Contents

Welcome to Corel KPT Collection

Welcome to Corel® KPT® Collection, the revolutionary KPT series of filters designed to help you create dazzling and unique effects.

In this section, you'll learn about

- the Corel KPT Collection filters
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- Corel Corporation
- Corel® Customer Support Services

KPT

The Corel KPT Collection filters

Corel KPT Collection includes 24 extraordinary filters that produce dazzling and unique effects for print and the Web.

KPT FiberOptix

The KPT® FiberOptix filter lets you create realistic hair, fur, rain showers, and more. You can control the length, color, and tint of each fiber you create on a source image. Using a mask, you can create fibers in specific shapes; for example, you can create hair that grows as text.

KPT Frax4D

The KPT® Frax4D filter lets you create 3-D sculptures out of fractal space. You can wrap these sculptures with any environment map. You can also rotate sculptures and render them as images.

KPT Blurrrr

The KPT® Blurrrr filter lets you manipulate the pixels in a source image to soften, smooth, and blend its edges and colors.

KPT Equalizer

The KPT® Equalizer filter lets you use a variety of filters to add interesting effects to images by manipulating their frequencies; for example, you can sharpen or blur images.

KPT FraxPlorer

The KPT® FraxPlorer filter lets you create an infinite variety of fractal patterns. You can also customize fractals using various color, contrast, distortion, and zooming tools.

KPT ShapeShifter

The KPT® ShapeShifter filter lets you apply interesting effects to objects; for example, you can apply bevels, graphics and text layers, and dimensions. You can also use environment and bump maps to achieve reflections and surface texture. You can create multiple objects at once; for example, by loading a mask with the shapes of each letter in a font set, you can turn the shapes into 3-D buttons for a Web site.

KPT Noize

The KPT® Noize filter lets you explore a variety of mathematically generated noise patterns that can be used as textures, patterns, or noise maps. You can select a noise family, mutate it to explore its variations, and apply it to a source image.

KPT Gel

The KPT® Gel filter lets you use paint tools to create 3-D images, text treatments, and objects such as buttons and borders. You can use lighting effects, tinting, and transparency to control the qualities of effects.

KPT Goo

The KPT® Goo filter lets you create effects that simulate the look of gelatin finger-painted on a source image. You can smear, splatter, twirl, pinch, or bulge images to create unique results. You can also use animation controls to save effects as movies.

KPT LensFlare

The KPT® LensFlare filter lets you apply interesting effects on a source image to simulate the photographic reflections created by

a bright light shining on a camera lens. For example, you can create glows, halos, and streaks of light.

KPT Materializer

The KPT® Materializer filter lets you create complex textures, stunning backgrounds, and dazzling text treatments on source images. You can import bump maps and scale, pan, and rotate them to achieve interesting effects. You can also use lighting controls to manipulate surface textures.

KPT Projector

The KPT® Projector filter lets you use warping effects to create 2-D perspective distortions and 3-D transformations on source images. You can also create infinite planar tiling at any angle, and you can use anisotropic light filtering.

KPT Reaction

The KPT® Reaction filter lets you use patterns and diffusion options to create realistic simulations of organic textures, such as the growth pattern of coral or the stripes on a zebra.

KPT Turbulence

The KPT® Turbulence filter lets you create waves on a surface image. As the waves distort the image, they become animated and fluid. You can apply color blends to the waves. You can also take a snapshot of the waves that you can apply to a source image, or you can save the waves in motion as a movie.

KPT RadWarp

The KPT® RadWarp filter lets you use a simulated camera effect called barrel distortion to warp the edges of images. You can also correct barrel distortion on images.

KPT Channel Surfing

The KPT® Channel Surfing™ filter lets you apply effects to individual channels in an image. You can blur or sharpen a channel, or you can adjust its contrast or value. You can adjust the amount and transparency of the effect and control how the effect blends with the source image.

KPT Fluid

The KPT® Fluid™ filter lets you manipulate images by applying liquid-like transformations and distortions that simulate dragging a brush across a wet surface. You can control the effect by setting the thickness of the fluid as well as the brush size and velocity. You can use various preview techniques to fine-tune the effect, and choose to save the fluid in motion as a movie.

KPT FraxFlame II

The KPT® FraxFlame II™ filter lets you explore and mutate an infinite variety of flame fractals. You can also customize fractals with various color, contrast, and distortion techniques.

KPT Gradient Lab

The KPT® Gradient Lab™ filter lets you create complex color blends with various levels of transparency. You can also customize gradients with interesting shapes, styles, and pixel distortions.

