (more yellow) to select a specific color temperature.
<b>Tint</b>	Drag the <b>Tint</b> slider to the left (more green) or right (more magenta) to match the white balance settings that you selected when you took the photo.
<b>Strength</b>	To specify the strength of the white balance adjustment, move the <b>Strength</b> slider. Higher settings remove more of the unwanted color.
<b>Auto</b>	Click the <b>Auto</b> button to allow Gemstone to analyze and correct the image.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 If the desired effect is not forthcoming, try clicking an image area that is a different shade of white or gray.


 Use the **Gradient** tool to transition this effect across specific areas of the image. 


 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Color EQ

The **Color EQ** filter (hue, saturation, contrast, and brightness) is used to adjust overall colors in an image or each color individually. The advanced tools can subtly fine-tune and enhance colors, or completely change individual colors in an image.

For instance, if an image has a yellow car, use the **Saturation** tab to saturate the yellow, or use the **Brightness** tab to brighten the yellow. In the **Hue** tab, change the color of the car from yellow to pink. In the **Contrast** tab, adjust the contrast of the yellow and use the **Balance** slider to target the brightness range for that contrast adjustment.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

 If an image contains a yellow car with a yellow building in the background, change just the car by using the **Selections** tool. Select the car using the **Selections** tool and then apply color adjustments.

### To adjust color:

1. Select **Filter | Color | Color EQ** from the main menu, or press **O**.
2. Set the options as described below.
3. Do one of the following:
  - Click **Apply** to apply any changes.
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

### Color EQ™ Options

Select **High Quality** mode or **Standard** mode from the top of the **Color EQ** dialog. To adjust colors individually, click a color on the image and drag up or down to alter. Changes are reflected in the color

sliders in **High Quality** mode, and the graph in **Standard** mode respectively. This works in the **Saturation, Brightness, Hue, and Contrast** tabs.

<b>High Quality</b>	Adjust image colors individually. High Quality uses the newer, more modern color models, allowing for a visually perceptive and higher quality adjustment.
<b>Color EQ</b>	Adjust each color individually by dragging sliders right for more intensity, or left for less intensity. You can also enter a number into the fields for precise adjustments. Or select a precise color to adjust by placing your cursor on the image for the double arrow icon to appear. Then click and drag up or down to adjust the colors beneath the double arrow icon. The affected color sliders automatically adjust as you move your cursor.
<b>Saturation</b>	Color saturation adjustments can be made in the Red, Orange, Yellow, Green, Cyan, Blue, Purple, and Magenta bands. Drag sliders to the right for more intensity, or to the left for less intensity of color. Levels can also be entered numerically to the right of the slider on a scale of 0 - 100.
<b>Brightness</b>	Color brightness adjustments can be made in the Red, Orange, Yellow, Green, Cyan, Blue, Purple, and Magenta bands. Drag sliders to the right for more intensity, or to the left for less intensity of color. Levels can also be entered numerically to the right of the slider on a scale of 0 - 100.
<b>Hue</b>	Color hue adjustments can be made in the Red, Orange, Yellow, Green, Cyan, Blue, Purple, and Magenta bands. Drag sliders to the right for more intensity, or to the left for less intensity of color. Levels can also be entered numerically to the right of the slider on a scale of 0 - 100.
<b>Contrast</b>	Contrast adjustments can be made in the Red, Orange, Yellow, Green, Cyan, Blue, Purple, and Magenta bands. Drag sliders to the right for more intensity, or to the left for less intensity of color. Each color band also has an adjacent <b>Balance</b> slider with a range of -100 to +100. Levels can also be entered numerically to the right of the sliders.

Global Adjustments	
<b>Vibrance</b>	Drag the slider to adjust the vibrance of the image without affecting skin tones.
<b>Saturation</b>	Drag the slider to adjust the saturation of the image.
<b>Color Shift</b>	Drag the slider to adjust the amount of color shift in the image.
<b>Hue</b>	Drag the slider to adjust the hue of the image.
<b>Lightness</b>	Drag the slider to adjust the lightness of the image.
<b>Red</b>	Drag the slider to adjust the amount of red in the image.
<b>Green</b>	Drag the slider to adjust the amount of green in the image.
<b>Blue</b>	Drag the slider to adjust the amount of blue in the image.
<b>Standard</b>	Adjust colors individually or make global adjustments.
<b>Vibrance</b>	Drag the slider to adjust the vibrance of the image without affecting skin tones.
<b>Vertical Slider</b>	<p>Apply adjustments to the entire image. The main slider on the left has the following effects on the tabs:</p> <ul style="list-style-type: none"> <li>• <b>Saturation:</b> Adjusts from saturation to grayscale.</li> <li>• <b>Brightness:</b> Adjusts the light or dark tones in the image.</li> <li>• <b>Hue:</b> Changes to a different color.</li> </ul> <p>It is also possible to enter a number into the field for precise adjustments.</p>
<b>Individual Color Sliders</b>	Adjust each color with individual sliders. Select the color to adjust and click and drag the sliders. It is also possible to enter a number into the fields

### Direct Image Adjustments

for precise adjustments.

Place the cursor on the image for the double arrow icon to appear. Then click and drag up or down to adjust the colors beneath the double arrow icon. The curve control and the affected color sliders automatically adjust as the cursor is moved. The black down arrow on the graph indicates which color is being adjusted in the image.

The curve appears black in the graph and is not directly adjustable. To apply further adjustments, alter the white curve. When adjusting the white curve, the black curve automatically changes with it. It is also possible to enter a number into the fields for precise adjustments.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

### Convert to Black & White

Create rich grayscale images by controlling the brightness of the red, green, and blue channels, as well as the overall brightness. Use the **Convert to Black & White** filter to emphasize different areas or aspects of a photo, as well as alter its mood and tone.

Hover the mouse over each slider and watch the effect on the small preview to view which parts of the image will be affected by each channel. This helps to gauge the effect of each slider on the image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To create a grayscale image:

1. Select **Filter | Color | Convert to Black & White** from the main menu, or press **W**.
2. Set the options as described below.
3. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

### Grayscale Options

The preview window inside the **Convert to Black & White** dialog will reflect changes made with the current slider.

## Brightness Tab

In the **Brightness** tab, do any of the following:

- Drag individual color sliders, or left-click on the image (where a color previously occurred) and drag up or down to alter the brightness of specific tones. For instance, drag the cursor on sky areas to alter the brightness of the blue.
- Drag the **Percent Red** slider to the left or right.
 

The more red there is in a pixel, the more effect the red slider has on that pixel. The area of red in the picture is brightened or darkened more than other areas.
- Drag the **Percent Green** slider the left or right.
 

The more green there is in a pixel, the more effect the green slider has on that pixel. The area of green in the picture is brightened or darkened more than other areas.
- Drag the **Percent Blue** slider to the left or right.
 

The more blue there is in a pixel, the more effect the blue slider has on that pixel. The area of blue in the picture is brightened or darkened more than other areas.
- Drag the **Percent Brightness** slider to the right or left to brighten or darken the whole image.



Right-click the slider to reset the value to zero.

## Contrast Tab

Increase or decrease the contrast of each individual color. In addition, specify the brightness range that the contrast adjustment will target for each color.

On the **Contrast** tab, do the following:

**Strength:** To adjust the contrast in specific color tones, drag individual color sliders, or left-click on the image (where a color previously occurred) and drag up or down.

**Balance:** To set the targeted brightness range for the contrast adjustment, adjust the slider to bring details out of highlights or shadows. To bring details out of the midtones, leave the Balance sliders set to 0.



Hold down **Shift** while clicking and dragging on the image to target the color's corresponding **Balance** slider.



Right-click the slider to reset the value to zero.

At the bottom of the **Convert to Black & White** panel, use the **Amount** and **Hue** sliders to add color back into the image. Choose the color using the **Hue** slider. The saturation of the color added back to any given pixel is scaled based on both the amount of color/saturation that existed in the original image and the **Amount** slider.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).





Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Split Tone

Split toning is a powerful technique originating in film photography to tint highlights and shadows.

The **Split Tone** filter provides creative control over the hue and saturation of highlights and shadows. Use the sliders to adjust the balance of tones in photo highlights and shadows. Split toning allows for adding a creative element to RAW conversion and non-destructive editing in Gemstone.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To adjust highlights and shadows:

1. Select **Filter | Color | Split Tone** from the main menu, or press **Shift + Alt + T**.
2. Set the options as described below.
3. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

### Split Tone Options

## Highlights


<b>Hue</b>	Drag the slider to the right to select a highlight color.
<b>Saturation</b>	Drag the slider to the right to increase saturation of the specified color in the highlights of the image.

## Shadows

<b>Hue</b>	Drag the slider to the right to select a shadow color.
<b>Saturation</b>	Drag the slider to the right to increase saturation of the specified color in the shadows of the image.

## Balance

Drag the slider to the right to emphasize the highlight color; drag the slider to the left to emphasize the shadow color. For example if the slider is set to the maximum at 50, then full emphasis is applied to the highlight color; if the slider is set to the minimum -50, then full emphasis is applied to the shadow color.

 Create a sepia tone effect by first reducing the saturation of your photo with the **Advanced Color** tool and then applying a reddish brown hue with the **Split Tone** tool. Or create a monochromatic black and white photo with a slight tint of hue.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Tone Wheels

Colors in every image are split into Highlights, Midtones, and Shadows. Use the **Tone Wheels** filter to add color tints to certain tones in an image. There are two curved sliders with each tone wheel. The curved slider on the left is the saturation slider, the slider on the right is the brightness slider. The tone wheels are used to pinpoint a hue for adjustment.

### To adjust color using the Tone Wheels:

1. Select **Filter | Color | Tone Wheels** from the main menu, or press **Alt + Q**.
2. Choose a hue to edit by clicking and dragging the target point within the tone wheel, or by using the relevant eyedropper on the image itself. When moving the eyedropper around the image, note the dot, known as the hue indicator, move around the wheel to show where the color being hovered over sits on the wheel. The three eyedroppers relate to the relevant tone wheels. The saturation of the selection can be refined by clicking and dragging a selection away from the edges of the wheel, or away from the center of the wheel. The less saturated colors are in the center of the wheel and the more saturated colors are towards the edge of the wheel. Moving the target point towards the outside of the wheel increases tone saturation. Moving it towards the inside of the wheel decreases tone saturation.
3. With a hue selected, increase saturation and/or brightness for the selected tones.
4. Do one of the following:
  - Click **Apply** to apply any changes.
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

 To reset any changes, right-click on either the relevant slider, or the wheel to reset all changes.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Color Wheel

The **Color Wheel** filter adjusts precise colors in an image by changing the color's saturation, hue, brightness, contrast, and contrast balance. The **Color Wheel** tool adjusts smoothness, which acts like a feathering tool to soften a color's edges. The **Color Wheel** filter is particularly useful for common requests like making a blue sky more blue, or brightening dark water that is meant to depict a bright lake.

### To adjust color using the Color Wheel:

1. Select **Filter | Color | Color Wheel** from the main menu, or press **Shift + Alt + H**.
2. Choose a color to edit by clicking and dragging the section of the color wheel around, or by using the eyedropper on the image itself. When moving the eyedropper around the image, note the dot, known as the hue indicator, move around the wheel to show the where the hovered-over color sits on the wheel.
3. To refine the selection, increase or decrease the color selection size by clicking and dragging the double arrows at the edge of the selection on the wheel. Or, refine the color saturation of the selection by clicking and dragging the selection away from the edges of the wheel, or away from the center of the wheel. The less saturated colors are in the center of the wheel and the more saturated colors are towards the edge of the wheel.
4. Set the options as described below.
5. Do one of the following:
  - Click **Apply** to apply any changes.
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.



To reset any changes, right-click on either the relevant slider, or the wheel to reset all changes.

## Color Wheel Options

<b>Invert the selected colors on the wheel</b>	To invert the selected colors, click the <b>Invert the selected colors on the wheel</b> icon.
<b>Press and hold to preview the selection mask</b>	To view a color wheel selection, press and hold the icon to preview the selection mask.
<b>Auto preview the selected range</b>	Enable the checkbox to auto preview the selected range within the selected area in the image.
<b>Smoothness</b>	Adjust the edge of the selection by using the <b>Smoothness</b> slider to soften or sharpen the cut-off point of the selection edges, similar to feathering.
<b>Saturation</b>	Slide left to decrease saturation and slide right to increase saturation.
<b>Hue</b>	Slide left or right to adjust hue.
<b>Brightness</b>	Slide left to decrease brightness and slide right to increase brightness.
<b>Contrast</b>	Slide left to decrease contrast and slide right to increase contrast.
<b>Contrast Balance</b>	After adjusting contrast, adjust the contrast balance, which changes whether the contrast is applied to the lighter or darker colors in the image.

### To adjust multiple colors using the Color Wheel:

After making initial color wheel edits, make changes to other colors using additional color wheels by clicking the green plus **+** symbol adjacent to the color wheel icon.

### To delete additional Color Wheel:

Additional color wheels can be deleted up until the either the **Apply** or **OK** buttons are clicked.

To delete an additional color wheel, click the red **X** adjacent to the list of color wheels.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Color LUTs

"Color LUT" stands for Color Lookup Table. Color LUTs are lists that instruct Gemstone or related programs to map specific RGB values to other specific color values. LUTs can be imported and used as filters in Gemstone. Apply a LUT in the same way as any other filter, or create customized LUTs from adjustment layers. Color LUT supported file types are *.3DL* and *.CUBE*.



Color LUTs can also be applied as an adjustment layer.

### To apply a Color LUT to an image:

1. Select **Filter** | **Color** | **Color LUTs** from the main menu, or press **Alt + M**.
2. In the **Color LUTs** dialog, do one of the following:
  - Select a LUT from the list. The LUT is immediately applied.
  - Click the **Import LUTs** button. In the **Open** dialog, browse to the location of stored LUT files, and click **Open**. The LUT is immediately applied.
3. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 If an imported LUT file's location has changed, reload it in the **Color LUTs** dialog.

### To refresh the list of Color LUTs:

Refresh the list of available LUTs to reveal moved or deleted files. Unavailable LUTs will be indicated in a darker font color.

On the Color LUTs panel, click the **Refresh List** button.

### To remove Color LUTs:

1. In the **Color LUTs** dialog, click the **Remove LUTs** button.
2. In the **Remove LUTs** dialog, toggle the checkboxes next to the LUTs you want to delete.
3. Click **Remove LUTs**.

## Creating Color LUTs

### To create a Color LUT:

Create a customized LUT using adjustment layers. Add multiple adjustment layers and configure them to achieve a desired LUT, or create a LUT using the following adjustment layers:

- [Exposure](#)
- [Levels](#)
- [Curves](#)
- [Light EQ](#)
- [White Balance](#)
- [Vibrance](#)
- [Color EQ](#)
- [RGB](#)
- [Split Tone](#)
- [Add Color](#)
- [Black and White](#)
- [Negative](#)
- [Photo Effect](#)
- [Gradient Map](#)
- [Posterize](#)
- [Threshold](#)

 LUTs cannot be created from a regular layer.

 Customized LUTs will not take masks into consideration.

1. With an image open, add one or more adjustment layers and configure their settings as desired.
2. Choose **Tools | Create LUT...**
3. In the **Create LUT** dialog, configure the settings as described in the table below.
4. Enter a LUT name and click **Save**. The customized LUT will immediately be added to the list in the **Color LUTs** dialog and to the Color LUTs adjustment layer drop-down list.

### Create LUTs Options

<b>Description</b>	(Optional) Enter a LUT description. This is most useful for sharing the new LUT with others.
<b>Copyright</b>	(Optional) Enter the LUT copyright. This is most useful for sharing the new LUT with others.
<b>Format</b>	Select 3DL or CUBE for the LUT file format.
<b>Quality</b>	Select the LUT quality. A higher quality setting will create a larger file size.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



### Sharpen

The **Sharpen** filter sharpens an image by enhancing medium and high contrast edges.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

#### To sharpen an image using the Sharpen tool:

1. Select **Filter | Detail | Sharpen** from the main menu, or press **Alt + N**.
2. Set the image as described below.


3. Do one of the following:

- Click **OK** to apply any changes and close the tool.
- Click **Cancel** to discard all changes and close the tool.

## Sharpen Options

<b>Amount</b>	Specifies the amount of sharpening applied by increasing contrast around the edges.
<b>Radius</b>	Controls the number of pixels to adjust around each edge. Higher values increase the number of sharpened pixels and tend to bring out coarser detail, while lower values reduce the number of sharpened pixels and tend to bring out finer detail.
<b>Mask</b>	Allows the targeting of edges, while suppressing the sharpening of noise and texture. To view the areas the mask affects, press the <b>Alt</b> key when moving the mask slider. Areas affected by sharpening appear white.
<b>Detail</b>	Suppresses the halo, (the light border that forms around edges with extreme sharpening), by reducing its intensity. The higher the value, the stronger the reduction.
<b>Threshold</b>	Specifies how different the pixel lightness values within an edge must be before the pixels within the edge are sharpened. Higher values sharpen only stronger edges but minimize the appearance of noise. Lower values sharpen both strong and weaker edges, but can increase the appearance of noise. It is recommend to set the threshold to enhance edges while keeping background noise to a minimum.
<b>100% Preview</b>	Click the preview image in the <b>100% Preview</b> box to compare the image before and after filtering.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Blur

The **Blur** filter applies various types of blur to an image.




Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.


### To blur an image:

1. Select **Filter | Detail | Blur** from the main menu, or press **Alt + U**.
2. In the **Blur** dialog, navigate to the **Blur type** section and select the type of blur to apply.
3. Set the options as described below.
4. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

### Blur Types


	<p><b>Gaussian</b></p>	<p>Produces an even, smooth blur.</p>
		<p><b>Amount</b></p> <p>Specifies the amount of blur. Move the slider to the right to intensify the effect.</p>
	<p><b>Linear</b></p>	<p>Produces a blurring effect that gives the illusion of movement.</p>
		<p><b>Amount</b></p> <p>Specifies the amount of blur. Move the slider to the right to intensify the effect.</p>
		<p><b>Angle</b></p> <p>Specifies the direction of the blur effect.</p>
	<p><b>Radial</b></p>	<p>Produces blur around a center point. Click the image to set the center point.</p>
		<p><b>Amount</b></p> <p>Specifies the amount of blur.</p>

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		Move the slider to the right to intensify the effect.
	<b>Clockwise</b>	Specifies clockwise blur.
	<b>Counter-clockwise</b>	Specifies counter-clockwise blur.
	<b>Horizontal position</b>	Specifies the blur's center point on the horizontal axis.
	<b>Vertical position</b>	Specifies the blur's center point on the vertical axis.
	<b>Spread</b>	Produces a smeared or frosted blur.
	<b>Amount</b>	Specifies the amount of blur. Move the slider to the right


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			to intensify the effect.
	<b>Zoom</b>	Produces inward or outward blur to or from a center point.	
		<b>Amount</b>	Specifies the amount of blur. Move the slider to the right to intensify the effect.
		<b>Zoom in</b>	Creates a blur that zooms in to the image's center.
		<b>Zoom out</b>	Creates a blur that zooms out from the image's center.
		<b>Horizontal position</b>	Specifies the blur's center point on the horizontal axis.
		<b>Vertical position</b>	Specifies the


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blur's center point on the vertical axis.

