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Weekly chats are held every Tuesday night at 7:30 p.m. PST in the Mac Graphics (Keyword: MGR) Forum on America Online.

A Quick Tour of the User-Interface

Common Items for all of the User-Interface Filters
The most unique feature of Kais Power Tools for Windows is the intuitive User-Interface.   The following items are common to Gradient Designer, Gradients on Paths, Texture Explorer and Fractal Explorer.

Moveable Interface

Temporary Re-size Option

Options Button

Shuffle Button

Add Button

Delete Button

Cancel Button

OK Button

Keyboard Shortcuts

The Gradient Designer

Basics

The Gradient Designer allows you to design complex, multi-color 24 bit gradients, save them (as presets), and/or apply them to your image.   It is the cornerstone of Kais Power Tools.   The architecture of Kais Power Tools allows gradients saved as presets in the Gradient Designer to be used, or subscribed to, by all other U-I filters.   Because other U-I filters parse this gradient data through their own proprietary algorithms, many new variations of existing gradients are created.   Most of these gradients could not be created by using the Gradient Designer by itself.   To capture this new gradient data, (for new presets), and to allow greater user control over textures and fractals, **<Control G>** brings up the Gradient Designer in the Texture Explorer and Fractal Explorer; a powerful combination.

A couple of hints:

- When you find a gradient you like, (**anytime** the Gradient Designer is active) **SAVE** it.
- Dont forget that None is a color. Different levels of None (varying levels of opacity and translucency) allow for some great special effects.
- All Gradient Designer presets are available to you in all other KPT User-Interface Filters.

A Tour of the Gradient Designer U-I

Using the Gradient Designer

Keyboard Shortcuts for the Gradient Designer

Using the Gradient Designer

Basics
Using the Gradient Designer is as easy as point and click.   Move the cursor over the gradient bar, click (the cursor turns into a color picker), and watch as the colors are instantly interpolated over the entire gradient bar.

Use the selection bar to focus on a specific area of the gradient bar.

Change the shape algorithm, loop control (how the gradient repeats the base colors), repeat values (how many times the loop control values repeat) for interesting effects.

Change opacity levels for the entire gradient bar, or just for small selected areas.

Use NONE as a color for masks, transparencies, frames, fogs, etc.

Save gradient data, including Algorithm Control, Looping Control, Direction and Blur Control as a presets. Create new categories and preset files.

Use one of the many KPT presets.

Apply Modes Explained

[Normal Apply](#)

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Darken Only

The algorithm for Darken Only Apply Mode reads the luminance values of both the original image and the gradient, texture or fractal image and compares them. It then adds the gradient, texture or fractal only in those areas where the gradient, texture or fractal is darker than the underlying image.

Add

The algorithm for the Add Apply Mode sums the underlying image and the gradient, texture or fractal you wish to apply and clips them at white.   In many cases it may resemble a blend function, but not always.

Subtract

The algorithm for the Subtract Apply Mode compares the underlying image and the gradient, texture or fractal and combines them using subtractive color theory.   For instance, if the image is white and a green effect is applied, the subtract mode will yield a magenta.   (Subtract Green from RGB yields Red + Blue or purple.)

Multiply

The Multiply Apply Mode uses an algorithm which takes only the dark components of the gradient, texture or fractal and adds only those dark components to the underlying image.   Everything that is white is ignored, and everything that is black is added proportionately according to its luminance values.

Screen

The screen Apply Mode algorithm measures the light components in both the underlying image and the gradient, texture or fractal.   The lighter components are added to the image, and the darker components discarded or ignored.   Everything in between appears to be blended.

Difference

The Difference Apply Mode is probably the most dramatic of the apply modes.   This algorithm uses both the underlying image and gradient, texture or fractal color ranges to their fullest, and measures the difference between the two.

Tie Me Up/Tie Me Down

An apply mode which uses modulo arithmetic for color manipulation.   The apply mode function is similar to Add and Subtract, with the distinction that instead of clipping to black or white, the result which would have been clipped is retained and used as color data.   When dealing with a lot of black or white within either the underlying image or selection, or within the gradient itself, Tie Me Up/Tie Me Down will not yield anything surprising. On the other hand, some results will be astonishing with polarized sheens and kaleidoscopic type effects.