KPT Hyper Tiling

The KPT® Hyper Tiling™ filter lets you create and save intricate tiling effects by reducing a source image to create a tile. The tile is then repeated to create a hypertiling effect. You can create different blends between the source image and the effect, and you can change the viewer's perceived distance from the effect. You can also change the depth, transparency, position, and size of the effect, and you can rotate it through space.

KPT Ink Dropper

The KPT® Ink Dropper™ filter lets you create the effect of dropping colored liquid (ink) on a surface. You can create fluid drops, stains, and smoky swirls. You can choose the color of the liquid, and change its intensity and transparency. You can also change the size of the individual drops, and the rate at which they disperse on the surface.

KPT Lightning

The KPT® Lightning™ filter lets you create customized lightning bolts. You can control every aspect of a lightning bolt, from setting its length and color, to determining its path and how much it zags and wanders. The lightning effect can then be realistically integrated into your source image using one of several blend modes.

KPT Pyramid Paint

The KPT® Pyramid Paint™ filter uses the Lab color mode to let you transform source images into effects that resemble paintings and perform various color and contrast adjustments to them.

KPT Scatter

The KPT® Scatter™ filter lets you disperse particles over a source image. You can disperse a single particle or a grid of particles over an effect to emulate intricate effects such as paint strokes or mosaics. You can also use variants to create special effects based on the way particles interact with different components of a source image. You can control every aspect of particle placement, color, and shadow.

About the User Guide

The Corel KPT Collection User Guide assumes you are already familiar with basic Mac OS® and Windows® concepts — menus, dialog boxes, and mouse operations, such as clicking and dragging. If you need more information on these subjects, or about the Apple® Finder™ or the Windows desktop, refer to the Mac OS® User Manual or the Microsoft® Windows® User Guide, respectively.

User Guide conventions

The Corel KPT Collection User Guide is for both Mac OS and Windows platforms. By convention, Mac OS commands precede Windows commands in the text. For example, Command/Ctrl + I, is equivalent to the Mac OS Command + I and the Windows Ctrl + I, and indicates that you must hold down the Command or Ctrl key, and press I. The term "folder" refers to directories as well as folders. The Corel KPT Collection interface for Mac OS and Windows platforms is identical, unless otherwise specified.

About Corel Corporation

Founded in 1985, Corel Corporation (**www.corel.com**) is a leading technology company specializing in content creation tools, business process management and XML-enabled enterprise solutions. The company's goal is to give consumers and enterprise customers the ability to create, exchange and instantly interact with visual content that is always relevant, accurate and available. With its headquarters in Ottawa, Canada, Corel's common stock trades on the Nasdaq Stock Market under the symbol CORL and on the Toronto Stock Exchange under the symbol COR.

Corel Customer Support Services

Corel Customer Support Services can provide you with prompt and accurate information about product features, specifications, pricing, availability, services and technical support.

Online Support Services

For information about online support services, visit **www.corel.com**. Please note, some of the services are available only in English.

Web services	Description
Corel® Knowledge Base	Allows you to read, print and download documents that contain answers to many technical questions.

Web services	Description
Newsgroups (peer-to-peer forums)	Allow you to exchange information, tips and techniques with other users of Corel products.
Downloads	Allow you to download product patches, updates and trial versions.

Telephone Support Services

For detailed information regarding telephone support services, please visit **www.corel.com**.

Live telephone support services are available for all Corel products from warranty support (30 days) to fee-based Priority and Premium Services. OEM, "white box," jewel case (CD only), trial, and Academic versions of Corel products are eligible for fee-based support services only.

North America

- For pricing, purchasing, or general inquiries about Corel products, you can call Customer Service toll-free at 1-800-772-6735.

- To speak directly to a technician please dial 1-613-274-0500. The hours of operation are 8:30 a.m. to 7:30 p.m., Monday to Friday, Eastern Standard Time (EST).

Outside North America

For pricing, purchasing, or general inquiries about Corel products, you can call Customer Service toll-free at 1-800-267-35127. If the country you are calling from is listed below, please call the corresponding number.

Please note that these numbers may change as we adapt our services to fit user needs. Check the international support numbers page at www.corel.com for the most up to date contact details.

Contact Customer Service for pricing, purchasing, general inquiries, or replacement CDs. Contact Technical Support Services should you require technical assistance operating your Corel software.

