

# More Post-Processing Effects

## Manual

This manual contains all the information that you need to understand how all the effects works.

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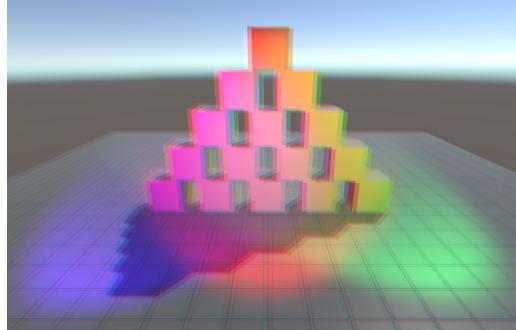
## 1 Effects

All the parameters are described according this format :

- Label (*Variable Name* : **Type**) : Description

### 1.1 Anaglyph 3D

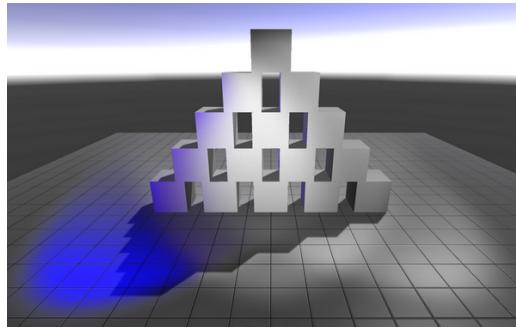
**Overview :** The **Anaglyph 3D** effect will enable your game to be playable with 3D stereoscopic glasses. Two layers will be added (one in red and another in cyan) to the current rendered image.



**Parameters :** There are no parameters for this effect.

### 1.2 Black and Blue

**Overview :** The **Black and Blue** effect will only show the blue colors. The other colors are shown on gray scale.

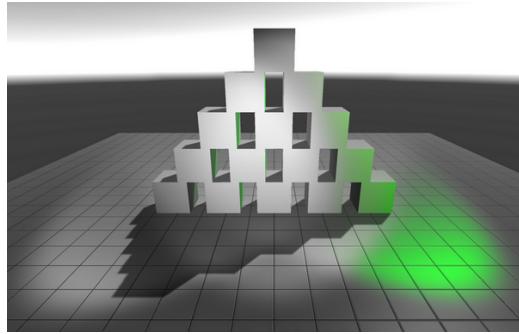


**Parameters :**

- Smoothness (*smoothness* : **float** between 0 and 1) : The smoothness allows to define the intensity of the fade between the blue color and gray scale. If smoothness is near from 0, blue colors are rendered with high intensity. Otherwise, when smoothness increase up to 1, the gray scale will be dominant.

### 1.3 Black and Green

**Overview :** The **Black and Green** effect will only show the green colors. The other colors are shown on gray scale.

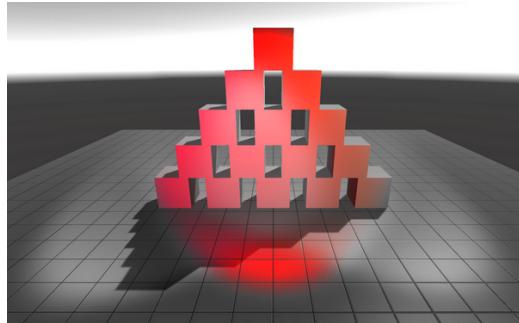


#### Parameters :

- Smoothness (*smoothness* : **float** between 0 and 1) : The smoothness allows to define the intensity of the fade between the green color and gray scale, as defined for the **Black and Blue** effect.

### 1.4 Black and Red

**Overview :** The **Black and Red** effect will only show the red colors. The other colors are shown on gray scale.

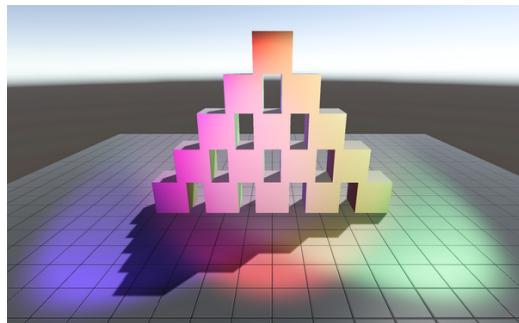


#### Parameters :

- Smoothness (*smoothness* : **float** between 0 and 1) : The smoothness allows to define the intensity of the fade between the red color and gray scale, as defined for the **Black and Blue** effect.