	<b>Smart Blur</b>	<p>Produces blur by detecting and avoiding edges, and preserves detail based on the threshold setting. This effect is usually used to smooth out skin.</p>
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<b>Amount</b>	<p>Specifies the amount of blur. Move the slider to the right to intensify the effect.</p>
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<b>Threshold</b>	<p>Specifies how little detail an area must have before the blur will apply to it.</p>
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	<b>Lens</b>	<p>Produces a blur that mimics the blurring effect of a camera aperture.</p> <p>Select a bokeh shape from the options on the Blur panel. These shapes concentrate in highlights.</p>
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<b>Amount</b>	<p>Specifies the strength of the blur.</p>
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Move the slider to the right to intensify the effect.


**Bokeh Frequency**

Specifies how often the bokeh shapes show up.

**Bokeh Brightness**

Specifies how much the bokeh shapes stand out.

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 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 


## Clarity

The **Clarity** filter adds subtle definition to an image's details. Use the **Clarity** filter to enhance the contrast of image midtones, without overpowering the shadows and highlights.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To adjust image clarity:

1. Select **Filter | Detail | Clarity** from the main menu, or press **Alt + C**.
2. Drag the **Strength** slider to the right for greater clarity, or to the left for reverse clarity.
3. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

 Enter a numerical value into the number box to incrementally make precise adjustments.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

### Detail Brush

To highlight important photo details and remove the emphasis off others, use the **Detail Brush** filter. The impact of the **Detail Brush** filter is cumulative, meaning the more the tool is brushed in a particular area using the blur option, for example, the more blurry the area will become.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To adjust details:

1. Select **Filter | Detail | Detail Brush** from the main menu, or press **I**.
2. Set the options as described below.

3. Do one of the following:

- Click **OK** to apply any changes and close the tool.
- Click **Cancel** to discard all changes and close the tool.

## Detail Brush Options

### Operation

Select the operation to perform:

- **Blur**
- **Sharpen**

### Tool settings

**Blur** does not have any tool settings. If **Sharpen** is selected, set the following:

<b>Radius</b>	Controls the number of pixels to adjust around each edge. Higher values increase the number of sharpened pixels and tend to bring out coarser detail, while lower values reduce the number of sharpened pixels and tend to bring out finer detail.
<b>Threshold</b>	Specifies how different the pixel lightness values within an edge must be before the pixels within the edge are sharpened. Higher values sharpen only stronger edges but minimize the appearance of noise. Lower values sharpen both strong and weaker edges, but can increase the appearance of <a href="#">noise</a> . It is recommended to set the <b>Threshold</b> value to enhance edges while keeping background noise to a minimum.

### Brush settings

<b>Nib Width</b>	Drag the slider to select a brush size.
<b>Feathering</b>	Drag the slider to soften the stroke edges.
<b>Strength</b>	Drag the slider to determine the strength of the sharpening or blurring.



Enter a numerical value into the number box to incrementally make precise adjustments.



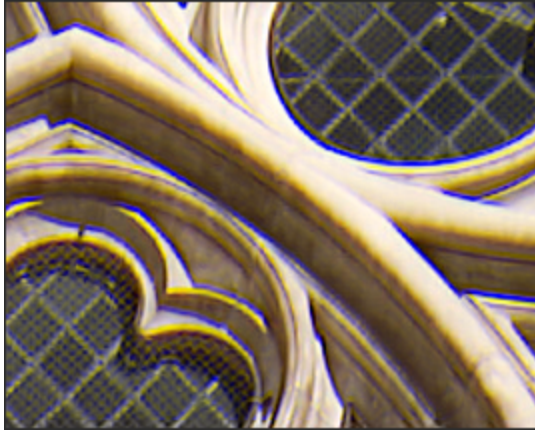
Right-click a slider to reset to the default value.

## Chromatic Aberration

Chromatic aberration is a lens artifact that can result in fringes in high contrast areas of some photos. The camera lens can cause some wavelengths of light to focus differently, which appear in photos as

colored fringing or colored lines on the borders of high contrast areas. Purple fringing can also occur when there is a bright spot of light in front of the lens.

This zoomed-in image shows an example of blue/yellow fringing.



The **Chromatic Aberration** filter is used to reduce the appearance of colored fringes, which can be especially useful for photos with architectural details. For best results, it's recommended to use the Chromatic Aberration sliders first, and then the Defringe sliders.

#### To reduce fringing in an image:

1. Select **Filter | Detail | Chromatic Aberration** from the main menu, or press **Alt + Y**.
2. Adjust the sliders as described below.
3. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.



Right-click a slider to reset to the default value.

#### Chromatic Aberration Options

<b>Fix Red/Cyan</b>	Adjust the red and cyan channels to reduce red/cyan fringing.
<b>Fix Blue/Yellow</b>	Adjust the blue and yellow channels to reduce blue/yellow fringing.
<b>Defringe strength</b>	Adjust the amount of fringe color to be removed from high contrast edges. A setting of zero means that defringing is off.
<b>Defringe radius</b>	Adjust the number of pixels surrounding an edge that will be defringed.
<b>Fringe color</b>	Adjust the color to remove from high contrast edges.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.

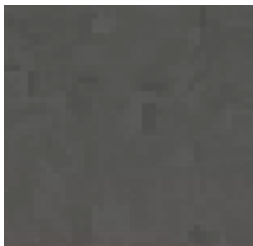


### About Noise and Noise Reduction

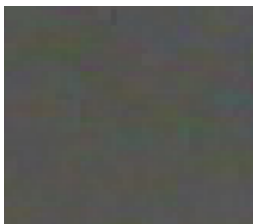
Image noise looks like random black, white, or colored pixels in an area of a photo where there should be solid color, such as a dark night sky. In digital photography, noise is typically more visible in the dark areas of a photo.

There are many causes of image noise. The amount of image noise will be increased if a high ISO setting is used (such as ISO 800) to capture a photo, or if the exposure time is extended. (Typically, a high ISO setting and extend exposure times are used to take photos in low light.) However, image noise can also be caused by dead or stuck pixels in a digital camera's image sensor. Similarly, dust on a camera lens or scanner bed can cause noise by blocking or reflecting light.

Images generally have two types of noise: luminance and color. Luminance noise is random variations of brightness, and particularly in gray areas, may appear spotted when there should be a solid color in the area of the image.



Color noise is random variations of color in the image.



Noise is visually distracting and in most cases will need to be reduced. However, if noise is reduced too much, the image sharpness may be unintentionally reduced. Use the **Noise** tool to remove both luminance and color noise in your images.

## Add Noise

The **Add Noise** filter adds a grainy texture to an image. Adding small amounts of noise can reduce the appearance of minor imperfections in the original image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent **Save** icon.

### To add noise to an image:

1. Select **Filter | Detail | Noise** from the main menu, or press **N**.
2. Select the **Add Noise** tab.
3. Set the options as described below.
4. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

### Add Noise Options

<b>Intensity</b>	Specifies the amount of noise to add to the image. A higher intensity increases the chance that a noise pixel will replace a pixel in the original image.
<b>Color proximity</b>	Specifies the color of noise pixels to add to the image. A lower value gives each noise pixel a color similar to the pixel it replaces. Higher values result in a random selection of the noise pixel color.
<b>Noise color</b>	Select one of the following options to specify noise pixel color: <ul style="list-style-type: none"> <li>• <b>Random</b>: Randomly selects the color.</li> <li>• <b>Monochrome</b>: Produces black and white noise pixels.</li> <li>• <b>Adjustable</b>: Randomly selects the color of each noise pixel, but more pixels match a defined color. To define a color, click the color picker and select a color.</li> </ul>
<b>Noise placement</b>	Adds noise to image areas that closely match a defined color. Select the <b>Set color</b> checkbox to enable noise placement, and click the color picker to specify a color.
<b>Randomize</b>	Indicates the random placement of noise in an image.  When using the <b>Add Noise</b> tool, Gemstone places the noise pixels based on a random seed to make the image noise different each time the <b>Add Noise</b> tool is used. To generate a new random seed, click the <b>Randomize</b> button.



Right-click a slider to reset to the default value.



This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details).



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Remove Noise

The **Remove Noise** filter removes noise from images while preserving the image details.



Use the **Remove Noise** filter to remove hot image pixels caused by digital cameras with malfunctioning CCD array sensors, or the unwanted pixels caused by a dusty scanner or camera lens.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To remove noise from an image:

1. Select **Filter** | **Detail** | **Noise** from the main menu, or press **N**.
2. Select the **Remove Noise** tab.
3. Make a selection from the **Noise Type** section.
4. Set the options as described below.



Hold down the **Alt** key while adjusting a slider to view a preview of its effect on the image.

5. Do one of the following:
  - Click **OK** to apply any changes and close the tool.
  - Click **Cancel** to discard all changes and close the tool.

## Remove Noise | Noise Type Options



### Camera Noise Removal

Removes digital camera noise. Adjust the associated following sliders to further remove noise.



<b>Luminance</b>	Reduces the random variations of brightness in the noise.
<b>Strength</b>	Controls the strength of the <b>Luminance</b> slider.
<b>Color</b>	Reduces the random variations of color in the noise.
<b>Tonal Range</b>	<p>Tonal Range refers to a range of average brightness values in an image. For example, the tonal range of a photo taken in a dark cavern it would be low, whereas a sunny sky would be high.</p> <p>The Tonal Range slider increases in value from left to right, increasing from a low tonal range on the left to a high tonal range on the right. The Tonal Range slider is used to focus noise reduction to areas of the image that have a corresponding tonal range. For example, the left-most position would reduce the noise in a cavern more than a sky.</p> <p>Tonal Range only affects luminance noise reduction.</p>
<b>Frequency Range</b>	<p>The Frequency Range slider adjusts the noise pattern. High frequency noise looks like fine static while low frequency noise looks like coarse grain or "splotches". Move the Frequency Range slider to the left to limit noise reduction to high frequency noise.</p> <p>Frequency Range affects both luminance and color noise reduction.</p>



### Median Noise Removal

Reduces impulsive, or salt-and-pepper noise while preserving edges. Select from the following options to further remove noise:

<b>Square</b>	Removes noise using a 3 x 3 pixel
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		square.
	<b>X</b>	Removes noise using a 3 x 3 pixel X shape. Use this option when you want to preserve an image's thin and diagonal lines.
	<b>Plus</b>	Removes noise using a 3 x 3 pixel plus (+) shape. Use this option to preserve an image's thin, vertical, and horizontal lines.
	<b>Despeckle</b>	Removes noise.
	<b>AI Denoise</b>	Removes noise using AI.
	<b>Strength</b>	Controls the strength of the AI Denoise tool.

 Right-click a slider to reset to the default value.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 


## About Special Effect Filters


Gemstone includes more than 40 special effect filters, such as Crosshatch, Pencil Drawing, and Solarize to add unique effects to images.

### To access the Special Effects filters:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. Make a Special Effects selection in the **Effects** dialog. Special Effects are grouped under the following headings:

- Artistic
- Color
- Distort
- Edges
- Light
- Nature
- Painting
- Retro
- User Defined

 For more information about each effect, click the Help menu item to view a Help file page specific to that effect.

 This filter features a **Pixel Targeting** tab (see [Pixel Targeting](#) for more details). 


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Blinds

The **Blinds** effect divides an image into bars that look like venetian or vertical window blinds. The characteristics of the blinds can be customized.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Blinds effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Blinds**.
4. Set the options as described below.

5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

## Blinds Options

<b>Width</b>	Specifies the width of the blinds. Enter a number from 1 to 1000 or drag the slider to adjust the width of each blind. As the value increases, the width of the blind also increases.
<b>Opacity</b>	Specifies the opacity of the blinds. Enter a number from 1 to 99 or drag the slider to adjust the opacity of the blinds. The higher the opacity, the more the image is obscured.
<b>Angle</b>	Specifies the angle of the blinds. Enter a number from 1 to 360 or drag the arrow to adjust the angle.
<b>Blind color</b>	Specifies the color of the blinds.

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Collage

The **Collage** effect creatively breaks up a photo into a number of photos.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To use the Collage effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Collage**.
4. Set the options as described below.

5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

## Collage Options

<b>Number of photos</b>	Sets the number of photos to include in the collage.
<b>Size</b>	Sets the size of the photos to include in the collage.
<b>Background color</b>	Selects a background color by clicking the drop-down arrow to display color gradients
<b>Randomize</b>	Reshuffles the photos.

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Colored Edges

The **Colored Edges** effect traces the lines and details of people or objects in an image.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Colored Edges effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Colored Edges**.
4. Set the options as described below.

5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

## Colored Edges Options

<b>Intensity</b>	Specifies the amount of color added to the edges within the image. The higher the setting, the thicker the color that is applied to the image.
<b>Edge color</b>	Specifies the color of the edges.
<b>Edge detection</b>	Specifies the edge detection algorithm. The algorithm controls the formula used to detect the edges and the direction of the edge indicators.
<b>Blurring</b>	Blurs the edges in the image. Enable the <b>Use blurring</b> checkbox, then select a blur setting from the drop-down to determine how much blur is applied.

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Contours

The **Contours** effect draws contour lines on an image to create a cartoon effect. Customization includes rounding, line frequency, color, and strength.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Contours effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Contours**.
4. Set the options as described below.

5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

## Contours Options

<b>Rounding</b>	Specifies the amount of curve in the contour lines. The higher the value, the rounder the lines.
<b>Line frequency</b>	Specifies the amount of space between the contour lines. The higher the value, the closer the lines move together.
<b>Strength</b>	Specifies the strength of the line. The higher the value, the darker the line.
<b>Line color</b>	Specifies the color of the contour lines.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 



 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Crosshatch

The **Crosshatch** effect adds crosshatching to an image.

### To use the Crosshatch effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Crosshatch**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Dramatic

The **Dramatic** effect makes images look dramatic and moody by drastically changing the contrast in specific areas.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Dramatic effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Dramatic**.
4. Set the options as described below.
5. Do one of the following:
  - Click **Done** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Dramatic Options

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**Strength** Specifies the strength of the contrast being applied.

**Spread** Specifies how far the effect spreads over the details in the photo.

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 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 



Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point.



## Emboss

The **Emboss** effect adds a grayscale relief to an image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To Emboss an image:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Emboss**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Emboss Options

<b>Elevation</b>	Specifies the light source's elevation on the image. Lower values produce more shadows and a darker image. Higher values produce fewer shadows and a lighter image.
<b>Weight</b>	Specifies the amount of relief added to the image. Higher values increase the relief depth.
<b>Azimuth</b>	Specifies the angle of shadows that extend from the edges of image details. A value of 0 adds shadows to the left side, while a value of 180 adds shadows to the right side.



Right-click a slider to reset to the default value.



Use the [Edit Brush](#) to paint this effect onto specific areas of the image.



Use the [Gradient](#) tool to transition this effect across specific areas of the image.





Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Furry Edges

The **Furry Edges** effect adds fur and bristles to the lines and details of people or objects in an image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To use the Furry Edges effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Furry Edges**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Furry Edges Options

<b>Frequency</b>	Specifies how much fur is added to the image. The higher the setting, the more dense the fur that is applied to the image.
<b>Threshold</b>	Specifies how sharp an edge must be before fur is applied to it. As the value decreases, the area of the image that fur is added to increases.
<b>Fur length</b>	Specifies the length of each strand of fur. As the value increases, the length of each fur strand also increases.
<b>Variance</b>	Specifies how much of the fur grows in the direction indicated by the <b>Hair direction</b> setting. The higher the value, the more random the fur direction will be.
<b>Hair direction</b>	Specifies the general direction in which fur appears to grow.
<b>Edge detection</b>	Specifies the edge detection algorithm. The algorithm controls the formula used to detect the edges and the direction of the edge indicators.
<b>Background color</b>	Specifies the background color of the filtered image. Select the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Fur color</b>	Specifies the color of the fur. Select the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Randomize</b>	<p>Indicates the random placement of the fur strands.</p> <p>When applying the <b>Furry Edges</b> effect to an image, Gemstone places the fur randomly to make the fur strands different every time the filter is applied. You can define a specific random seed to generate identical fur patterns.</p> <p>To generate a new random seed, click the <b>Randomize</b> button.</p>

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Gloom

The **Gloom** effect gives an images a dark, gloomy appearance.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Gloom effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Gloom**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Gloom Options

#### Color

Slide to add a color tint to the image.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



### Glowing Edges

The **Glowing Edges** effect adds color to the lines and details of people or objects in an image. The colored lines and details appear to glow.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Glowing Edges effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.

3. Select **Glowing Edges**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Glowing Edges Options

<b>Intensity</b>	Specifies the amount of color added to the edges within the image. The higher the setting, the more intense the color that is applied to the image.
<b>Color</b>	Specifies the color of the edges.

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

### Grunge

The **Grunge** effect gives an image a moody, dark look.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

#### To apply a Grunge effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Grunge**.
4. Set the options as described below.

5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

## Grunge Options

<b>Color</b>	Slide to add a color tint to the image. When the <b>Color</b> slider is set to 0, no tint has been added.
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 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Lomo

The **Lomo** effect simulates the retro-effects of a lomo camera. Photos taken with a lomo camera are high contrast, with a golden hue and a noticeable vignette.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To use the Lomo effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Lomo**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Lomo Options

<b>Color Distortion</b>	Slide to the right to increase the color distortion.
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<b>Vignette Strength</b>	Slide to the right to increase the vignette strength.
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 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Orton

The **Orton** effect creates beautiful impressionistic images. The **Orton** effect mimics a darkroom technique created by sandwiching two images together, one of which is slightly out of focus, and both of which are slightly overexposed.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To use the Orton effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Orton**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Orton Options

<b>Blur</b>	Slide to the right to increase the blur.
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<b>Contrast</b>	Slide to the right to increase the contrast.
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<b>Brightness</b>	Slide to the right to increase the brightness.
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 Right-click a slider to reset to the default value.