Add Button

Hit A to save a [preset](#) name or start a new preset category in the Gradient Designer, Gradients on Paths, Texture Explorer and Fractal Explorer.

Delete Button

Hit the letter D or click on the delete button to delete a preset or a category in any of the U-I filters.

Preset Menu

The Preset Menu is where all of the named or saved Gradients, Textures and Fractals are stored.   When you press the letter A or click on Add a dialog box will allow options for item names, category names, and preset files.   Each U-I is allow up to five different preset files.

Options Menu (Button)

The Options Menu Button appears on all of the U-I filters.   The first major set of options which appears on all the U-I filters is the **Apply Mode** option.   There are 12 different apply modes.

The second major set of options which appears on the Gradient Designer, Gradients on Paths, and Texture Explorer is the **Background Preview** option.   The background preview option allows 9 different backgrounds to the gradient or texture you have designed.   This allows you to test various apply modes against different color backgrounds for the best effect.

The third set of options deals with **Real-time Linking** and **Preferences**.   Real-time Linking allows you to view the changes you are making as they happen in the preview window.   When Real-time Linking is disabled, the preview window will only update after the mouse button has been released, i.e. when you have completed an action.

The Preferences choice is only active in the Gradient Designer and Gradients on Paths.   The preference choices here are Load Normal Gradient from Image, Load Smooth Gradient from Image, and Return to Previous State.
- Load Normal Gradient from Image loads color data drawn from a horizontal selection across the center of the image.
- Load Smooth Gradient from Image loads the color data from a horizontal selection across the center of the image, and interpolates, or smoothes, the color data across the Gradient Bar. If, however, there are hard edges in the selection area, those hard edges are still represented in the Gradient Bar.
- Return to Previous State remembers the last gradient in the Gradient Bar and displays that gradient at start up.

Apply Modes Explained

Presets

A general rule of thumb for KPT is when you see something you like, SAVE IT!   A preset in KPT is much the same as a preset on a digital radio.   It allows immediate access to an item you have already tuned, or created.   Instead of later trying to recreate a gradient, texture or fractal, save it as a preset.   Then it is always available.   To save a preset, just hit the A key on your keyboard, or use the Add Button.   The U-I then prompts you for a preset name.   You may also add additional categories and create up to four additional preset files for each U-I.

Find Edges and Invert/Charcoal/Soft

Find Edges and Invert is a very simple filter combining the Photoshop Find Edges filter and an Invert function in a single one-step filter, undo-able on the fly.

Find Edges Charcoal, with alternate settings in the algorithm, will also invert the image. On a full color RGB scan often the results are faint grayish lines on white wherever the edges pass a certain threshold. While this can look strikingly like gray charcoal on white paper and earn its name, do not forget that these are algorithmic operations processing your existing image and the result will vary tremendously with different source material.

Find Edges Soft is a softer algorithm than the original Photoshop Find Edges, creating an effect that is less harsh and intense.   This one will, for instance, not create full rectangles around single bright pixels, but rather smooth edge outlines.

Number key and keypad controls (1 = 10 percent - 0 = 100 percent) will vary the intensity of the Find Edges effect from very light to very intense.   Use the **CAPS LOCK** key to toggle the invert function on and off.

Glass Lens

The KPT filters go further than any previous spherical filter that takes a selection and "bumps" it outward to the front. The Glass Lens filters actually use a special-case ray tracer, complete with a 10 position user-defined, shadow casting 3-D light source and ambient light.
The result will look like an anti-aliased 3-D rendered ball.
There are three versions:
      Glass Lens Bright
      Glass Lens Normal
      Glass Lens Soft

Bright has a low ambiance setting, medium aliasing and high intensity spotlight, casting a "hot" spot.

Normal reduces the intensity of the light to about 60%, resulting in less harsh lighting and contrast. Smooth spheres with small highlights and soft, rich shadows can be easily created.

