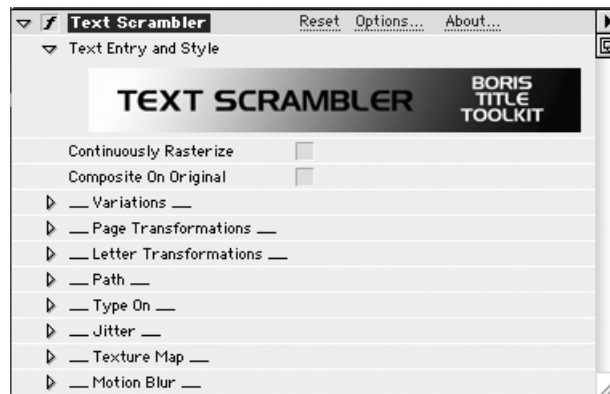


Working with the Text Scrambler

The Text Scrambler generates random text or numbers. You can lock each letter or number in position regardless of changes made to neighboring characters. A typical example would be a timecode or numerical countdown or an effect that reveals text.

Many of the Text Scrambler parameters are similar to the Vector Text parameters. For instance, you could use either filter to create a text on a path or type on effect. However, the Text Scrambler also allows you to randomize text. Conversely, the Vector Text filter allows you to create animatable shadows and borders. The Text Scrambler does not include a Border and Shadows parameter group.



When the **Continuously Rasterize** checkbox is selected, the Vector form of the text is forced to recalculate based on Page Transformations parameter changes. While this can be useful for specific types of effects, it is unnecessary for many effects and can slow performance - most noticeably when using sophisticated text styles.

Select the Continuously Rasterize checkbox to improve image quality in the following situations.

- When the Scale parameters are set to scale the text much larger than 100% size.
- When using large negative Position Z values.
- When the Tumble or Spin parameters are set so that parts of the text appear very close to the viewer.
- When Rotating text with a bevel or emboss style and you want the highlight to recalculate accordingly.



When using the Continuously Rasterize option, set up the effect with the option disabled to improve preview performance. Then select the option as a final step to improve the quality of the render.

You do not need to select the Continuously Rasterize checkbox for any Transformations other than Page Transformations. The Vector form of the text is always recalculated for any scaling or rotating or repositioning of text characters in the Variations, Letter Transformations, Path, Type On, Jitter, and Texture Map parameter groups.

When the **Composite on Original** checkbox is selected, the filter composites the text over the source image, which remains visible behind the text. When this checkbox is deselected, the text is composited over an alpha channel.

Working with the Variations Parameter Group

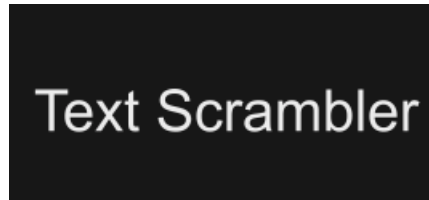
The Variations parameter group provides a way to generate random text or numbers. You can lock each letter or number in position regardless of changes made to neighboring characters. A typical example would be a timecode or numerical countdown.

The **Generator Type** menu determines the type of text that is generated. The choices are *User Text*, *Random Text*, *Random Numbers* and *Numbers*. Each choice has its own parameters which are described in detail in the following sections.

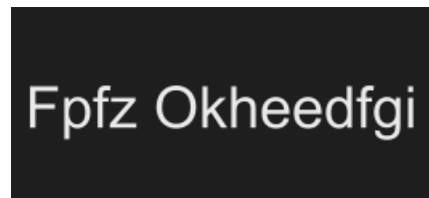
User Text Generator Type

When you set the Generator Type menu to User Text, the following parameters apply.

When **Generator Type** is set to *User Text*, the text created or imported in the Text window is used. The following examples were all created with the example at right.



When you adjust **User Text Variation**, each ASCII character value offsets by a certain amount. Notice that this does include spaces between words. This parameter is expressed as an offset with a range of 0 to 100. When Letter Variation is 0, no variation occurs. In the example at right, Letter Variation is 6. You can use the Scramble Characters parameter to randomize the offset.



