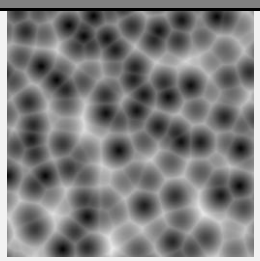
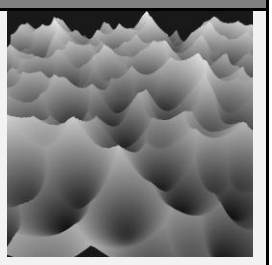
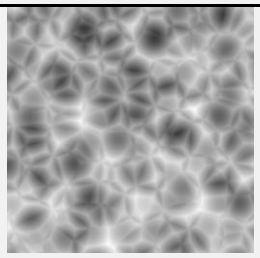
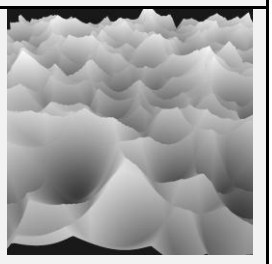
Noise Table

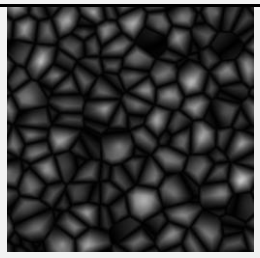
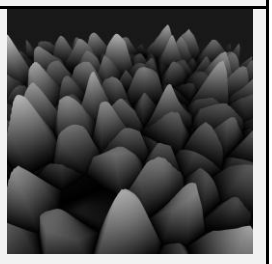
Default general parameters for all noise types :

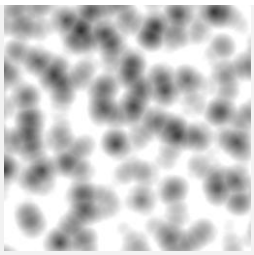
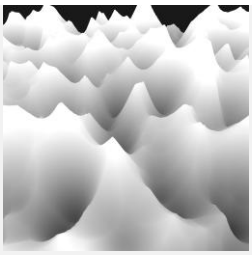
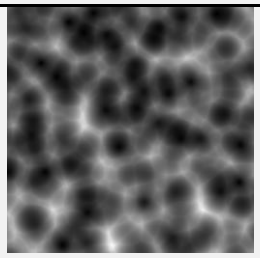
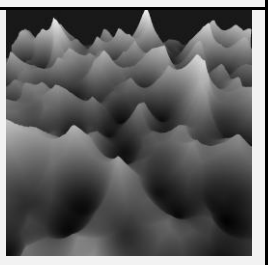
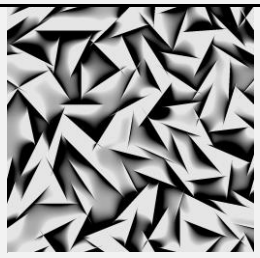
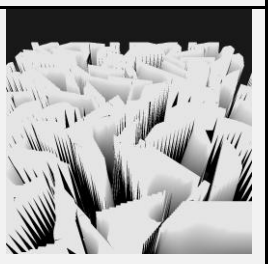
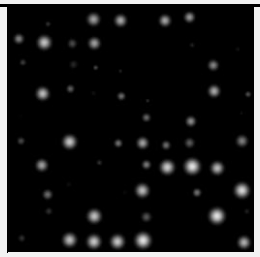
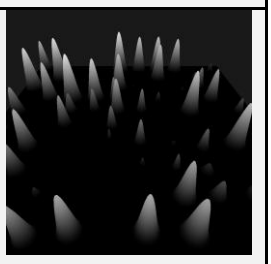
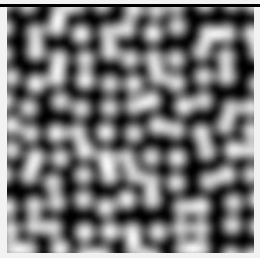
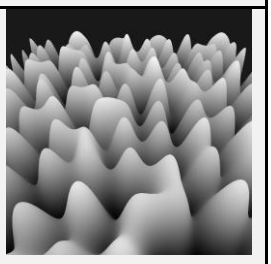
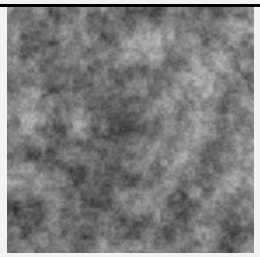
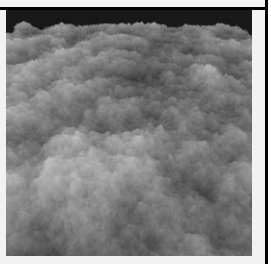
- Low Color = (0.0, 0.0, 0.0, 1.0)
- High Color = (1.0, 1.0, 1.0, 1.0)
- Texturing = -1
- Low Texture = {}
- High Texture = {}
- Displace = -1
- Anim Speed = 0
- Octaves = 10
- Noise Offset = (0.0, 0.0, 0.0)