### 1.5 Bleach Bypass

**Overview :** The **Bleach Bypass** effect creates a kind of black and white by increasing contrast and decreasing saturation in specific areas of the rendered image.

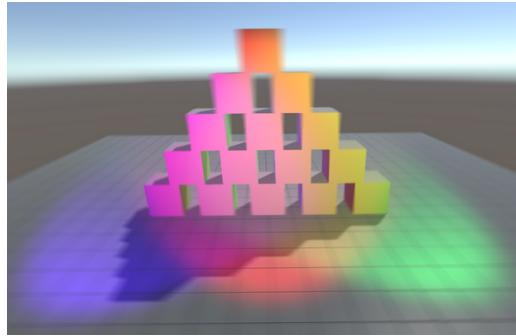


## Parameters :

- Darkness (*darkness* : **float**) : The darkness strength of the effect.

## 1.6 Circular Blur

**Overview :** The **Circular Blur** effect creates a rotating blur around the center of the rendered image. Note that this effect is different from the **Radial Blur**. This rotation will be performed regarding  $(r, \theta)$  polar coordinates. For each sample, the  $\theta$  angle will be increased by a certain value to rotate the sample around the center.

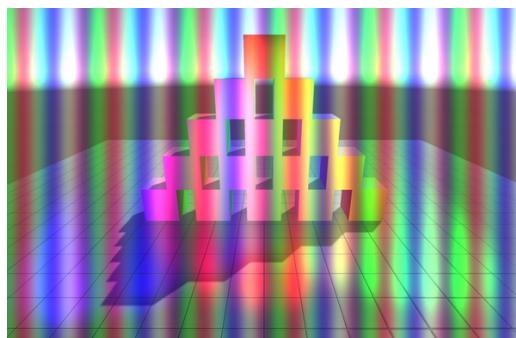


## Parameters :

- Strength (*strength* : **float**) : The variation of the  $\theta$  angle. Theoretically, it represents the  $\Delta\theta$  in polar coordinates applied on each sample. If  $j$  is the index, the  $j$ -th sample is rotated  $j\Delta\theta + \theta_0$  around the center (where  $\theta_0$  is the rotation of the first sample).
- Sample (*samples* : **int** between 3 and 64) : The number of samples, that is to say the number of rotations of the rendered image.

## 1.7 Colored Rays

**Overview :** The **Colored Rays** effect adds moving colored rays to the rendered image.

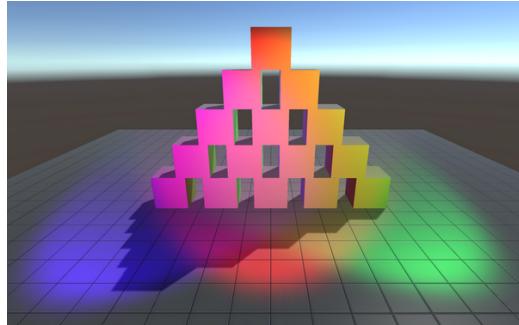


## Parameters :

- Strength (*strength* : **float**) : The strength of the rays.
- Red, Green, Blue Strength (*RraysStrength*, *GraysStrength*, *BraysStrength* : **float**) : The strength of each channel.
- Red, Green, Blue Speed (*RraysSpeed*, *GraysSpeed*, *BraysSpeed* : **float**) : The speed of each channel. Note that the green channel is always faster than the red channel which is faster than the blue channel.

## 1.8 Colorization

**Overview :** The **Colorization** effect recolors the rendered image.

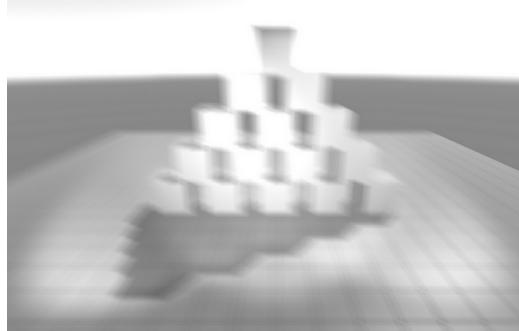


**Parameters :**

- Red, Green, Blue Channel (*Rchannel*, *Gchannel*, *Bchannel* : **float**) : The value of the color channels.