 Use the Edit Brush to paint this effect onto specific areas of the image. 

 Use the Gradient tool to transition this effect across specific areas of the image. 

 Use the Radial Gradient tool to apply effects around, or directly to, a center point. 

## Photo Effect

The **Photo Effect** applies a variety of filters to an image.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Photo Effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Photo Effect**.
4. Select an option from the **Filter Type** drop-down menu.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Right-click a slider to reset to the default value.

 Use the Edit Brush to paint this effect onto specific areas of the image. 

 Use the Gradient tool to transition this effect across specific areas of the image. 

 Use the Radial Gradient tool to apply effects around, or directly to, a center point. 

## Pixel Explosion

The **Pixel Explosion** effect explodes pixels from a center point in an image. The **Pixel Explosion** effect settings can be customized, such as intensity and direction.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent **Save** icon.

### To use the Pixel Explosion effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Pixel Explosion**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Pixel Explosion Options

<b>Horizontal center</b>	Specifies the center point of the explosion on the horizontal axis. A value of 500 places the explosion at the middle of the image.
<b>Vertical center</b>	Specifies the center point of the explosion on the vertical axis. A value of 500 places the explosion at the middle of the image.
<b>Intensity</b>	Specifies the intensity of the explosion. A higher value creates a larger, more brilliant spread of the pixels in the image.
<b>Explosion direction</b>	Specifies the direction of the explosion. Select one or both of the following: <ul style="list-style-type: none"> <li>• <b>Explode horizontally:</b> Explodes the pixels towards the right and left sides of the image.</li> <li>• <b>Explode vertically:</b> Explodes the pixels towards the top and bottom of the image.</li> </ul>
<b>Randomize</b>	Indicates the random placement of the pixels.  When applying the <b>Pixel Explosion</b> effect to an image, Gemstone places the pixels randomly to make the pixels different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Scattered Tiles

The **Scattered Tiles** effect divides an images into rectangular tiles, and scatters and stacks the tiles.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Scattered Tiles effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Scattered Tiles**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Scattered Tiles Options

<b>Tile size</b>	Specifies the size of the tiles.
<b>Scatter amount</b>	Specifies how much the tiles will move from their original positions.
<b>Background color</b>	Specifies the color of the background. Click the color picker to select a different color.
<b>Randomize</b>	Indicates the random placement of the tiles.  When applying the <b>Scattered Tiles</b> effect to an image, Gemstone places the tiles randomly to make the effect different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Sheet Metal

The **Sheet Metal** effect turns an images into sheet metal impressions.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Sheet Metal effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Sheet Metal**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Sheet Metal Options

<b>Rounding</b>	Specifies the amount of curve in the edges of the impressions.
<b>Detail</b>	Specifies the amount of detail in the impression.
<b>Angle</b>	Specifies the angle of the grain in the sheet metal.
<b>Metal color</b>	Specifies the color of the sheet metal.
<b>Direction</b>	Specifies the direction in which the sheet metal was manipulated. Select one of the following: <ul style="list-style-type: none"> <li>• <b>Indented:</b> Stamps the metal from the top side of the image.</li> <li>• <b>Pushed out:</b> Stamps the metal from underneath the image.</li> </ul>



Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Stained Glass

The **Stained Glass** effect divides images into fragments of a random size and shape, to give the photo the appearance of a stained glass window.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Stained Glass effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Stained Glass**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Stained Glass Options

<b>Fragment size</b>	Specifies the size of the fragments.
<b>Randomize</b>	Indicates the random placement of the fragments.  When applying the <b>Stained Glass</b> effect to an image, Gemstone places the fragments randomly to make the effect different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Threshold

The **Threshold** effect creates a black and white image.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply the Threshold effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Threshold**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Threshold Options

<b>Threshold</b>	The <b>Threshold</b> slider determines which pixels become black and which ones become white in a black and white rendering of the image. Any pixels that are brighter than the selected threshold will become white and any pixels that are darker than the threshold will become black.
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 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Topography

The **Topography** effect changes the details of an images into contour lines.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Topography effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Topography**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Threshold Options

<b>Rounding</b>	Adjusts the amount of curve in the contour lines.
<b>Number of lines</b>	Specifies how many contour lines to add.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image. 



Use the **Gradient** tool to transition this effect across specific areas of the image. 



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Weave

The **Weave** effect gives a photo the appearance of being woven into a tapestry or basket. Control the width of the vertical and horizontal strips, the width of the gap between the strips, and the background color that displays through the gap.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Weave effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Weave**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Weave Options

<b>Strip width</b>	Specifies the width of the vertical and horizontal strips.
<b>Gap width</b>	Specifies the width of the gap between the strips.
<b>Background color</b>	Specifies the color of the background. Click the color picker to select a different color.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



### Wind

The **Wind** effect adds wind lines that make stationary objects in an image look like they are moving.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Wind effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Artistic** group.
3. Select **Wind**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Wind Options

<b>Strength</b>	Determines how strong the wind lines are in the image. The higher the value, the stronger the wind lines.
<b>Threshold</b>	Determines how sharp an edge must be before the filter will apply wind. The higher the value, the sharper the edge needs to be.
<b>Chance of wind</b>	Determines the amount of wind lines to place in the image.
<b>Edge detection</b>	Specifies the edge detection algorithm. The algorithm controls the formula used to detect the edges and the direction of the edge indicators.
<b>Background color</b>	Specifies the background color. Enable the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Wind color</b>	Specifies the color of the wind lines. Enable the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Wind angle</b>	Specifies the angle of the wind lines.
<b>Randomize</b>	Indicates the random placement of the wind lines.  When applying the <b>Wind</b> effect to an image, Gemstone places the wind lines randomly to make the wind lines different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.

 Right-click a slider to reset to the default value.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 



Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point.



## Gradient Map

The **Gradient Map** effect adds colors to the dark and light parts of an image. The **Gradient Map** effect maps shadows to one color, and highlights to another based on the lightness value of each pixel. Give the darker parts of an image a completely different color from the lighter parts.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Gradient Map effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Color** group.
3. Select **Gradient Map**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Gradient Map Options

<b>Dark</b>	Specify the color to be added to the dark parts of an image.
<b>Light</b>	Specifies the color to be added to the light parts of an image.



Right-click a slider to reset to the default value.



Use the [Edit Brush](#) to paint this effect onto specific areas of the image.



Use the [Gradient](#) tool to transition this effect across specific areas of the image.



Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point.



## Negative

The **Negative** effect creates a negative of the image. The **Negative** effect can also be applied to a negative scanned from a roll of film to produce a positive image.

### To create an image negative:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Color** group.
3. Select **Negative**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Posterize

The **Posterize** effect reduces the number of brightness levels in an image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Posterize effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Color** group.
3. Select **Posterize**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Posterize Options

**Brightness levels** Slide to adjust the variance of colors in the image. The lower the value, the fewer colors used in the image.

 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Solarize

The **Solarize** effect simulates the effect of overexposing an image, as though the film was exposed to light before developing.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Solarize effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Color** group.
3. Select **Solarize**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Solarize Options

<b>Threshold</b>	Specifies the brightness threshold of the image.
<b>Effect</b>	<p>Specify which pixels to adjust by selecting one of the following options.</p> <p><b>Solarize:</b> Adjusts pixels located above the specified threshold option. The effect takes any pixels above the threshold and replaces them with their negative value. When solarizing an image, a higher threshold value sets a brighter threshold, and colors need to be brighter to be overexposed.</p> <p><b>Lunarize:</b> Adjusts pixels located below the specified threshold option. The effect takes any pixels below the threshold and replaces them with their negative value. When lunarizing an image, a higher threshold value sets a darker threshold, and colors do not have to be as bright to be overexposed.</p>

 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Bathroom Window

The **Bathroom Window** effect divides images into bars, transforming them to resemble the view through privacy glass often found in bathroom windows. Select or customize the **Bathroom Window** effect options to apply to the image.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Bathroom Window effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Bathroom Window**.
4. Set the options as described below.

5. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

## Bathroom Window Options

<b>Bar width</b>	Slide to dictate the width of the individual image slates.
<b>Bar direction</b>	Enable either the <b>Horizontal</b> or <b>Vertical</b> radio buttons to specify the orientation of the image bars.

 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Bulge

Use the **Bulge** effect to stretch or shrink areas of an image, horizontally and vertically. Customizing the **Bulge** effect includes the strength, radius, and position of the distortion.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Bulge effect:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Bulge**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Bulge and Shrink Options

<b>Horizontal position</b>	Specifies the center of the distortion along the horizontal axis. A lower value moves the distortion towards the left side of the image, while a higher value moves it towards the right side of the image.
<b>Vertical position</b>	Specifies the center of the distortion along the vertical axis. A lower value moves the distortion towards the bottom of the image, while a higher value moves it towards the top of the image.
<b>Radius</b>	Specifies the radius of the distorted area. A lower value decreases the radius of the distortion, while a higher value increases the radius of the distortion.
<b>Strength</b>	Specifies the strength of the distortion. A negative value shrinks the center of the distortion, while a higher value bulges the distortion.
<b>Background color</b>	Specifies the background color for the filtered image. Select the <b>Image</b> checkbox to use the original image color, or click the color picker to select a different color.
<b>Bulge direction</b>	Specifies the direction of the distortion. Select one or both of the following options: <ul style="list-style-type: none"> <li>• <b>Horizontal:</b> Moves the distortion horizontally.</li> <li>• <b>Vertical:</b> Moves the distortion vertically.</li> </ul>

 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Jiggle

The **Jiggle** effect adds jiggly distortions to an image. Customize distortion characteristics to be added to an image. Some distortions will change the shape of the outside edges of the image, revealing a transparent background.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

**To apply a Jiggle effect:**

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Jiggle**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

**Jiggle Options**

<b>Size</b>	Specifies the size of the jiggle distortion. Type a number from 1 to 100 or drag the slider to adjust the width of the distortions. As the value increases, the width of the wave also increases.
<b>Detail</b>	Specifies how jagged the distortion becomes. Type a number from 1 to 10 or drag the slider to adjust the detail.
<b>Strength</b>	Specifies the intensity of the distortion. Type a number from 1 to 100 or drag the slider to adjust the strength.
<b>Randomize</b>	Indicates the random placement of the distortions.  When applying the <b>Jiggle</b> effect to an image, Gemstone places the fragments randomly to make the effect different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

**Mirror**

The **Mirror** effect reflects an image along the horizontal or vertical axis. Select or change the **Mirror** effect options to apply mirroring to an image, including mirror axis and direction.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Mirror effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Mirror**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Mirror Options

<b>Mirror axis</b>	Slide to adjust the position of the mirror. A value of 500 places the mirror in the center of the image.
<b>Mirror direction</b>	Enable either the <b>Horizontal</b> or <b>Vertical</b> radio buttons to specify the orientation of the image bars.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



### Pixelate

A pixel is the smallest piece of a digital image, arranged in rows and columns. When the resolution of an image is reduced, the size of the pixel increases and produces blurring. The **Pixelate** effect increases the size of the pixels in an image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

**To apply a Pixelate effect:**

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Pixelate**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

**Pixelate Options**

<b>Width</b>	Slide to the right to increase the width of the pixels in an image.
<b>Height</b>	Slide to the right to increase the height of the pixels in an image.
<b>Square</b>	Enable the <b>Square</b> checkbox to make the width and height equal.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

**Radial Waves**

The **Radial Waves** effect displays waves radiating from a center point in the photo. The center point of the photo and the appearance of the waves can be customized.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

**To apply a Radial Waves effect:**

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.

3. Select **Radial Waves**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Radial Waves Options

<b>Horizontal position</b>	Specifies the center of the waves on the horizontal axis. A value of 500 places the waves in the middle of the image.
<b>Vertical position</b>	Specifies the center of the waves on the vertical axis. A value of 500 places the waves in the middle of the image.
<b>Amplitude</b>	Specifies the depth and height of each wave.
<b>Wavelength</b>	Specifies the amount of space between waves.
<b>Light strength</b>	Specifies the amount of light contrast between the top and bottom of each wave.
<b>Background color</b>	Specifies the background color of the filtered image. Select the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Wave direction</b>	Specifies the direction of the waves. Select one, or both, of the following: <ul style="list-style-type: none"> <li>• <b>Wave horizontally:</b> Makes the waves move towards the right and left sides of the image.</li> <li>• <b>Wave vertically:</b> Makes the waves move towards the top and bottom of the image.</li> </ul>

 Right-click a slider to reset to the default value.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Ripple

The **Ripple** effect divides images into concentric circles that resemble ripples from a pebble dropped into water. Customization includes position and strength.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Ripple effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Ripple**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Ripple Options

<b>Horizontal position</b>	Specifies the center of the ripples on the horizontal axis. A value of 500 places the ripples in the middle of the image.
<b>Vertical position</b>	Specifies the center of the ripples on the vertical axis. A value of 500 places the ripples in the middle of the image.
<b>Amplitude</b>	Specifies the depth and height of each ripple.
<b>Wavelength</b>	Specifies the amount of space between ripples.
<b>Light strength</b>	Specifies the amount of light contrast between the top and bottom of each ripple.
<b>Background color</b>	Specifies the background color of the filtered image. Enable the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Ripple direction</b>	Specifies the direction of the ripples. Enable one or both of the following: <ul style="list-style-type: none"> <li>• <b>Ripple vertically</b>: Makes the ripples move towards the top and bottom of the image.</li> <li>• <b>Ripple horizontally</b>: Makes the ripples move towards the right and left sides of the image.</li> </ul>



Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Shift

The **Shift** effect divides images into bars and shifts the bars in random directions.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Shift effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Shift**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Shift Options

<b>Strength</b>	Specifies the amount of shift between the bars.
<b>Width</b>	Specifies the width of each bar.
<b>Angle</b>	Specifies the angle of the bars.
<b>Background color</b>	Specifies the background color of the filtered image. Enable the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.

 Right-click a slider to reset to the default value.

 Use the **Gradient** tool to transition this effect across specific areas of the image. 



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Slant

The **Slant** effect makes a photo appear slanted. For example, use the **Slant** effect to distort a photo by pushing the top of the photo to the left and the bottom of the photo to the right. Similarly, use the slant effect to push the left side of the photo upwards and the right side of the photo downwards.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Slant effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Slant**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Slant Options

<b>Amount</b>	Specifies the degree of the slant.
<b>Fulcrum</b>	Specifies the center of the slant. Drag the slider to the left to place the center of the slant near the bottom of the photo. Drag the slider to the right to place the center of the slant near the top of the photo.
<b>Background color</b>	Specifies the background color of the filtered image. Click the color picker to select a different color.
<b>Slant Direction</b>	Specifies the angle of the slant: <ul style="list-style-type: none"> <li>• <b>Horizontal:</b> Select Horizontal to push the top or bottom of the photo to the left or right.</li> <li>• <b>Vertical:</b> Select Vertical to push the left or right side of the photo up or down.</li> </ul>



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Swirl

The **Swirl** effect rotates and stretches people and objects in an image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Swirl effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.
3. Select **Swirl**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Swirl Options

<b>Horizontal position</b>	Specifies the center of the swirl on the horizontal axis. A value of 500 places the swirl in the middle of the image.
<b>Vertical position</b>	Specifies the center of the swirl on the vertical axis. A value of 500 places the swirl in the middle of the image.
<b>Radius</b>	Specifies the size of the swirl effect.
<b>Strength</b>	Specifies the strength and direction of the swirl. Higher values create a clockwise swirl, while negative values create a counter-clockwise swirl.
<b>Focus</b>	Specifies the concentration of the swirl. Higher values concentrate the effect on the center of the swirl, while lower values spread the swirl across the image.
<b>Background color</b>	Specifies the background color of the filtered image. Select the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.
<b>Swirl direction</b>	Specifies the direction of the swirl. Select one or both of the following: <ul style="list-style-type: none"> <li>• <b>Swirl horizontally:</b> Moves the swirl towards the top and bottom of the image.</li> <li>• <b>Swirl vertically:</b> Moves the swirl towards the right and left sides of the image.</li> </ul>

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Waves

The **Waves** effect displays waves across a photo. Change the distance between waves, called "wavelength", or change the height of the waves, and the angle at which the waves cross the photo.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Waves effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Distort** group.

3. Select **Waves**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Waves Options

<b>Wavelength</b>	Specifies the distance between waves. Drag the slider to the left to reduce the distance between waves and increase the distortion caused by the waves. Drag the slider to the right to increase the distance between waves and reduce the distortion caused by the waves.
<b>Amplitude</b>	Specifies the height of the waves. Drag the slider to the left to reduce the height of the waves and the distortion caused by the waves. Drag the slider to the right to increase the height of the waves and the distortion caused by the waves.
<b>Angle</b>	Specifies the angle of the waves. Type a number from 1 to 360 or drag the arrow to adjust the angle.
<b>Background color</b>	Specifies the background color. Enable the <b>Image</b> checkbox to use the original image colors, or click the color picker to select a different color.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Edge Detect

The **Edge Detect** effect creates a highlighted outline of an image. After creating a black image, the **Edge Detect** effect uses colored lines to outline the detail of an image where significant color differences exist. Greater differences between colors in the original image produce brighter outline colors. (The **Sobel** effect is similar to the **Edge Detect** effect, but produces sharper and brighter outlines.)

### To use the Edge Detect effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Edges** group.
3. Select **Edge Detect**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Outline

Use the **Outline** effect to create a highlighted outline of an image, similar to the **Edge Detect** effect. However, with the **Outline** effect, the thickness of the outline can be controlled, whether an edge is outlined or not, and the color that displays behind the outlined image.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To use the Outline effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Edges** group.
3. Select **Outline**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Outline Options

<b>Line width</b>	Specifies the width of the outline in the effect. The higher the value, the wider the outline.
<b>Threshold</b>	Specifies how sharp an edge must be in order to be outlined. If a higher value is specified, more edges in the photo will be outlined.
<b>Background color</b>	Specifies the background color of the filtered image. Click the color picker to select a different color.