Soft has very soft settings of a low intensity sun (<15%) and higher ambiance, creating less hot spot and softer shadows on the sphere.

Keyboard Settings
The Keypad controls the direction of the ambient light.   Holding down the number nine produces a bright spot in the upper right hand portion of the globe, while holding down the number one produces a bottom left highlight.

Special eclipse effects use the **Scroll Lock** key.   With the scroll lock key down, all of the numbers produce the effect in the same basic area, only with an eclipse result.   Holding down the number five key with the scroll lock active backlights the sphere for a full eclipse effect.

Due to memory limitations in the Windows environment, Glass Lens will only work on files smaller than 16 MB.

Hue Protected Noise: Maximum-Medium-Minimum

Hue Protected Noise works with the existing hues of the selection area and creates a random dithering of similar hues as opposed to a random RGB smattering of pixels.   This is very effective when color must be preserved, such as original scans or skin tones.   These filters work in CMYK, RGB, Lab, and Gray scale modes in Photoshop. Each of the Hue Protected Noise filters can be controlled using the number keys or the keypad to vary the effect about 20% more or less intense.

Using Hue Protected Noise
Use the number keys 1 = 10 percent, 0 = 100 percent to control the amount of noise applied to the image.

The Maximum setting will create a serious amount of noise. The default is set at about 80% noise and may be controlled with the number keys "1" to "0" to cover a range of about 60-100% noise. The apply curve is weighted to preserve bright whites and blacks. This subtle feature makes a big difference as all previous noise generators would affect both highlights and background in black with high contrast opposite colors.

The Medium setting, about 50%, will generate noise with the same characteristics as the Maximum, but the resulting noise will be visible yet not harsh. The variable range that can be obtained using the number keys is 30-70%.

The Minimum setting is at about 20% and is barely visible in most cases. That is exactly the purpose: an extremely fine control for ever-so-little texturizing. The variable range that can be obtained using the number keys is 1-40%.

Page Curl

Basics/Using Page Curl

Page Curl simulates the effect of a page being peeled back, with a highlight running along the center of the curl and a shadow being thrown from beneath the image. (if your image is light enough to see the shadow.)

The curl begins in one corner of your selection and follows a perfect diagonal line to the opposite corner of the selection.   You may also notice a slight transparency to the curl if there is any pattern or texture in the selected portion of your image.   If do not want the opacity in the curl, hold down the Space Bar.

The origination point of the curl is controlled by using   the numeric keypad.   The placement of the numbers on the keypad is analogous to the corner that will be affected.   The vertical or horizontal orientation of the curl is controlled by the caps lock key.

To curl this corner: Press this key
     Upper left   7
     Upper right   9
     Lower left   1
     Lower right   3

Caps Lock key is: - curl orientation is:
     up (off)   Vertical
     down (on)   Horizontal

Because of Windows memory limitations this filter will only work on files smaller than 16 MB.

Pixel Storm/Breeze

Basics/Using Pixel Storm/Breeze

Pixel Storm is a super diffusion process that takes each pixel on the screen and disperses it by a factor of 200 pixels over the current selection area. It also includes a darkening apply transfer mode. Repeated application in small areas can suck in neighboring colors and intensity and dissolve them in a veritable pixel storm, hence the name.

PixelStorm diffuses pixels based on a 200 pixel size and uses a darken apply mode, PixelWind uses approximately 80 pixels but features a different apply mode that diffuses and enhances the image.

PixelBreeze is set at 30 pixels diffusion size. It features a lighten apply transfer mode, which will add light and fade the selection in repeated applies.

On feathered selections, different variations may be achieved by holding down the Caps Lock key. PixelBreeze will act similarly to PixelStorm with the Caps Lock key down. The amount of diffusion is controlled using the keyboard or keypad, as in PixelStorm.

Each of the PixelBreeze/Wind/Storm filters has a unique character in repeated application and will yield subtly different effects.