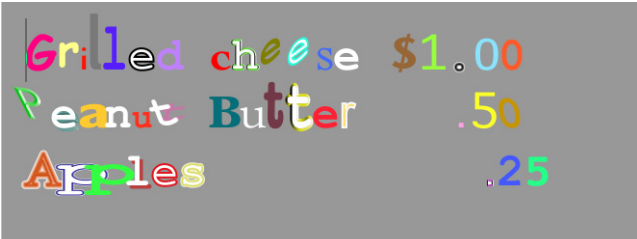
The **Variation Mode menu** allows you to vary the characters included in the effect.



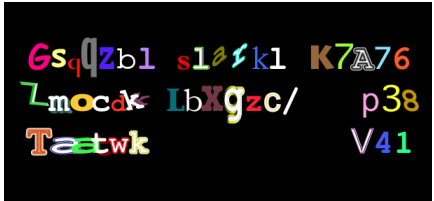
When you experiment with the choices in the **Variation Mode menu**, it is helpful to scrub *User Text Variation* to see how the animated text will vary.

The Variation Mode menu examples use the text and styles in the following illustration. The examples show one frame in an animation where the text is constantly changing.

Text entered into Text window



- *Alphabetical Text* uses only alphabetical characters, offset by the Letter Variation amount. For example, all the “l” characters from the original “Grilled” word are now “w.”
- *Random Text* uses only alphabetical characters, but the characters are randomized. So the “l” characters from the original “Grilled” word would not necessarily be the same.
- *Random User Text* uses only the alphabetical characters that are included in the original user text. In this example, only the characters *a, b, c, d, e, g, h, i, l, n, p, r, s,* and *t* would be used.





- *Style Shift* uses the original user text but randomizes the styles that are applied to each character from left to right. The text must use multiple styles or this choice has no affect.
- *Random Style* is similar to Style Shift except that it randomizes the styles instead of moving from left to right. The text must use multiple styles or this choice has no affect.
- *Style Shuffle* randomly shuffles the styles assigned to each character to that of another style used in the Text window. The text must use multiple styles or this choice has no affect.
- *Style by Word* looks at the style of the first letter of each word and assigns that style to entire words at random.
- *Style by Line* looks at the style of the first letter of each line and assigns that style to entire lines at random
- *Style Shuffle by Word* looks at the style of the first letter of each word and shuffles that style with other words.

Grilled cheese \$1.00
Peanut butter .50
Apples .25

Grilled cheese \$1.00
Peanut butter .50
Apples .25

Grilled cheese \$1.00
Peanut butter .50
Apples .25

Grilled cheese \$1.00
Peanut butter .50
Apples .25

Grilled cheese \$1.00
Peanut butter .50
Apples .25

Grilled cheese \$1.00
Peanut butter .50
APPLES .25



Generated Text Generator Type

When you set the Generator Type menu to Generated Text, the following parameters apply.

When the **Generator Type menu** is set to *Generated Text*, user input is ignored except for style properties. The idea is to mimic large bodies of text (sometimes called Greek text in page layout programs) or to create design elements and background with text shapes.

Scramble Characters allows you to vary the characters from frame to frame. When you use Letter Variation parameter to adjust the characters, the characters are offset by the same amount. For example, all the “e” characters from the original “Generator” text are now “x.” You can randomize this, using the Scramble Characters parameter.



Animate **Random Seed** to randomize the change of the text characters from frame to frame.

Line Length sets the character count in each line.

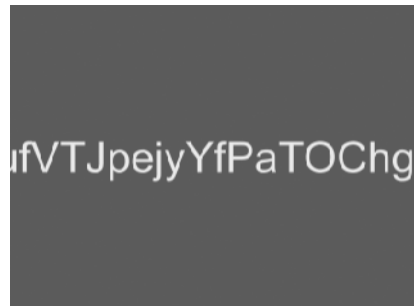


Line Length = 9

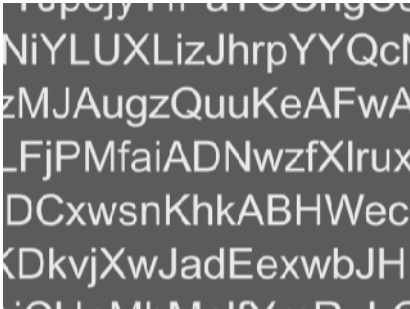


Line Length = 25

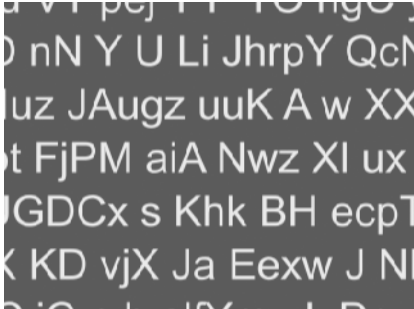
Line Count sets the number of lines. In the example at right, Line Count is 1.