 Right-click a slider to reset to the default value.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Sobel

The **Sobel** effect creates a highlighted outline of an image. After creating a black image, the **Sobel** effect uses colored lines to outline the detail of an image where significant color differences exist. Greater differences between colors in the original image produce brighter outline colors. (The **Sobel** effect is similar to the **Edge Detect** effect, but produces sharper and brighter outlines.)

### To use the Sobel effect:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Edges** group.
3. Select **Sobel**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Sunspot

The **Sunspot** effect adds a bright spot to images.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Sunspot effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Light** group.
3. Select **Sunspot**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Sunspot Options

<b>Horizontal position</b>	Specifies the horizontal position of the sunspot.
<b>Vertical position</b>	Specifies the vertical position of the sunspot.
<b>Brightness</b>	Specifies the intensity of the sunspot.



Right-click a slider to reset to the default value.

## Clouds

The **Clouds** effect makes graphical content out of an images, such as backgrounds and more.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply the Clouds effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Nature** group.

3. Select **Clouds**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Clouds Options

<b>Size</b>	Specifies the size of the clouds. Drag the slider to the right to increase the size.
<b>Detail</b>	Specifies the detail's fineness. Enter a number from 0 to 10 or drag the slider to adjust the details of the clouds.
<b>Randomize</b>	<p>Indicates the random placement of the clouds.</p> <p>When applying the <b>Clouds</b> effect to an image, Gemstone places the fragments randomly to make the effect different every time the filter is applied. Define a specific random seed to generate identical fragment patterns.</p> <p>To generate a new random seed, click the <b>Randomize</b> button.</p>

 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Granite

The **Granite** effect gives images the appearance of being painted on a rock wall.

 Customized settings can be saved as a preset for future use. Presets can be selected from the [Presets](#) drop-down, or saved by clicking the adjacent Save icon.

### To use the Granite effect:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Nature** group.

3. Select **Granite**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Granite Options

<b>Light Angle</b>	Specifies the direction from which an imaginary light source is shining on the image. Drag the arrow to adjust the angle. Different light angles will change the highlights and shadows in the peaks and valleys on the rock.
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Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Rain

The **Rain** effect makes it look like it was raining when you took a photo. Customize the amount of rain, the angle, strength and other characteristics.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply the Rain effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Nature** group.
3. Select **Rain**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Rain Options

<b>Strength</b>	Specifies the length of the rain drops. Drag the slider to the right to increase the length.
<b>Opacity</b>	Specifies the opacity of the rain drops. Type a number from 0 to 100 or drag the slider to adjust the opacity of the rain drops. The higher the opacity, the more the image is obscured.
<b>Amount</b>	Specifies the number of rain drops.
<b>Angle variance</b>	Specifies the angle of the rain drops. Type a number from 0 to 50 or drag the arrow to adjust the angle.
<b>Strength variance</b>	Specifies how much variety there should be in the length of the rain drops. Drag the slider to the left to have a similar length. Drag the slider to the right to vary the length of rain drops. The more varied the length of the rain drops, the more natural they will appear.
<b>Background blur</b>	Specifies the amount of blur in the photo. Since heavy rainfall reduces visibility, use the blur option to make the rain effect look more natural.
<b>Angle</b>	Specifies the angle at which the rain drops are falling.
<b>Color</b>	Specifies the color of the rain drops.

 Right-click a slider to reset to the default value.


 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Water

The **Water** effect inserts an expanse of water below the subject of a photo to display a reflection of the subject in the water. The position of the water below the subject can be customized. For example, position the water below a person's chin, below their waist, or control the appearance of ripples in the water and how dark or light the water appears.

 Customized settings can be saved as a preset for future use. Presets can be selected from the [Presets](#) drop-down, or saved by clicking the adjacent Save icon.

### To apply a Water effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Nature** group.
3. Select **Water**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Water Options

<b>Position</b>	Specifies the position of the water below the subject of the photo.
<b>Amplitude</b>	Specifies the height of the ripples in the water. Drag the slider to the left to reduce the height of the ripples and the distortion caused by the ripples. Drag the slider to the right to increase the height of the ripples and the distortion caused by the ripples.
<b>Wavelength</b>	Specifies the distance between ripples. Drag the slider to the left to reduce the distance between ripples and increase the distortion caused by the ripples. Drag the slider to the right to increase the distance between ripples and reduce the distortion caused by the ripples.
<b>Perspective</b>	Changes the size of the waves as they get farther from the subject. Drag the slider to the left to increase the size of the waves farthest from the subject and to increase the illusion of distance.
<b>Lighting</b>	Specifies the amount of light in the water.

 Right-click a slider to reset to the default value.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Water Drops

The **Water Drops** effect displays water drops on the surface of the photo. The number and size of water drops, and their position on the photo are customizable.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent **Save** icon.

### To apply the Water Drops effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Nature** group.
3. Select **Water Drops**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Water Drops Options

<b>Density</b>	Specifies the number of water drops on the photo. Drag the slider to the left to remove water drops. Drag the slider to the right to add water drops.
<b>Radius</b>	Specifies the size of the water drops. Drag the slider to the left to make the water drops smaller. Drag the slider to the right to make the water drops larger.
<b>Height</b>	Specifies the height of the water drops above the photo surface. Drag the slider to the left to reduce the height of the water drops and the distortion caused by the water drops. Drag the slider to the right to increase the height of the water drops and the distortion caused by the water drops.
<b>Randomize</b>	Indicates the random placement of the water drops.  When applying the <b>Water Drops</b> effect to an image, Gemstone places the water drops randomly to make the effect different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Bob Ross

The **Bob Ross** effect gives images a painted look in the style of Bob Ross, an American painter and host of the PBS TV show *The Joy of Painting*.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply the Bob Ross effect to an image:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Painting** group.
3. Select **Bob Ross**.
4. Set the options as described below.
5. Do one of the following:
  - Click **Done** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Bob Ross Options

<b>Brush size</b>	Drag the <b>Brush size</b> slider to specify the width of the brush strokes in the effect. The higher value, the wider the brush stroke.
<b>Coverage</b>	Drag the <b>Coverage slider</b> to specify the amount or density of paint on the canvas.
<b>Paint thickness</b>	Drag the <b>Paint thickness</b> slider to specify how three dimensional the paint appears.
<b>Colorfulness</b>	Drag the <b>Colorfulness</b> slider to specify the amount of color in the image.
<b>Background color</b>	Enable the <b>Image</b> checkbox to use the color in the image as the background color behind the brush strokes added to the photo. To use a different color for the background, disable the <b>Image</b> checkbox and select a new color from the color picker.
<b>Randomize</b>	Indicates the random placement of the paint daubs. When applying the <b>Bob Ross</b> effect to an image, Gemstone places the daubs randomly to make the paint daubs appear different every time the filter is applied. To generate a new random placement of the paint daubs, click the <b>Randomize</b> button.



Right-click a slider to reset to the default value.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Cartoon

The **Cartoon** effect gives images a sketched appearance.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply a Cartoon effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Painting** group.
3. Select **Cartoon**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Cartoon Options

<b>Shading strength</b>	Specifies the strength of the shading in the image. The higher the setting, the more intense the shading that is applied to the image.
<b>Shading radius</b>	Specifies how spread out the shading is.
<b>Shading threshold</b>	Specifies how sharp an edge must be in the image before shading is applied. If a higher value is specified, more edges in the photo will be shaded.
<b>Smoothness</b>	Controls how smooth the transitions between similar colors are.
<b>Outline detail</b>	Specifies how much the details are outlined in black.
<b>Outline strength</b>	Specifies how strong the black outlines are applied.
<b>Artifact suppression</b>	Enable the <b>Remove small details</b> checkbox to prevent small details from being outlined in black, allowing the image to appear more cartoon-like.

 Right-click a slider to reset to the default value.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 

 Use the [Gradient](#) tool to transition this effect across specific areas of the image. 

 Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point. 

## Crayon Drawing

The **Crayon Drawing** effect gives photos the appearance of a crayon drawing.

### To use the Crayon Drawing effect:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Painting** group.
3. Select **Crayon Drawing**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Use the [Edit Brush](#) to paint this effect onto specific areas of the image. 



Use the **Gradient** tool to transition this effect across specific areas of the image.



Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Dauber

The **Dauber** effect makes images look like they were painted with a paint dauber. Customization options include intensity, frequency, and randomizing.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To use the Dauber effect:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Painting** group.
3. Select **Dauber**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### Dauber Options

<b>Intensity</b>	Specifies the amount of color applied with each daub.
<b>Frequency</b>	Specifies the number of daubs added to the image.
<b>Background color</b>	Specifies the background color of the filtered image. Select the <b>Image</b> checkbox to use the original image colors or click the color picker to select a different color.
<b>Randomize</b>	Indicates the random placement of the paint daubs.  When applying the <b>Dauber</b> effect to an image, Gemstone places the daubs randomly to make the paint daubs different every time the filter is applied. To generate a new random seed, click the <b>Randomize</b> button.




Right-click a slider to reset to the default value.

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Oil Paint

The **Oil Paint** effect give an image a painted with oils appearance.

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To create an Oil Paint effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Painting** group.
3. Select **Oil Paint**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Oil Paint Options

<b>Brush Width</b>	Drag the <b>Brush width</b> slider to specify the width of the brush strokes in the effect. The higher the value, the wider the brush stroke.
<b>Variance</b>	Drag the <b>Variance</b> slider to specify the color variance in each brush stroke. Higher values increase the number of colors used in each stroke.
<b>Vibrance</b>	Drag the <b>Vibrance</b> slider to adjust the intensity of the colors in the image.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 



Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point.



## Pencil Drawing

The **Pencil Drawing** effect creates a pencil drawing from an image.

### To create a Pencil Drawing from an image:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Painting** group.
3. Select **Pencil Drawing**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.



Use the [Edit Brush](#) to paint this effect onto specific areas of the image.



Use the [Gradient](#) tool to transition this effect across specific areas of the image.



Use the [Radial Gradient](#) tool to apply effects around, or directly to, a center point.





## Blue Steel

The **Blue Steel** effect gives images a stylish blue tint.

### To apply the Blue Steel effect:

1. Select **Filter** | **Add** | **Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Retro** group.
3. Select **Blue Steel**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Childhood

The **Childhood** effect gives an image a dreamy, nostalgic look.

### To apply the Childhood effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Retro** group.
3. Select **Childhood**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Right-click a slider to reset to the default value.


 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Old

The **Old** effect gives an image an antique look. (The **Old** effect is similar to the **Sepia** effect, but produces a more realistic appearance of age.)

 Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent Save icon.

### To apply the Old effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Retro** group.
3. Select **Old**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

## Old Options

<b>Age</b>	Specifies the intensity or degree of the effect. (The numbers do not correspond to how old the photo should appear.)
------------	--

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Purple Haze

The **Purple Haze** effect gives an image a hyper-retro, purple tint.

### To apply the Purple Haze effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Color** group.
3. Select **Purple Haze**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Sepia

The **Sepia** effect gives images an antique look. (The **Old** effect is similar to the **Sepia** effect, but produces a more realistic appearance of age.)

### To add a Sepia treatment to an image:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Retro** group.
3. Select **Sepia**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Seventies

The **Seventies** effect gives images a retro look based on the styles of the 1970s.

### To apply the Seventies effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Retro** group.
3. Select **Seventies**.

4. Do one of the following:

- Click **OK** to accept your changes and close the panel.
- Click **Cancel** to discard your changes and close the panel.

 Right-click a slider to reset to the default value.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## Somber

The **Somber** effect gives an image an austere or sleek look.

### To apply the Somber effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **Retro** group.
3. Select **Somber**.
4. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

 Use the **Edit Brush** to paint this effect onto specific areas of the image. 

 Use the **Gradient** tool to transition this effect across specific areas of the image. 

 Use the **Radial Gradient** tool to apply effects around, or directly to, a center point. 

## User Defined Convolution

The **User Defined Convolution** effect creates a customized special effect.



Customized settings can be saved as a preset for future use. Presets can be selected from the **Presets** drop-down, or saved by clicking the adjacent **Save** icon.

### To create a User Defined Convolution effect:

1. Select **Filter | Add | Special Effects** from the main menu, or press **Ctrl + Alt + S**.
2. In the **Effects** dialog, navigate to the **User Defined** group.
3. Select **User Defined Convolution**.
4. Set the options as described below.
5. Do one of the following:
  - Click **OK** to accept your changes and close the panel.
  - Click **Cancel** to discard your changes and close the panel.

### User Defined Convolution Options

<b>Convolution Matrix</b>	<p>Specifies the formula to use when altering the image.</p> <p>Enter numbers in the matrix fields to change the pixels in the image. Using a mathematical formula, the color value of each pixel in an image is multiplied by the numbers in the matrix to produce an effect.</p>
<b>Division factor</b>	<p>Specifies the fractional coefficient of the matrix.</p> <p>Enter a number into the <b>Division factor</b> field to use fractional coefficients in the matrix. The product of the convolution matrix is divided by the division factor before being applied to a pixel.</p>
<b>Bias</b>	<p>Specifies the brightness of the image.</p> <p>Enter a number into the <b>Bias</b> field to change the brightness of the image. The bias number is added to the RGB values of each pixel. A positive number brightens the image, while a negative number darkens the image.</p>
<b>Clear Matrix</b>	Resets the matrix.
<b>This matrix is</b>	Loads a sample effect to use as a starting point for creating a personalized effect.



Use the **Edit Brush** to paint this effect onto specific areas of the image.



Use the **Gradient** tool to transition this effect across specific areas of the image.





Use the **Radial Gradient** tool to apply effects around, or directly to, a center point.



## Combining with Photomerge

Photomerge is the home base of HDR, Focus Stacking, and Panoramic Stitching.

### To access Photomerge:

1. Click **File** | Select **Photomerge...**
2. Use the **Photomerge** window to select between **Panorama**, **HDR**, and **Focus Stacking**. Use the Add or Remove buttons to change which selected photos will be used.



You must have 2 or more photos selected, and all images must have the same dimensions.



The maximum pixel dimensions for generated Panorama images is 16000 x 16000.

## Loading Files into a Stack

To load multiple files into one image and have each image in the stack be assigned to a separate layer, use the **Stacking** command.

### To load files into a Stack:

1. Select **File** | **Load Files into Stack...** from the main menu.
2. In the **Load Files into Stack...** dialog, select images to include in the stack.
3. Click the **Open** button.



Running the **Stack** command on large images will require a significant amount of memory.



There is a 50 image limit when Stacking.

## Creating an HDR Image

High-dynamic-range imaging (HDR) is a technique used in digital image processing to combine a series of images with different exposures to produce one image with an optimal overall range. Use the **HDR** tool to create a new image with a greater dynamic range of luminosity. Ideally, the images you use with the HDR tool will include a well-balanced range of highlights and shadows. See below for additional tips on achieving the best results.

## Shooting Photos for HDR

For a higher chance of generating quality results, follow these instructions when shooting images for HDR:

- Use the shutter speed to vary exposures. That said, varying the aperture setting changes the depth of field, leading to poor quality results. Similarly, varying the ISO or aperture may generate noise or vignettes. Set your ISO to its lowest value
- Generally, do not use your camera's auto-bracket feature as the exposure changes are not significant enough
- Ensure the scene does not include features in motion. HDR is meant for photos of the same scene with exposure variances
- Keep the camera stable using a tripod
- Use your camera's timer to avoid camera shake
- Keep the focus and zoom constant between images
- Shoot in RAW rather than JPEG. This will provide for greater range and flexibility
- Ensure there is detail in the deep shadows of your darkest exposure
- Ensure no area of the image is blown out in your lightest exposure
- Ensure the set of images is "balanced" (i.e. the middle image of the set has well-exposed midtones)
- Using a quantity of photos higher than suggested in the table below can result in unwanted artifacts due to improper alignment and ghosting

Camera Bracket Settings	Optimum Number of Exposures for Creating HDR Images
-1.0 to +1.0	3
-2.0 to +2.0	5
-3.0 to +3.0	7

### To create an HDR image:

1. Select **File | New HDR...** from the main menu.
  - ! Selected images must have the same dimensions.
2. In the **HDR** open dialog, select images to merge and click **Open**.
3. In the **HDR** dialog, select a preset from the **Presets** drop-down menu and click the **Merge** button.

! Creating an HDR image can also be done from within **Photomerge**.

! Running **HDR** on large images will require a significant amount of memory.

! There is a 50 image limit when performing **HDR**.

## Merging with Focus Stacking

**Focus Stacking** merges a series of images with different focal distances. By combining multiple images with different areas in focus, a new image is created with a greater depth of field.

### To use Focus Stacking:

1. Select **File | New Focus Stack...** from the main menu.

 Selected images must have the same dimensions.

2. In the **Focus Stack** dialog, select images to merge.

3. Click the **Open** button.

 Focus Stacking is also available within **Photomerge**.

 The Focus Stack command will ignore all masks, text layers, and adjustment layers.

 Running the **Focus Stack** command on large images will require a significant amount of memory.

 There is a 50 image limit when **Focus Stacking**.

