

# Function Editor Nodes Reference



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- Dynamics Nodes
- Meta Nodes

# Function editor node

## Input Nodes

Undefined

Color

Number

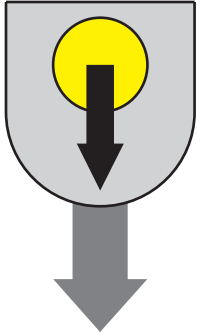
Vector

Texture coordinates

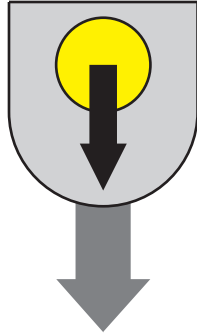
Drop selection

Check box

External Dependency



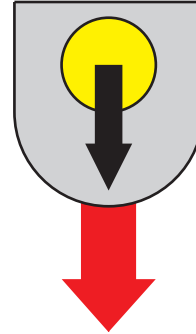
Recall Dependency



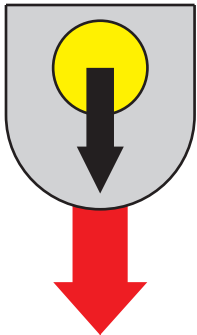
Delay



Position



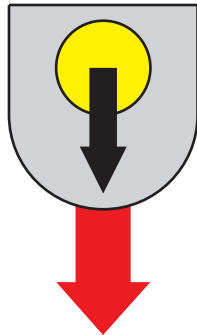
Position options



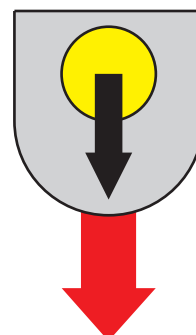
Position type.  
Selection based  
on mapping types



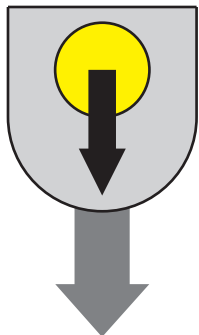
Normal



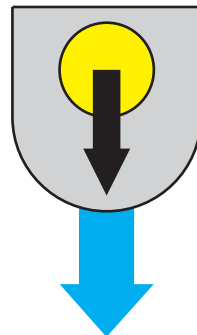
Normal options



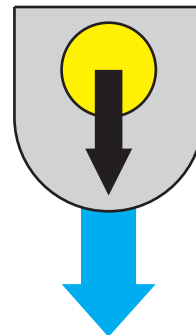
Normal type.



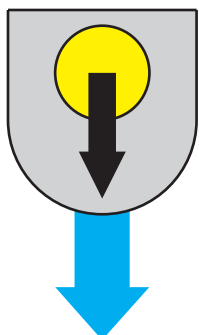
Slope



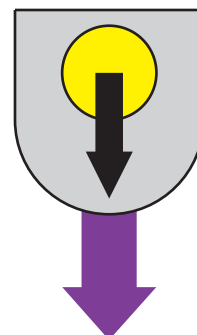
Altitude



Orientation



UV Coordinates



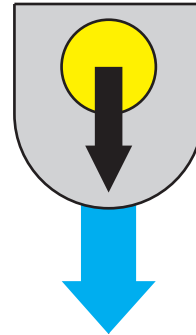
Scale

Origin

Mapping mode



Time





# Function editor node

## Input Nodes

Undefined

Color

Number

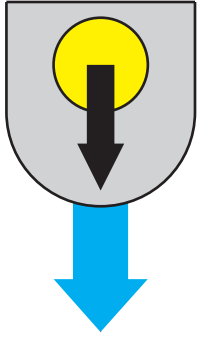
Vector

Texture coordinates

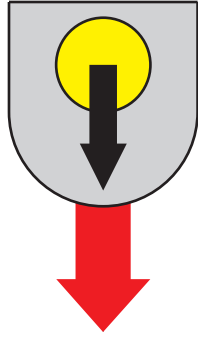
Drop selection

Check box

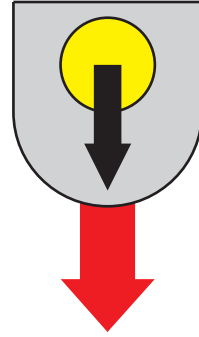
Angle of Incidence



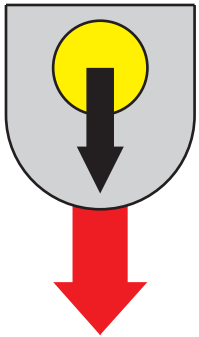
Ray Direction World



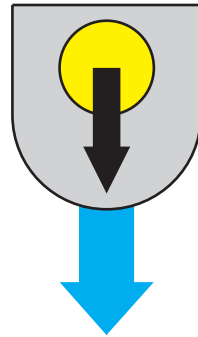
Ray Direction Object



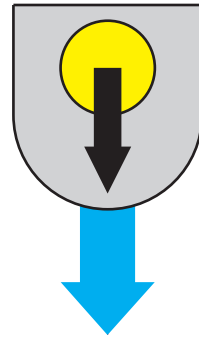
Position on Picture



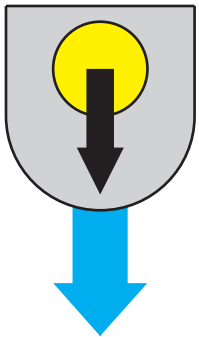
Distance to Camera



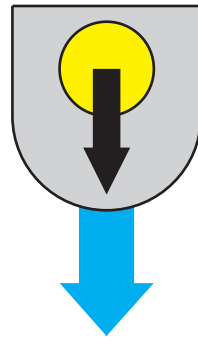
Distance on Ray



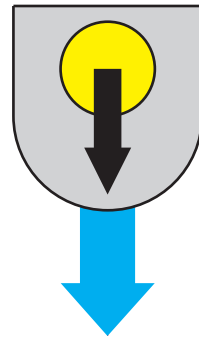
Distance to Object Center



Distance to Object Below

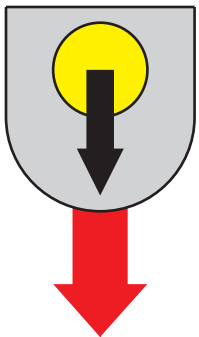


Distance to Surface

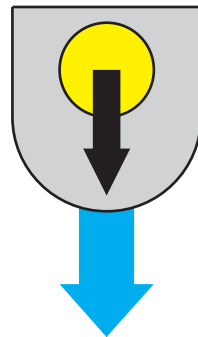


← Depth kind

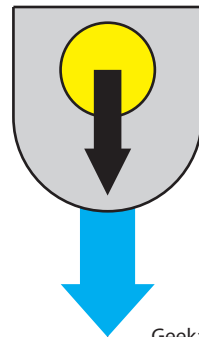
Object Center



Incident Light Angle



Specular Light Angle



# Function editor node

## Input Nodes

Undefined



Color



Number



Vector



Texture coordinates



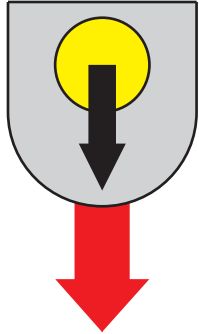
Drop selection



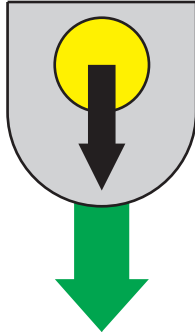
Check box



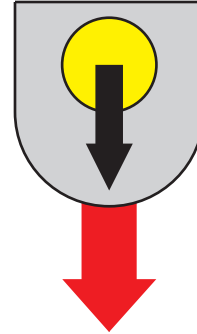
Light Direction



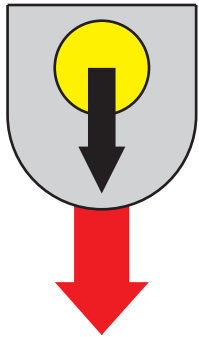
Light Color



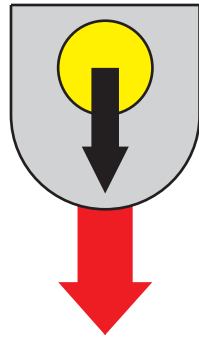
Reflected Direction



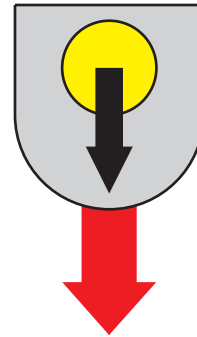
Anisotropic Direction



Transformed Z Vector



Transformed Left Vector



# Function editor node

## Output Nodes

Undefined



Color



Number



Vector



Texture coordinates



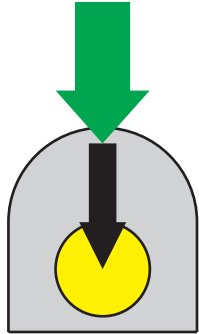
Drop selection



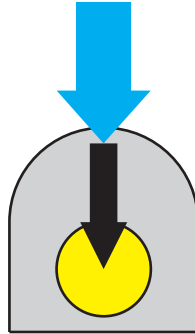
Check box



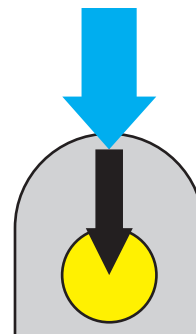
Color



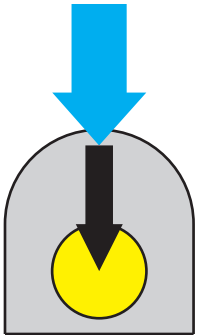
Alpha (-1/1)



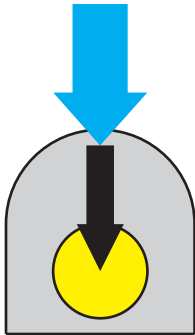
Transparency (-1/1)



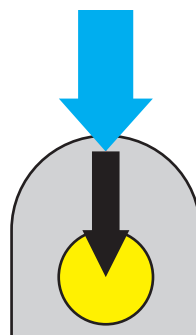
Bump (-1/1)



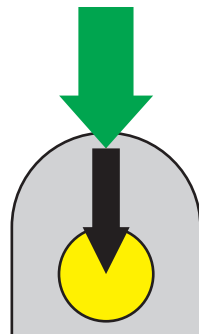
Highlight (-1/1)



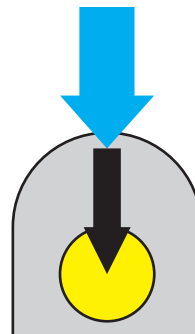
Reflection (-1/1)



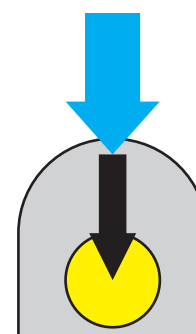
Highlight Color



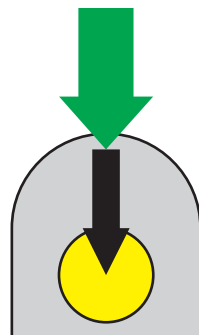
Highlight Intensity(-1/1)



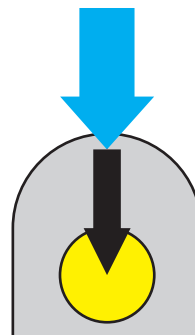
Highlight Size (-1/1)



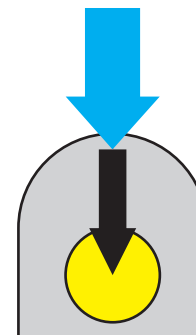
Highlight Value



Anisotropic Highlight(-1/1)



Global Transparency (-1/1)