Use **Word Break** to generate word breaks or spaces. At a value of 10, no breaks are generated. At lower values, breaks appear at random. The lower the value the more frequent the breaks (or the smaller the average word size becomes).



Word Break= 10



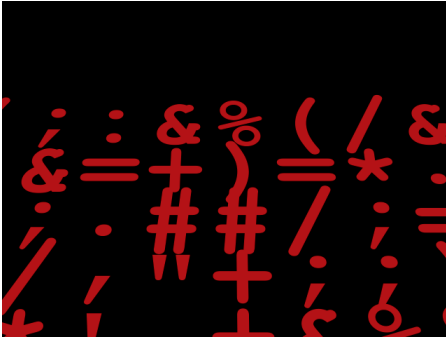
Word Break= 5

The **Character Type** menu sets the type of characters that make up the random text:

- **Upper Case** displays all upper case letters.
- **Lower Case** displays all lower case letters.
- **Mixed Case** displays a random mix of upper and lower case letters.
- **Capital Words** displays words with the initial letter capitalized.
- **Numbers** randomly displays numbers.
- **Non Alpha** randomly displays only non-alpha-numeric characters such as punctuation marks and symbols.
- **All Printable** randomly displays all the characters on the keyboard, with randomly mixed cases.
- **User Text Characters** randomly displays only the characters that appeared in the Text window. For example, if the original text was "Coming Soon," only the characters *c, o, m, i, n, g,* and *s* would appear in the generated text.



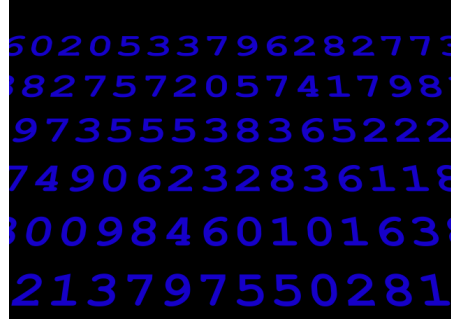
Character Type=Mixed Case



Character Type=Non-Alpha



Character Type=All Printable



Character Type=Numbers

Random Numbers Generator Type

The Random Numbers Generator Type is similar to Random Text, except it only generates numbers. When **Generator Type** is set to *Random Numbers*, random numbers are generated on the screen. User input is ignored except for style properties. When you set the Generator Type menu to Random Numbers, the following parameters apply.

Scramble Characters allows you to randomly vary the numbers from frame to frame.

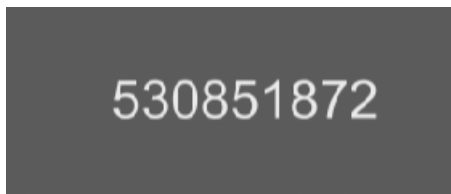
Animate **Random Seed** to randomly vary the numbers from frame to frame.

Adjust **Precision** to set the number of digits after decimal point. Set Precision to 0 to generate whole numbers.

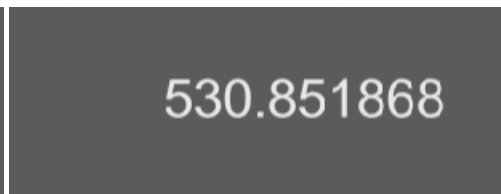


If you are using a Numbers Generator and animating the Numeric value over a period of time, **Precision** can only offer a running count that is truly more precise if the range of Numeric values being animated between allows for the number to update frequently enough.

In other words, if you are using a Precision of 2 (showing 2 decimal places) but your animation is set up to require the whole number value to change every frame, the numbers after the decimal place will not look correct.