 **Focus Stacking** cannot be performed on a single image.

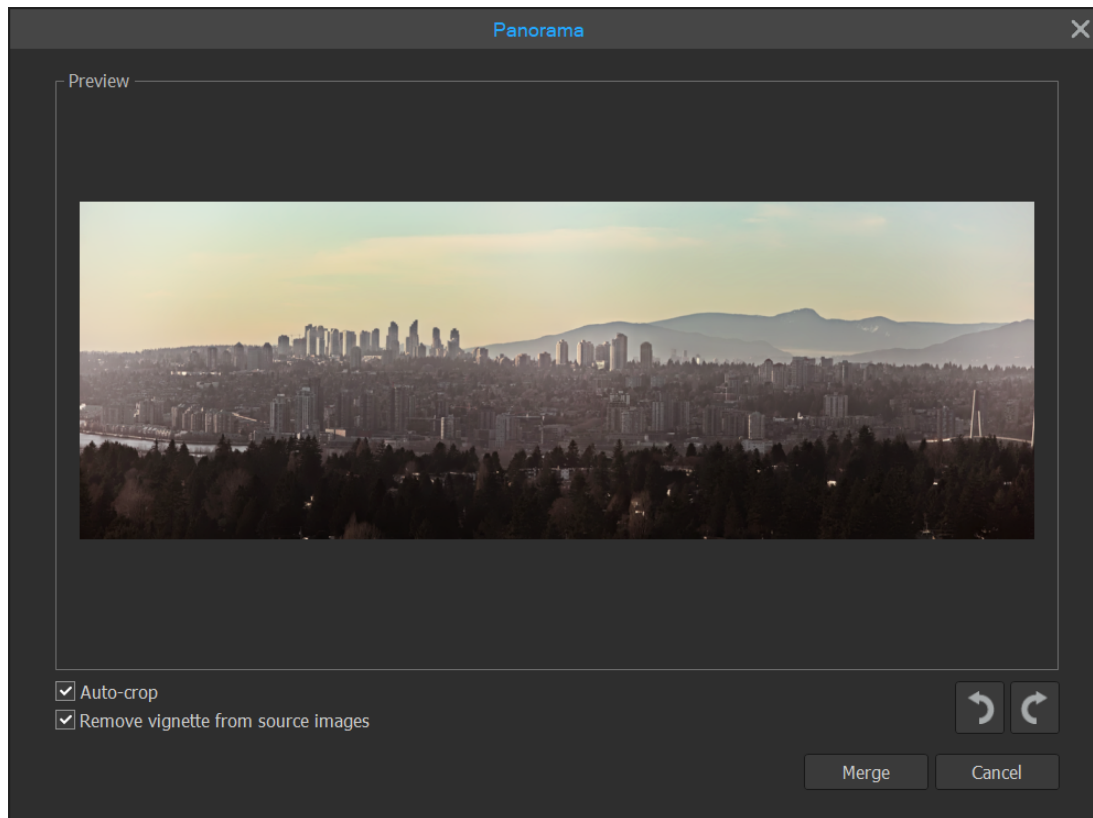
## Creating a Panorama with Panoramic Stitching

You can use panoramic-stitching to combine a series of side-by-side images. By combining multiple side-by-side images, you can create a new single image.


### To Create a Panoramic Image:

1. Choose **File | New Panorama...**

 Your selected images must have the same dimensions.



Once the Panorama preview image is generated, you can apply Auto-Crop or Remove Vignette:

- Auto-Crop: Automatically crops the edges of the image to create a smooth rectangle
  -  This may remove significant portions of the edges
- Remove vignette from source images: Cleans up the seams between images by removing vignetting.
- Use the arrow buttons to the right side to rotate your images clockwise or counterclockwise.

2. When finished, press Merge to complete the process and view the complete image.

- ! The maximum pixel dimensions for generated Panorama images is 16000 x 16000.
- ! The Panorama command will ignore all masks, text layers, and adjustment layers.
- ! Running Panoramic Stitching on large images will require a significant amount of memory.
- ! There is a 50 image limit when performing Panoramic Stitching.

## Toolbar and Tool Properties Bar

The icons contained in the tool bar located to the left of the Display Area, and their associated tools in the **Tool Properties** bar located directly above the Display Area, are detailed below.



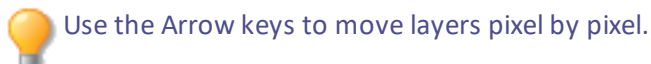
The **Hand Tool** is used to move the visible portion of the photo in the Image pane. For a list of panes to be enabled/disabled for visibility in the interface, navigate to the **Window** main menu item.



The **Move** tool is used to select layer content. With a layer selected, the **Move** tool is used to move or resize the selected content. The **Move** tool populates the Tool Properties bar with tools used to constrain objects vertically, horizontally, or diagonally.

Use the **Move** tool to move image and text layers, and selections, as well as to rotate and resize layers. Also move and rotate objects, such as circles, lines, etc, created on their own respective layer. (See [To Add a Layer.](#)) Select the **Move** tool, then click and drag the layer. If moving an object on its own respective layer, select the layer, then click the object on the image and drag it to the desired location.

Masks can be linked or unlinked from the layer, allowing the **Move** tool to operate on just the mask or the linked combination of mask and layer.



Use the Snap-to buttons in the Tool Properties bar to snap the image, text, or object to the left, right, top, bottom, center, and respective corners. Enable the **Grid** button in the Tool Properties bar to display a grid over the image. This is useful when making precise placements.

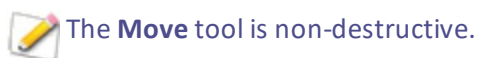
To ensure that the layer's aspect ratio is maintained while resizing, enable the **Lock Aspect Ratio** checkbox in the Tool Properties bar and drag from the corners of the layer. The **Lock Aspect Ratio** checkbox is enabled by default.

To rotate images, text, or objects, hover the cursor over the rotation handle at the center of the image, text, or object until the cursor becomes a circular arrow. Drag the cursor clockwise or counterclockwise. Lock the rotation to each 45° angle by holding down the **Shift** key while rotating.













To commit the move, click the **OK** button in the Tool Properties bar. To discard the move and revert back to the image's original position, click the **Cancel** button.

It is possible to move a layer outside of the image area, commit it, then click the **Move** tool button again and move it back into the image area without a loss of image data. Retrieve the moved layer after saving the file as a *.gsd*, closing it, and re-opening it at a later date.



**Associated items in the Tool Properties bar**

Item	Icon or Type	Description
OK	Button	Saves any changes made with the <b>Move</b> tool. Does not overwrite the original file.
Cancel	Button	Removes any changes made with the <b>Move</b> tool. Only available prior to clicking the <b>OK</b> button.
Lock Aspect Ratio	Check box	When enabled, the image's aspect ratio is locked and the image moves with its original proportions intact.
Show Grid		Enables or disables the reference grid.
Snap Left		Aligns the selected image to the left of the canvas.
Snap Right		Aligns the selected image to the right of the canvas.
Snap Top		Aligns the selected image to the top of the canvas.
Snap Bottom		Aligns the selected image to the bottom of the canvas.
Snap Center		Aligns the selected image to the center of the canvas.
Snap Top Left		Aligns the selected image to the top left-hand corner of the canvas.
Snap Top Right		Aligns the selected image to the top right-hand corner of the canvas.
Snap Bottom Left		Aligns the selected image to the bottom left-hand corner of the canvas.
Snap Bottom Right		Aligns the selected image to the bottom right-hand corner of the canvas.




## Crop Tool

The **Crop** tool is used to remove portions of a photo to create focus on a subject or strengthen the overall composition by removing distractions. Besides cropping, the **Crop** tool can be used to expand the canvas size and rotate the image by grabbing one of the four corner points and moving the mouse.

For all operations, visual guides provide an interactive preview of the actual image crop or straightening.

### Associated items in the Tool Properties bar





Tip or Name	Icon or Type	Description
<b>OK</b>	Button	Saves any changes made with the <b>Crop</b> tool. Does not overwrite the original file.
<b>Cancel</b>	Button	Removes any changes made with the <b>Crop</b> tool. Only available prior to clicking the <b>OK</b> button.
<b>Width</b>	Field	Used to specify the desired width of a selected layer.
<b>Height</b>	Field	Used to specify the desired height of a selected layer.
<b>Units</b>	Drop-down List	Used to specify the desired units of measurement for the Width and Height input values.
<b>Delete cropped pixels</b>	Check box	Used to delete pixels from all layers (not just the selected one).
<b>Show Grid</b>		Enables or disables the reference grid.

## AI Object Selection Tool



Click and drag the cursor and loosely draw around the area that you wish to select. As you draw, a line appears showing where you have drawn. When you release the mouse, the end of the line joins to the start automatically to complete the selection. The AI will detect any object(s) within the drawn area, and create well-defined, tight selections around the objects.

### Associated items in the Tool Properties bar

Tip	Icon	Tool	Description
<b>New selection</b>		AI Object Selection	Used to perform a new AI Object selection on a layer.
<b>Add to selection</b>		AI Object Selection	Adds a new AI object selection to an existing AI object selection on a layer.
<b>Subtract from selection</b>		AI Object Selection	Removes AI object selections from a selected layer.
<b>Press and hold to preview the selection mask</b>		AI Object Selection	Click and hold the icon to preview the selected area.

### Marquee Selection Tools







The **Rectangular Selection** tool is used to draw a rectangular or square selection box on a selected layer. Drag over the image to create rectangle. Pressing **Shift** adds selection and pressing **Ctrl** subtracts selection.



The **Elliptical Selection** tool is used to draw a circular selection box on a selected layer. Drag over the image to create an ellipse. Pressing **Shift** adds selection and pressing **Ctrl** subtracts selection.

#### Associated items in the Tool Properties bar

Tip	Icon	Tool	Description
<b>New selection</b>		Rectangular, Elliptical	Used to perform a new rectangular selection on a layer.
<b>Add to selection</b>		Rectangular, Elliptical	Adds a new rectangular selection to an existing rectangular selection on a layer.
<b>Subtract from selection</b>		Rectangular, Elliptical	Removes rectangular selections from a selected layer.
<b>Press and hold to preview the selection mask</b>		Rectangular, Elliptical	Click and hold the icon to preview the selected area.

## Lasso Selection Tools



The **Lasso Selection** tool is used to draw a free-hand selection area on a selected layer. Unlike the Marquee Selection Tools which are a closed loop, and what is drawn constitutes the selection, the **Lasso selection** tool is an open loop and the two ends must be connected before the enclosed area can be selected.



The **Polygonal Lasso Selection** tool is used to draw a free-hand selection area on a selected layer. Unlike the Marquee Selection Tools which are a closed loop, and what is drawn constitutes the selection, the **Lasso selection** tool is an open loop and the two ends must be connected before the enclosed area can be selected.

### Associated items in the Tool Properties bar

Tip or Name	Icon or Type	Tool	Description
New selection		Lasso, Polygonal Lasso	Used to perform a new lasso selection on a layer.
Add to selection		Lasso, Polygonal Lasso	Adds a new lasso selection to an existing lasso selection on a layer.
Subtract from selection		Lasso, Polygonal Lasso	Removes lasso selections from a selected layer.
Press and hold to preview the selection mask		Lasso, Polygonal Lasso	Click and hold the icon to preview the selected area.
Preview	Checkbox	Polygonal Lasso	Enable to provide a shaded interior while making a selection.

## Quick Selection Tools







The **Brush Selection** tool is used to select an area in the layer drawn by hand using the brush. Unlike **Lasso Selection** tools which are an open loop that must be connected at the two ends to perform the selection, **Quick Selection Tools** are a closed loop and the area drawn constitutes the selected area.



The **Magic Wand** tool is used to select a consistently colored area (for example, a yellow flower) without having to trace its outline. Specify a color, brightness, or Magic range and set the tolerance relative to the original clicked color. Unlike **Lasso Selection** tools which are an open loop that must be connected at the two ends to perform the selection, **Quick Selection Tools** are a closed loop and the area drawn constitutes the selected area.

**Associated items in the Tool Properties bar**

Name	Type	Tool	Description
<b>Strength</b>	Slider	Brush Selection	Used to set the effectiveness of the <b>Brush</b> tool in selecting pixels. At full strength the brush selects every pixel in the brush's width. At lower settings, a narrower set of pixels in the brush's width are selected.
<b>Smart Brushing</b>	Drop-Down List	Brush Selection	Alters the type of selection made by the brush. The brush can be in Smart Brush mode (Color, Brightness, Magic), or can be off, allowing just pixels for selection.
<b>Tolerance</b>	Slider	Brush Selection	Only available when the <b>Smart Brushing</b> drop-down is set to either "Brightness", "Color", or "RGB". The slider determines the effectiveness of the brush on targeted pixels. Enter a value in pixels, ranging from 0 to 100. A higher value is more effective than a lower value.
<b>Brush Width</b>	Slider	Brush Selection	Used to specify the desired width of the brush. Options include Nib Width and Feathering. See <a href="#">Drawing Tools</a> for more information on spacing.
<b>New Selection</b>		Magic Wand	Used to perform a new lasso selection on a layer.
<b>Add to selection</b>		Magic Wand	Adds a new lasso selection to an existing lasso selection on a layer.
<b>Subtract from selection</b>		Magic Wand	Removes lasso selections from a selected layer.
<b>Press and hold to preview the selection mask</b>		Magic Wand	Click and hold the icon to preview the selected area.

Name	Type	Tool	Description
<b>Wand Type</b>	Drop-down List	Magic Wand	Make a selection from the drop-down to specify the image component targeted by the wand: "Brightness", "Color", or "RGB".
<b>Threshold</b>	Slider	Magic Wand	Determines the effectiveness of the wand when selecting an image component. Slide to a value in pixels, ranging from 0 to 255. A low value selects fewer pixels. A higher value selects a broader range of pixels.
<b>Connected</b>	Checkbox	Magic Wand	Enable to select only adjacent areas using the same brightness, color, or RGB value. Disable to select all pixels in the entire image using the same selected components.



### Eyedropper

The **Eyedropper** tool is used to make a color selection from the selected layer. The color selection will be populated to the **Swap Colors** tool at the bottom of the toolbar.

Use the **Eyedropper** tool to select colors from the images. Click a color in the image, which will appear in the color boxes at the top right of the panel. Apply this color using the drawing tools, such as the **Brush** tool.

Select the background color (bottom of the color boxes) by right-clicking the image.

Select a color from outside of the application by left-clicking an image and dragging the cursor to the color outside of the application. After releasing the mouse button, the color will be selected and shown in the color boxes at the top right of the panel.




### Brush

The **Brush** tool is used to apply the selected color in the **Swap Color** tool to the selected layer.

Drag over the image to draw a free-flowing line. Left-click with your mouse to draw with the foreground color, and right-click to draw with the background color.

 Use the **mouse wheel** to adjust nib width or use the **Nib Width** slider at the top of the panel, near the Opacity slider.

 Use **Shift + mouse wheel** to adjust the amount of feathering or adjust the **Feathering** slider under the **Nib Width** drop-down menu.

 You can undo and redo each brush stroke individually using the **Undo** and **Redo** buttons at the bottom of the **History** panel.

#### Associated items in the Tool Properties bar

Name	Type	Description
<b>Blending</b>	Drop-Down List	Sets the type of blend between the selected brush color and the original image.
<b>Opacity</b>	Slider	Sets the level of opacity for work conducted by the brush.
<b>Brush Width</b>	Drop-Down List	Used to specify the desired width of the brush. Options include Nib Width and Feathering.



The **Fill** tool is used to apply the selected color in the **Swap Color** tool to a selected object, area, or layer. Select the **Fill** button, and click a pixel to shade every pixel of that same color value with your selected color. The selected color is defined in the color box, as described below. Use the **Threshold** slider to adjust the number of pixels to be included or excluded. The **Threshold** slider sets how similar a pixel needs to be to selected color in order to be included in the selection. Enable the **Connected** checkbox in the Tool Properties bar to fill all of the connected pixels of the same color.

#### Associated items in the Tool Properties bar

Name	Type	Description
<b>Blending</b>	Drop-Down List	Sets the type of blend between the selected brush color and the original image.
<b>Opacity</b>	Slider	Sets the level of opacity for work conducted by the brush.
<b>Threshold</b>	Slider	Sets how similar a pixel needs to be to selected pixel in order to be included in the selection.

Name	Type	Description
<b>Connected</b>	Check box	Fills all of the connected pixels of the same color.









### Gradient Tool

The **Gradient** tool is used to apply a gradient over an image. The **Gradient** tool is applied in the same layer as the image. Use the **Linear Gradient** tool to draw gradients across an image, or use the **Radial Gradient** tool to draw a gradient around an area. Select the **Gradient** tool from the tool bar, then configure the color, opacity and blend mode using the options in the Tool Properties bar. For a radial gradient, select the **Radial Gradient** button in the Tool Properties bar. Then draw the gradient by dragging across the image. To discard the gradient, click the **Cancel** button in the Tool Properties bar. Rearrange the gradient as desired, then click the **OK** button in the Tool Properties bar. Undo an acceptance by clicking **Ctrl + Z**, selecting **Edit | Undo**, or by using the History pane.

#### Associated items in the Tool Properties bar

Name	Type	Description
<b>OK</b>	Button	Saves any changes made with the <b>Crop</b> tool. Does not overwrite the original file.
<b>Cancel</b>	Button	Removes any changes made with the <b>Crop</b> tool. Only available prior to clicking the <b>OK</b> button.
<b>Blending</b>	Drop-Down List	Sets the type of blend between the gradient and the original image.
<b>Opacity</b>	Slider	Sets the level of opacity for the applied gradient.
<b>Linear Gradient</b>	Button	Sets the <b>Linear Gradient</b> tool as the type of gradient tool.
<b>Radial Gradient</b>	Button	Sets the <b>Radial Gradient</b> tool as the type of gradient tool and adds the <b>Feathering</b> slider for refining the edge between the original image and the radial gradient.

## Drawing Tools

	The <b>Rectangle</b> tool is used to draw a rectangle over an image. The <b>Rectangle</b> tool uses the colors set in the <b>Swap Colors</b> tool located at the bottom of the toolbar. The <b>Fill</b> checkbox is enabled by default.
	The <b>Ellipse</b> tool is used to draw a circle over an image. The <b>Ellipse</b> tool uses the colors set in the <b>Swap Colors</b> tool located at the bottom of the toolbar. The <b>Fill</b> checkbox is enabled by default.
	The <b>Polygon</b> tool is used to draw an octagonal circle over an image. The <b>Polygon</b> tool uses the colors set in the <b>Swap Colors</b> tool located at the bottom of the toolbar. Click to set the corner points of a polygon, then double-click to connect the start and end points to complete the polygon. The <b>Fill</b> checkbox is enabled by default.
	The <b>Line</b> tool is used to draw a straight line over an image. The <b>Line</b> tool uses the colors set in the <b>Swap Colors</b> tool located at the bottom of the toolbar. Drag over the image to draw a straight line. Press <b>Shift</b> as you draw to create a vertical or horizontal line.
	The <b>Arrow</b> tool is used to draw an arrow over an image. The <b>Arrow</b> tool uses the colors set in the <b>Swap Colors</b> tool located at the bottom of the toolbar. Drag over the image to create an arrow. Press <b>Shift</b> as you draw to create a vertical or horizontal arrow.
	The <b>Curve</b> tool is used to draw a curve over an image. The <b>Curve</b> tool uses the colors set in the <b>Swap Colors</b> tool located at the bottom of the toolbar. Drag over the image then release. Next, move the mouse to create the curve and click to set.