# Function editor node

## Output Nodes

Undefined



Color



Number



Vector



Texture coordinates



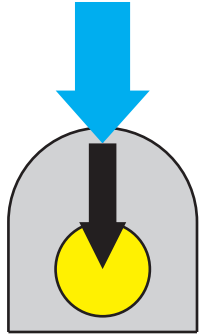
Drop selection



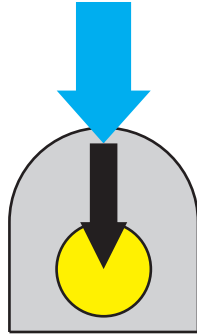
Check box



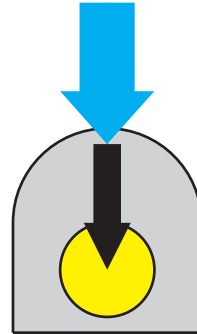
Blurred Transparencies (-1/1)



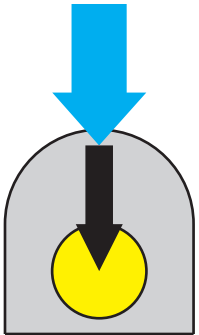
Refraction Index (-1/1)



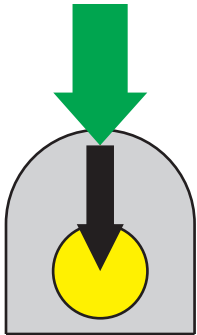
Dispersion (-1/1)



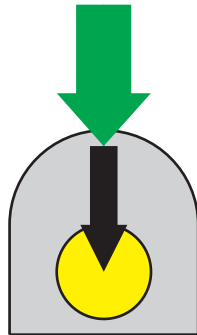
Fading Out (-1/1)



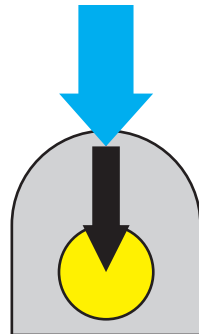
Fade Out Color



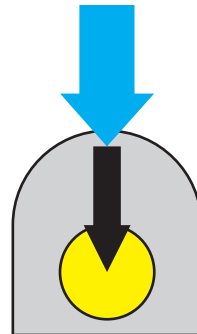
Fade Light Color



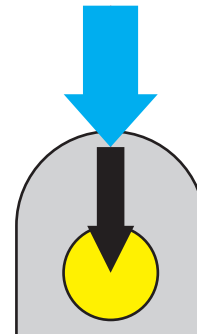
Turn Reflective with Angle (-1/1)



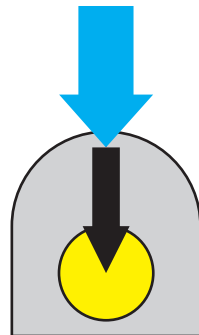
Flare Intensity (-1/1)



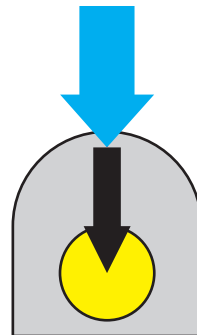
Flare Span (-1/1)



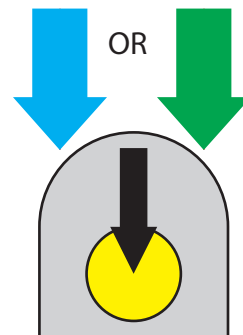
Global Reflectivity (-1/1)



Blurred Reflections (-1/1)



Color Transmitted (-1/1)



# Function editor node

## Output Nodes

Undefined



Color



Number



Vector



Texture coordinates



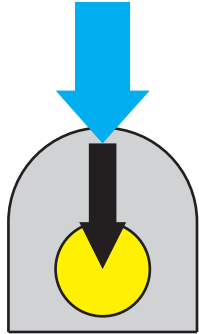
Drop selection



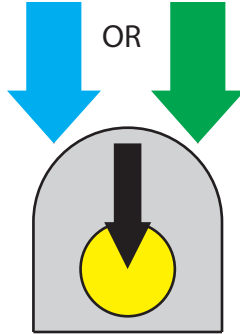
Check box



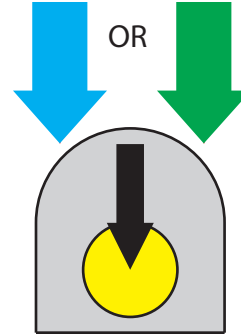
Global Reflectivity (-1/1)



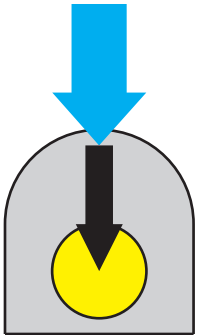
Color Reflected (-1/1)



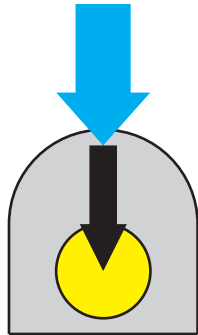
Color Backlight (-1/1)



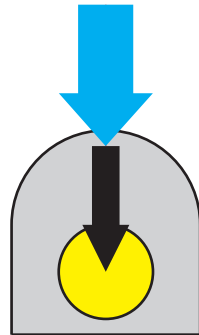
Diffuse (-1/1)



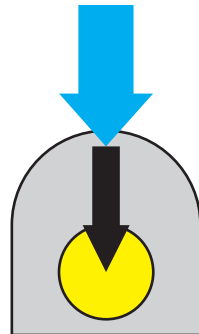
Ambient (-1/1)



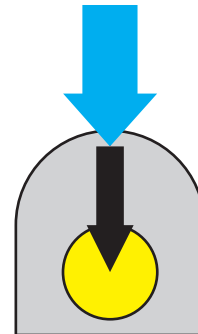
Luminous (-1/1)



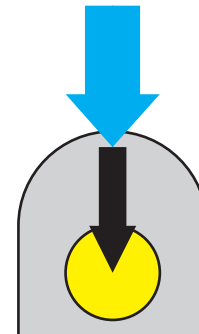
Contrast (-1/1)



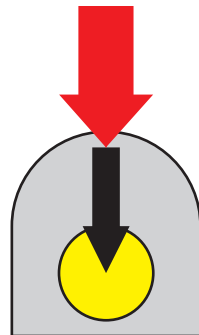
Glow Intensity (-1/1)



Glow Radius (-1/1)



Origin





## Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



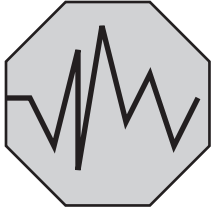
Drop selection



Check box



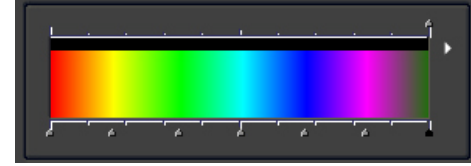
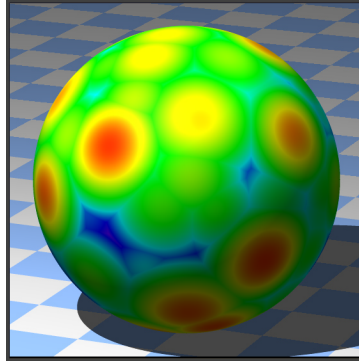
### Cellular Patterns, Chipped



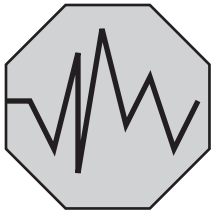
Scale

Wavelength (x/y/z)

Origin (x/y/z)



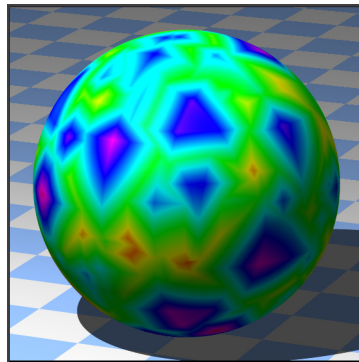
### Cellular Patterns, Crystals



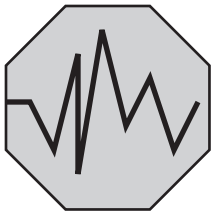
Scale

Wavelength (x/y/z)

Origin (x/y/z)



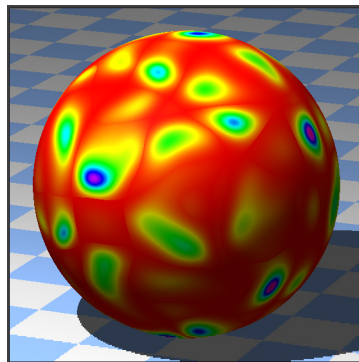
### Cellular Patterns, Pebble Noise



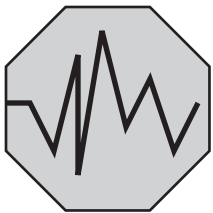
Scale

Wavelength (x/y/z)

Origin (x/y/z)



### Cellular Patterns, Drought

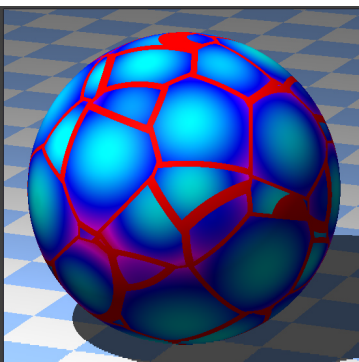


Scale

Wavelength (x/y/z)

Origin (x/y/z)

Crack Width



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined

Color

Number

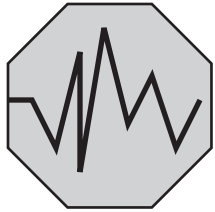
Vector

Texture coordinates

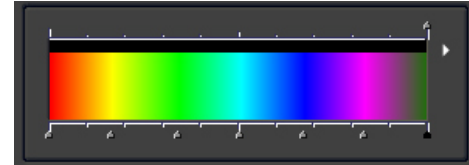
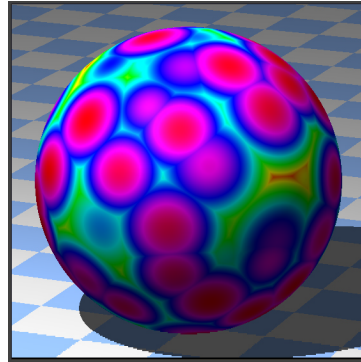
Drop selection

Check box

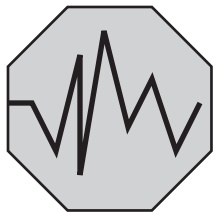
## Cellular Patterns, Voronoi



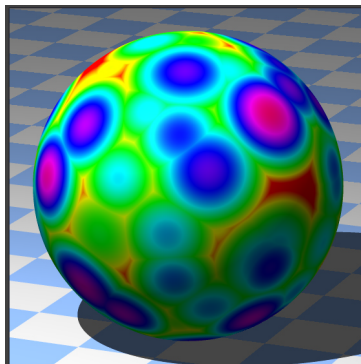
- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Neighbor Mode
- Voronoi Profile



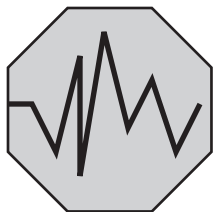
## Cellular Patterns, Voronoi (Altitude)



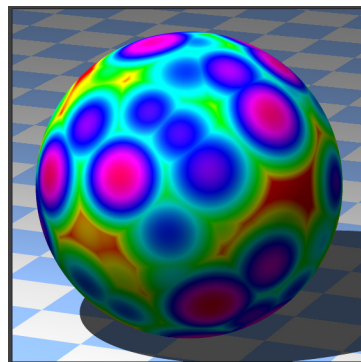
- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Voronoi Profile