Country	Customer Service	Technical Support
Argentina	0800 777 3203	57 1 523 1240
Australia	1 800 658 850	61 2 8844 4101
Austria	0192 89600	0192 89600
Belgium (Dutch)	0240 06733	0240 06733
Belgium (French)	0240 06777	0240 06777
Brazil	0800 14 1212	55 11 5696 5797
Chile	54 0800 777 3203	57 1 523 1240
China	10 800 610 2323	10 800 610 2673
Colombia	01 800 091 9370	57 1 523 1240

Country	Customer Service	Technical Support
Czech Republic	0224 239645	0224 239645
Denmark	352 58008	352 58008
Finland	922 906040	922 906040
France	0170 706090	0170 706090
Germany	06922 2220288	06922 2220288
Hong Kong	800 964 514	800 964 515
Hungary	204 117089	204 117089
Indonesia	1 803 61 539	1 803 61 544
Ireland	0124 77724	0124 77724
Israel	44 1628 581601	44 1628 581601
Italy	0236 003600	0236 003600
Japan	81 3554 53274	81 3531 93013
Luxembourg	44 1628 581603	44 1628 581603
Malaysia	1 800 807 895	1 800 807 899
Mexico	1 800 1234 854	57 1 523 1240
Netherlands	0207 132700	0207 132700
New Zealand	0508 267 351	0800 908 592

Country	Customer Service	Technical Support
Norway	229 71908	229 71908
Poland	071 3477279	071 3477279
Portugal	44 1628 581601	44 1628 581601
Singapore	800 6161 853	800 6161 854
South Africa	0860 223 388	0860 223388
South Korea	82 2 3444 5166	82 2 3444 5166
Spain	0914 141500	0914 141500
Sweden	0856 610555	0856 610555
Switzerland (German)	0158 03280	0158 03280

Mail and Fax Support Services

You can send inquiries to Corel Support Services representatives by mail or fax.

Corel Support Services
1600 Carling Avenue
Ottawa, Ontario, Canada
K1Z 8R7

Fax: 1-613-761-9176

Getting started with Corel KPT Collection

Corel KPT Collection is an extraordinary collection of filters that produce dazzling and unique effects for print and the Web. Whether you are a professional designer, artist, Web author, or hobbyist, the Corel KPT Collection filters will help you take your work to a new creative level, and enhance your productivity.

In this section, you'll learn about

- installing Corel KPT Collection
- accessing and quitting Corel KPT Collection filters
- the workspace
- using panels and sliders
- previewing filter effects
- customizing the workspace
- storing workspace and panel settings
- working with presets

Installing Corel KPT Collection

You can install Corel KPT Collection in host applications compatible with Mac OS and Windows.

To install Corel KPT Collection in Mac OS

1 Insert the **Corel KPT Collection** CD into the computer's CD drive.

2 Browse to the **Corel KPT Collection** folder.

3 Double-click the **Corel KPT Collection installer** icon.

4 Follow the instructions on your screen.

To install Corel KPT Collection in Windows

1 Insert the **Corel KPT Collection** CD into the computer's CD drive.

2 Click **Install**.

3 Follow the instructions on your screen.

Accessing and quitting Corel KPT Collection filters

You can access a Corel KPT Collection filter from the host application. You can quit a Corel KPT Collection filter in two ways. You can quit a filter and apply the effect to the source image in the host application. You can also quit a filter without applying the effect to the source image in the host application.

To access a filter

- Do one of the following:
  - In Adobe® Photoshop®, click **Filters ▶ Corel KPT Collection**, and click a filter.

- In Painter, click **Effects ▶ Corel KPT Collection**, and click a filter.
- In Corel PHOTO-PAINT, click **Effects ▶ Corel KPT Collection**, and click a filter.
- In Bryce®, click a flyout arrow in the **Pictures** dialog box in **Picture editor**, click **Corel KPT Collection**, and click a filter.

If you want to access a Corel KPT Collection filter in Bryce for the first time, you must first click a flyout arrow in the **Pictures** dialog box, click **Select plug-ins folder**, choose the folder where Corel KPT Collection is installed, and click **Choose/OK**.

To quit a filter

- Click one of the following buttons:
  - **OK** — to quit a filter and apply the effect
  - **Cancel** — to quit a filter without applying the effect

Using panels and sliders

You can set the style in which panels display. You can also move sliders.

To set a panel display style

1 Click the filter name.

2 From the **Filter options** list box, choose one of the following styles:
  - **Panel auto popup** — to automatically expand panels as you move the pointer over them

- **Panel manual popup** — to manually expand panels by clicking the **Cycler** button in the title bar
- **Panel solo mode** — to expand the current panel and automatically collapse those not in use

In **Panel auto popup** mode, sliders expand to display a panel with additional controls you can use to adjust slider settings incrementally, and view previous slider settings (indicated by the location of the gray arrow).

In **Panel manual popup** mode, you can expand a panel by clicking the **Cycler** button in the right corner of its title bar.

In **Panel solo mode**, you can collapse an expanded panel by double-clicking its title bar.