## 1.9 Dreamy

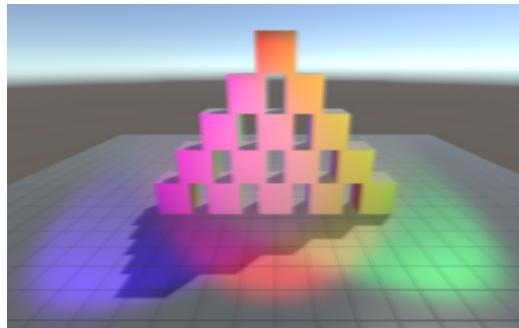
**Overview :** The **Dreamy** effect simulates a dream.



**Parameters :** There are no parameters for this effect.

## 1.10 Drunk

**Overview :** The **Drunk** effect creates slow shaking to simulate the view when sick.

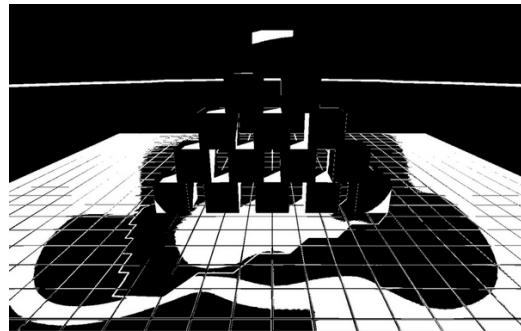


**Parameters :**

- Strength (*strength* : **float**) : The intensity of the offsets.

## 1.11 Duo Tone

**Overview :** The **Duo Tone** effect only shows two colors on the rendered image.

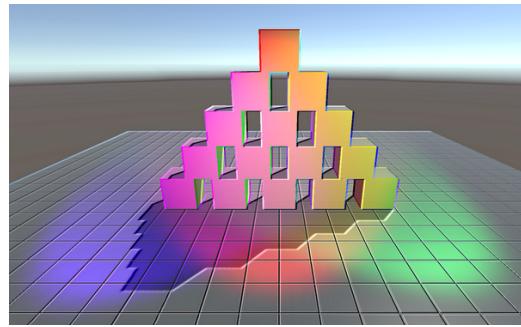


**Parameters :**

- Color 1 and 2 (*color1, color2 : color*) : The two colors of the effect.
- Minimum limit (*minLimit : float* between 0 and 1) : The minimum value for each color channel that will set pixel color to first color.
- Maximum limit (*maxLimit : float* between 0 and 1) : The maximum value for each color channel that will set pixel color to second color.

## 1.12 Emboss

**Overview :** The **Emboss** effect creates an embossed sharpen visual look.

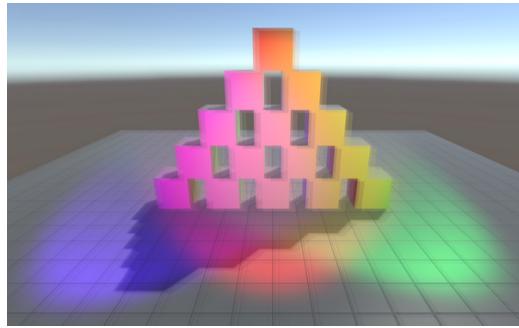


**Parameters :**

- Strength (*strength : float*) : The strength is the intensity of the offset.
- Grayscale (*grayscale : bool*) : Value to render image on gray scale.

## 1.13 Headache

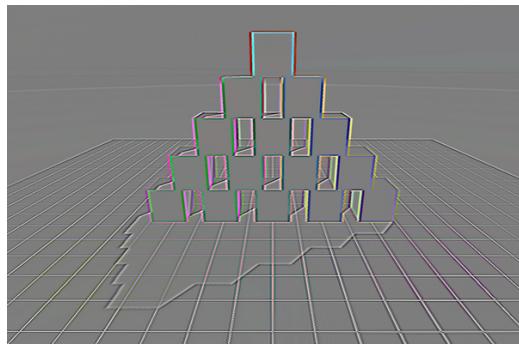
**Overview :** The **Headache** effect slowly moves four layers of the rendered image to simulate a headache.

**Parameters :**

- Strength (*strength : float*) : The strength is the intensity of the offsets.
- Speed (*speed : float*) : The speed of the layers movement.