## Cellular Patterns, Voronoi (Generalized)



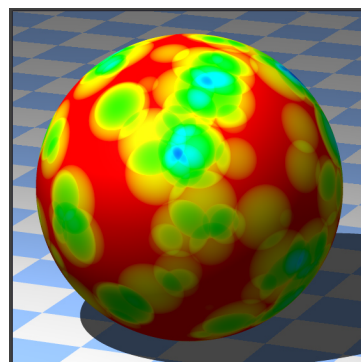
- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Randomness
- Voronoi Profile



## Distributed Patterns, Round Samples



- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Size
- Randomness
- Shape



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



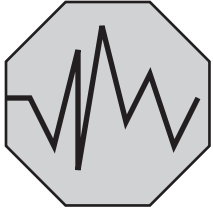
Drop selection



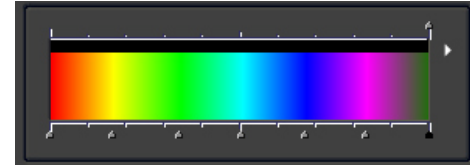
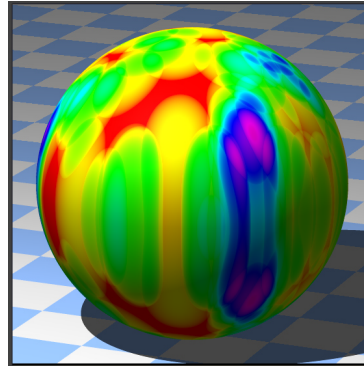
Check box



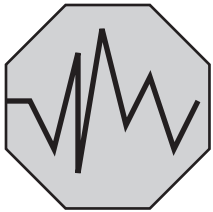
## Distributed Patterns, Round Samples (2D)



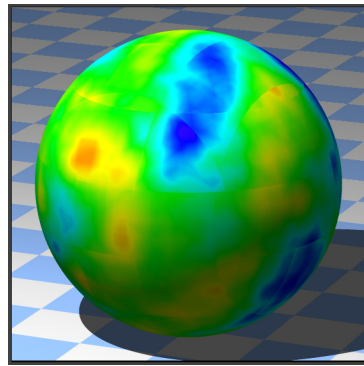
- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Size
- Randomness
- Shape
- Samples
- Random Altitudes
- Find Maximums



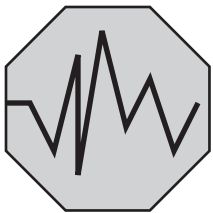
## Distributed Patterns, Square Samples



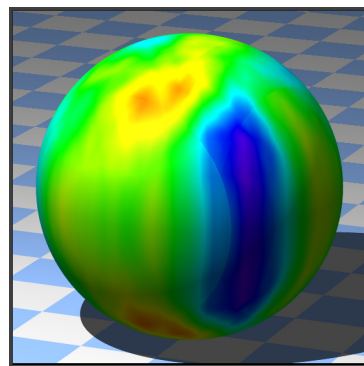
- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Size
- Randomness
- Scale Variations
- Angular Variations
- Shape
- Samples
- Random Altitudes
- Find Maximums



## Distributed Patterns, Square Samples (2D)



- Scale
- Wavelength (x/y/z)
- Origin (x/y/z)
- Size
- Randomness
- Scale Variations
- Angular Variations
- Shape
- Samples
- Random Altitudes
- Find Maximums



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



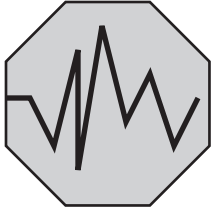
Drop selection



Check box



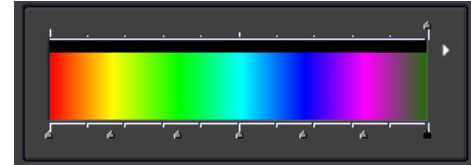
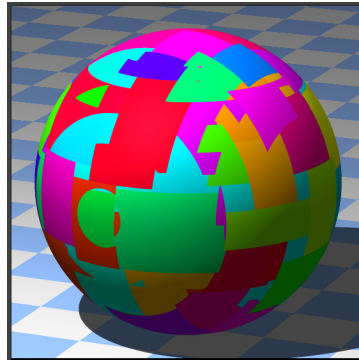
## Flat Patterns, Varying Blocks



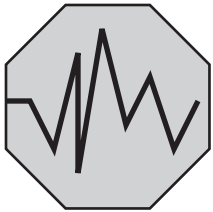
Scale

Wavelength (x/y/z)

Origin (x/y/z)



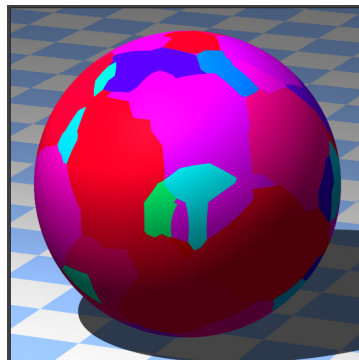
## Flat Patterns, Clumps



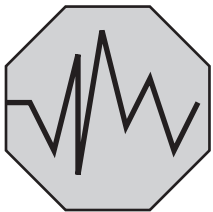
Scale

Wavelength (x/y/z)

Origin (x/y/z)



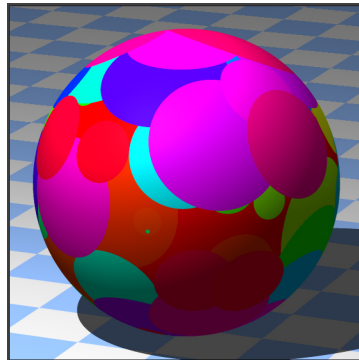
## Flat Patterns, Water Cress



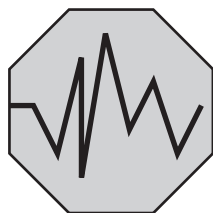
Scale

Wavelength (x/y/z)

Origin (x/y/z)



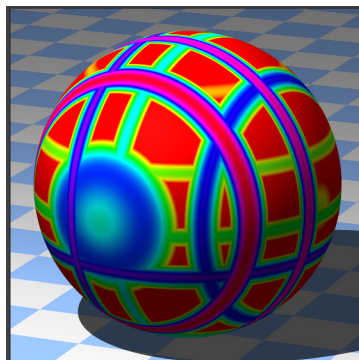
## Line Patterns, Lines



Scale

Wavelength (x/y/z)

Origin (x/y/z)



Undefined



Color



Number



Vector



Texture coordinates



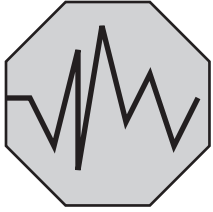
Drop selection



Check box



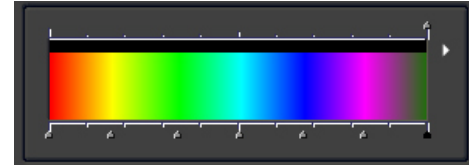
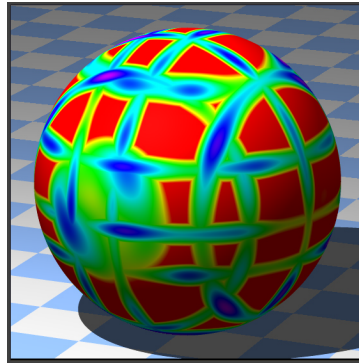
### Line Patterns, Fabric



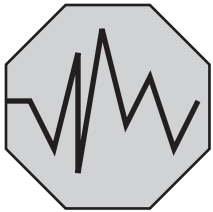
Scale

Wavelength (x/y/z)

Origin (x/y/z)



### Line Patterns, Cracks

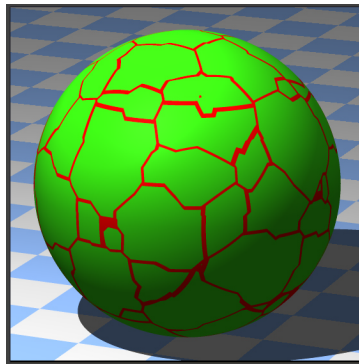


Scale

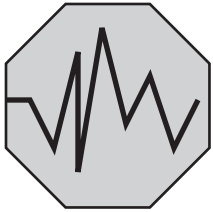
Wavelength (x/y/z)

Origin (x/y/z)

Crack Width



### Line Patterns, Sparse Cracks

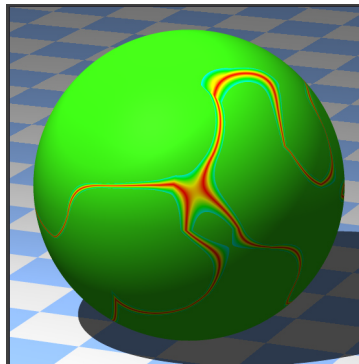


Scale

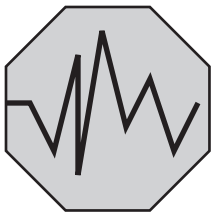
Wavelength (x/y/z)

Origin (x/y/z)

Crack Width



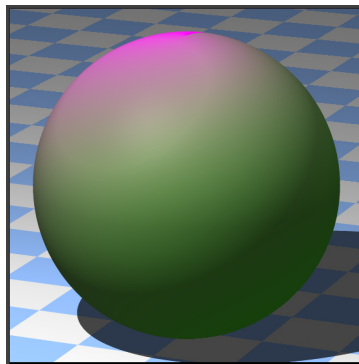
### Math Patterns, Radial Sine



Scale

Wavelength (x/y/z)

Origin (x/y/z)





# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



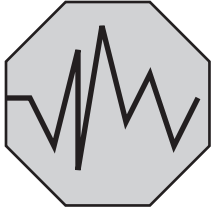
Drop selection



Check box



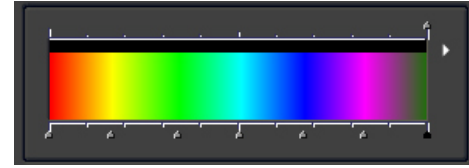
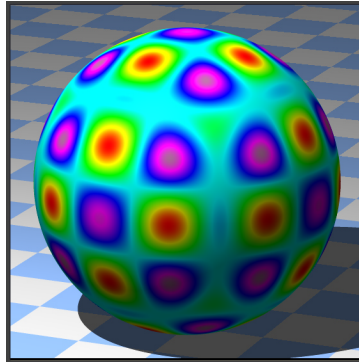
## Math Patterns, Sine Wave



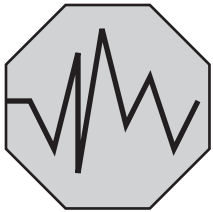
Scale

Wavelength (x/y/z)

Origin (x/y/z)



## Math Patterns, Triangular

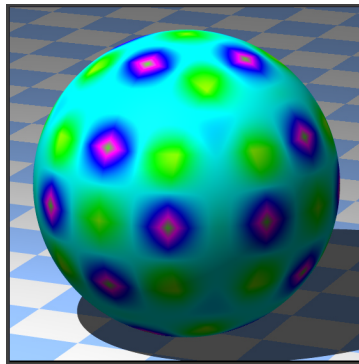


Scale

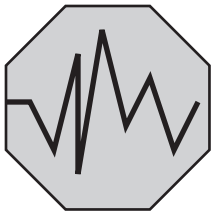
Wavelength (x/y/z)

Origin (x/y/z)