To move a slider

- Drag the black slider arrow.

Previewing filter effects

The **Preview** window lets you dynamically view the results of your work. You can apply a background to the **Preview** window. You can also move and size the **Preview** window.

To apply a background to the Preview window

- Click the flyout arrow in the **Preview** window, and choose one of the following options from the **Preview options** list box:
  - **Preview against black** — to display an effect against a solid black background

- **Preview against white** — to display an effect against a solid white background
- **Preview against checkerboard** — to display an effect against a background of gray squares
- **Preview against dark checkerboard** — to display an effect against a background of dark gray squares
- **Preview against gradient** — to display an effect against a grayscale gradient background

The effect only displays against the background while it is in the **Preview** window. The background is not applied to the source image in the host application, and does not impact the final render of the effect.

To move the Preview window

- Drag the title bar.

To size the Preview window

1 Click the flyout arrow in the **Preview** window.
2 From the **Preview options** list box, choose one of the following **Preview** window sizes:
  - **Small preview**
  - **Medium preview**
  - **Large preview**

Customizing the workspace

You can apply a fun icon style to the common workspace. If the KPT workspace is smaller than the resolution of your screen, you can also display or hide common workspace controls.

To apply a fun icon style to the common workspace

1 Click the **KPT** logo.
2 Choose **Smileys!** from the **Global options** list box.

To display or hide common workspace controls

1 Click the **KPT** logo.
2 Choose **Black out screen** from the **Global options** list box.

Storing workspace and panel settings

Storing workspace settings lets you save different workspace layouts. For example, you can arrange all panels on one side of the workspace and enlarge the **Preview** window, and then save this layout for later use.

Storing panel settings lets you save and compare different versions of a filter effect.

The workspace and panel settings you save are retained from one session to another, so you can use them again and again. When you no longer need stored workspace and panel settings, you can clear them. You can also restore default workspace or panel settings.

To store workspace settings

• Click a gray memory dot in the **Layout** panel.

✎ Empty memory dots display gray, full memory dots display green, and memory dots currently in use display yellow.

To store panel settings

• Click a gray memory dot in the **Recall** panel.

To use stored workspace or panel settings

• Click a green memory dot in one of the following panels:
  • **Layout** — to use stored workspace settings
  • **Recall** — to use stored panel settings

To clear stored workspace or panel settings

• Hold down **Option/Alt**, and click the corresponding green memory dot in one of the following panels:
  • **Layout** — to clear stored workspace settings
  • **Recall** — to clear stored panel settings

To restore default workspace or panel settings

• Click the memory dot in the center of one of the following panels:
  • **Layout** — to restore default workspace settings
  • **Recall** — to restore default panel settings

Working with presets

Some Corel KPT Collection filters provide you with preset effects. You can load a preset effect. You can also save an effect you create as a preset. You can create multiple presets categories in which to organize the presets you store.

You can import and export presets.

To load a preset

1 Click the **Presets** button.

2 Double-click a preset thumbnail in the **Presets library** panel.

   If the preset is stored in a category, you must first choose the category from the middle-left tile of the **Presets library** panel, then double-click a preset thumbnail.

   You can preview a preset by single-clicking a preset thumbnail. A larger version of the preset thumbnail displays in the upper-left tile of the **Presets library** panel.

To save an effect as a preset

1 Click the **Presets** button.

2 Choose a category from the middle-left tile of the **Presets library** panel.

3 Click **Add preset**.

   A preset thumbnail displays in the **Presets library** panel.

   You can also delete a preset from a category by clicking a preset thumbnail, and clicking **Delete preset**.

To create a presets category

1 Click the **Presets** button.

2 Click the flyout arrow in the **Presets library** panel, and click **Create new category**.

   A text box displays in the middle-left tile of the **Presets library** panel.

3 Type a name.

4 Press **Return/Enter**.

   Each category can store up to 24 presets.

To import a preset

1 Click the **Presets** button.

2 Click **Import** in the **Presets library** panel.

   If you want to import a preset to a specific category, you must first choose the category from the middle-left tile of the **Presets library** panel, and then click **Import**.

3 Choose the folder where the file is stored in the **From** dialog box.

4 Click the file.

5 Click **Open**.

   The preset displays as a thumbnail in the **Presets library** panel.