Pixel Storm/Breeze Apply Modes

On feathered selections, a different variation of PixelStorm and PixelBreeze can be achieved by holding down the Caps Lock key. By default, PixelStorm/Breeze will decrease the amount of the effect on a feathered selection but will retain the color of the moved pixels. When the Caps Lock is applied, the effect will fade out over the feathered area, actually blurring and blending the pixels for a subtle effect. The difference is most noticeable on color documents.
The amount of diffusion can be controlled by using keys "0" through "9" on the keyboard or keypad. "1" is assigned as the lowest amount of diffusion and "0" the greatest.

Smudge Lighten/Darken

These Smudge filters are two sets of symmetrical effects de coupled as standalone. They are directional motion blurs that take the current selection and create a multi-layer blend using a transfer mode (either lighten or darken). They are unlike Photoshop's Motion Blur in that the latter extends in both directions and has no apply mode. They are also totally unlike other blur filters in that they are constrained to horizontal features, not cell-based, and utilize lighten and darken apply modes.

You can easily create subtle trailing motion and wind effects, as well as interesting alterations of textures.

The Darken version will slowly build up the dark content in the selection. After about 4-6 repeat applies the image converges on black. Repeated Darken works particularly well on a mostly light background with black speckled noise. Darken creates smooth trails which eventually result in needle-like structures.

Smudge Darken Right is a complement to the left version. Note that a Right after a Left Smudge will not recreate the original image. In the multi-layer process, information is irretrievably lost.

The Smudge Lighten filters are the same except they use a lighten transfer mode. The combination of darken and lighten can be very effective.
Here we have a trio of plug-ins providing unusual noises. These actually subscribe to the gradients.

Large feathered selections of Special Noise, when copied and pasted, then altered using paste controls can yield very new and subtle images. Also try processing the noises with the Smudge and Find Edges filters.

Each filter uses a different gradient with an alpha channel.   The method of deriving the Noise from the Gradient presets implies that each one has unique alpha channel opacity behavior. This is not simply one noise filter with three hue settings.
Sharpen Intensity applied to an image will yield stronger contrast and brighter colors. This is a good tool for brightening up an image. Use it as a first step. For correcting scanned images it will "punch up" the colors. In the best situations, the resulting image will look so much more vivid, that an undo to the previous version will seem as if it had a drab hazy gauze layer over it.
Repeated applies of Sharpen Intensity will posterize an image. With extreme repetition you may converge on black and over saturate your image, but used in controlled dosage the filter is extremely effective.

Using Sharpen Intensity
Modulating Sharpen Intensity: The degree of Sharpen Intensity's effect is controlled with the keyboard/keypad where 0 is equal to 100 percent (the most correction) and 1 is equal to 10% (the smallest amount of correction.)   The default value, with no numerical key held down, is 50 percent.

Scatter Horizontal

Scatter Horizontal is an special case filter which diffuses only on the horizontal axis with a lighten apply mode. The real power is evident with several repeated applies, stretching a selection and swallowing certain features while bringing out others. A unique streaking trailing effect can result.

The degree of effect obtained with Scatter Horizontal is controlled by holding down one of the number/keypad keys. 1 = 10 percent and renders a faint effect, while 0 = 100 percent, an extreme effect.

Moveable Interface

The User-Interface filters may be moved around the screen at any time.   To move the U-I click and hold on the **Title Bar**.   When the U-I is minimized, hold down the shift key (<Shift>) click and hold to drag the U-I.

Temporary Re-size Option

Double clicking on the Kai Logo will minimize the User-Interface.   In Gradient Designer and Gradients on Paths the minimize function reduces the U-I to the gradient bar.   The gradient bar is still **hot,** that is, still active.   In fact, the gradient bar by itself functions as the full Gradient Designer U-I without the preview window, looping, direction and blur controls.   You may make changes, including saving and deleting presets in this mode.   Also notice, when either the Texture Explorer or the Fractal Explorer are active and you bring up the Gradient Designer (CTRL-G), all changes made to the gradient are immediately reflected in both preview windows.