Crack Width



## Math Patterns, Leopard

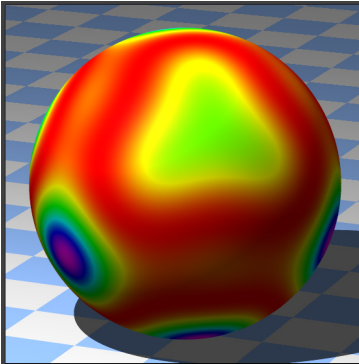


Scale

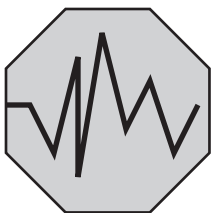
Wavelength (x/y/z)

Origin (x/y/z)

Crack Width



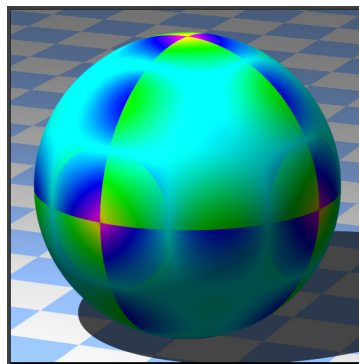
## Math Patterns, Saw Teeth



Scale

Wavelength (x/y/z)

Origin (x/y/z)



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



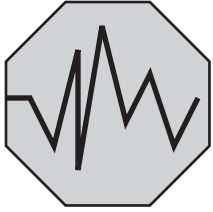
Drop selection



Check box



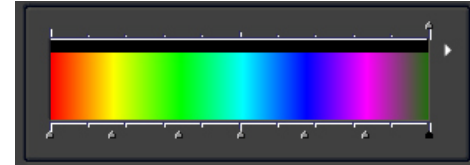
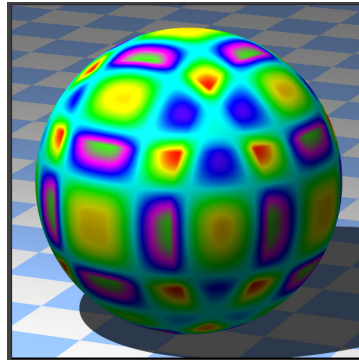
## Math Patterns, Water Wave



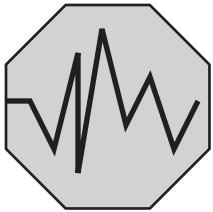
Scale

Wavelength (x/y/z)

Origin (x/y/z)



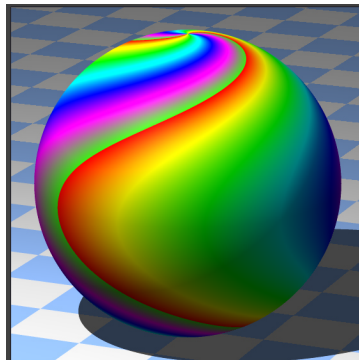
## Math Patterns, Spiral



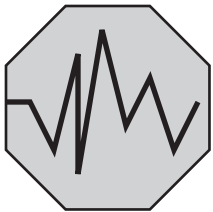
Scale

Wavelength (x/y/z)

Origin (x/y/z)



## Math Patterns, Rectangular



Scale

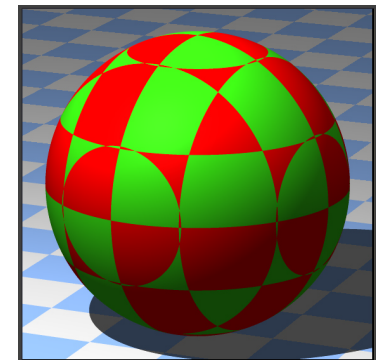
Wavelength (x/y/z)

Origin (x/y/z)

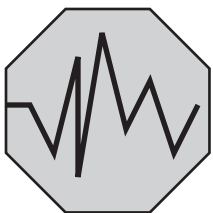
Step Width

Up/Down Ratio

Slope , enabled when Step width > 0



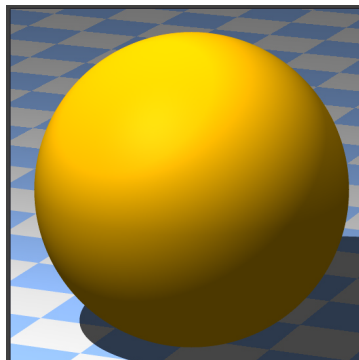
## Math Patterns, Onion



Scale

Wavelength (x/y/z)

Origin (x/y/z)



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



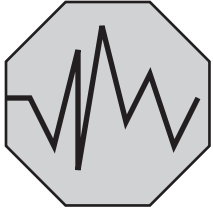
Drop selection



Check box



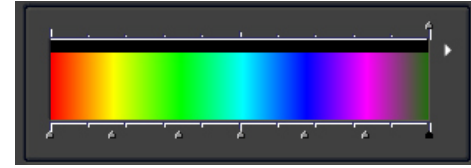
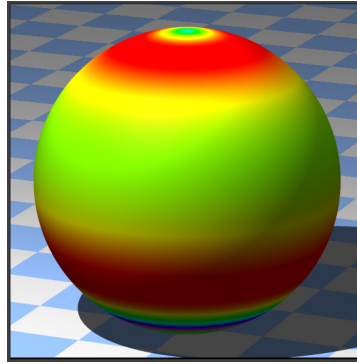
## Math Patterns, Wavelet



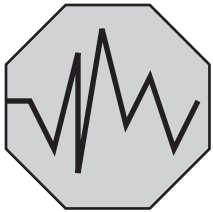
Scale

Wavelength (x/y/z)

Origin (x/y/z)



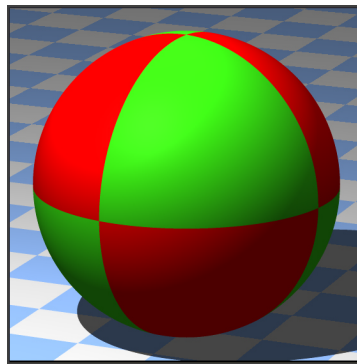
## Math Patterns, Step



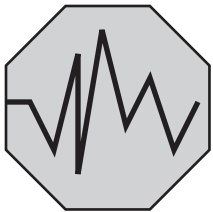
Scale

Wavelength (x/y/z)

Origin (x/y/z)



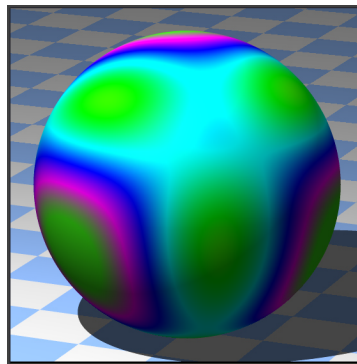
## Math Patterns, Step (smooth)



Scale

Wavelength (x/y/z)

Origin (x/y/z)



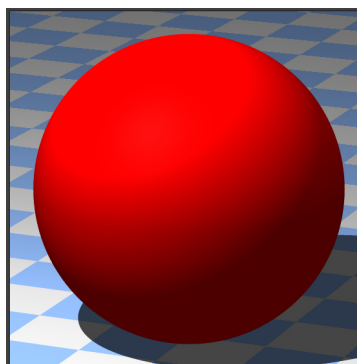
## Math Patterns, Tooth (rectangular)



Scale

Wavelength (x/y/z)

Origin (x/y/z)



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



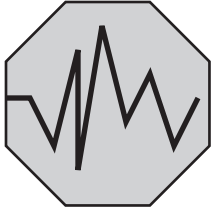
Drop selection



Check box



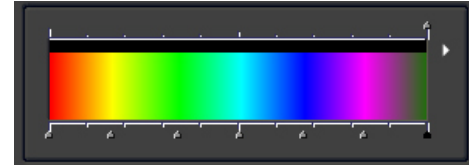
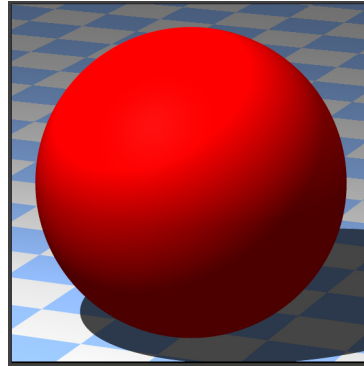
## Math Patterns, Tooth (triangular)



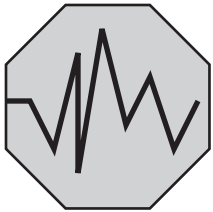
Scale

Wavelength (x/y/z)

Origin (x/y/z)



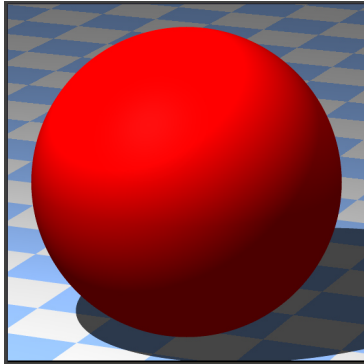
## Math Patterns, Tooth (Gaussian)



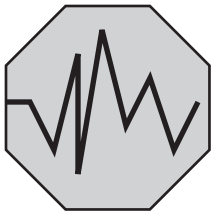
Scale

Wavelength (x/y/z)

Origin (x/y/z)



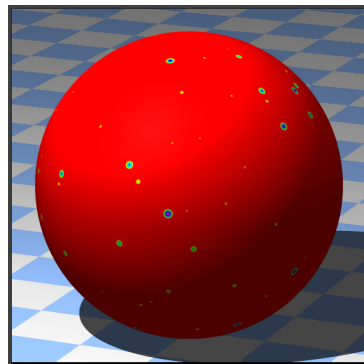
## Other Patterns, Dots



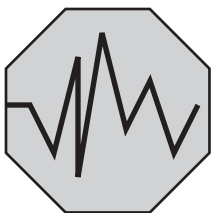
Scale

Wavelength (x/y/z)

Origin (x/y/z)



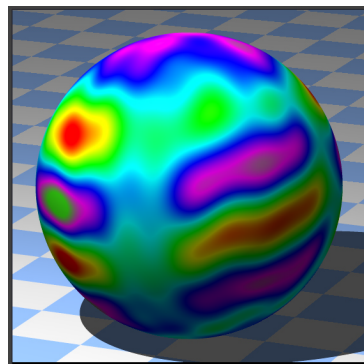
## Other Patterns, Water (calm)



Scale

Wavelength (x/y/z)

Origin (x/y/z)



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



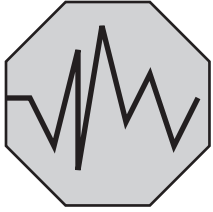
Drop selection



Check box



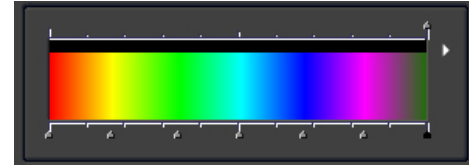
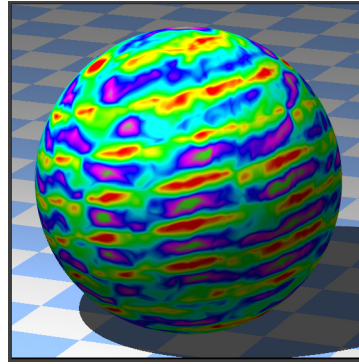
## Other Patterns, Water (Rough)



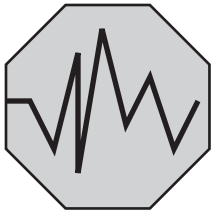
Scale

Wavelength (x/y/z)

Origin (x/y/z)



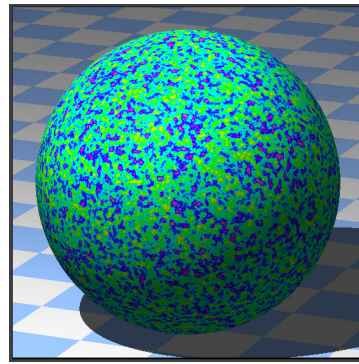
## Other Patterns, Granite



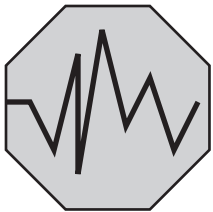
Scale

Wavelength (x/y/z)