To export a preset

1 Click the **Presets** button.

2 Choose a category from the middle-left tile of the **Presets library** panel.

3 Click a preset thumbnail.

4 Click **Export**.

5 In the **Save as** dialog box, type a filename in the **Save as** box.

6 In the **Where** box, choose the folder where you want to export the file.
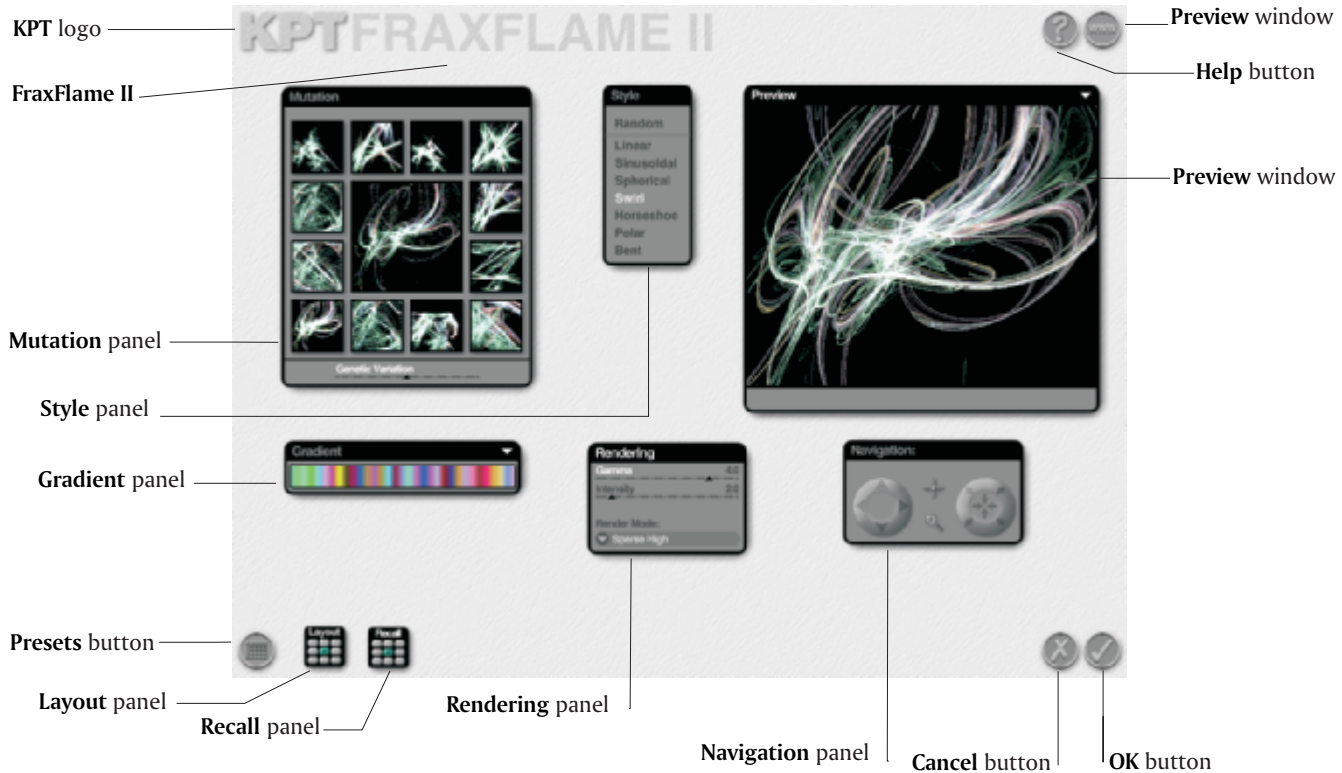
7 Click **Save**.
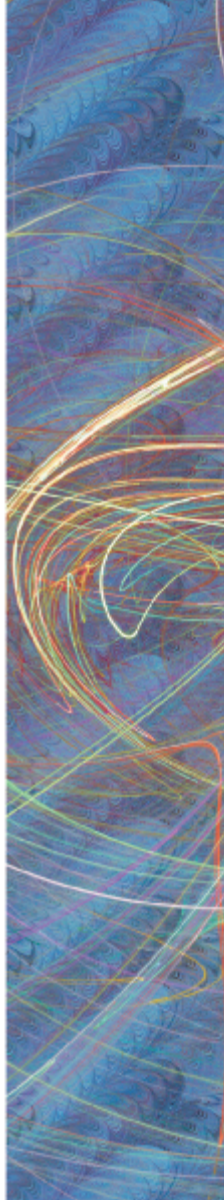
Using KPT FraxFlame II

The KPT FraxFlame II filter lets you explore and mutate an infinite variety of flame fractals. A fractal is a geometric pattern repeated at very small scales to produce irregular shapes. You can customize fractals with various color, contrast, and distortion techniques.

In this section, you'll learn about

- the workspace
- choosing and mutating fractal styles
- defining a work area
- working with color and contrast
- distorting fractals
- exploring fractals
- rendering fractals

Exploring the workspace

The KPT FraxFlame II workspace contains a **Preview** window and a set of panels and controls.