### Associated items in the Tool Properties bar







Name	Type	Tool	Description
<b>Blending</b>	Drop-Down List	Rectangle, Ellipse, Polygon, Line, Arrow, Curve	Sets the type of blend between the drawing tool and the original image.
<b>Opacity</b>	Slider	Rectangle, Ellipse, Polygon, Line, Arrow, Curve	Sets the level of opacity for work conducted by the brush.
<b>Border Width</b>	Slider	Rectangle, Ellipse, Polygon, Line, Arrow, Curve	Used to specify the desired width of the rectangle border. Options include Nib Width.
<b>Fill</b>	Check Box	Rectangle, Ellipse, Polygon	Fills in the interior of the drawing tool with the selected color.

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## Text

The **Text** tool is used to add texts as layers to an image.

### Associated tools in the Tool Properties bar

Tip or Name	Icon or Type	Description
<b>Font</b>	Drop-Down List	Contains a list of available fonts that can be applied to the text.
<b>Font Weight</b>	Drop-Down List	Contains a list of available font weights that can be applied to the text.
<b>Font Size</b>	Drop-Down List	Contains a list of available font sizes that can be applied to the text.
<b>Font Color</b>	Color Selector	Contains a color selector wheel that can be used to apply color to the text.
<b>Bold</b>		Adds a bold weight to the font.
<b>Italic</b>		Adds an italic treatment to the font.
<b>Underline</b>		Adds an underline to the font.
<b>Align Left</b>		Aligns the text to the left margin of the text box.
<b>Align Center</b>		Aligns the text to the center of the text box.
<b>Align Right</b>		Aligns the text to the right margin of the text box.
<b>Fx (Layer Effects)</b>	Button	Opens the <b>Layer Effects</b> dialog used for applying effects to layers.  For more information on Layer Effects...
<b>Text Type</b>	Drop-Down List	Sets the type of text added to an image: "Dynamic", "Path", or "Frame".

## Text Type

### Dynamic

When the size of a text box is changed, **Dynamic** text changes the size of the text within the box to increase or decrease with the box size.










### Path

Path text dictates the precise path the text takes.

### Frame

In Frame text, increases or decreases in the text box size do not affect the size of the text within the frame.

## Text Type Actions and Key Combinations

Dynamic Text		
Move cursor		Moves the text box.
Resize cursor		Resizes the box while preserving the aspect ratio.
Shift key + Resize cursor		Resizes the box without preserving the aspect ratio (free form).
Rotate cursor		Rotates the box.
Shift key + Rotate cursor		Rotates incrementally at 45 degrees.
Path Text		
Move cursor		Moves the entire path.
Move anchor point cursor		Moves the anchor point.
Add anchor point cursor		Adds a new anchor point.
Right click + Add anchor point cursor		Deletes the anchor point.
Ctrl key + Move cursor		Resizes the path, including the text.
Alt key + Move cursor		Rotates the path.
Frame Text		
Move cursor		Moves the text box.
Resize cursor		Resizes the box without preserving the aspect ratio (free form).
Shift key + Resize cursor		Resizes the box while preserving the aspect ratio.
Rotate cursor		Rotates the box.
Shift key + Rotate cursor		Rotates incrementally at 45 degrees.



The **Eraser** tool is used to remove pixels from a selected layer. Use the **Eraser** tool to erase pixels. To erase pixels on a layer to reveal the layer beneath, select the second layer or higher in the Layered

Editor and drag the cursor over the pixels to be erased. This tool modifies the alpha channel value of the pixels.

#### Associated tools in the Tool Properties bar

Name	Type	Description
Opacity	Slider	Sets the level of opacity for work conducted by the eraser.
Eraser Width	Drop-Down List	Used to specify the desired width and effectiveness of the eraser. Options include Nib Width, Feathering, Spacing, and the <b>Use Auto Spacing</b> check box.



#### Smart Erase brush

The **Smart Erase** brush is used to remove unwanted elements from a selected layer.

#### Associated tools in the Tool Properties bar




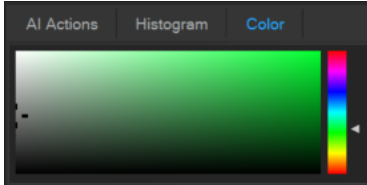
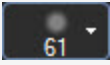
Name	Type	Description
Eraser Width	Drop-Down List	Used to specify the desired width and effectiveness of the smart eraser. Options include Nib Width.

## Drawing Tools

Use the Drawing Tools to add lines and shapes, such as squares, circles, and arrows to an image. Other options include adjusting the width, feathering, and blending of your brush, which is useful for creating subtle and dramatic drawings.

#### To draw on an image:

1. Select a drawing tool on the Toolbar (see [Toolbar and Tool Properties Bar](#)).
2. **Optional:** Select from one or more of the following options (**Note:** Options vary depending on the tool selected):

	Option	Instructions
	<p><b>Color</b></p>	<p>Select a color by clicking the color boxes at the top right of the panel to open the Foreground or Background <a href="#">Color dialog</a>, which displays a dialog of swatches to choose from. If you are drawing a solid shape, such as a rectangle, the top (foreground) color box defines the color for the outline of the shape. The bottom (background) color box defines the color that fills the center of the shape. If you want your shape to be a solid color, set both color boxes to match.</p> <p> You can reset to black and white by pressing the reset button directly next to the color boxes.</p> <p> You can also access the color palette on the fly by using the Color pane at the top of the Layered Editor.</p> 
	<p><b>Nib Width</b></p>	<p>Drag the <b>Nib Width</b> slider to set the diameter of the brush measured in pixels.</p>
	<p><b>Feathering</b></p>	<p>Select the <b>Nib Width</b> button to reveal the Feathering slider. Drag the <b>Feathering</b> slider to set the blurring radius of the brush. Hold down <b>Shift</b> while using the mouse wheel to adjust the feather radius, represented by the dotted circle.</p>
	<p><b>Spacing</b></p>	<p>Drag the <b>Spacing</b> slider to set how far apart each brush segment will be. This slider specifies the percentage of the size of the nib width, which determines how smooth or choppy the strokes will appear.</p> <p><b>Use Auto Spacing:</b> Select the <b>Use Auto Spacing</b> checkbox to allow Gemstone to choose a spacing percentage based on the nib width and feathering settings, which will create a smooth-looking stroke.</p>
	<p><b>Fill</b></p>	<p>Select the <b>Fill</b> checkbox to fill the shapes you draw with the selected color.</p>
	<p><b>Opacity</b></p>	<p>Drag the <b>Opacity</b> slider to specify the transparency of the brush strokes.</p>

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**Blending**

Select an option from the Blending drop-down menu to affect how your brush strokes blend with your image as you draw.

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3. Drag over the image to draw.



Right-click a slider to reset to the default value.

**Creating Straight Lines:**

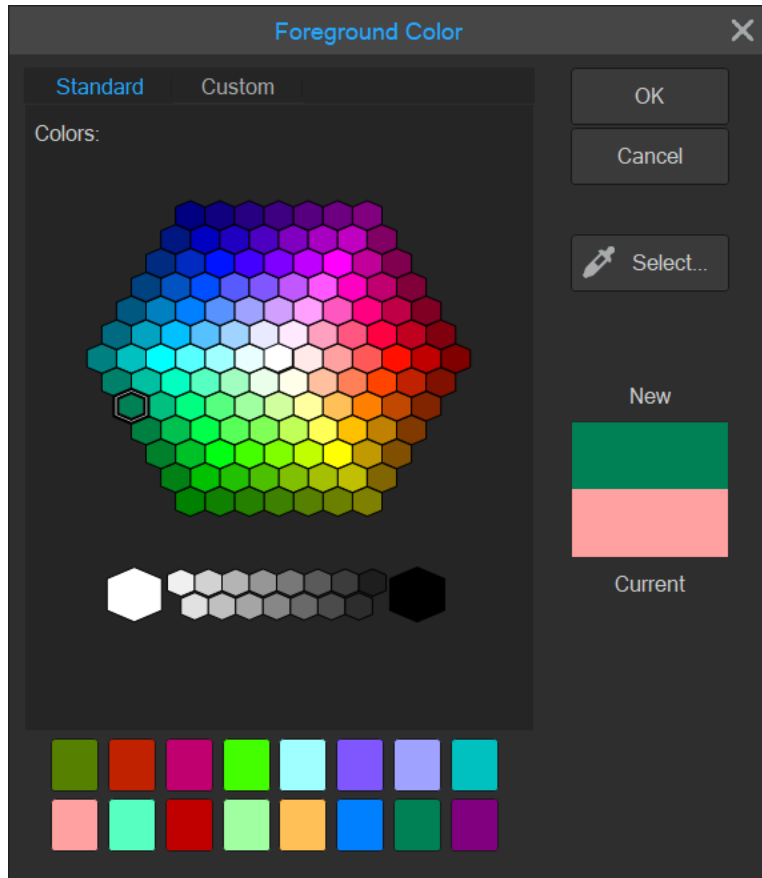
Hold the **Shift** key while using the **Edit Brush** to lock the direction the brush can move in horizontally, or vertically. For example, holding **Shift**, then clicking and dragging horizontally will lock the cursor into horizontal only so long as shift is being held. Release **Shift** to return to free hand brushing. You can even release **Shift** to return to free hand brushing, then press it again while still drawing the same line to unlock and re-lock the brush at will.

**Creating Diagonal Lines:**

Using the **Edit Brush**, **Gemstone** can create straight diagonal lines by placing two points on the image. Place the cursor where you want the line to begin, press and hold **Shift**, then **Left-Click** on the image to create a point. Let go of **Shift**, and move the brush to where the line will end, press and hold **Shift**, then **Left-Click** again to create a second point. A straight line will fill in between these two points.

**Color Dialog Box**

The Color dialog box appears in several places in Gemstone when you select or apply a color. You can use the Color dialog box to select a color in multiple ways and to adjust a color using several different tools.



### The Standard Tab

On the first tab, there is a fixed honeycomb of Basic colors to choose from, including gray, black, and white at the bottom. Below it is a grid of Custom or Favorite colors that you can fill in by selecting a color and then right-clicking a box in the grid. To create a custom color, click the Custom tab.

### The Custom Tab

On the second tab, there is a color palette. On the far right is a color slider, which you can use to navigate to a color group and gain access to any or all colors of the spectrum. Add colors to your Custom colors by selecting the color in the palette and then right-clicking a box in the grid.

### Selecting and Adjusting Colors

To select a color, click on a square in the grid of custom colors, or on the color palette. You can also drag over the color palette. When you click a color, that color appears in the New box and all of its numerical values, (Hue, Saturation, Luminosity, as well as Red, Green, and Blue), appear in the fields on the Custom tab.

You can also adjust a color by changing the Hue, Saturation, and Luminosity values. To select a precise color, type in the values for that color. You can do the same using the Red, Green, and Blue values.

## Chapter 6: ACDSee Gemstone Options

### ACDSee Gemstone Photo Editor Options

The **Options** dialog box can be used to configure settings for Gemstone.

#### To set the Editor Options:

1. Select **Tools | Options...** from the menu.
2. In the **Options** dialog box, select **General**.
3. Configure the options as described below.
4. Click **OK** to apply any changes.

#### GPU selection

In order to ensure optimum performance, parts of Gemstone run off the GPU. Gemstone automatically chooses the best GPU in the system. The **Let ACDSee Gemstone Photo Editor decide** option is enabled by default. When **Let ACDSee Gemstone Photo Editor decide** is enabled, the GPU model text displays next to the option, specifying whether Gemstone is running off of the primary GPU or another, more superior GPU that Gemstone has detected. In most cases, the GPU detected and identified as the best by Gemstone will be one and the same: the primary GPU.

- **Use primary:** Enable this option to use the primary GPU over the GPU Gemstone has chosen.
- **Let ACDSee Gemstone Photo Editor decide:** Enable this option to use the superior GPU found by Gemstone.

#### Adobe® Photoshop® Plug-in Paths

Displays the paths of the hard drive locations of any Photoshop® plug-ins (This will tell Gemstone where to find the plug-in.). Direct the path to the location where Photoshop® plug-ins are already stored.

To change or add a location, click the **Add...** button, then browse to the location, select it, and click **Select Folder**.

To remove a location, select it and click **Remove**.

To move plug-ins to a listed location, select the location, and click **Open Folder**, then drag any plug-ins into the folder.

### ACDSee RAW Options

The **ACDSee Gemstone Options** dialog box can be used to change the ACDSee RAW options.

#### To set the ACDSee RAW options:

1. Select **Tools | Options...** from the main menu.
2. In the **ACDSee Gemstone Options** dialog box, select **ACDSee RAW**.
3. Set or change the options described below.
4. Click **OK** to accept any changes.

### ACDSee RAW Options

Field	Description
<b>Enable fast image switching for RAW files in ACDSee RAW</b>	Displays a JPEG version of the RAW file while the RAW file loads.
<b>AutoSave all ACDSee RAW adjustments</b>	All changes made to a RAW image are kept in an XMP sidecar file until the RAW file changes are saved as a JPEG.

### Setting the AI Super-Resolution Output Options

File Output Options can be found by clicking the **Options...** button in the bottom-left corner of the **AI Super-Resolution** window.

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**Output File Type** Select an output file format for the image. File formats include: AVIF, BMP, GIF, JP2, JPG, PCX, PNG, PSD, TGA, TIFF, WBMP, and WEBP.

**Output Location** Choose an output location from the options:

- **Same as source folder:** pastes the enhanced files in the folder they originated.
- **Specific folder:** use the folder icon to navigate to a specific folder for the output files.
- **Create subfolder:** with an output location selected, check this checkbox to create a subfolder for your enhanced images. Enter a name in the box. This is useful if you are making multiple batch resizes to specific dimensions. You can save your enhanced files in separate folders.

**File options** Overwrite Existing Files: Sets the default action when overwriting files.

- **Ask:** Asks for confirmation before overwriting any files.
- **Skip:** Skips any files that would be overwritten.
- **Rename:** Prompts a renaming dialogue for the new file when output is complete.
- **Replace:** Replaces the original file with the new enhanced one.

**Preserve last-modified dates:** Toggles whether the last-modified dates are saved into the enhanced file output.

**Preserve metadata:** Toggles whether metadata is saved into the enhanced file output.

**Preserve database information:** Toggles whether database information is saved into the enhanced file output.

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## Output File Format Settings

Some Output File Formats have elements that can be fine-tuned. To modify the settings, select the Output File Format from the dropdown, and then click the **Settings** button to the right.

Below is a list of the Output File Formats that can be adjusted.

### AVIF - AVI Image

**Lossless compression:** Allows the original data to be perfectly reconstructed from the compressed data with no loss of information.



Selecting Lossless compression disables the Image Quality Slider when selected.

**Image Quality Slider:** The slider bar represents a sliding scale from "Best compression" to "Best quality". A numerical value is represented below the bar which allows you to easily fine-tune the exact number needed.

### JP2 - JPEG 2000 JP2 File

#### Compression options:

- **Lossless:** Lossless will ensure the original data is perfectly reconstructed from the compressed data with no loss of information.
- **Compression ratio:** Specifies the compression factor as a ratio. A 10:1 ratio will save an image that is 10 times smaller than the uncompressed image. This setting uses a lossy compression technique, and some image quality may be lost.
- **File size:** Specifies a maximum file size. The resulting file will be as large as or smaller than the specified size. This setting uses a lossy compression technique, and some image quality may be lost.

**Partition image (tiles):** Splits the image into separately compressed regions.

#### Progressive decoding options:

**Decompression layers:** Sets the number of decompression layers that are used for progressive decoding.

**Progression order:** Select from the following orders:

- Layer-Resolution-Component-Position
- Resolution-Layer-Component-Position
- Resolution-Position-Component-Layer
- Position-Component-Resolution-Layer
- Component-Position-Layer-Resolution

### JPG - JPEG

**Image Quality Slider:** The slider bar represents a sliding scale from "Best compression" to "Best quality". A numerical value is represented below the bar which allows you to easily fine-tune the exact number needed.

#### Encoding:

- Progressive
- Optimize Huffman codes

**Color Component Sampling:**

- 2:1 Horizontal
- 2:1 Vertical

**Embedded Thumbnails:**

- Only update existing thumbnails
- Always add/update thumbnails
- Never add/update thumbnails

**Generate DCF compatible thumbnails:** Ensures that thumbnails generated are compatible with DCF standards.

**PNG - Portable Network Graphics**

**Encoding Options:**

- Interlaced

**PSD - PSD**

**Storage Format:**

- No compression
- Compression



The 16-bit grayscale and 48-bit rgb formats do not support compression so in their case this setting will be ignored.

**TGA - Targa**

**Encoding Options:**

- Compress using Run Length Encoding (RLE)
- Bottom-up orientation

**TIFF - Tagged Image File Format**

**Compression:**

- None
  - CCITT Group 3
  - CCITT Group 4
  - LZW
  - Deflate
  - JPEG
-

- 
- Adobe Deflate

### WEBP - Google WebP Image

**Lossless compression:** Allows the original data to be perfectly reconstructed from the compressed data with no loss of information.



Selecting Lossless compression disables the Image Quality Slider when selected.

**Image Quality Slider:** The slider bar represents a sliding scale from "Best compression" to "Best quality". A numerical value is represented below the bar which allows you to easily fine-tune the exact number needed.

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Any file format's settings will have the option to **Save these settings as the defaults**. Checking this off will ensure that the settings are saved and used again when outputting that file format again.

## Color Management

The Gemstone color management options help reduce color matching problems between devices, such as a computer, a monitor, and a printer. Gemstone automatically detects the color profile assigned to a monitor (if the monitor is setup correctly within the operating system). It is recommended to regularly profile a monitor with color management hardware and software.

Before changing the color management settings, make sure to have accurate color profiles for each of the devices to be used. Color profiles can be obtained from device manufacturers if the profiles were not included in the device's software, or from the professional printers.

- ! Color management can be a complex process. If you are not familiar with color management systems, it is recommended to accept the default color management settings in Gemstone.

### To Set the Color Management Options:

1. Select **Tools | Options...** from the menu.
2. In the **Options** dialog box, select **Color Management**.
3. In the **Color Management** page, set or change any of the options as described below.
4. Click **OK** to accept any changes.