Shuffle Button

The Shuffle Button exchanges user defined parameters within a given U-I filter.   Common shuffle elements for all U-I filters are Colors, Apply Modes and Test Image.   Specific U-I shuffle parameters are:

     Gradient Designer
          Algorithm Control
          Looping Control
          Origin Control
          Direction Control

Cancel Button

Any time you want to cancel or end an action within any of the U-I filters, press the Cancel button.   Using the Escape Key does the same thing, and works on the non-U-I or one-step filters also.

Apply Button

When you have complete your task in any of the U-I filters, click on the Apply Button to apply the gradient, texture or fractal, with appropriate apply mode to the underlying image.   Using the Enter Key will accomplish the same task.

Keyboard Shortcuts for the Gradient Designer

Keyboard Shortcuts for the Gradient Designer are:
Gradient Bar Specific:
- Control+X   Cut current gradient selection.
- Control+C   Copy current gradient selection.
- Control+V   Paste.
- Contorl+F   Flip gradient (within selection bracket.)
- Control+I   Invert colors in gradient (with **CAPS** lock key down, **ALPHA** channel will be **inverted**.)
- Left Arrow   Move selection bracket left one pixel.
- Shift+left arrow   Moves selection bracket left by width of bracket
- Right Arrow   Moves selection bracket right one pixel.
- Shift+right arrow   Moves selection bracket right by width of bracket.
- R   dynamically toggles the Real-time preview state.
- Shift + Left Mouse Button   moves left side of the bracket to that position.
- ALT + Left Mouse Button   moves right side of the bracket to that position.
- Number Keys   Control opacity level while selecting colors from the color picker.   With CAPS LOCK down (engaged) the number keys represent the opacity for the entire gradient.
- ALT held down while selecting a color forces entire selection to that color with hard edges.
- Control + Left Mouse Button   Rotates the gradient as you drag in the Gradient Bar.
- ALT + Left Mouse Button   Distorts the gradient as you drag in the Gradient Bar.

Note: As you drag and distort or rotate the gradient in the Gradient Bar, the numbers 1,2,3 and 4 respectively represent Red, Green, Blue and Alpha channels. I.E., tapping the 1 key after pressing Control + Left Mouse Button in the Gradient Bar (hand appears) will rotate just the Red channel, tapping the 2 key rotates just the Green channel.   Tapping multiple keys will rotate or distort those that are selected.   Selecting none of the keys will rotate and distort everything.

OK Button

Click on OK or hit the Enter Key to accept and end the current action.

Keyboard Shortcuts

General Keyboard Shortcuts are:

When launching a filter
- Control   Aborts sub sampling the entire image into the preview window.
                                           (Saves time with very large files.)
- Space Bar   Brings up the U-I with a black background.

While in the U-I:
- Up Arrow   Previous Preset (in current category.)
- Down Arrow   Next Preset (in current category.)
- Page Up   First Preset (in current category.)
- Page Down   Last Preset (in current category.)
- Home   First Category (also first preset in category.)
- End   Last Category (also first preset in category.)
- Control+Right Arrow   Moves apply mode to next mode.
- Control+Left Arrow   Moves apply mode to previous mode.
- Control-Z   Undo
- S   Shuffles Parameters (user defined apply mode, color, etc.)
- OK   Enter Key
- NO   Escape Key
- HELP   ? or Shift + ?

Previews and Controls

Color Gradient Bar

As in the Gradient Designer, the Color Gradient Bar contains three distinct areas which allow the user choices in color channel and alpha channel.   Located just above the main preview area of the color gradient bar is the color bar.   Clicking on the color bar will bring up the preset menu and allow the choice of any gradient designer preset.   The color bar accepts the **color only**.   It does not affect the alpha channel or opacity levels.   Located below the main preview area of the color gradient bar is the Alpha Channel Gradient Bar.   The Alpha Channel Gradient Bar functions much the same as the Color Bar.   Again, clicking on this part of the Color Gradient Bar will bring up the user presets for the Gradient Designer.   Unlike the Color Bar, the Alpha Channel Bar only displays **the alpha channel settings** of a particular gradient. The two items are then blended, one for color, one for alpha channel settings, and the combination is displayed in the largest part of the Color Gradient Bar.