KPT logo

FraxFlame II

Mutation panel

Style panel

Gradient panel

Presets button

Layout panel

Recall panel

Rendering panel

Navigation panel

Cancel button

OK button

Preview window

Help button

Preview window

The following table provides a description of each control in KPT FraxFlame II, starting with the filter-specific panels.

Control	Description
Rendering panel	Lets you render a fractal. For more information, see "Rendering fractals" on page 22.
Style panel	Lets you choose a fractal style. For more information, see "Choosing and mutating fractal styles" on page 17.
Navigation panel	Lets you view a fractal from different perspectives. You can pan or zoom a fractal; shrink or expand a fractal; and explore the 3-D facets of a fractal in conjunction with any of those viewing options. For more information, see "Exploring fractals" on page 22.
Mutation panel	Lets you mutate a fractal style, creating an infinite variety of parent and cousin styles in the process. For more information, see "Choosing and mutating fractal styles" on page 17.

Control	Description
Gradient panel	Lets you apply a color, shade of gray, or level of transparency. You can also adjust the intensity and contrast, and distort a fractal with techniques such as blurring, squeezing, repeating, and more. For more information, see "Working with color and contrast" on page 20 or "Distorting fractals" on page 21.
Preview window	Lets you preview the effect you create. For more information about setting preview options, see "Previewing filter effects" on page 10.
KPT logo	Lets you customize the display of the KPT workspace, and access product information
FraxFlame II	Lets you customize the display of the **Rendering**, **Style**, **Navigation**, **Mutation**, and **Gradient** panels. For more information about setting panel display options, see "Using panels and sliders" on page 9.
Web button	Connects you to the **Corel** Web site where you can find information about KPT and other **Corel** products

Control	Description
Help button	Lets you access the Corel KPT Collection Help
Layout panel	Lets you store workspace layout settings. For more information about using the **Layout** panel, see "Storing workspace and panel settings" on page 11.
Recall panel	Lets you store different settings of the **Rendering**, **Style**, **Navigation**, **Mutation**, and **Gradient** panels. For information about using the **Recall** panel, see "Storing workspace and panel settings" on page 11.
Presets button	Lets you load and store presets. For more information about using presets, see "Working with presets" on page 11.
Cancel button	Returns to the host application without applying the effect to the source image
OK button	Returns to the host application and applies the effect to the source image

Defining a work area

By default, effects you apply encompass the entire flame fractal, unless you define a specific section as a work area. You can move or pivot the work area. You can also reset the work area.

To define a work area

- In the **Gradient** panel, drag an edge of the bracket left or right.

  The bracket is located directly above the **Combination** palette.

You can also

Move the work area	Click the bracket, and drag left or right.
Pivot the work area	Drag one edge of the bracket past the opposite edge.
Reset the work area	Double-click the bracket.

You can move, pivot, or reset the work area only after you have dragged an edge of the bracket left or right.

You cannot apply effects to areas of a fractal that are not contained in the bracket. If you want to apply effects to another area of a fractal, you must move the bracket.

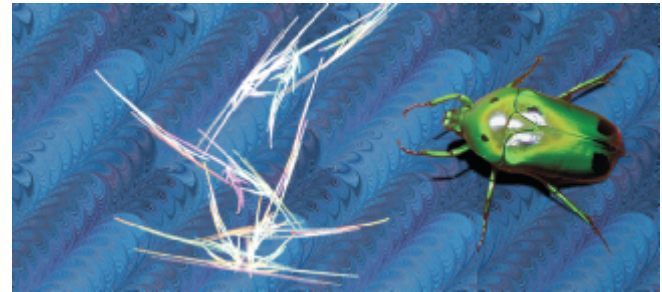## Choosing and mutating fractal styles

You can choose from seven preset fractal styles. Once you have chosen a fractal style, you can mutate the parameters of the parent fractal. When you mutate the parent fractal, you generate a range of cousins.
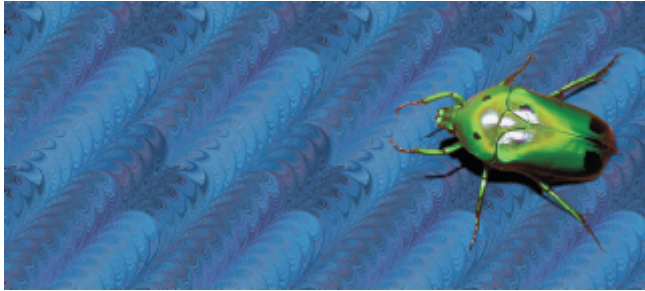
Sample image
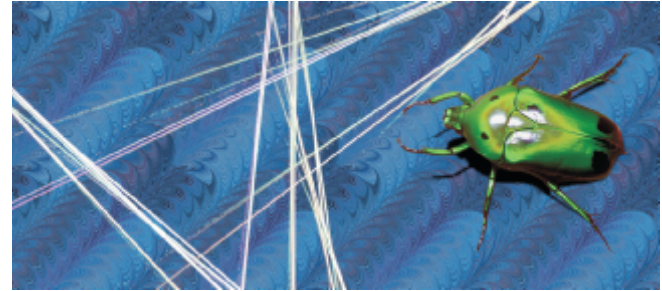
A fractal to which the Linear style has been applied