## 1.14 Laplacian

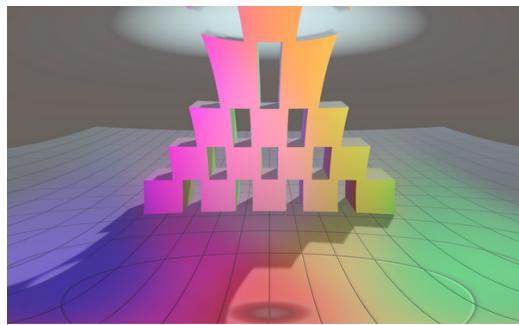
**Overview :** The **Laplacian** returns the Laplacian of the rendered image.



**Parameters :** There are no parameters for this effect.

## 1.15 Lens

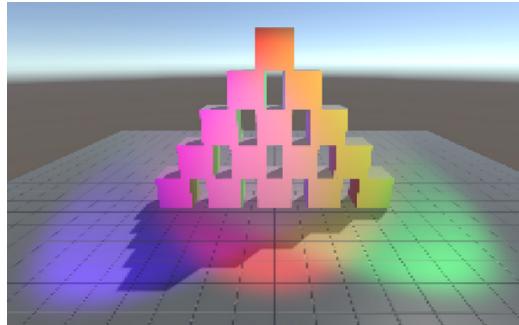
**Overview :** The **Lens** effect reproduces the view through a convex lens.

**Parameters :**

- Lens Distortion (*lensDistortion : float*) : The distortion of the lens.
- Cubic Distortion (*cubicDistortion : float*) : The distortion on the borders (as a cube).

## 1.16 Low Resolution

**Overview :** The **Low Resolution** effect changes the pixel resolution of the rendered image.

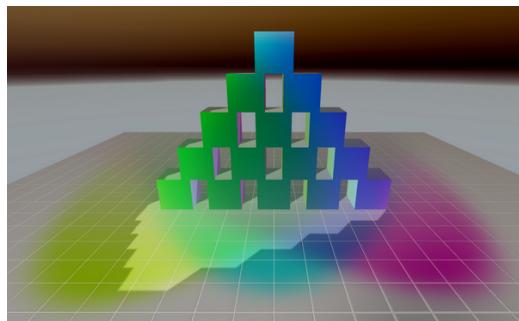


**Parameters :**

- Resolution X and Y (*resolutionX, resolutionY : int*) : The number of pixels.

## 1.17 Negative

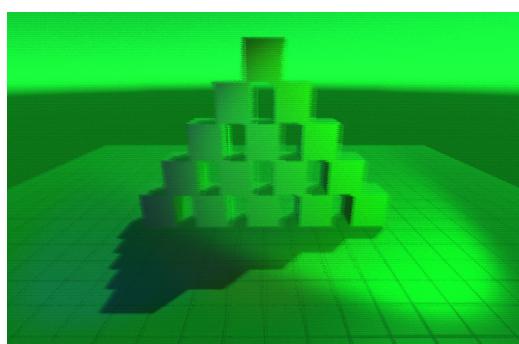
**Overview :** The **Negative** effect invert the color.



**Parameters :** There are no parameters for this effect.

## 1.18 Night Vision

**Overview :** The **Night Vision** effect simulates the view through night vision goggles by creating noise and adding horizontal lines to the rendered image.

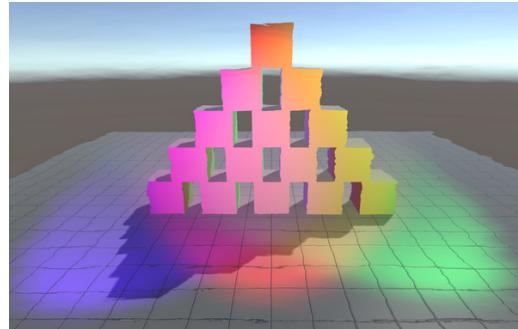


## Parameters :

- Noise Strength (*noiseStrength* : **float**) : The intensity of the noise effect.
- Noise Saturation (*noiseSaturation* : **bool**) : If set to true, the noise will not be brighter than original image.
- Lines Strength (*linesStrength* : **float**) : The intensity of the horizontal lines.
- Lines Amount (*linesAmount* : **int**) : The quantity of horizontal lines.
- Amplification (*amplification* : **float**) : The intensity of luminous areas.
- Luminosity Threshold (*luminosityThreshold* : **float** between 0 and 1) : The threshold to detect luminous areas.
- Texture Offset (*textureOffset* : **float**) : The offset of the noise effect.