### Color Management Options

Field Set	Field	Description
<b>Enable</b>		
	<b>Enable Color Management</b>	Activates the color management system in Gemstone and the fields in this dialog box.
	<b>Color Management Engine</b>	Select from the drop-down list of color management engines.
<b>Input</b>		
	<b>Default Input Profile</b>	Specifies the default color profile to use when the image is not tagged with an ICC profile.
<b>Soft Proofing</b>		
	<b>Enable soft proofing</b>	Choose from a selection of device profiles for monitor simulation proofing. Choose a connected printer profile to be the emulated device and then preview what the printer's output would look like on your monitor (soft proofing).
	<b>Emulated Device Profile</b>	Choose the device to be emulated.
	<b>Rendering Intent</b>	<p>A strategy for handling situations where not all colors will fit in the output device's color space. Strategy options consist of:</p> <ul style="list-style-type: none"> <li>• <b>Perceptual:</b> Remaps colors outside of the target color space by compressing all colors for the entire image. Colors may become less saturated as everything condenses towards neutral and away from the saturated colors at the edges of the target color space.</li> <li>• <b>Relative Colorimetric:</b> Maps all out-of-gamut colors to the closest in-gamut color. Colors that fall outside the range of what the output device can render are adjusted to the closest color the device is capable of displaying.</li> <li>• <b>Saturation:</b> Preserves the saturation of colors, potentially at the cost of hue and lightness. This intent is most valuable for business applications, such as graphics, where images need to be vibrant and contrast distinctly from one another.</li> </ul>

Field Set	Field	Description
		<ul style="list-style-type: none"> <li>• <b>Absolute Colorimetric:</b> Colors that fall outside the range of what the output device can render are adjusted to the closest color that can be rendered. However, the white point does not move, which may result in the distance of the colors to the white point changing.</li> </ul>
	<b>Profile Details</b>	For a detailed account of the profile list, click the <b>Profile Details</b> button.



There are soft proofing items available from the **View | Soft Proofing** menu, including "Enable", "Perceptual", "Relative Colorimetric", "Saturation", and "Absolute Colorimetric".

## Display

The **Display** dialog box can be used to change the window background.

### To set the Display:

1. Select **Tools | Options...** from the menu.
2. In the **Options** dialog box, select **Display**.
3. In the **Display** page, set or change the options described below.
4. Click **OK** to accept any changes.

### Display Options

Field Set	Field	Description
<b>Background</b>		
	<b>Default color</b>	Uses the default Gemstone color for the background.
	<b>Custom color</b>	Specifies a color to use as the background.
<b>Tab Tooltips</b>		
	<b>File Name</b>	Includes a File Name in the tooltip.
	<b>File Location</b>	Includes a File Location in the tooltip.
	<b>None</b>	Tooltips are not displayed.

## Ruler and Guideline Options

The **Options** dialog box can be used to configure settings for rulers and guidelines.

### To set the Rulers and Guidelines Options:

1. Select **Tools | Options...** from the menu.
2. In the **Options** dialog box, select **Rulers and Guidelines**.
3. Set the options as described below.
4. Click **OK** to apply any changes.

### Rulers and Guidelines Options

Field Set	Field	Description
<b>Guidelines</b>		
	<b>Color</b>	Select a guideline color.
<b>Rulers</b>		
	<b>DPI</b>	Determines the ruler scale by dividing the layer's pixel value by Dots Per Inch (DPI).
	<b>Load resolution from EXIF metadata</b>	When this checkbox is enabled, the EXIF metadata value will override the value in the <b>DPI</b> field.
<b>Units</b>		
	Select a unit of measure for the rulers:	
	<ul style="list-style-type: none"> <li>• <b>Inches</b></li> <li>• <b>Centimeters</b></li> <li>• <b>Pixels</b></li> <li>• <b>Percent</b></li> </ul>	

# Chapter 7: Printing

## Adding Text to Pages

From the **Print** dialog box, headers and footers can be added to printed pages, and captions added beneath images.

### To Add Captions to Printed Images:

1. Select **File | Print...** from the main menu.
2. In the **Print** dialog box, select the **Caption** tab.
3. Enable the **Use caption text** checkbox.
4. Click the **Font...** button to open the **Font** dialog box and set the font options.
5. In the text box, type the caption text to be displayed.
6. Click **Insert Metadata** to insert file-specific information into the caption for each image.
7. In the **Text alignment** drop-down list, select the caption positioning.
8. To set the maximum number of text lines for each caption to display, select the **Number of lines** checkbox, and then specify a number in the field.

### To Add Headers and Footers to Printed Pages:

1. Do one of the following:
  - Select the **Header** tab and enable the **Use header text** checkbox.
  - Select the **Footer** tab and enable the **Use footer text** checkbox.
2. Click the **Font...** button to open the **Font** dialog box and set the font options.
3. In the text box, type the text to be displayed.
4. To insert the current page number or the total number of pages into the text, click **Insert Page Number**, and then select an option from the menu.
5. In the **Text alignment** drop-down list, select the header or footer positioning.
6. To set a maximum number of text lines, select the **Number of lines** checkbox, and then specify a number in the field.

## Custom Print Layouts

In the **Print** dialog custom print layouts can be created and stored as print options.

### To Create a Custom Print Format:

1. Select **File | Print...** from the main menu.
2. In the **Print** dialog box, enable the **Full page** radio button.
3. In the Print format area, click the **Add...** button.
4. In the **Add Custom Format** dialog box, select a measurement unit from the **Measurement units** drop-down list.
5. Enter the dimensions for the new format in the **Format width** and **Format height** fields.
6. Click **Add**.

## Image Size and Positioning



The **Page Settings** tab in the **Print** dialog box can be used to adjust and control the size of the images for printing, and the positioning of images on each page. Select **File | Print...** from the main menu to open the **Print** dialog box.

### Page Settings Options

<b>Page position</b>	Specifies where to place the image on each page.
<b>Margins</b>	Specifies the size of the margins. Type a value or click the arrows in the <b>Top</b> , <b>Bottom</b> , <b>Left</b> , and <b>Right</b> spin boxes.
<b>Number of prints</b>	Specifies how many copies of each image to print. The print utility adds pages as required.
<b>Automatically rotate picture based on print format</b>	Specifies whether the print utility will automatically determine which orientation to use for each image. With the <b>Automatically rotate picture based on print format</b> checkbox enabled, the print utility changes each page's orientation to best suit the image to be printed.
<b>Maintain aspect ratio</b>	<p>Specifies whether the print utility will maintain the original image's aspect ratio.</p> <p>Select one of the following options to indicate how the print utility should handle the aspect ratio for oversized images:</p> <ul style="list-style-type: none"> <li>• <b>Crop image to fit print format:</b> Prints only the part of the image that fits within the print format.</li> <li>• <b>Shrink image to fit print format:</b> Prints the entire image, reduced to fit inside the print format.</li> </ul>

## Print Adjustments

The settings on the **Adjustments** tab of the **Print** dialog can be used to compensate for quirks specific to a connected printer, such as the way the printer handles exposure.

-  It is recommended to adjust these settings only after printing to better determine any corrections the printer may require.
  
-  Please note that any adjustments made on the **Adjustments** tab will not be reflected in the **Preview** window.

### To Apply Adjustments to Images Prior to Printing:

1. Select **File | Print** from the menu.
2. In the **Print** dialog's **Adjustments** tab, adjust the **Exposure**, **Contrast**, or **Sharpness** sliders as desired.
3. Click **Print**.

## Printer Options

When printing images with Gemstone, be sure to specify which printer to use, and set the printer options on the **Printer Options** tab in the **Print** dialog box. Select **File | Print...** from the main menu to open the **Print** dialog box.

### Printer Options

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<b>Printer</b>	Specifies the printer to use. Select a printer from the drop-down list and click the <b>Properties</b> button to set its options. Refer to the printer manufacturer's Help file or manual for more information.
<b>Paper size</b>	Specifies the size of the paper, e.g. Letter, Legal, A4.
<b>Orientation</b>	Specifies "Portrait" or "Landscape" page orientation.
<b>Copies</b>	Specifies the number of copies to print.
<b>Print range</b>	Select one of the following options: <ul style="list-style-type: none"><li>• <b>All</b>: Prints all of the pages in the document.</li><li>• <b>Pages from</b>: Prints a range of pages. Specify the first and last pages of the range in the fields.</li></ul>
<b>Resolution</b>	Specifies a resolution in pixels-per-inch (PPI) for the image. The higher the value, the more dots per inch, and the higher the resolution of the printed image. For example, 600 PPI is 360,000 (600 x 600) pixels per square inch.
<b>Filter</b>	Specifies the resampling filter to use when printing images. Click the drop-down list and select one of the following: <ul style="list-style-type: none"><li>• <b>Box</b>: Displays considerable tiling or jaggies when resizing an image.</li><li>• <b>Triangle</b>: Produces good results for image reduction and enlargement, but displays sharp transition lines.</li><li>• <b>Bicubic</b>: Produces good results with photo-realistic images and with images that are irregular or complex. Uses interpolation to minimize the raggedness normally associated with image expansion.</li><li>• <b>Bell</b>: Smooths the image.</li><li>• <b>B-Spline</b>: Produces smooth transitions, but may cause excessive blurring.</li><li>• <b>Lanczos</b>: Produces the sharpest images, but may also introduce some ringing artifacts.</li><li>• <b>Mitchell</b>: Produces smooth transitions when enlarging photo-realistic images. This filter is good compromise between the ringing effect of Lanczos and the blurring effect of other filters.</li></ul>
<b>Color Management</b>	From the drop-down menu, choose between allowing the printer to manage colors, or managing colors with Gemstone.  Manage colors using Gemstone: <ul style="list-style-type: none"><li>• <b>Printer Profile</b>: Select from all printer profiles currently stored on the computer. Scroll down to find the profile cor-</li></ul>

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responding to the currently selected printer.

- **Rendering Intent:** A strategy for handling situations where not all colors will fit in the output device's color space.
- **Soft Proof:** Preview what the printed output would look like with the currently selected printer profile.
- **Gamut Warning:** Displays colors that cannot be reproduced by the printer in the preview. In such cases, the closest available color is selected. The rendering intent describes the method used to select another color.

For more information, see [Color Management](#).

**Use EXIF 2.2 printing  
(if available)**

Some cameras may capture EXIF information that can be shared with a designated printer to optimize printing results. Select this option if your camera and printer support EXIF 2.2 printing.

## Chapter 8: File Information

### Supported File Formats

#### **Files that can be read by Gemstone:**

<b>ABR</b>	Adobe™ brush format	
<b>ACDC</b>	ACDSee Ultimate ACDC Image	
<b>AFPHOTO</b>	Affinity	Thumbnails only
<b>ANI</b>	Windows animated cursor	Shows cursor animation
<b>ARW</b>	Sony RAW	
<b>AVIF</b>	AV1 Image File Format	Animated AVIF files are not supported.
<b>BMP</b>	Windows Bitmap	Windows and OS/2; 2/8/16/24/32 bpp; RLE and uncompressed
<b>CNV</b>	Canvas	Thumbnails only
<b>CR2</b>	Canon RAW CR2	
<b>CR3</b>	Canon RAW CR3	To see applicable cameras, please refer to the <a href="#">supported RAW format page</a> on the ACDSee website.
<b>cRAW</b>	Sony cRAW	
<b>CRW</b>	Canon RAW CRW	
<b>CUR</b>	Windows cursor	
<b>CVX</b>	Canvas	Thumbnails only
<b>DCR</b>	Kodak RAW DCR	
<b>DCX</b>	Multi-page PCX	All sub-types and multiple pages supported
<b>DNG</b>	Digital Negative	An open-source archival format for RAW files
<b>EMF</b>	Enhanced Metafile Format	Win32 enhanced placeable metafiles
<b>ERF</b>	Epson RAW	
<b>GIF</b>	Graphics Interchange Format	Single page animated; 87a and 89a
<b>GPR</b>	GoPro RAW	
<b>GSD</b>	Gemstone Document	Includes layer support
<b>HDR</b>	Creo RAW	
<b>HEIC/HEIF</b>	High Efficiency Image File Format	Includes support for HIF files.

<b>ICN</b>	AT&T ICN	
<b>ICO</b>	Windows icon	Shows multiple resolutions as separate pages
<b>JBR</b>	Corel brush format	
<b>JP2</b>	JPEG 2000	48-bit support
<b>JPC</b>	JPEG 2000	48-bit support
<b>JPG</b>	JPEG JFIF	JFIF and Adobe CMYK
<b>JXL</b>	JPEG XL	
<b>MRW</b>	Konica Minolta RAW	
<b>NEF</b>	Nikon RAW	
<b>ORF</b>	Olympus RAW	
<b>PBR</b>	Corel PaintShop Pro brush format	Up to 3072×2048 resolution (16BASE)
<b>PCX</b>	ZSoft Publishers Paintbrush	All sub-types supported
<b>PEF</b>	Pentax RAW PEF, Samsung RAW	
<b>PCT</b>	Macintosh PICT	
<b>PNG</b>	Portable Network Graphics	All sub-types supported
<b>PSD</b>	Adobe PhotoShop Document	RGB, grayscale, duotone, paletted and bi-level Lab color interpreted as grayscale only
<b>RAF</b>	FujiFilm RAW	
<b>RAW</b>	Pentax RAW, Leica RAW, Contax RAW, Casio RAW, Panasonic RAW	
<b>RWL</b>	Leica RAW	
<b>sRAW</b>	Canon sRAW	
<b>SRW</b>	Samsung SRW	
<b>SVG</b>	Scalable Vector Graphics	Requires Windows 10 and the Creators' update.
<b>TGA</b>	Targa TGA	All sub-types supported

<b>TIFF</b>	Tag Image File Format	Bilevel / RGB / Paletted / CMYK / YCrCb / LOGL / LOGLUV; Uncompressed / PackBits / LZW / ThunderScan / SGILog / CCITT / ZIP / NEXT / New-JPEG (no v6.0 JPEG support) Support for multiple-page documents Kodak RAW TIFF, Canon RAW TIFF
<b>WBMP</b>	Wireless Bitmap	
<b>WEBP</b>	Google WebP Format	Includes support for animated and transparent WebP files
<b>WMF</b>	Windows Metafile Format	Win 3.x placeable metafiles

### Files that can be written by Gemstone:

<b>ACDC</b>	ACDSee Ultimate ACDC Image	
<b>AVIF</b>	AV1 Image File Format	
<b>BMP</b>	Windows Bitmap	Windows 1/8/24 bpp
<b>GIF</b>	Graphics Interchange Format	Non-interlaced GIF 89a only
<b>GSD</b>	Gemstone Document	Includes layer support
<b>JP2</b>	JPEG2000	
<b>JPEG</b>	JPEG JFIF	
<b>JXL</b>	JPEG XL	
<b>PCX</b>	ZSoft Publishers Paintbrush	8 and 24 bpp; RLE compressed
<b>PNG</b>	Portable Network Graphics	1/4/8 bpp colormapped; 24 bpp RGB
<b>PSD</b>	Adobe PhotoShop Document	RGB, grayscale, duotone, paletted and bi-level Lab color interpreted as grayscale only
<b>WBMP</b>	Wireless Bitmap	
<b>WEBP</b>	Google WebP Format	
<b>TGA</b>	Targa TGA	8 and 24 bpp. RLE and uncompressed top-down and bottom-up
<b>TIFF</b>	Tag Image File Format	1/8/24 bits per pixel, single-page; uncompressed, CCITT3, CCITT4, LZW, Deflate (ZIP), and JPEG compression; Adjustable DPI tags

## Chapter 9: Shortcuts

### Keyboard Shortcuts

The following keyboard shortcuts are available in Gemstone.