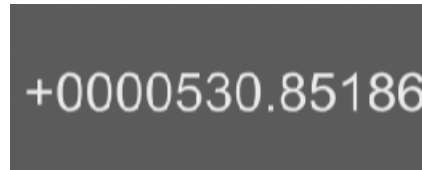
Precision = 0



Precision = 6

Field size determines the minimal total number of positions. This includes all symbols such as a plus or minus sign. Spaces are used in the left of the number if not all positions are used.

The **Show Plus checkbox** allows you to display a plus sign before the number. This option is selected in the example at right.



Select the **Leading Zeros checkbox** to display zero's before the number. This option is selected in the example at right.

Select the **Allow Negative checkbox** to allow negative numbers.

Numbers Generator Type

The Numbers Generator Type is similar to Random Numbers, except that Random Seed is replaced by **Numerical Value** so that the numbers can be animated sequentially. The Negative checkbox is not included because the Numeric Value parameter has a negative range as well as positive. The range of this parameter is -64,000 to 64,000. When you set the Generator Type menu to Numbers Generator, the following parameters apply.

Scramble Characters allows you to randomly vary the characters from frame to frame.

Adjust **Numeric Value** to display a specific number.



The rest of the parameters in the Numbers Generator Type are the same as Random Numbers. See the previous section for a description of how these parameters work.

Working with the Page Transformations Parameter Group

The Page Transformations parameter group allows you to add basic DVE moves to your text. For example, generate random text and then use these parameters to spin the text.

Opacity adjusts the opacity of the text. A setting of 100 makes the text completely opaque, while a setting of 0 makes the text completely transparent.

Position X/Y set the coordinates of the text's center point. You can adjust or animate these values to offset the text as it moves in or out.

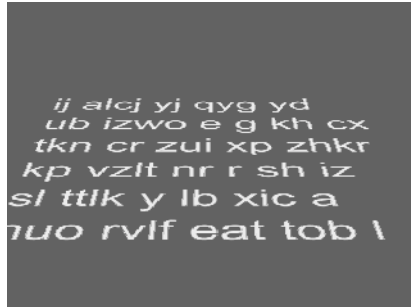
Position Z adjusts the apparent depth of the text. Decreasing negative values move the text closer to the viewer, while increasing positive values move the text farther away. Very low Position Z values move the text behind the viewer, making it invisible.

Master Scale lets you adjust Scale parameters globally. Parameters can still be changed independent of one another by using the individual Scale parameters. For example, you set Scale X to 100 and Scale Y to 200 to create text that is stretched vertically. If you then set Master Scale to 200, the resulting text is twice as wide and four times as tall as the original.

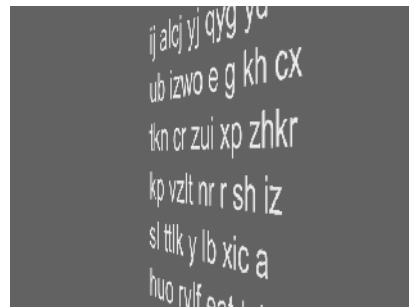
Scale X and **Scale Y** change the size of the object along the X and Y axes, respectively. These parameters are scaled as percentages of the object's original width or height. Thus, a Scale X setting of 200 produces text twice as wide as the original text.



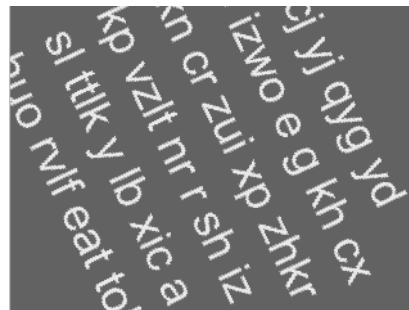
Tumble, **Spin**, and **Rotate** move the text around the X, Y, and Z axis respectively. Tumble, Spin, and Rotate can animate over values greater than 360° to make the image complete more than one full revolution.