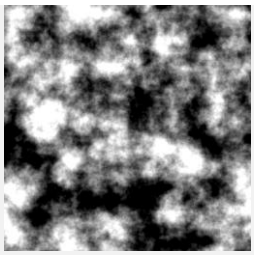
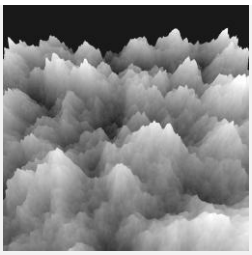
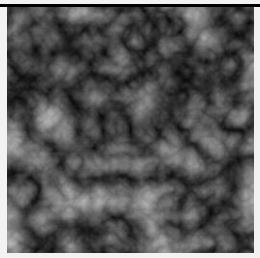
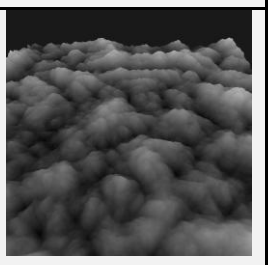
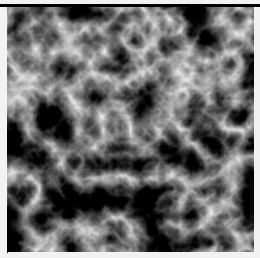
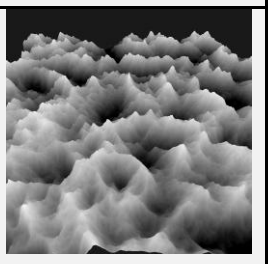
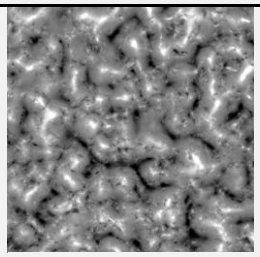
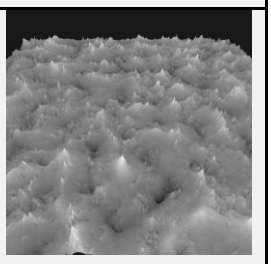
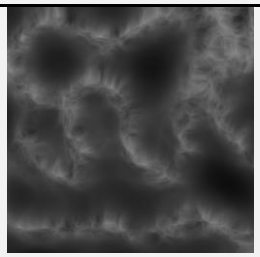
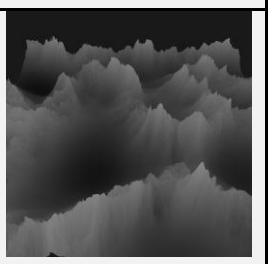
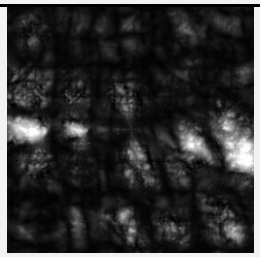
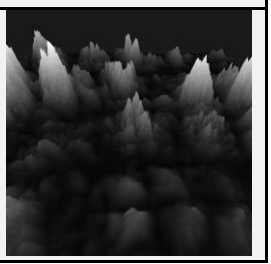
Noise Type	Default parameters	Interpolation methods	2D surface	3D surface

