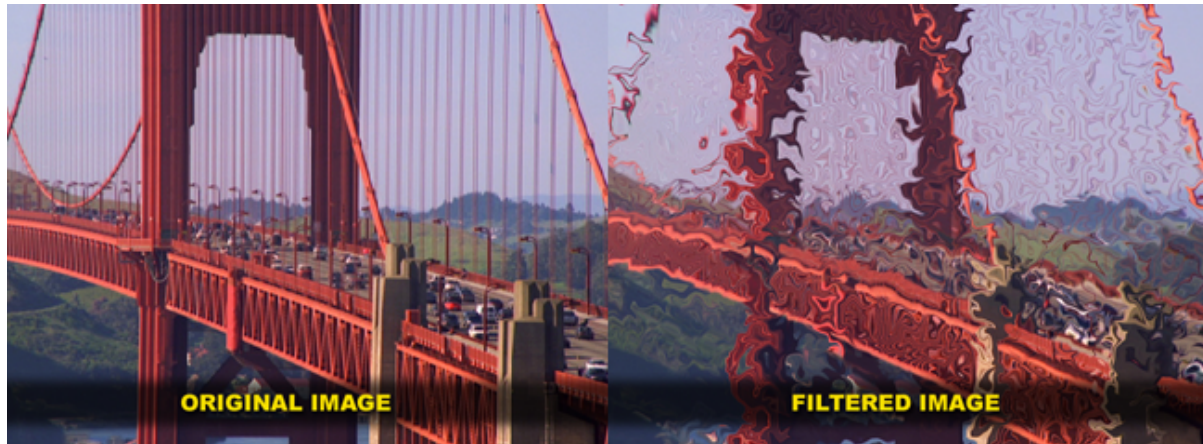


bcc turbulence

Based on the core algorithms that make up the BCC Noise Map 2 filter, the BCC Turbulence filter generates auto-animated gell-like distortion fields in an image clip based on input from the built-in noise map and turbulence controls. This filter includes 3 dozen preset effect settings to make working with and understanding some of the possibilities of this filter a piece of cake.



How to Use the Filter in a Typical Scenario

Let's generate a new composition in After Effects with 2 second duration. Into the project window we'll import the Artbeats clip VUS101.mov, which is of a fish swimming alongside some coral. PTR to familiarize yourself with the clip. We're going to add a little animated distortion to this clip to help make the scene appear as though the viewer is under water with the fish.

Next we'll add the BCC Turbulence filter to the clip. What we notice immediately is that the image appears to now have some displacement map style distortion applied. What we are going to do next is to enable the view texture button at the top of the filter so that we can actually see the procedural texture that is being generated by the filter. Click on the View Texture button. Observe the texture that is displayed. Make a Preview to RAM and you will see that this texture is static and does not change over time. Let's select one of the more interesting presets from the preset pop-up menu. Click on the preset loader and select the Heavy Oil with Wave setting. Now PTR and observe that the texture is self animating and that it has a natural looking flow. For this image we need a different scale so we're going to set the Scale parameter to a value of 250. Notice how the bubble texture is now larger. Now click again on the View Texture checkbox to turn off the Texture View and view the composite result. Set the Intensity parameter to a value of 80 to soften the effect and PTR to preview the result - an organic shimmer in the image, adding the effect or appearance of movement in the water.

While I have applied this filter to a clip to simulate movement in a body of water, it can also be used to simulate a heat wave or as a simple stylistic element for many scenes.

Parameter Descriptions

Scale - controls the size of the generated noise

Intensity - controls the complexity of the generated noise

Reference Level - controls the values created by the three dimensional noise map

Distortion Group - contains the image displacement parameters

 Process Alpha Only - confines the image displacement to the alpha channel

 Master - controls the amount of overall distortion that is applied to the image

 X Displacement - controls the displacement along the X axis

 X Reference Level -

 Y Displacement - controls the displacement along the Y axis

 Y Reference Level

Texture Geometrics Group

 Aspect - controls the aspect ratio of the noise texture with 100 being neutral

 Offset X - offsets the generated noise map along the X axis

 Offset Y - offsets the generated noise map along the Y axis

 Anchor - sets the center zero point for the generated noise pattern

 Rotation - rotates the generated noise pattern

Wrap Mode - determines how the values for Intensity and Reference Level interact

 Off - creates a more contrasty image

 On - is the default and creates a more complex image as the Intensity is increased