Algorithm Control

The left most box in the U-I is the Algorithm Control Menu.   In essence, algorithm control dictates the shape or form the gradient will take when rendered.   The selected shape is rendered in gray scale in the small preview window for reference.

Looping Control

Looping Control affects the number of times and the direction in which a gradient repeats itself.

Composite Real-time Preview

The Real-time Preview feature for Gradients on Paths will not show you the actual application of the gradient on the feathered path, but rather the interaction between the components selected for Gradients on Paths and the underlying image.

Post Blurring Control

Post Blurring Control dictates how much blurring will be allowed **in the gradient** being used for Gradients on Paths.

Menu Items

Clicking on the main Preview Window brings up the noise menu.   Enable noise by clicking on **Noise Apply Mode.**   Selections available are Inside, Outside and Inside and Outside.

Apply Modes

A Tour of the Gradient Designer U-I

Color Gradient Bar
Directly below the Real-time Preview Window, the Color Gradient Bar is the most prominent item in the Gradient Designer U-I.   It contains three distinct areas which allow the user choices in color channel and alpha channel.   Located just above the main preview area of the color gradient bar is the color bar.   Clicking on the color bar will bring up the preset menu and allow the choice of any gradient designer preset.   The color bar accepts the **color only**.   It does not affect the alpha channel or opacity levels.   Located below the main preview area of the color gradient bar is the Alpha Channel Gradient Bar.   The Alpha Channel Gradient Bar functions much the same as the Color Bar.   Again, clicking on this part of the Color Gradient Bar will bring up the user presets for the Gradient Designer.   Unlike the Color Bar, the Alpha Channel Bar only displays **only the alpha channel settings** of a particular gradient preset. The two items are then blended, one for color, one for alpha channel settings, and are displayed in the main color gradient bar preview.

Algorithm Control
The left most box in the U-I is the Algorithm Control Menu.   In essence, algorithm control dictates the shape or form the gradient will take when rendered.   The selected shape is rendered in gray scale in the small preview window for reference.

Algorithm Menu Selections

Looping Control
Looping Control affects the number of times and the direction in which a gradient repeats itself.

Looping Menu Selections

Composite Real-time Preview
The Real-time Preview feature for Gradients Gradient Designer shows a composite preview of the underlying image (or the preview option you have chosen.) selection area, gradient, and the interaction between the two, including apply modes.

Post Blurring Control
Post Blurring Control dictates how much blurring will be allowed **in the gradient**   (between the color interpolation.)

Gradient Direction
When using the Linear and Radial Algorithm Control settings, the direction of the gradient may be set by clicking and moving the Gradient Direction bar.

Algorithm Menu Selections

Algorithm Control Menu determines the actual shape of the gradient you have chosen.   Algorithm Menu Selections are:

- Linear Blend
- Circular Sunburst
- Elliptical Sunburst
- Radial Sweep
- Square Burst/Rectangular Burst
- Angular Shapeburst/Circular Shapeburst
- Angular Pathburst/Circular Pathburst

Looping Control Menu Selections

Determines the repeat rate of the selected gradient.   The choice is previewed in the Looping Menu Preview Window.

  Sawtooth A→B
  Sawtooth B→A
  Triangle A→B→A
  Triangle B→A→B

Other menu selections under the Looping Control Menu Selections include:

- No Distortion
- Pinch Right
- Pinch Left
- Pinch Inward
- Pinch Outward

The third selection deals with the number of times the gradient will repeat, using the above menu selections.

Linear Blend

The straight forward application of the gradient from A to B.   Additional options include the entire Looping Control Menu, Blur Control and Direction Control.

Circular Sunburst

Circular Sunburst is very similar to the Radial blend in Photoshop.   It renders in a circle, fading to the edges.   All Looping Menu Options may be added (for great effects), as well as Blur Control and Direction Control.

Elliptical Sunburst

Elliptical Sunburst follows the basic pattern of the Circular Sunburst except for the ellipse shape following the size of the image or selection.   It creates circles no matter what the aspect ratio of the selection area is.   All Looping Menu Options may be added (for great effects), as well as Blur Control and Direction Control.