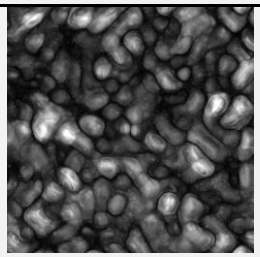
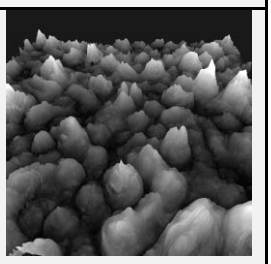
Cellular F1	`Frequency = 1.0`
	`Amplitude = 1.0`
	`Contribution = 0.45`
	`Cell Type = 0`
		Cellular
		Simplex
				

Cellular F2	`Frequency = 1.0`
	`Amplitude = 1.0`
	`Contribution = 0.45`
	`Cell Type = 1`
		Cellular		

Cellular F2-F1	`Frequency = 1.0`
	`Amplitude = 1.0`
	`Contribution = 0.45`
	`Cell Type = 2`
		Cellular		

Cellular F1+F2/2	Frequency = 1.0 Amplitude = 1.0 Contribution = 0.45 Cell Type = 3	Cellular		
Cellular F1*F2	Frequency = 1.0 Amplitude = 1.0 Contribution = 0.45 Cell Type = 4	Cellular		
Cubist	Frequency = 1.0 Amplitude = 1.0 Contribution = 0.45 Range Clamp = (-1.5, 0.5, 0.0)	Perlin-Cubist		
Polka Dot	Frequency = 1.0 Amplitude = 1.0 Contribution = 0.45 Radius Low = 0.0 Radius High = 1.0 Radius (simplex) = 1.0 Max Dimness (simplex) = 0.5	Smooth Falloff Simplex		
Sparse Convolution	Frequency = 1.0 Amplitude = 1.0 Contribution = 0.45	Cellular		
Value	Frequency = 1.0 Amplitude = 0.25 Lacunarity = 1.92 Persistence = 0.75 Contribution = 1.0	Simple		

Standard	Frequency = 0.5 Amplitude = 0.25 Lacunarity = 1.92 Persistence = 0.6 Contribution = 1.0 Normalize = 1.0	Perlin Hermite Simplex		
Billowed	Frequency = 0.5 Amplitude = 0.5 Lacunarity = 1.92 Persistence = 0.5 Contribution = 1.0 Normalize = -1.0 Powered = -1.0 Billow Power = 2.0	Perlin Hermite Simplex		
Ridged	Frequency = 0.5 Amplitude = 1.0 Lacunarity = 1.92 Persistence = 0.5 Contribution = 1.0 Normalize = -1.0 Powered = -1.0 Ridge Power = 1.0 Ridge Offset = 1.0	Perlin Hermite Simplex		
IQ	Frequency = 1.0 Amplitude = 1.0 Lacunarity = 1.92 Persistence = 0.75 Contribution = 1.0 Normalize = -1.0	Perlin Hermite Simplex		
Swiss	Frequency = 0.25 Amplitude = 1.0 Lacunarity = 1.92 Persistence = 0.65 Contribution = 1.0 Normalize = -1.0 Powered = -1.0 Ridge Power = 1.0 Ridge Offset = 1.0 Warp = 0.15	Pelrin Hermite Simplex		
Badlands	Frequency = 0.25 Amplitude = 0.6 Lacunarity = 1.92 Persistence = 0.75 Contribution = 1.0 Normalize = -1.0 Powered = 1.0 Ridge Power = 1.0	Perlin Hermite Simplex		