 Positive Only - creates more black areas

 Negative Only - creates more white areas

Use Improved Noise - uses an improved noise algorithm

Noise Type - sets the overall look of the noise

 Bubbly - creates noise with some defined detail

Stringy - creates noise with more defined detail
Smooth - creates noise with less defined detail
Seed - sets the random number generator that builds the three dimensional noise space used by the filter
Interpolation - this pop-up controls the algorithm that interpolates the noise with the following options
Spline
Quardic
Cubic
Quadratic
Linear
Turbulence - controls the number of layers of generated noise. A value of 1 creates a single layer of noise
Turbulence Settings Group - controls how each layer of noise is generated in relation to the previous layer
Feedback - creates visual feedback between each layer of the effect. Adjust feedback to produce some interesting looks
Sub Scaling - controls the scaling of each layer of noise relative to the previous layer
Turbulence Aspect - controls the aspect ratio of each layer of noise relative to the previous layer
Turb. Rotation - rotates each layer relative to the previous layer
Turb. Offset X - offsets the X value of each layer relative to the previous layer
Turb. Offset Y - offsets the Y value of each layer relative to the previous layer
Turbulence Mix - controls the mix of each layer of noise with previously rendered noise. Low values cause the turbulence to have very little effect. High values cause each layer to have more effect than the previous one, and also override the output.
Modulation Group - allows you to use two different sources to modify the noise with a variety of shapes
Modulation 1 Shape - this pop-up determines the shape used for modulation 1
Off
Layer
Layered Noise
Ripple
Wave
Radial Wipe
Ring
Linear Gradient
Distance to Line
Modulation 1 Layer - this pop-up is used to select the layer to use as noise source
Waveform - enabled when ripple or wave is selected from the modulation 1 shape menu
Anchor - sets a starting location for layered noise and wave
Intensity 1 - controls the intensity of layer 1
Intensity 2 - controls the intensity of layer 2
Seed - sets the random number generators
Scale 1 - scales the noise 1 layer
Scale 2 - scales the noise 2 layer
Morph - controls the morph between the layers of noise
Blur - controls the blur applied to the noise layer
Morph Rate - controls the speed of the noise morph
Invert Modulation 1 - inverts the modulation of layer 1
View Modulation - enables a preview of the noise generator
Modulation Destination - this pop-up determines the effect of the modulation
Off - produces no modulation.
Displacement - displaces the noise in the direction set by the Disp. Angle control.
Z Displacement - displaces the noise source in the Z dimension.
Turbulence Scaling - modulates the Sub Scaling control, affecting the relative scaling of the noise layers on a point by point basis.
Zoom - moves the noise around a point which defaults to the effect center, and can be offset by adjusting Zoom Rot Center.
Rotation - moves the noise around the Zoom-Rot Center.
Turbulence Amount modulates the number of layers of noise (the Turbulence setting in the main tab) on a point by point basis.
Feedback - modulates the feedback from the Turbulence tab on a point by point basis.
Turbulence Displacement, Z, Zoom, Rotation - apply the modulation only to the turbulence, not to the initial layer of noise.
Fade to Black/White - fades the modulated pixels to black or white.
Mod 1 Amount - controls the amount of modulation applied
Mod 1 Reference - creates a numeric starting pint for the modulation
Modulation 2 Source - this pop-up is used to select the layer to use as noise source
Modulation 2 Blur - controls the blur applied to the noise layer
Invert Modulation 2 - inverts the modulation of layer 2
Modulation 2 Dest - this pop-up determines the effect of the modulation
Mod 2 Amount - controls the amount of modulation applied
Mod 2 Reference - creates a numeric starting pint for the modulation
Zoom Rot Center - moves the noise around a point which defaults to the effect center
Disp Angle - controls the angle of displacement
Animation Group - controls the noise flow
Flow Rate - causes the output to flow through the image
Flow Direction - sets the direction of the flow
Morph Start - sets the initial Z coordinate for the three dimensional noise space
Morph Rate - auto-animates the morph start
PixelChooser - this pop-up is used to enable or disable the Pixelchooser masking / Matting system

Pixelchooser group - contains the PixelChooser masking / matting parameter controls.

Pin Pop-Up

- No Pin
- Pin Edges
- Pin Center
- Pin Left
- Pin Top
- Pin Right
- Pin Bottom
- Pin Horiz
- Pin Vert

Pinning Group

- Edge Pin Width
- Pin Point 1
- Point 1 Strength
- Point 1 Range
- Point 1 Center %
- Pin Point 2
- Point 2 Strength
- Point 2 Range
- Point 2 Center %