## 1.19 Normal Map Distortion

**Overview :** The **Normal Map Distortion** effect distorts the rendering image according to the normals of the map. The normal map moves along a specified direction. Note that the texture is repeated on both axis.

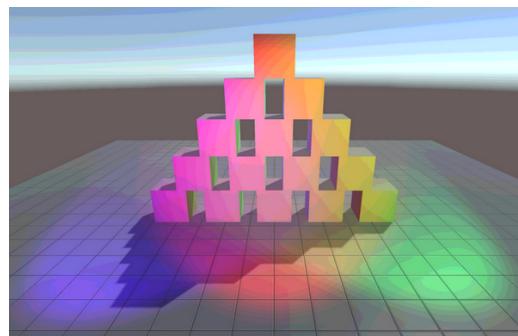


## Parameters :

- Normal Map (*normalMap* : **texture**) : The normal map texture.
- Horizontal and Vertical Speed (*speedX*, *speedY* : **float**) : The horizontal and vertical speed of the normal map.

## 1.20 Posterization

**Overview :** The **Posterization** will posterize the rendered image.

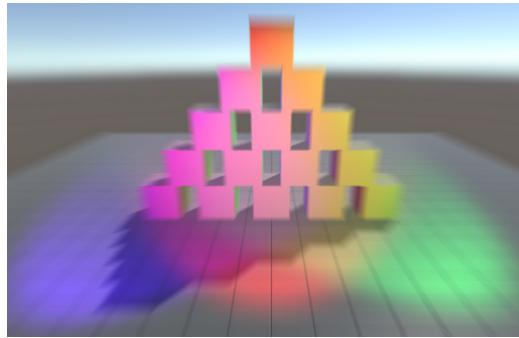


**Parameters :**

- Tones Amount (*tonesAmount* : **float**) : The number of tones used.
- Gamma Factor (*gamma* : **float**) : The gamma factor.

## 1.21 Radial Blur

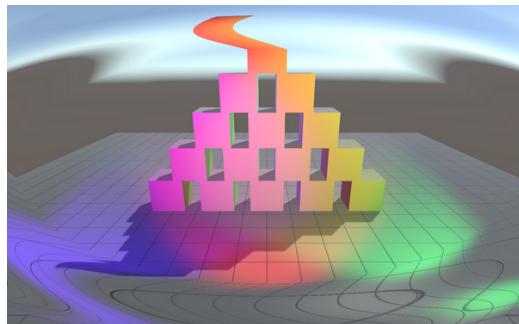
**Overview :** The **Radial Blur** effect creates a blur simulating movement to a screen point.

**Parameters :**

- Blur Strength (*blurStrength* : **float**) : The strength of the blur.
- Samples (*samples* : **int** between 3 and 64) : The number of samples.
- Blur Center X and Y (*centerX*, *centerY* : **float** between 0 and 1) : The center of the blur point.

## 1.22 Ripple

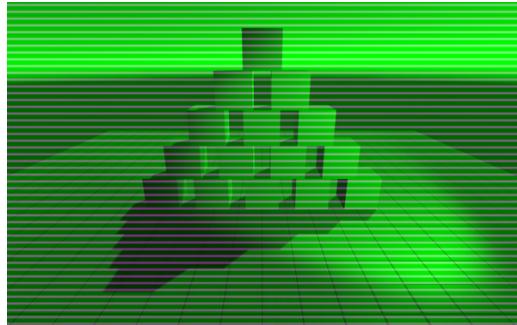
**Overview :** The **Ripple** effect creates ripples on the image.

**Parameters :**

- Waves (*waves* : **float**) : The amount of waves.
- Distortion (*distortion* : **float**) : The strength of the distortion of the waves.

### 1.23 Scanner

**Overview :** The **Scanner** effect adds horizontal lines and creates a green tint to simulate a scanner.

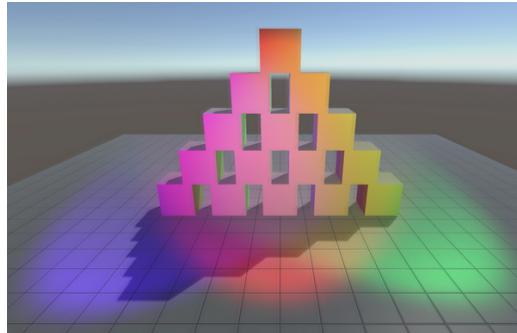


**Parameters :**

- Lines Intensity (*linesIntensity* : **float**) : The intensity of the lines.
- Lines Speed (*linesSpeed* : **float**) : The vertical movement speed of the lines.
- Lines Amount (*linesAmount* : **float**) : The amount of lines.