Origin (x/y/z)



## Perlin Noises, Value



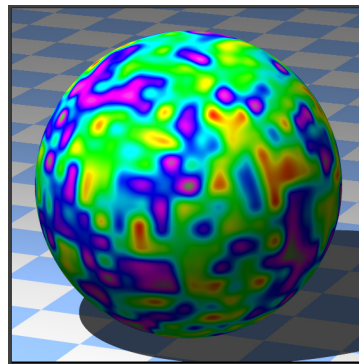
☐ Animated

Scale

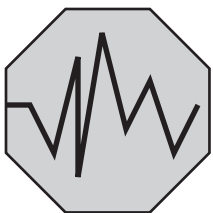
Wavelength (x/y/z)

Origin (x/y/z)

☐ Ridged



## Perlin Noises, Gradient



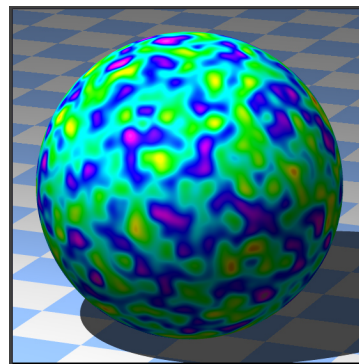
☐ Animated

Scale

Wavelength (x/y/z)

Origin (x/y/z)

☐ Ridged





# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined

Color

Number

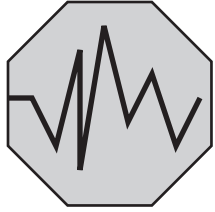
Vector

Texture coordinates

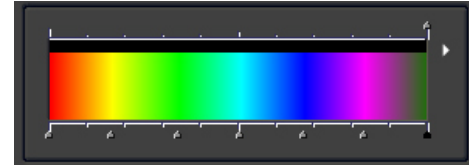
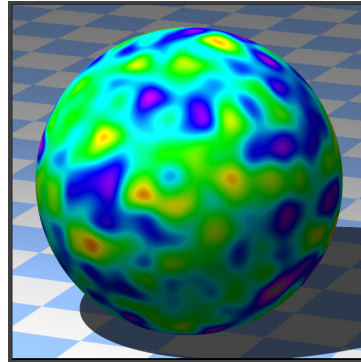
Drop selection

Check box

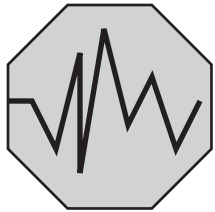
## Perlin Noises, Gradient Amplitude



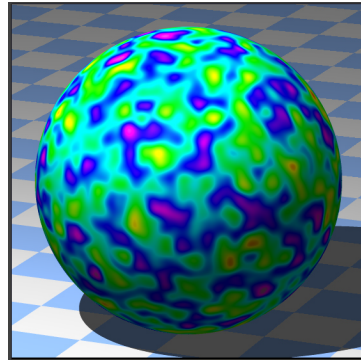
- ☐ Animated
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Amplitude (-1/1)
- ☐ Ridged



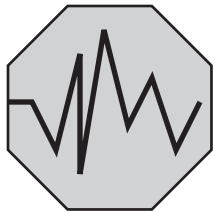
## Perlin Noises, Gradient Gradient



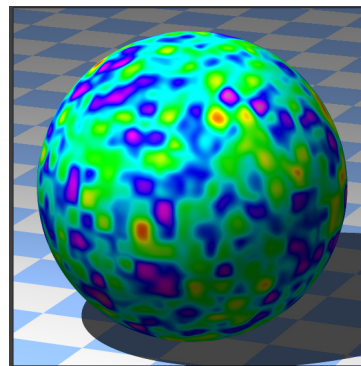
- ☐ Animated
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Ratio
- ☐ Ridged



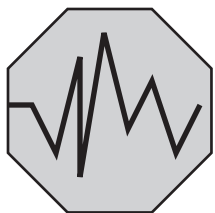
## Perlin Noises, Value-Gradient (Variable)



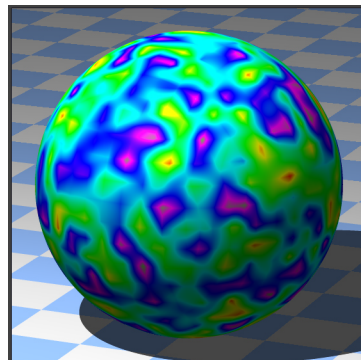
- ☐ Animated
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Ridged



## Perlin Noises, Noise (linear)



- ☐ Animated
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Ridged



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined

Color

Number

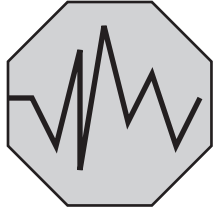
Vector

Texture coordinates

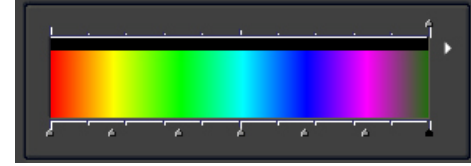
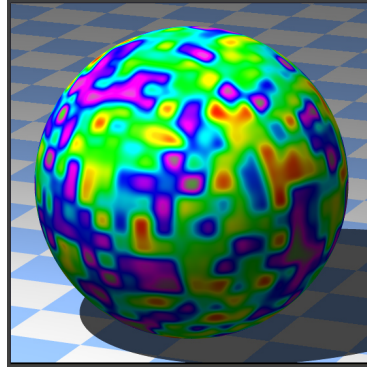
Drop selection

Check box

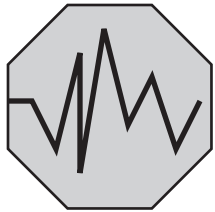
## Perlin Noises, Linear-Value-Gradient



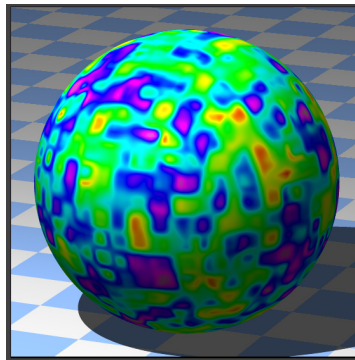
- ☐ Animated
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Ratio
- ☐ Ridged



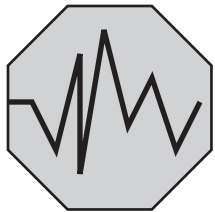
## Perlin Noises, Linear-Value-Gradient (Variable)



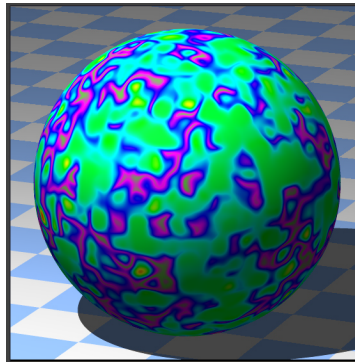
- ☐ Animated
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Ridged



## Perlin Noises, Terrain Perlin Noise



- ☐ Double Noise
- ☐ Value (simple) Noise
- ☐ Scale
- ☐ Wavelength (x/y/z)
- ☐ Origin (x/y/z)
- ☐ Billows/Ridges
- ☐ Smooth area altitude
- ☐ Ridge/Billow Smoothness
- ☐ Distortion



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



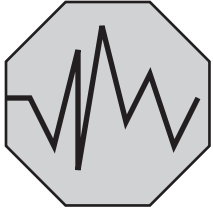
Drop selection



Check box



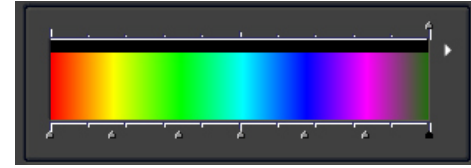
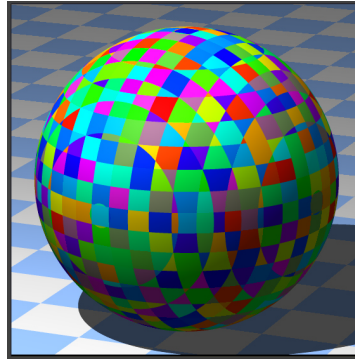
## Square Patterns, Random Altitudes



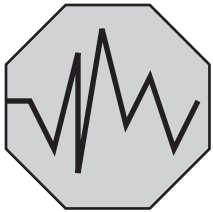
Scale

Wavelength (x/y/z)

Origin (x/y/z)



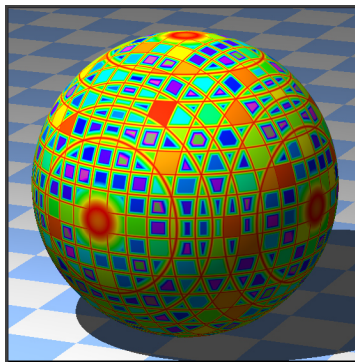
## Square Patterns, Squares



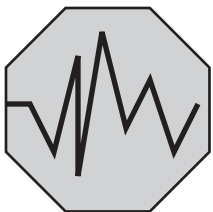
Scale

Wavelength (x/y/z)

Origin (x/y/z)



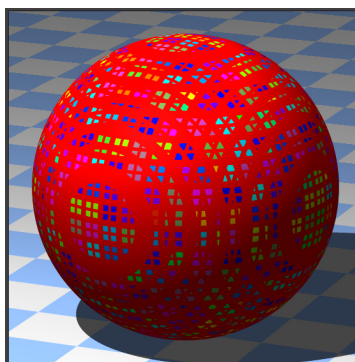
## Square Patterns, Squares (Pairs)



Scale

Wavelength (x/y/z)

Origin (x/y/z)



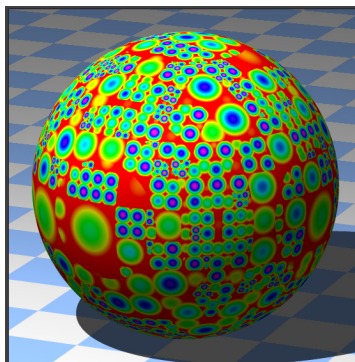
## Square Patterns, Stones



Scale

Wavelength (x/y/z)

Origin (x/y/z)



# Function editor node

Noise Nodes

All Noise Nodes accept input Position as Vector

Undefined



Color



Number



Vector



Texture coordinates



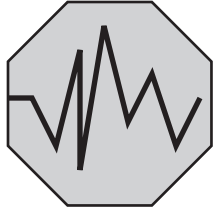
Drop selection



Check box



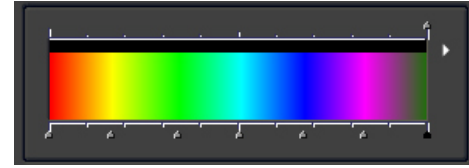
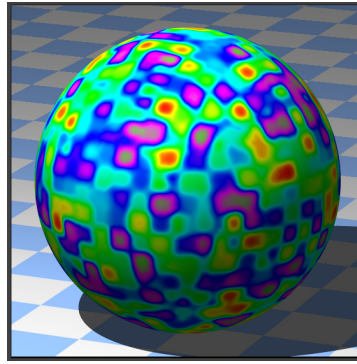
## Square Patterns, Square Blobs



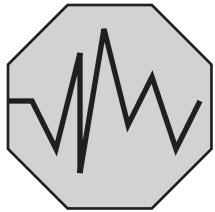
Scale

Wavelength (x/y/z)

Origin (x/y/z)