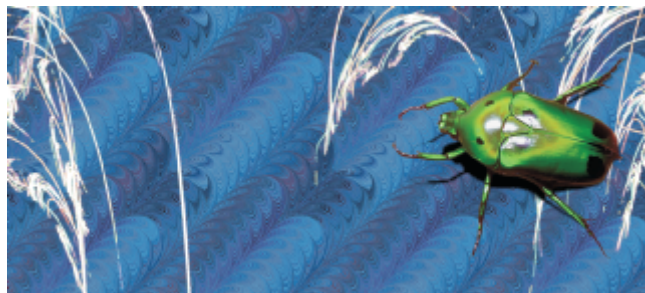*A fractal to which the Sinusoidal style has been applied*

A fractal to which the Spherical style has been applied

A fractal to which the Horseshoe style has been applied

A fractal to which the Swirl style has been applied

A fractal to which the Polar style has been applied

A fractal to which the Bent style has been applied

display in the surrounding tiles. When you click a parent fractal or cousin, it displays in both the center tile of the **Mutation** panel, and the **Preview** window.

You can mutate a parent fractal, and choose a new parent fractal from the cousins generated from the mutation. For more information, see "To mutate a fractal" on page 19.

You can choose from a variety of fractal styles by clicking **Random** in the **Style** panel. A range of fractal styles display in the **Mutation** panel, from which you can click a style.

To choose a preset style

1   In the **Style** panel, click one of the following styles:
    - **Linear**
    - **Sinusoidal**
    - **Spherical**
    - **Swirl**
    - **Horseshoe**
    - **Polar**
    - **Bent**

    A range of fractals in the selected style display in the **Mutation** panel.

2   Click a fractal in the **Mutation** panel.

    The parent fractal displays in the center tile of the **Mutation** panel. The cousins of the parent fractal

To mutate a fractal

1   In the **Mutation** panel, click anywhere on the parent fractal.

    A range of cousins display on the tiles surrounding the parent fractal.

2   Click a cousin.

    The cousin displays in the center tile, and becomes the parent fractal.

3   Move the **Genetic variation** slider.

4   Click the parent fractal.

    The **Genetic variation** slider controls how closely related the cousins are to the parent fractal. If you move the **Genetic variation** slider to the right, the cousins are less like the parent fractal. If you move

the **Genetic variation** slider to the left, the cousins are more like the parent fractal.

Once you achieve the effect you want, you can explore the fractal in several ways. For more information, see "Exploring fractals" on page 22.

Working with color and contrast

You can apply a color, shade of gray, or level of transparency, to a fractal.

You can adjust the intensity of colors in a fractal by modifying the hue, saturation, and brightness. Hue represents the pigment of a color and is measured in degrees. Saturation represents the vividness or richness of a color and is measured in percent from 0 to 100 (the higher the percentage, the more vivid the color). Brightness represents the amount of white contained in a color and is measured in percent from 0 to 100 (the higher the percentage, the brighter the color).

You can adjust the contrast of colors in a fractal. By adjusting the contrast, the differences in the color values of neighboring light and dark pixels are adjusted. You can also adjust the color tone and vibrancy of a fractal.

To apply a color or shade of gray

1 In the **Gradient** panel, click and hold down the pointer on the **Combination** palette.
2 Drag the pointer over one of the following:
   - **Color** bar — to apply a color
   - **Grayscale** bar — to apply a shade of gray
3 Release the pointer on the preferred color or shade of gray.

When you click the **Combination** palette, three bars display. The top bar is the **Grayscale** bar, which lets you apply a shade of gray from black to white. The middle bar is the **Color** bar, which lets you apply a color from a spectrum of colors and shades. The lower bar is the **Opacity** bar, which lets you adjust the transparency through which the source image can display.

Where you click on the **Combination** palette determines where the effect will display in the fractal. For example, clicking on the far left side of the **Combination** palette lets you apply the effect to the far left side of the fractal. Similarly, clicking on the far right side of the **Combination** palette lets you apply the effect to the far right side of the fractal.