### 1.24 Shadows 2D

**Overview :** The **Shadows 2D** effect creates a dark layer to simulate a shadow.

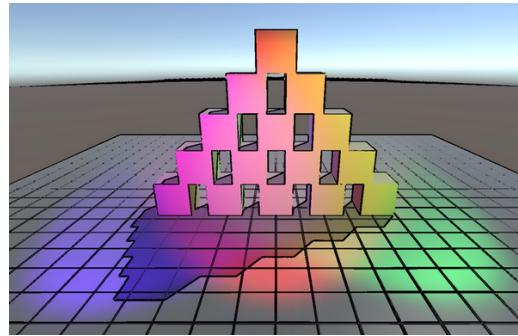


**Parameters :**

- Shadow Strength (*shadowStrength* : **float**) : The strength of the shadow.
- Shadow Offset (*offsetStrength* : **float**) : The offset of the shadow.

### 1.25 Sobel

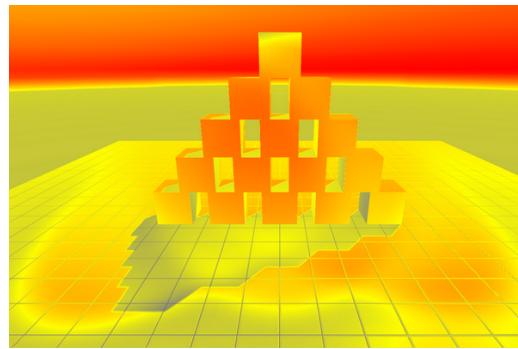
**Overview :** The **Sobel** effect adds lines to the edges.

**Parameters :**

- Threshold (*threshold* : **float**) : The threshold for edge detection.
- Edge Color (*edgeColor* : **color**) : The color of the edges.
- Show Background (*showBackground* : **bool**) : Show or not the initial rendered image on background.
- Background Color (*backgroundColor* : **color**) : If we do not want to show the background, we set the background color.

## 1.26 Thermal Vision

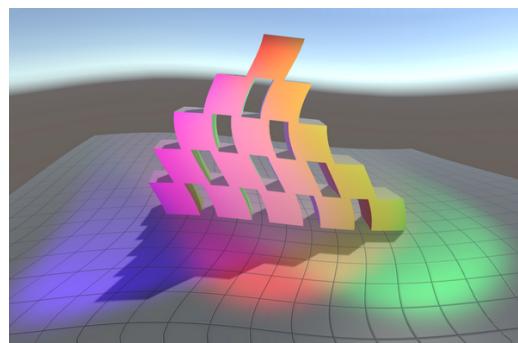
**Overview :** The Thermal Vision effect reproduces a simple thermal vision.



**Parameters :** There are no parameters for this effect.

## 1.27 Waves

**Overview :** The Waves effect creates waves on the rendered image.

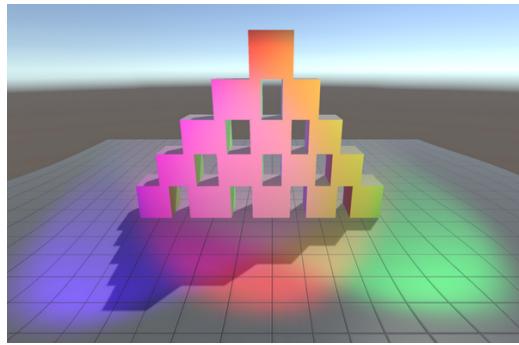


**Parameters :**

- Horizontal and Vertical Strength (*strengthX, strengthY : float*) : The horizontal and vertical strength of the waves.
- Horizontal and Vertical Frequency (*frequencyX, frequencyY : float*) : The horizontal and vertical frequency of the waves.
- Speed (*speed : float*) : The movement speed of the waves.

## 1.28 Wiggle

**Overview :** The **Waves** effect makes the image wiggle.

**Parameters :**

- Amplitude X and Y (*amplitudeX, amplitudeY : float*) : The size of the transforms.
- Distortion X and Y (*distortionX, distortionY : float*) : The strength of the transforms.
- Speed (*speed : float*) : The speed of the effect.