Keyboard Shortcuts	Shortcut
<b>General</b>	
Customize Shortcuts dialog Box	Ctrl + Alt + Shift + K
Options dialog box	Alt + O
Help File	Ctrl + H
<b>File Menu</b>	
New	Ctrl + N
Open	Ctrl + O
Save	Ctrl + S
Save As	Ctrl + Shift + S
Export	Ctrl + Alt + E
Exit	Ctrl + Q
<b>Edit</b>	
Undo	Ctrl + Z
Redo	Ctrl + Shift + Z
Copy	Ctrl + C
Paste	Ctrl + V
Paste as Mask	Ctrl + Shift + V
<b>Document</b>	
Resize Document	Ctrl + Alt + I
Resize Canvas	Ctrl + Alt + C
<b>Layer</b>	
New Blank Layer	Ctrl + Shift + N
Add a File as a Layer	Ctrl + Shift + Alt + I
Duplicate	Ctrl + J
Delete	Delete
Rename	Ctrl + Alt + R
Exposure	Shift + E

Keyboard Shortcuts	Shortcut
Levels	Shift + L
Curves	Shift + U
Light EQ	Shift + Q
White Balance	Shift + A
Vibrance	Shift + X
Color EQ	Shift + O
RGB	Shift + G
Add Color	Shift + F
Black And White	Shift + W
Negative	Shift + I
Photo Effect	Shift + P
Skin Tune	Shift + K
Sharpen	Shift + S
Blur	Shift + B
Noise Reduction	Shift + N
Split Tone	Shift + C
Clarity	Shift + R
Dehaze	Shift + H
Gradient Map	Shift + M
Vignette	Shift + V
Posterize	Shift + Z
Threshold	Shift + T
Color LUTs	Shift + D
Clip Adjustment Layer	Ctrl + Alt + Shift + C
Rasterize Text Layer	Ctrl + Shift + T
Merge Layer Down	Ctrl + Shift + Down
Flatten Image	Ctrl + Alt +

Keyboard Shortcuts	Shortcut
	Shift + E
<b>Frequency Separation</b>	Ctrl + Shift + F
<b>Layer Effects</b>	Ctrl + Alt + X
<b>Paste as Mask</b>	Ctrl + Shift + V
<b>Delete Mask</b>	Ctrl + Shift + Delete
<b>Invert Mask</b>	Ctrl + Alt + J
<b>Link/Unlink Mask</b>	Ctrl + Shift + X
<b>Enable/Disable Mask</b>	Ctrl + Shift + M
<b>Mask From Selection</b>	Ctrl + Alt + .
<b>Add Mask to Selection</b>	Ctrl + Alt + ,
<b>Subtract Mask From Selection</b>	Ctrl + Alt + -
<b>Intersect Mask From Selection</b>	Ctrl + Alt + =
<b>Pixel Targeting</b>	Ctrl + Alt + P
<b>Toggle Layer Visibility</b>	Ctrl + ,
<b>Show All Layers</b>	Shift + J
<b>Hide All Layers</b>	Ctrl + Shift + Y
<b>Select</b>	
<b>All</b>	Ctrl + A
<b>Deselect</b>	Ctrl + D
<b>Inverse</b>	Ctrl + Shift + I
<b>Refine</b>	Shift + Alt + N
<b>Delete Selected Pixels</b>	Alt + Delete
<b>Smart Erase</b>	Shift + Alt + F
<b>AI Select Subject</b>	Ctrl + Shift + J
<b>AI Select Background</b>	Ctrl + Shift + K
<b>AI Select Sky</b>	Ctrl + Shift + Q
<b>AI Select Hair</b>	Ctrl + Shift + H

<b>Keyboard Shortcuts</b>	<b>Shortcut</b>
<b>Luminance/Color Range</b>	Shift + Alt + P
<b>Channel Selection</b>	Ctrl + Alt + L
<b>Save Selection</b>	Shift + Alt + S
<b>Load Selection</b>	Shift + Alt + L
<b>Manage Selections</b>	Shift + Alt + M
<b>Overlay Options</b>	Shift + Alt + O
<b>Filters</b>	
<b>Denoise</b>	Ctrl + Alt + K
<b>Face Edit</b>	Ctrl + Alt + G
<b>Sky Replacement</b>	Ctrl + Shift + Alt + R
<b>Red Eye Filter</b>	Y
<b>Repair Tools</b>	Alt + P
<b>Skin Tune</b>	K
<b>Add Watermark</b>	Shift + Alt + W
<b>Vignette</b>	Shift + Alt + V
<b>Special Effects</b>	Ctrl + Alt + S
<b>Tilt-Shift</b>	Shift + Alt + X
<b>Grain</b>	Alt + G
<b>Perspective Correction</b>	CTL + Alt + D
<b>Distortion Correction</b>	Alt + Z
<b>Lens Correction</b>	Ctrl + Shift + C
<b>Liquify</b>	Ctrl + Shift + Alt + L
<b>Exposure</b>	Alt + X
<b>Levels</b>	L
<b>Auto Levels</b>	Alt + J
<b>Tone Curves</b>	Ctrl + Shift + A
<b>Light EQ</b>	Q

Keyboard Shortcuts	Shortcut
Dehaze	Ctrl + Alt + H
Dodge & Burn	D
White Balance	A
Color EQ	O
Convert to Black and White	W
Split Tone	Shift + Alt + T
Tone Wheels	Alt + Q
Color Wheels	Shift + Alt + H
Color LUTs	Alt + M
Sharpen	Alt + N
Blur	Alt + U
Noise	N
Clarity	Alt + C
Detail Brush	I
Chromatic Aberration	Alt + Y
<b>Tools</b>	
Customize Shortcuts	Ctrl + Shift + Alt + K
Options	Ctrl + O
<b>View</b>	
Proof Color	Ctrl + Y
Zoom In Button	Ctrl + +
Zoom Out Button	Ctrl + -
100%	/
Fit on Screen	Ctrl + 0
Rulers	Ctrl + T
Snap to Guidelines	Ctrl + Shift + G
Clear all Guidelines	Ctrl + Shift + ;

<b>Keyboard Shortcuts</b>	<b>Shortcut</b>
<b>Lock Guidelines</b>	Ctrl + Alt + ;
<b>Hide Guidelines</b>	Ctrl + ;
<b>Window</b>	
<b>Adjustments</b>	F4
<b>Color</b>	F6
<b>Histogram</b>	F8
<b>History</b>	F9
<b>Info Palette</b>	F10
<b>Layers</b>	F7
<b>Navigator</b>	F3
<b>Quick Actions</b>	F11
<b>Toolbar</b>	
<b>Hand</b>	H
<b>Move</b>	V
<b>Crop</b>	Ctrl + Shift + C
<b>AI Object Selection</b>	Ctrl + U
<b>Rectangular Selection</b>	Ctrl + R
<b>Ellipse Selection</b>	Ctrl + I
<b>Lasso</b>	Ctrl + L
<b>Polygon Selection</b>	Ctrl + P
<b>Brush Selection</b>	Ctrl + B
<b>Magic Wand</b>	Ctrl + W
<b>Eyedropper</b>	Ctrl + Shift + U
<b>Brush</b>	B
<b>Fill</b>	Ctrl + F
<b>Gradient</b>	Ctrl + G

Keyboard Shortcuts	Shortcut
Curve	Ctrl + Shift + B
Rectangle	U
Ellipse	Ctrl + Shift + E
Polygon	Ctrl + Shift + P
Line	Ctrl + Shift + L
Arrow	Ctrl + Alt + A
Text	T
Eraser	E
Smart Erase Brush	Ctrl + E
Swap Colors	X
Set Foreground Color	Ctrl + [
Set Background Color	Ctrl + ]
<b>Menu Alt Commands</b>	
File	Alt + F
Edit	Alt + E
Document	Alt + D
Layer	Alt + L
Select	Alt + I
Filter	Alt + K
Tools	Alt + T
View	Alt + V
Window	Alt + W
Help	Alt + H

### ACDSee RAW Keyboard Shortcuts

The following keyboard shortcuts are available in ACDSee RAW.



Keyboard Shortcuts	Shortcut
<b>General</b>	
Open the Customize Shortcuts dialog box	Ctrl + Alt + Shift + K
Help File	Ctrl + H
<b>File Menu</b>	
Display the next image	Page Down 3
Display the previous image	Page Up 9
Switch to the first image in the filmstrip	Home
Switch to the last image in the filmstrip	End
<b>Edit</b>	
Undo	Ctrl + Z
Redo	Ctrl + Y
Delete	Delete
<b>Viewing</b>	
Fit the image to the viewing area	Shift + 8
Fit the image width to the display area	Alt + Arrow Right
Fit the image height to the display area	Alt + Arrow Down
Zoom In	+ (plus)
Zoom Out	- (minus)
Toggle full screen mode	F
Toggle the Histogram open and closed	H

Keyboard Shortcuts	Shortcut
Toggle the Snapshots pane open and closed	P
Opens the Develop Presets pane	Ctrl + Shift + P
Opens the History pane	Ctrl + Shift + U F9
Opens the Histogram pane	Ctrl + Shift + H F7 H
<b>Using ACDSee RAW</b>	
Switch to Hand Tool	Spacebar
Toggle the Exposure Warning	E

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## Chapter 10: Glossary

## Glossary

### A

#### **Absolute Colorimetric**

Rendering intent, generally used for proofing. Based on a device-independent color space, reproducing colors within the available gamut perfectly, and reducing colors outside of the gamut to the nearest reproducible hue (at the expense of saturation).

#### **Aliasing**

Jagged edges caused by pixels. Occurs most often in low resolution images or images that have been enlarged. See [jaggies](#).

#### **Anchor**

Method of fixing an object such as a selection to a screen, page, or image location.

#### **Antialiasing, Anti-Aliasing**

Software technique for reducing jagged lines, or 'jaggies'. Uses shades of gray and color to smooth out the contrast between adjacent pixels.

#### **Aspect Ratio**

An image's width-to-height ratio. For example, an image with an aspect ratio of 3:1 has a width 3 times larger than its height.

#### **Azimuth**

Angle of shadows that extend from the edges of image details. In Gemstone you can control azimuth when applying the Emboss effect to an image.

### B

#### **Background Processing**

Tasks or programs that function without user interaction.

#### **Bandwidth**

Amount of data that can be sent through a network connection in a fixed amount of time. Bandwidth is measured in kilobits per second (Kbps).

#### **Barrel Distortion**

In barrel distortion the photo appears to bulge outwards from the center.

#### **Bit**

Bits are small units of computer memory. The color depth of your image is constrained by the number of bits available to store color information. For example, it is possible to store 256 different

color values per color channel in 8-bit RGB images. Similarly, it is possible to store 65,536 different color values per color channel in 18-bit images.

### **Blackpoint**

An image's darkest area. You can control the intensity of the black in an image by adjusting its blackpoint.

### **Blend Modes**

Filters that change the effect of a tool or the appearance of a selected object.

### **Brightness**

Light intensity of an image. You can make an image appear brighter or darker by adjusting its brightness.

### **Brush**

A tool that you can use to isolate or indicate pixels you want to apply effects or adjustments to. The Brush in Drawing Tools can be used to draw in color on your image. See [Smart Brushing](#).

## **C**

### **Chromatic Aberration**

A lens artifact that can result in fringes in high contrast areas of some photos.

### **CMYK**

Color model that uses cyan, magenta, yellow, and black (key) as its primary colors.

### **Color Cast**

Changes the hue of an image while keeping the saturation and brightness intact. For example, many digital cameras produce pictures with a slightly blue color cast. Gemstone includes a tool that removes an unwanted color cast.

### **Color Channel Value**

Contains all pixel information for a single color. A grayscale image has one channel, while an RGB image has three channels. You can adjust RGB values when editing a color.

### **Color Gamut**

Range of colors that a device such as a printer or monitor can produce or display.

### **Color Management**

Process of adjusting your computer settings so that the color output from your printer matches the colors you see on your monitor.

### **Color Space**

There are two types of color spaces: device-independent or device-dependent. A device-independent color space, such as RGB, describes all possible colors. A device-dependent color space

describes the subset of colors (from the device-independent color space) that a particular device can reproduce. Device-dependent color spaces are used to map colors between devices (for example, from a monitor to a printer) to ensure that colors are reproduced accurately.

### **Compression**

Process that converts data to a storage format requiring less space than the original data.

### **Contact Sheet**

Physical or digital page that contains a series of small images, usually in a grid format.

### **Contrast**

Measure of an image's color and brightness differences.

### **Convert**

Change a file from one format to another. For example, you might convert a file from a bitmap (.bmp) to a JPEG (.jpg) to reduce the file size.

### **Cropping**

Removing unwanted image areas.

## **D**

### **Dock**

Attaching a toolbar, window, or pane to different screen areas.

### **DPI (dots per inch)**

Measurement of an image's resolution. For example, 92 DPI means 92 dots horizontally and 92 dots vertically, which equals 8,464 dots per square inch. More dots per inch result in higher resolution and image quality.

### **Dynamic Range**

The dynamic range of an image is directly related to the dynamic range of your digital camera's sensor. If your digital camera's sensor has a large dynamic range it can capture the darkest shadows and brightest highlights at the same time, without clipping the shadows or highlights. (RAW images preserve the dynamic range of your digital camera's sensor.) Adjusting the tonal range of the image changes how the dynamic range of the image is represented on a monitor or in a photo.

## **E**

### **Elevation**

Height of an imaginary light source over an image. The elevation of the light source works in conjunction with azimuth to generate a three-dimensional emboss effect.

### **Encode**

Writing (or saving) a file format.

### **Encryption**

Method of converting data into a secure format. You need a digital password or key to read an encrypted file.

### **EXIF (Exchangeable Image File)**

Standard for storing information, primarily with images that use JPEG compression. Most digital cameras create EXIF information and embed it in the image file. For example, EXIF information can include details about shutter speed and whether a flash was used.

### **Export**

Moving data from one application to another. The exporting application places the data in a format that the other application understands.

### **Exposure**

Exposure is the amount of time that your digital camera's sensor is exposed to light.

## **F**

### **Feather**

Softening image edges to blend them into the background.

### **File Format**

Medium for encoding information in a file. Each type of file has a different file format that specifies how it organizes the information it contains.

### **Filter**

Program that can apply an effect to an image, such as an embossed appearance or a sepia tone.

### **Fisheye Distortion**

In fisheye distortion, the photo appears to bulge outwards from the center, as if the photo were wrapped around a sphere.

## **G**

### **Gamma**

Range of color values a monitor, scanner, or printer can display. Adjusting this value increases or decreases the intensity of the light spectrum.

### **Grayscale Image**

Image composed of different shades of gray.

## **H**

### **Highlights**

Highlights are the brightest or whitest parts of an image.

### **Histogram**

A histogram is a graph that displays the dynamic range of shadows and highlights in an image.

## **HSL**

An acronym for hue, saturation, and lightness.

## **Hue**

Predominant color in an image.

## **I**

### **Image Resolution**

Quality of image details and colors. Also used to describe the quality of monitors and printer output.

### **Interpolation**

Process that uses nearby pixels to estimate the color of new pixels added to the larger image. For example, interpolation might be used when enlarging a digital image.

## **J-K**

### **Jaggies**

Individual pixels displayed in an image with low resolution. The appearance of pixels in an image causes lines and curves to appear jagged.

## **L**

### **Lens Vignetting**

Unusual darkness in the corners of images as a result of an inability of the lens to distribute light into the corners of the image.

### **Lossless Compression**

Form of compression that retains all image data and quality.

### **Lossless Rotation and Flipping**

Rotation of a JPEG image without loss of image quality. This works best on images with dimensions that are a multiple of 8 or 16.

### **Lossy Compression**

Form of compression that attempts to remove unnecessary data. This data loss can affect image quality.

## **M**

### **Marquee**

Dashed-line frame that identifies a selected portion of an image. Depending on the tool, you can resize or move a marquee with or without changing the underlying image.

### **Metadata**

Information about an image and how it was taken. For example, the metadata of digital camera images can contain the date and time the picture was taken, the shutter speed, the exposure settings of the camera, and whether a flash was used.

### **Monochrome Image**

Image containing a single color.

## **N**

### **Noise**

Effect produced when a variety of pixel colors are used in the same color region. Noise often occurs in images with high ISO setting or slow shutter speed.

## **O**

### **Opacity**

Determines how visible an effect is when applied to an image or a selection. High opacity produces a more solid effect, while low opacity results in a nearly invisible effect.

### **Overexposed**

Images that are overexposed have too many highlights, and tend to look faded. You typically overexpose images by exposing your digital camera's sensor to light for too long.

## **P-Q**

### **Panning**

Moving zoomed images vertically, horizontally, and diagonally across the display area to view specific areas of the image.

### **Perceptual**

Rendering intent that scales all of the colors within one gamut to fit within another gamut. Best used for photographic images, as it maintains the relationship between the colors more accurately than the colors themselves.

### **Perspective Distortion**

Perspective distortion is caused by wide angle and telephoto lenses, which distort the perspective of large or far-away objects. For example, if you take a photo of a tall building, the building may appear to be narrower at the top even though the building is the same width from top to bottom.

### **Pincushion Distortion**

In pincushion distortion the photo appears to shrink inwards toward the center.

### **Pixel (PICTure ELEMENT)**

Smallest visible portion of a digital image, arranged in rows and columns.

### **Plug-in**

Software module that adds functionality to a larger program.

### **PPI (pixels per inch)**

Measurement of how an image is displayed. More pixels per inch result in higher image quality.

### **Presets**

A preset contains image correction settings. You can create and use presets to ensure that settings you apply are the same and consistent across all images.

### **Primary Colors**

Colors that can produce other colors when blended. For example, in the RGB color model, red, green, and blue are primary colors.

## **R**

### **Raster Image**

Image composed of a rectangular grid of pixels. Each pixel contains a defined value about its color, size, and location in the image. As a result, resizing the image can affect its quality.

### **RAW**

An image file format. RAW files contain all of the image data that was captured by your digital camera's sensor. RAW files are not processed by your camera.

### **Red Eye**

Red eye occurs when the light from your digital camera's flash reflects off the retinas in the subject's eyes. The subject's eyes look red instead of their normal color.

### **Relative Colorimetric**

Rendering intent that maps the colors that fall exactly within the color gamuts of both the input and output devices. Best used for single- or limited-color images as colors outside of both gamuts may be mapped to a single color.

### **Render**

Drawing images to your screen.

### **Rendering Intent**

Approach used to map colors from one color gamut to another. There are four rendering intents available: [Perceptual](#), [Relative Colorimetric](#), [Saturation](#), and [Absolute Colorimetric](#).

### **Resolution**

Quality and clarity of an image, measured in pixels, dots per inch, or pixels per inch.

### **RGB**

Color model that uses red, green, and blue as its primary colors.

### **Ringing Artifacts**

Distortion around the edges of image subjects, caused by compressing or resizing an image.

## **S**

### **Saturation**

Purity of a color. Higher color saturation results in more gray.

### **Saturation (rendering intent)**

Rendering intent that maintains color saturation from one gamut to another. Best suited for images in which the actual color represented is less important than the color's vividness.

### **Selection**

Portion of an image that you define with a selection tool. A marquee surrounds a selection.

### **Sepia**

Sepia-toned images are composed of shades of brown. Many old photographs have a sepia tone.

### **Sharpen**

The sharpen tool is for sharpening images. The original image is blurred slightly. This blurred version of the image is subtracted from the original image, revealing the edges in the original image. These edges can then be sharpened by increasing contrast.

### **Sharpness**

The sharpness in an image is determined, primarily, by your digital camera's lens and sensor. You can also create the illusion of sharpness by increasing the contrast between edges within an image.

### **Shortcut Menu**

Menu that appears when you right-click within a program. Sometimes referred to as a context menu.

### **Smart Brushing**

Brushing targeted to specific colors, brightness values, or combination of color and brightness. The Smart Brush only affects pixels similar in value to the pixel in the center of the brush stroke, and allows you to apply adjustments to those pixels.

### **Soft Proofing**

Using your computer's monitor as a proofing device. The monitor displays a simulation of how colors will appear when rendered by the printer.

## **T**

### **Thumbnails**

Small preview of a full-sized image.

## **U**

### **Underexposed**

Images that are underexposed have too many shadows. Images typically become underexposed if you don't expose your digital camera's sensor to light long enough.

## **V**

### **Vector Image**

Image consisting of individual objects rather than pixels. Mathematical equations define the objects. You can adjust the size of a vector image and the image will retain its clarity and quality.

## **W**

### **Watermark**

Background text or graphics added to an image, usually to provide copyright protection.

### **White Balance**

Removes color cast to create a photo that is correctly lit. You can use your camera settings to apply the correct white balance before taking an image, or correct the white balance in Gemstone.

### **Whitepoint**

Lightest image area. You can control the intensity of the white in an image by adjusting its whitepoint.

## **Z**

### **Zoom**

In Gemstone, zoom refers to the process of increasing or decreasing the display scale for an image. Increase the display scale to view a portion of an image or a specific image detail. Decrease the display scale to view more or all of the image.