Tumble =-65 Degrees



Spin=65 Degrees



Rotate=65 Degrees

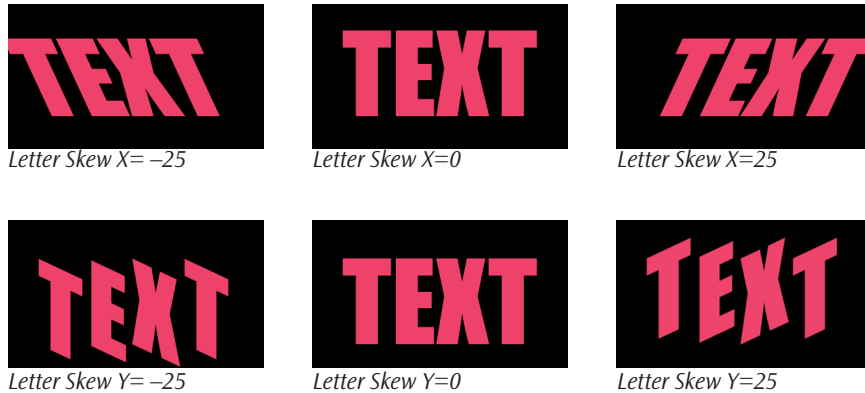
When the **Lock Pivot to Position** checkbox is selected, the text tumbles, spins, and rotates around its own center. If this option is deselected, you can set an external pivot point around which to tumble, spin, or rotate. **Pivot X/Y** and **Pivot Z** set the X, Y, and Z coordinates of the pivot point. If the Lock Pivot checkbox is selected, moving the pivot point has no affect.

Working with the Letter Transformations Parameter Group

Tracking controls the global horizontal spacing of the characters in the effect. Unlike the Tracking parameter in the Text window, you can animate this tracking parameter.



Letter Skew X and **Letter Skew Y** distort text along the horizontal and vertical axis.



Master Letter Scale lets you adjust Letter Scale parameters globally. Parameters can still be changed independent of one another by using the individual Letter Scale parameters. For example, you set Letter Scale X to 100 and Letter Scale Y to 200 to create text that is stretched vertically. If you then set Master Letter Scale to 200, the resulting text is twice as wide and four times as tall as the original.

Letter Scale X and **Letter Scale Y** set the scale of the text along the horizontal and vertical axis. These parameters differ from the Page Transformations parameter group's Scale X and Scale Y parameters, which scale the entire text layer. For example, if you set Scale X to 200, the resulting text is stretched twice as wide as the original. If you set Letter Scale X to 200, the resulting text is stretched twice as wide as the original but the characters would overlap since Letter Scale affects each letter. This is useful for creating animating tracking or type on effects.



Letter Tumble, **Letter Spin**, and **Letter Rotate** rotate the text characters around their baseline's X, Y, and Z axis, respectively. Compare how this appears with the Page Transformations parameter group's Tumble, Spin and Rotate parameters which move the entire text layer around the axis.



Letter Tumble



Letter Spin



Letter Rotate

Working with the Path Parameter Group

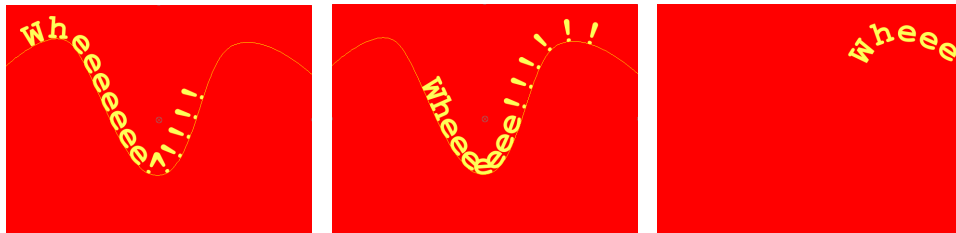
The Path parameters allow you to create text on a path—that is, text which wraps around a spline.

The **Path Type** menu lets you choose the type of path.

- **AE Path** allows you to use a path that you create in After Effects by creating a new mask with the Pen tool. Once you create the path, choose it from the **Text Path** menu.
- **Circle** allows you to create a circular path by setting the **Point 1** and **Point 2** parameters. Point 1 sets the center point of the circular path. Point 2 sets the radius of the circle.
- **Line** allows you to create a linear path by setting the **Point 1** and **Point 2** parameters.

The **On Path Motion** dial adjusts the position of the text on the path. You can animate over values greater than 360° to make the text finish more than one full revolution on the path.

Animated On Path Motion on an AE Path



Angle to Path allows you to control how text is positioned on the path. When Angle to Path is at the default value of 100, the Text position follows the curve of the path. As Angle to Path values approach 0, the text becomes more vertical on the path, regardless of the path's curve.