	Ridge Offset = 0.3 Warp = 0.15 Floor = 0.5			
Jordan	Frequency = 0.5 Amplitude = 1.0 Lacunarity = 1.92 Persistence = 0.65 Contribution = 1.0 Normalize = -1.0 Warp 0 = 0.5 Warp = 0.5 Damp 0 = 2.0 Damp = 2.0 Damp Scale = 1.0	Perlin Hermite Simplex		

Glossary

General noise parameters :

- Octaves : number of noise iterations. Higher values increase the "resolution" of the noise.
- Frequency : interval between noise features. Higher values decrease the distance between features. Can be used to "zoom" in or out.
- Amplitude : height value multiplier. Higher values accentuate highs and lows.
- Lacunarity : frequency multiplier. Higher values increase level of repetition.
- Persistence : amount of noise detail. Lower values will smooth the noise.
- Noise offset : noise input alteration. "x" and "y" components can be used to modify position along "xy" axis. "z" component can be used to smoothly "morph" the noise.
- Contribution : brightness multiplier of the output color. Higher values increase the overall brightness.
- Normalize : if set to >0, maps the output height range to <0, 1>, smoothing the overall color to gray instead of clear black and whites.
- Displace : if set to >0, displaces vertices to generate a 3D surface.
- Low Color : color of the lowest height range.
- High Color : color of the highest height range.
- Texturing : if set to >0, enables texturing.
- Low Texture : texture used in the lowest height range.
- High Texture : texture used in the highest height range.

- Anim Speed : animation speed of the "z" component of the noise offset.

Cellular noise parameters :

- Cell Type : type of Voronoi output. 0 = F1, 1 = F2, 2 = F2-F1, 3 = F1+F2/2, 4 = F1*F2.

Cubist noise parameters :

- Range Clamp : range of the cubist output.

Polka Dot noise parameters :

- Radius Low : radius of the lowest dots.
- Radius High : radius of the highest dots.
- Radius (simplex) : mean radius of the dots.
- Max Dimness (simplex) : maximum amount of penumbra.

Billowed noise parameters :

- Powered : if set to >0, outputs a powered height value.
- Billow Power : power coefficient.

Ridged noise parameters :

- Powered : if set to >0, outputs a powered height value.
- Ridge Power : power coefficient.
- Ridge Offset : initial height value of the reversed billowed noise.

Swiss noise parameters :

- Powered : if set to >0, outputs a powered height value.
- Ridge Power : power coefficient.
- Ridge Offset : initial height value of the reversed billowed noise.
- Warp : input displacement. Higher values shapes the ridges.

Badlands noise parameters :

- Powered : if set to >0, outputs a powered height value.
- Ridge Power : power coefficient.
- Ridge Offset : initial height value of the reversed billowed noise.

- Warp : input displacement. Higher values shapes the ridges.
- Floor : initial height value. Higher values raises the floor (flat) area.

Jordan noise parameters :

- Warp 0 : input displacement of the first octave. Higher values shapes the ridges.
- Warp : input displacement of the remaining octaves. Higher values shapes the ridges.
- Damp 0 : density of the first octave. Higher values increase the "hills" density.
- Damp : density of the remaining octaves. Higher values increase the "hills" density.
- Damp Scale : global elevation of the features. Higher values elevates the hills/ridges.

References

Some of the noise algorithms are based on the works of Ken Perlin, Brian Sharpe and Giliam De Carpentier :

GPU-Noise-Lib (http://briansharpe.wordpress.com) :

```
//
//      Code repository for GPU noise development blog
//      http://briansharpe.wordpress.com
//      https://github.com/BrianSharpe
//
//      I'm not one for copywrites.  Use the code however you wish.
//      All I ask is that credit be given back to the blog or myself when appropriate.
//      And also to let me know if you come up with any changes, improvements, thoughts or interesting uses for this stuff. :)
//      Thanks!
//
//      Brian Sharpe
//      brisharpe CIRCLE_A yahoo DOT com
//      http://briansharpe.wordpress.com
//      https://github.com/BrianSharpe
//
```

Scape (http://www.decarpentier.nl/) :