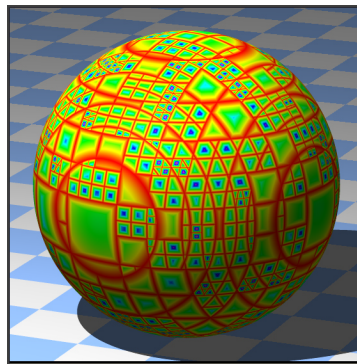
## Square Patterns, Squares Stones

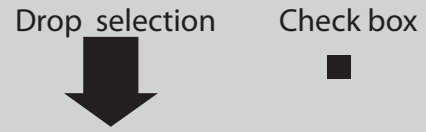
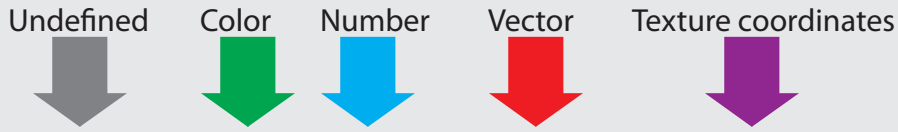


Scale

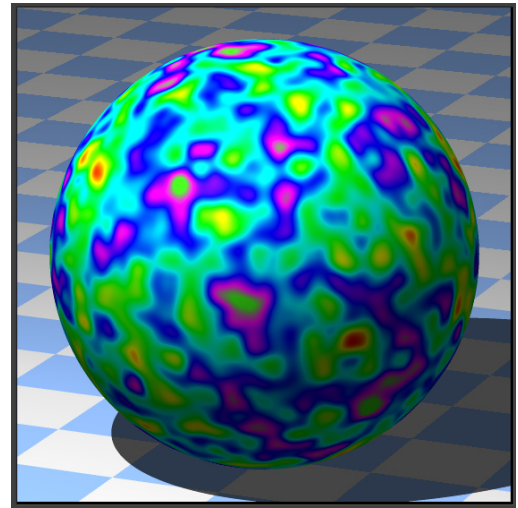
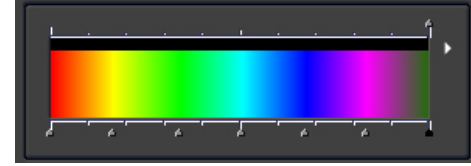
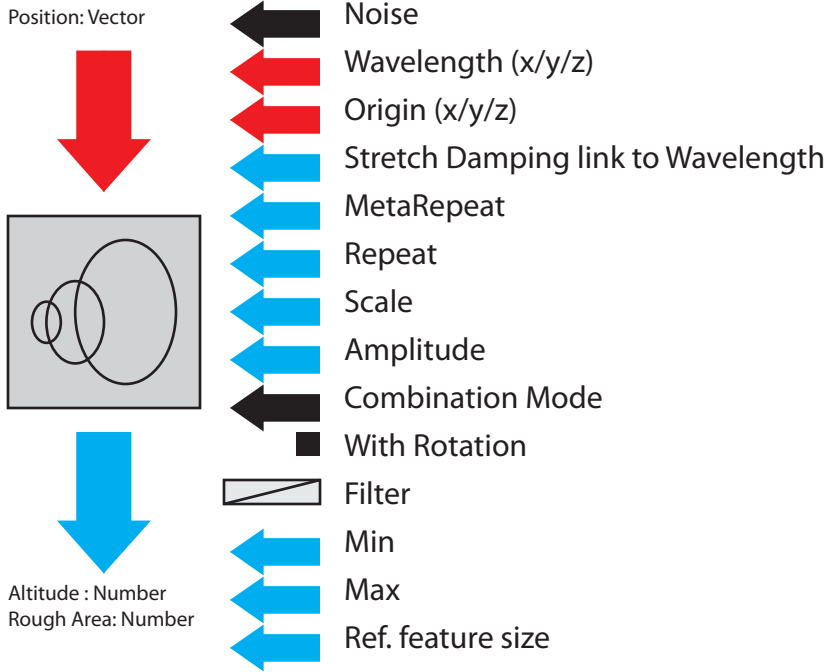
Wavelength (x/y/z)

Origin (x/y/z)

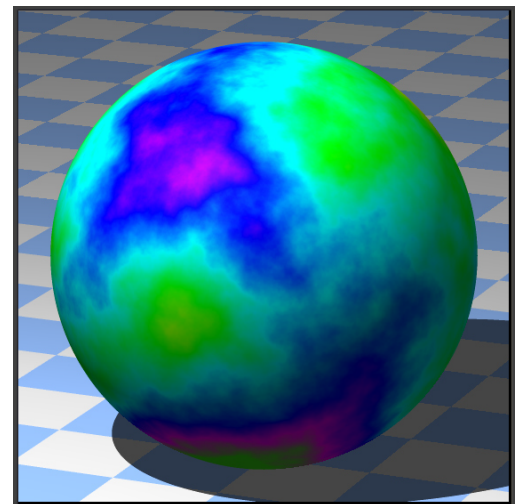
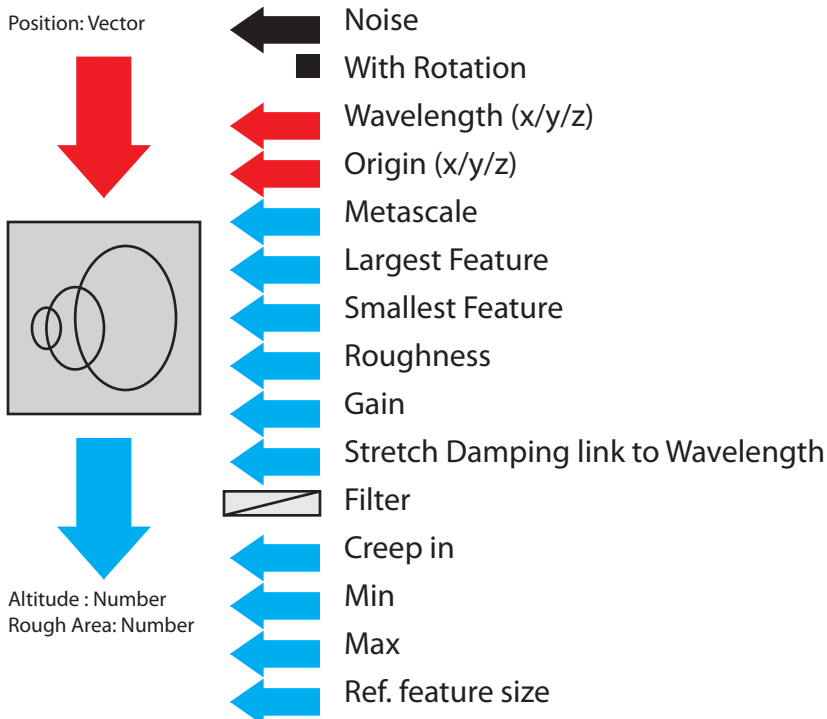




### Basic Repeater



### Simple Fractal





Undefined

Color

Number

Vector

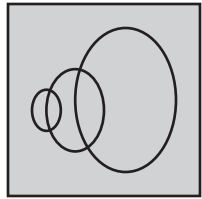
Texture coordinates

Drop selection

Check box

### Grainy Fractal

Position: Vector



Altitude : Number  
Rough Area: Number

With Rotation

Wavelength (x/y/z)

Origin (x/y/z)

Metascale

Largest Feature

Smallest Feature

Roughness

Gain

Stretch Damping link to Wavelength

Variation Strength

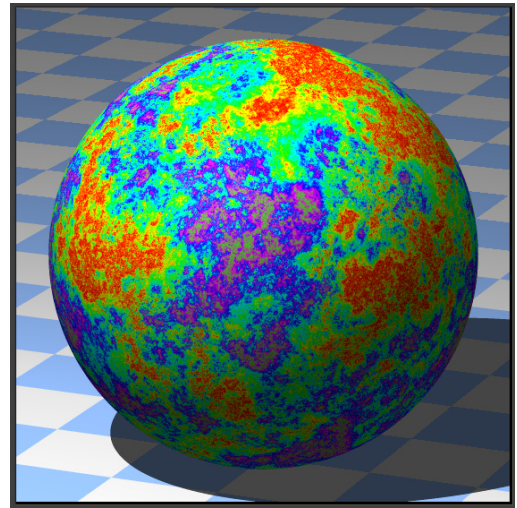
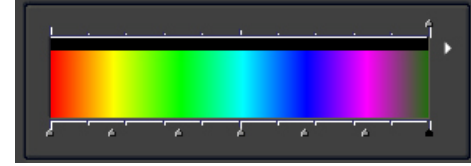
Variation Roughness

Smooth Area Altitude

Distortion

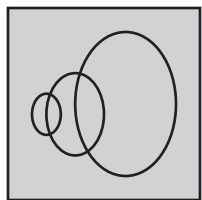
Filter Steepness

Ref. feature size



### Terrain Fractal

Position: Vector



Altitude : Number  
Rough Area: Number

With Rotation

Wavelength (x/y/z)

Origin (x/y/z)

Metascale

Largest Feature

Smallest Feature

Roughness

Gain

Stretch Damping link to Wavelength

Variation Strength

Smooth Area

Smooth Area Altitude

Distortion

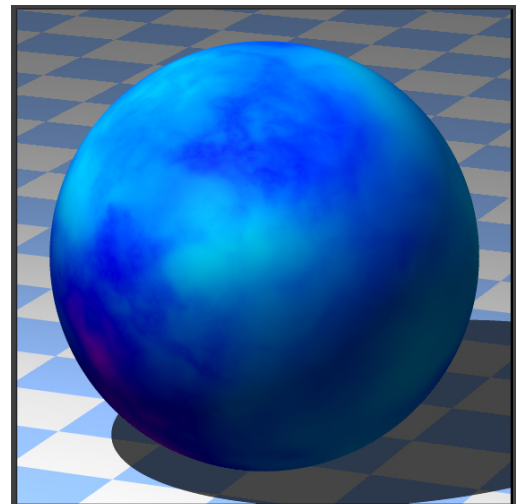
Bump Surge

Ridge Smoothness

Noise Type

Blending

Ref. feature size



Undefined

Color

Number

Vector

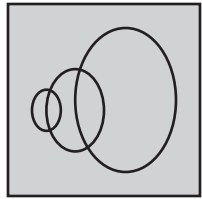
Texture coordinates

Drop selection

Check box

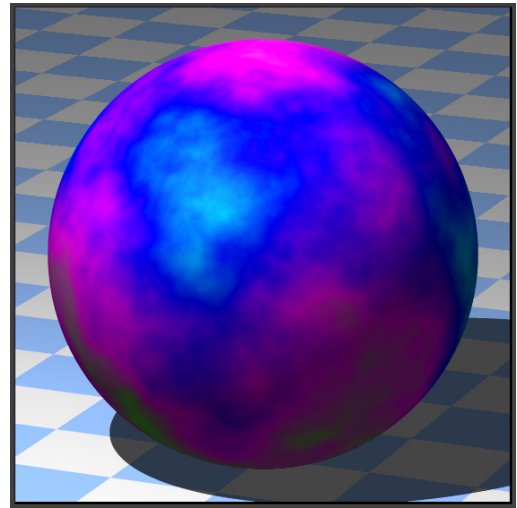
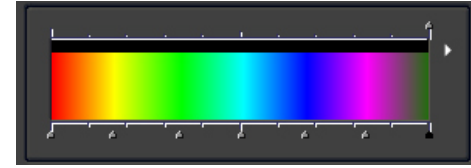
### Fast Perlin Fractal