Working with the Type On Parameter Group

The Type On parameter group offers several options for creating animated writing or “type-on” effects.

Text Type On adjusts the percentage of the text that is visible in each frame, allowing you to create animated typing effects. This value is measured as a percentage of the complete text. For example, if Text Type On is set to 50, the first half of the text is visible. If Text Type On is set to 100, all the text is visible.

Type-on effect with Text Type On animated from 0 to 100.



Time 00:00:00:08



Time 00:00:00:15



Time 00:00:01:00

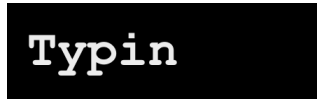
The **Type On Order** menu allows you to control the order in which the text types on. The **Type On Order** menu includes the following options:

- *Forward* types on the text from left to right.
- *Reverse* allows you to reverse the effect so that the text types on starting from the right.
- *Random* types the text type on randomly.

Type On Order=Forward.



Time 00:00:00:08



Time 00:00:00:15

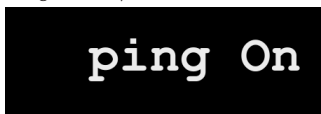


Time 00:00:01:00

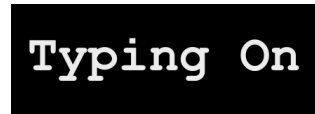
Type On Order=Reverse (types on from right to left)



Time 00:00:00:08



Time 00:00:00:15

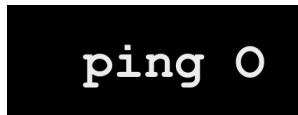


Time 00:00:01:00

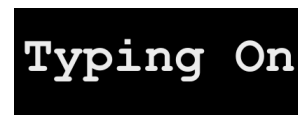
Type On Order=Random



Time 00:00:00:08



Time 00:00:00:15



Time 00:00:01:00



Fade, Shift, Skew, Tumble, Spin, and/or Rotate lasts. Thus if Reveal Time is 50, each character Fades, Shifts, Skews, Tumbles, Spins, and/or Rotates for 0.5 seconds (50% of 1), and subsequently remains stationary for the rest of the effect. In this case, the next letter does not appear for another 0.5 seconds after the previous letter stops animating.

Acceleration allows you to gradually accelerate the effect.

Overshoot allows you to create bouncing text effects, when combined with any parameters except Fade. Each character moves past its destination position or scale by the value specified in Overshoot before returning to its destination position or scale. This parameter only affects animations created with the Shift, Scale, Skew, Tumble, Spin, and/or Rotate parameters. If all of these parameters are set to the default, Overshoot has no affect.

Decay works in conjunction with the Overshoot parameter. Decay is expressed as a percentage that allows you to exponentially decrease the Overshoot. For example, you set the Shift Y so that the characters move in from the top of the frame with an Overshoot of 300. Setting Decay to 50 means that each of the three bounces will decay by half.

Fade allows you to gradually fade in successive characters. When Fade is set to 100, each character appears suddenly and is fully opaque. Decreasing this value creates a more gradual effect, in which each character fades on as its opacity increases.

Shift X and **Shift Y** adjust the starting position of the characters in relation to their destinations on the screen. For example, if the text is placed in the center of the screen and Shift X is set to 320, when Text Type On is animated, each character first appears on the right side of the screen, then moves toward the center.

Type-on effect with Shift X set to 320.



Time 00:00:01:11



Time 00:00:01:18



Time 00:00:01:24

Scale X and **Scale Y** adjust the starting size of the characters. The default value is 100, in which the text types on the screen full size. If you decrease the value, the text appears to grow on the screen as it types.



Scale Y = 200



Scale X = 200



Scale Y/Scale X = 200



Working with the Jitter Parameter Group

The Jitter parameter group allows you to randomize text parameters including Position, Angle, Scale, Hue and Opacity. The Jitter parameters are expressed as a percentage and are applied to individual text characters. All parameters have a range of 0 to 100, except for Scale which has a range of 0 to 600.

The Jitter parameters are similar to the Jitter parameters in the Type On parameter group. When you apply Jitter parameters in the Type On parameter group, they are applied progressively to each character as it types on. When you apply these parameters in the Jitter parameter group, they apply to all characters. When you set values for these parameters in both the Type On and Jitter parameter groups, the parameters in the Type On parameter group are applied to individual characters until the character is typed on; the parameters in the Jitter tab are applied after each character is typed on.