To adjust the transparency of a fractal

1 In the **Gradient** panel, click and hold down the pointer on the **Combination** palette.
2 Drag the pointer over the **Opacity** bar.
3 Release the pointer on the preferred transparency.

When you adjust the transparency of a fractal, you change the grayscale values of its individual pixels. Grayscale values range from black (a transparent value of 0), to white (an opaque value of 255).

To adjust the color intensity of a fractal

1 In the **Gradient** panel, click one of the following:
   - **Hue** — to rotate hues

- **Saturation** — to modify the intensity of colors
- **Brightness** — to modify the brightness of colors

2   Move the black slider arrow in the expanded panel.

When you rotate hues in a fractal, you cycle through all colors in the spectrum, but maintain the relative distance, in pixels, between each color.

To adjust the color contrast

1   Click **Contrast** in the **Gradient** panel.
2   Move the black slider arrow in the expanded **Contrast** panel.

If you increase the contrast, the difference between colors is exaggerated. If you decrease the contrast, the colors are homogenized.

You can decrease the contrast to the point where the gradient displays in a shade of gray.

To adjust the color tone and vibrancy of a fractal

- In the **Rendering** panel, move either of the following sliders:
  - **Gamma** — to adjust the color tone
  - **Intensity** — to adjust the color vibrancy

Moving the **Gamma** slider to the right saturates the flame colors, and moving it to the left dulls the flame colors. Moving the **Intensity** slider to the right brightens the flame colors, and moving it to the left fades the flame colors.

Distorting fractals

You can blur a flame fractal. Blurring smudges the edges of pixels by gradually blending them together.

You can squeeze a fractal. You can repeat a fractal, increasing its frequency up to 20 times. You can also adjust the color tone and vibrancy of a fractal.

To blur a fractal

1   Click **Blur** in the **Gradient** panel.
2   Move the black slider arrow in the expanded **Blur** panel.

Dragging up increases the blur and dragging down decreases the blur.

To squeeze a fractal

1   Click **Squeeze** in the **Gradient** panel.
2   Move the black slider arrow in the expanded **Squeeze** panel.

If you have defined a work area, the squeeze starts at the center of the bracket and moves to the end.

For more information about defining a work area, see "Defining a work area" on page 16.

If you want to start a squeeze from a point other than the center of the bracket, you must hold down **Option/Alt**, and drag in the **Combination** palette.

To repeat a fractal

1 Click **Frequency** in the **Gradient** panel.

2 Move the black slider arrow in the expanded **Frequency** panel.

Exploring fractals

You can explore the 3-D facets of a fractal. You can also zoom a fractal. You can pan a fractal to view areas that are not displayed at the zoom level you are working with. You can also shrink or expand a fractal.

To explore the 3-D facets of a fractal

• In the **Navigation** panel, click any of the following arrows on the **Navigation** wheel.

- • **Up**
- • **Down**
- • **Left**
- • **Right**

You can also	In the Navigation panel
Pan a fractal	Drag across the **Pan** button.
Zoom a fractal	Drag across the **Zoom** button.

You can also	In the Navigation panel
Shrink a fractal	Click the **Shrink** arrows on the **Sizing** wheel.
Expand a fractal	Click any of the **Grow** arrows on the **Sizing** wheel.

The **Navigation** wheel is located at the far left side in the **Navigation** panel.

The **Sizing** wheel is located at the far right side in the **Navigation** panel.

Rendering fractals

You can automatically render a fractal, using a preset rendering style. You can also custom render a fractal.

To automatically render a fractal

• In the **Rendering** panel, click the flyout arrow in the **Render mode** area, and choose one of the following render modes:

- • **Sparse low**
- • **Sparse medium**
- • **Sparse high**
- • **Sharp low**
- • **Sharp medium**
- • **Sharp high**

The **Sparse low**, **Sparse medium** and **Sparse high** render modes are designed to improve the quality of

cloudy, dispersed or pixelated fractals, such as **Sinusoidal** fractals.

The **Sharp low**, **Sharp medium** and **Sharp high** render modes are designed to improve the quality of tightly packed fractals, such as **Linear** fractals.

To custom render a fractal

1   In the **Rendering** panel, click the flyout arrow in the **Render mode** area, and click **Custom**.

2   Move any of the following sliders:

- **Sample density** — to set the complexity and detail in a fractal
- **Oversample** — to set the number of times a fractal is sampled to generate each pixel
- **Filter radius** — to set the amount of blur on the edges of a fractal

Adjusting the **Sample** density and **Oversample** sliders can greatly increase the quality of a fractal, but it may take some time to complete the rendering process.

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