Position: Vector



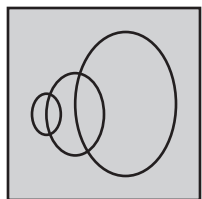
Altitude : Number  
Rough Area: Number

- ← Wavelength (x/y/z)
- ← Origin (x/y/z)
- ← Metascale
- ← Largest Feature
- ← Smallest Feature
- ← Roughness
- ← Gain
- ← Stretch Damping link to Wavelength
- ← Ref. feature size



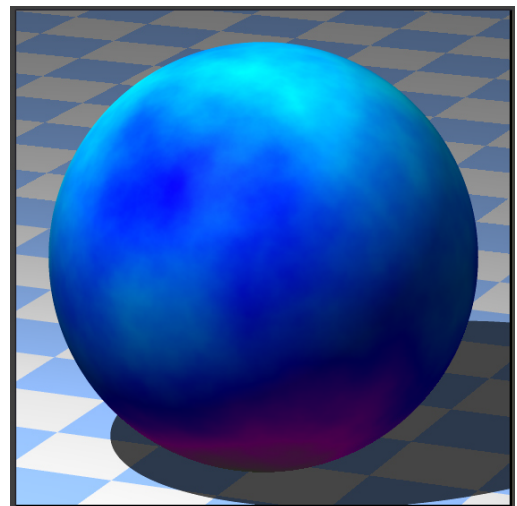
### Variable Roughness Fractal

Position: Vector



Altitude : Number  
Rough Area: Number

- With Rotation
- ← Wavelength (x/y/z)
- ← Origin (x/y/z)
- ← Metascale
- ← Largest Feature
- ← Smallest Feature
- ← Roughness
- ← Gain
- ← Stretch Damping link to Wavelength
- ← Smooth Level
- ← Influence
- ← Local Influence
- ← Creep In
- ▨ Filter
- ← Creep In
- ← Min
- ← Max
- ← Ref. feature size



Undefined



Color



Number



Vector



Texture coordinates



Drop selection

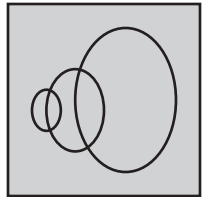


Check box



### Variable Noise Fractal

Position: Vector



Altitude : Number  
Rough Area: Number



Wavelength (x/y/z)



Origin (x/y/z)



Metascale



Largest Feature



Smallest Feature



Roughness



Gain



Stretch Damping link to Wavelength



Noise 1



Noise 2



With Rotation



Switch Level



Switch Speed



Local Influence



Filter



Creep In



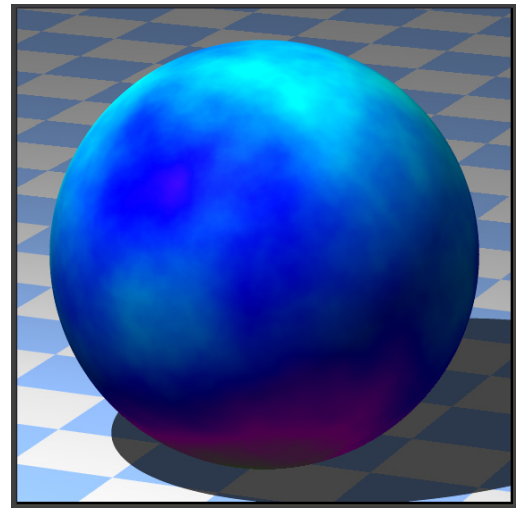
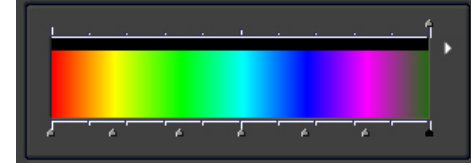
Min



Max



Ref. feature size

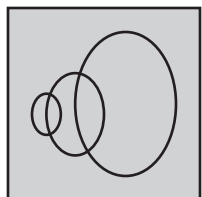


### Open Ocean

Time: Open Ocean

Type: Number

Position: Vector



Altitude : Number  
Foam: Number



Wavelength (x/y/z)



Origin (x/y/z)



Metascale



Largest Feature



Smallest Feature



Direction



Intensity



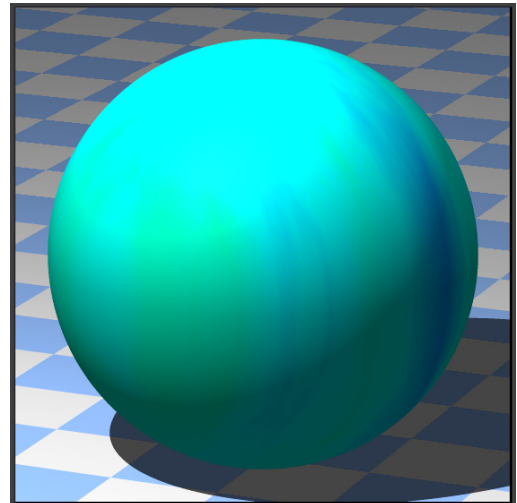
Agitation Tweak



Choppiness



Gain



Undefined



Color



Number



Vector



Texture coordinates



Drop selection

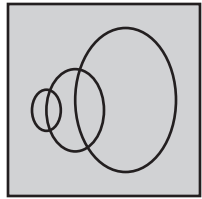


Check box



### Three Noise Fractal

Position: Vector



Altitude : Number  
Rough Area: Number



Large Scale Noise



Noise With Rotation



Wavelength (x/y/z)



Origin (x/y/z)



Largest Feature



Smallest Feature



Roughness



Gain



Smooth Level



Roughness Variability



Creep In



Local Influence



Turbulence Damping



Mid Scale Noise



Change-over Scale



Small Scale Noise



Change-over Scale



Filter



Creep In



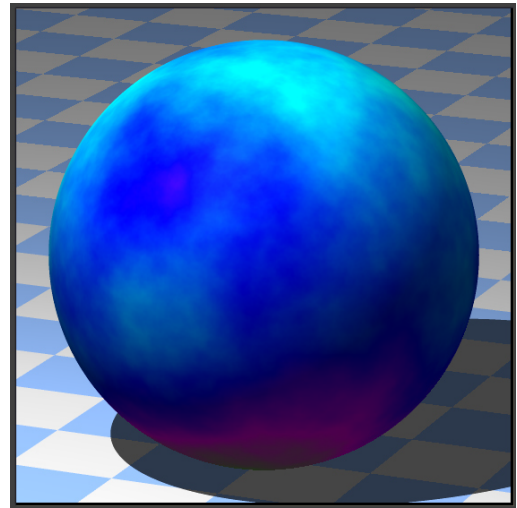
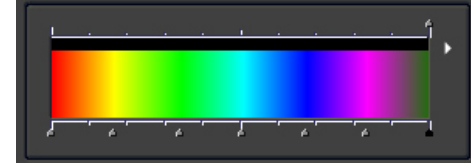
Min