Jitter Seed varies the amount of Jitter from frame to frame.

Jitter Speed varies the speed of the Jitter.

Jitter Position X and **Jitter Position Y** randomize the position of individual text characters on the X and Y axis respectively.

Jitter Angle randomizes the angle of the individual text characters. Angle distorts text on the X and Y axis.



Jitter Scale X and **Jitter Scale Y** randomize the scale of the individual text characters on the X and Y axis respectively.

Jitter Hue randomizes the color of the individual text characters. Hue sets the color fill of the text.

Jitter Opacity randomizes the transparency of the individual text characters.

The **Restrictions menu** lets you restrict the Jitter parameters. For example, you can restrict the Jitter Scale X and Y parameters so that they only scale larger than the original text.

- *None* does not restrict the parameters.
- *Positive Only* restricts the parameters so that the values can only be higher than the original parameter.
- *Negative Only* restricts the parameters so that the values can only be lower than the original parameter



Polarize lets you alternate the Jitter parameters for characters. At more extreme values, every other character will alternate.

Master Jitter Amount scales the Jitter parameters globally. Parameters can still be changed independent of one another by using the individual parameters. For example, you set Jitter Position X to 100 and Jitter Position Y to 200 to create text that is jitters vertically. If you then set Master Jitter Amount to 200, the resulting text jitter twice as much as the original.

Working with the Texture Map Parameter Group

The Texture Map parameter group allows you to map media onto Text. You can map media to the face or faces of text or to the text backdrop.

Choose the appropriate layer from the **Texture Map Layer menu**.

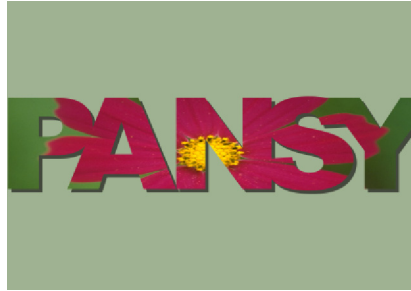
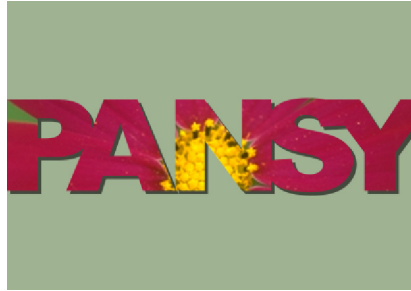
The **Map Method menu** controls how the media maps onto the text. The following example shows a still image of a flower as a texture.



Flower as Texture Map



Tile Map Method

*Stretch Map Method**Clip Map Method*

- Choosing *Tile* repeats the texture image on the face of the text. When you choose *Tile*, decrease the **Tile Size X** and **Tile Size Y** parameters to better see the tiled image within the text.
- Choosing *Stretch* sizes the texture image to fit the text. Stretch can distort the image, depending on its aspect ratio.
- Choosing *Clip* allows you to independently size and position the texture image on the text. When you choose *Clip*, **Scale X** and **Scale Y** change the size of the texture image along the X and Y axis respectively.

Offset X and **Offset Y** move the center of the Texture image along the X and Y axis respectively. This repositions the texture within the text. These parameters have no affect when you choose *Stretch* as the Map Method.

Working with the Motion Blur Parameter Group

Select the **Enable Motion Blur checkbox** to turn Motion Blur on. Deselect this option to turn it off.



Enabling or disabling Motion Blur is not global to the effect. Motion Blur can be keyframed and enabled for only portions of the effect. This allows you to save processor time by turning it off when it is not necessary.

The **MB Shutter Angle** parameter refers to the workings of a conventional film camera. Normally the shutter is open to 180°, meaning that the shutter is open for half of each frame. Increasing the angle will keep the shutter open longer, creating a wider blur. Decreasing the MB Shutter Angle produces a narrower blur.

The **MB Smoothness menu** setting determines how many times the effect samples between the time the “shutter” opens and the time it closes in composing the render. Increasing the number of samples creates a smoother blur but increases render and preview time proportionately. The menu choices are *Low*, *Medium*, *High* and *Highest*. *Low* uses the fewest samples, while *Highest* uses the most.