Radial Sweep

Radial Sweep looks like a radar screen, with the sweep drawing   360 degrees.   All Looping Menu Options may be added (for great effects), as well as Blur Control and Direction Control.

Square Burst/Rectangular Burst

Square Burst/Rectangular Burst render the gradient in a square or rectangle.   Square maintains the aspect ratio (and will be cut off without a perfectly square selection), whereas Rectangular Burst follows the proportions of the selection or image.   A great way to create framing effects.

Angular Shapeburst/Circular Shapeburst

Angular and Circular Shapeburst create gradients which follow the contours of a selection.   Circular and Angular refer to the type of form the gradient takes when the selections contours intersect with one another.   Angular creates sharp edges, while circular creates a rounder, more natural effect.

Angular Pathburst/Circular Pathburst

Angular and Circular Pathburst are similar to their Shapeburst cousins, and accordingly follow the selection contours.   Unlike Shapeburst, Pathburst renders the gradient to both the interior and exterior of the selection follow the filter rectangle, or bounding rectangle, as define by the graphics program you are using.   Inverting the selection fills the entire area with a Pathburst gradient.

Normal Apply

Normal Apply applies the gradient, texture or fractal without regard to the underlying image.   All underlying image data is destroyed by this process.   Transparency in general is not available in this mode unless the gradient, texture or fractal has some level of transparency.   Those areas underneath the transparency will show through, everything else will be covered with the selected gradient, texture or fractal.

Procedural Blend

A power application for a gradient, texture or fractal.   An algorithm is executed for each pixel based upon its luminance value.   If the original pixel has a luminance value in the medium range (128 +/- on a scale from 0-255) the apply is normal.   If the luminance value is brighter (200+/-) the apply effect will be brightened by that amount.   If the original pixel is darker, the apply effect will be proportionately darker. The effect is to wrap a gradient, texture or fractal around the underlying gray scale image, based upon luminance values.   Any areas of pure white or pure black will show through as pure white and pure black, as the luminance values dictate a full brightening or darkening to maximum values, black and white.

Lighten Only

The algorithm for Lighten Only Apply Mode reads the luminance values of both the original image and the gradient, texture or fractal image and compares them.   It then adds the gradient, texture or fractal only in those areas where the gradient, texture or fractal is lighter than the underlying image.

Vortex Tiling

Vortex Tiling is a filter that distorts an image in a two step process.   First the image is seamlessly mirrored across a flat infinite plane, and then an imaginary circle is drawn around the center of the selection or image.   The image is then turned inside out using the circle line as the fulcrum.   What was outside the circle is now inside and vice versa.   What you see in the center is an infinite vortex as the multitude of mirrored images are mapped into the center of the circle.   That is, after processing the image, the area in the center of the circle shows what used to be outside the circle (tiled many times), and the area outside the circle shows what used to be inside.

It appears as though the center recedes into an infinite vortex.

Keypad Controls
The keyboard/keypad controls the degree of Vortex Tiling effect. The numeric setting affects the size of the imaginary circle that acts as the flipping fulcrum.   Pressing the 1 key while selecting Vortex Tiling filter creates a small circle, whereas holding down the 0 key (stands for 10) creates a large circle.   The default setting is 5.
(Note: The size of the circle is fixed according to the number of pixels in the image.   The circle is not calculated relative to the file size.   For large files, to get a similar effect (compared to a smaller file), use a larger number.   The settings for the filter apply to a specific number of pixels, and different file sizes require larger selections for the same effect at higher resolution.
Another way to think of the numeric settings is as a zoom control. What was just inside circle #1 is just outside of circle #2.

Lower settings, with the smaller central circle results in a smaller portion of the image being distorted around the outside of the flipping fulcrum.

Larger selections (higher numbers) can be far beyond the boundaries of the image resulting in a highly symmetrical pattern reminiscent of Cathedral Rosette Stained Glass Windows or Arabic Mosaic patterns.

Vortex Tiling remembers the last setting and automatically applies at that level unless requested otherwise.

Due to Windows memory limitations, Vortex Tiling only works on files smaller than 16 MB.