Max



Ref. feature size



# Function editor node

## Color Nodes

Undefined

Color

Number

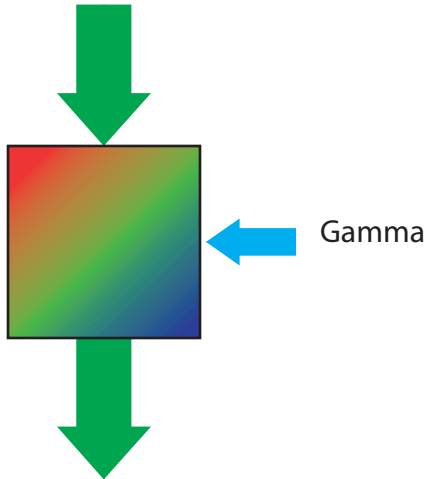
Vector

Texture coordinates

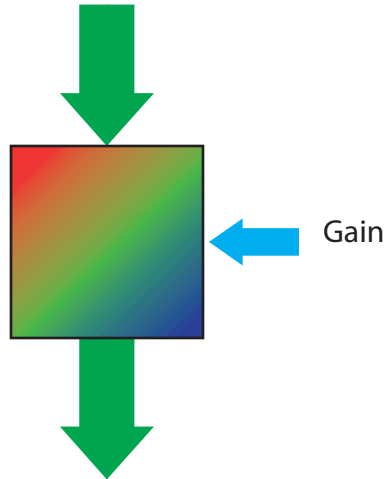
Drop selection

Check box

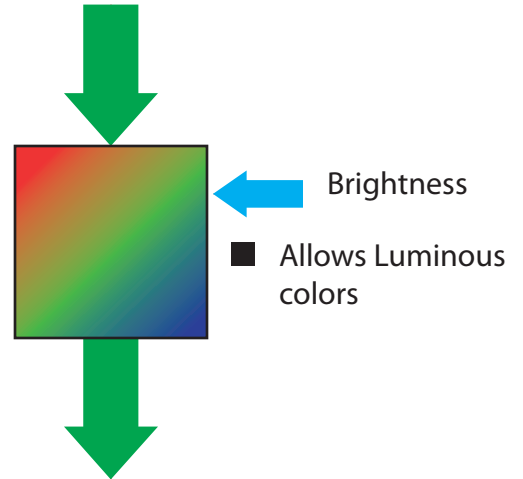
Color Correction, Gamma



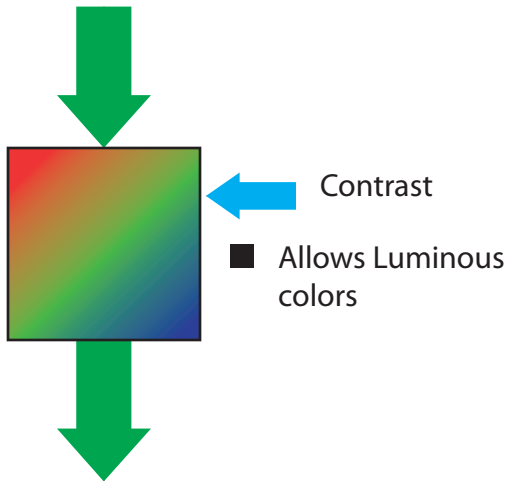
Color Correction, Gain



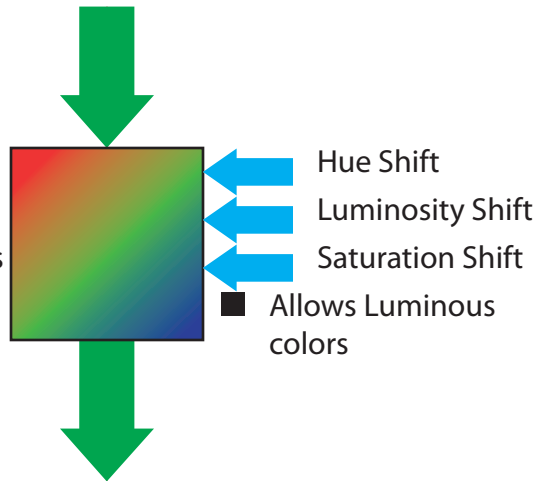
Color Correction, Brightness



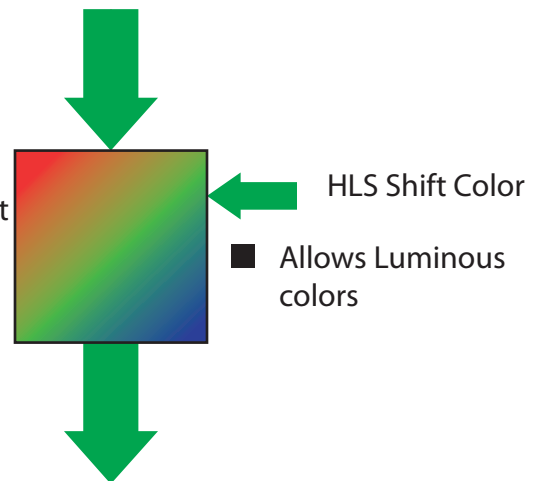
Color Correction, Contrast



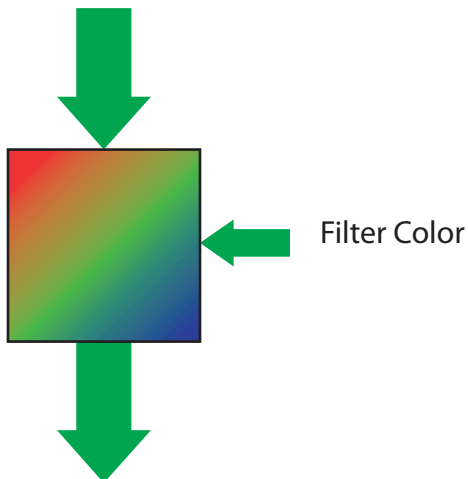
Color Correction, HLS Shift



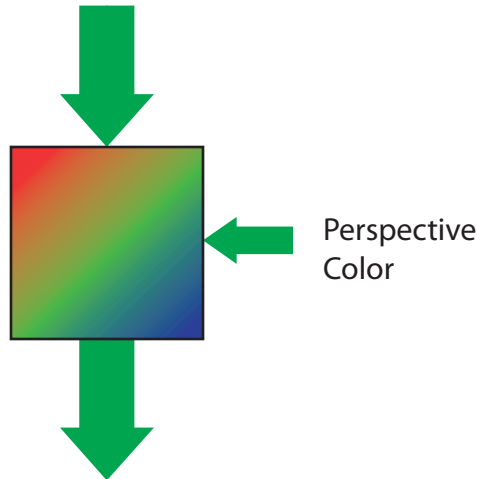
Color Correction, HLS Shift



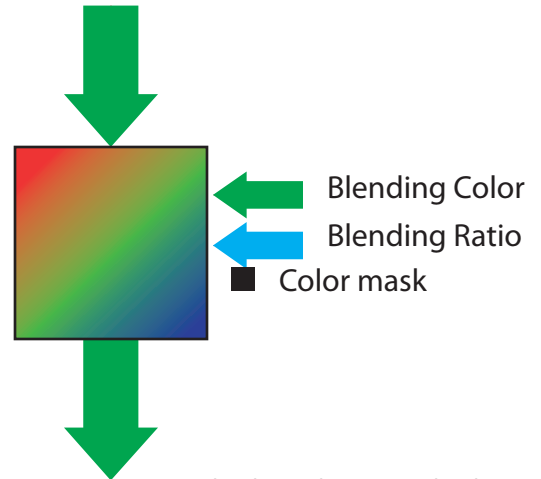
Color Correction, Filter



Color Correction, Perspective



Color Correction, Color Blending



Undefined

Color

Number

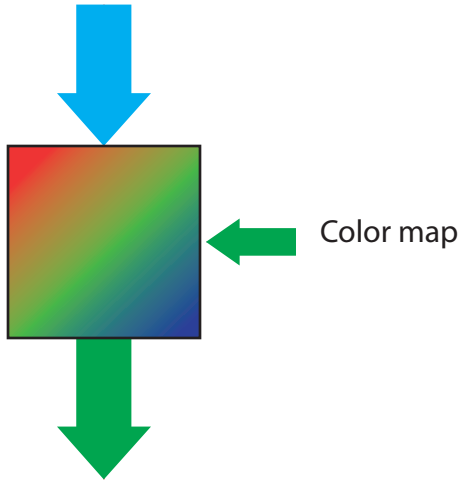
Vector

Texture coordinates

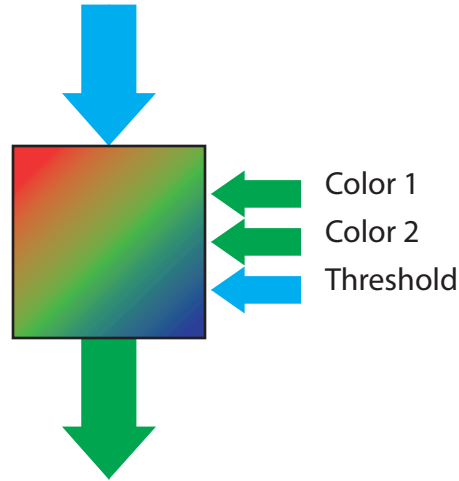
Drop selection

Check box

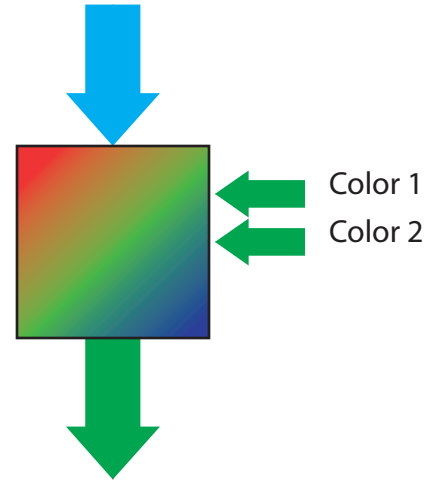
### Color Map



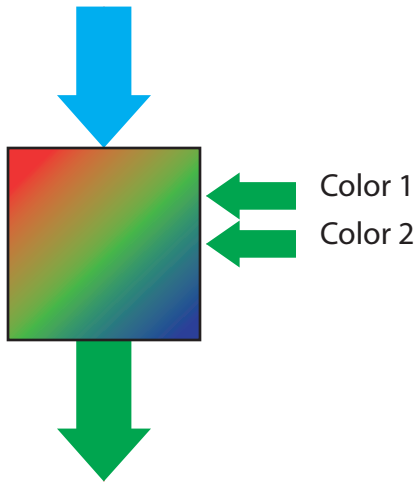
### 2 Color Output



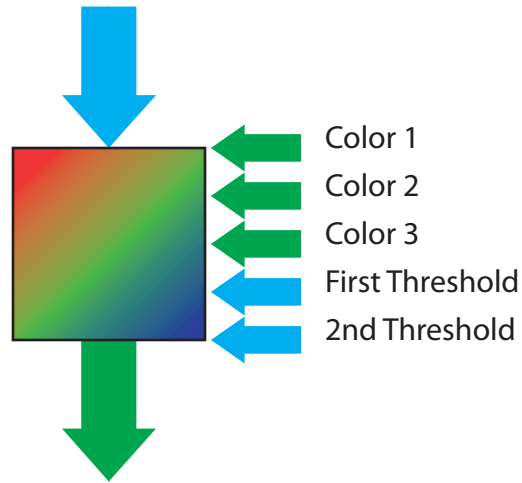
### Linear Interpolation 2



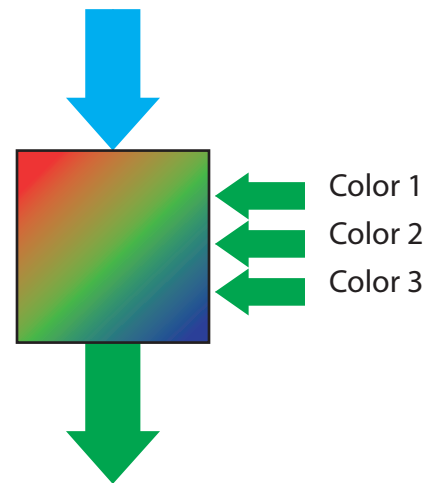
### Spline Interpolation 2



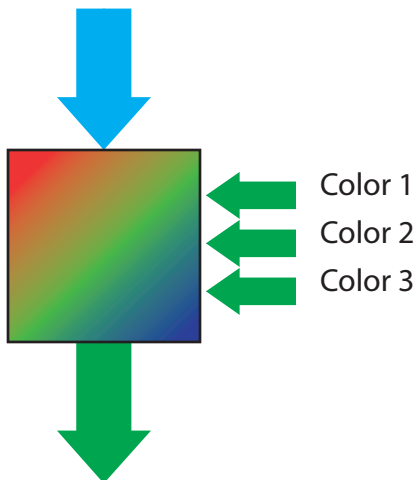
### 3 Color Output



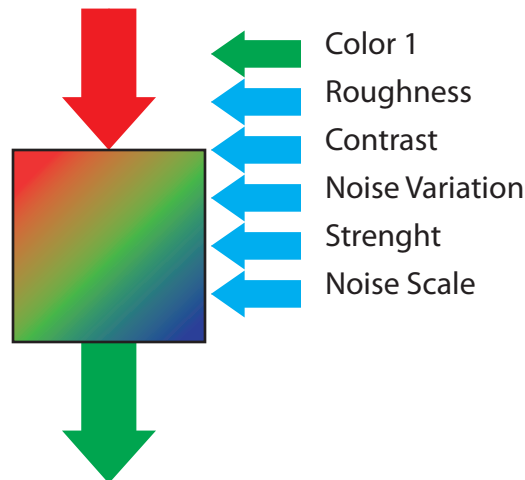
### Linear Interpolation 3



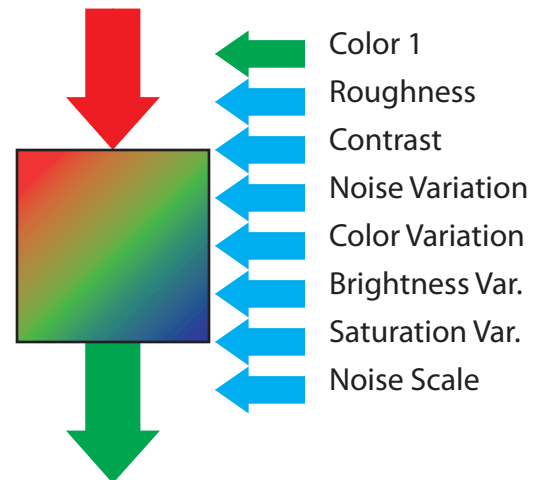
### Spline Interpolation 3



### Color Variation



### Color-Brightness Variation



Undefined

Color

Number

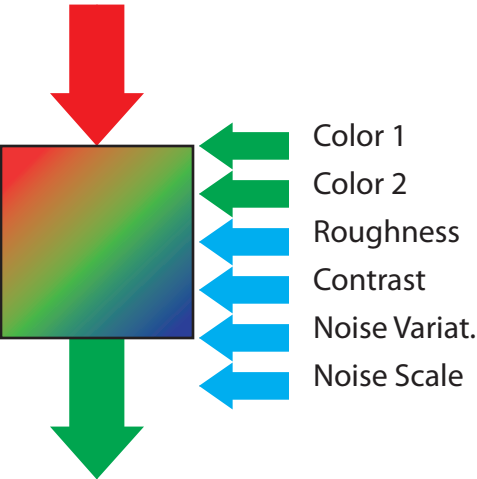
Vector

Texture coordinates

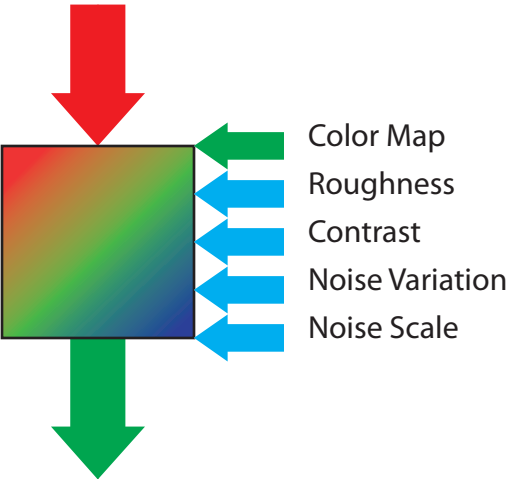
Drop selection

Check box

2 Color Variation



Color Variation Map



Undefined

Color

Number

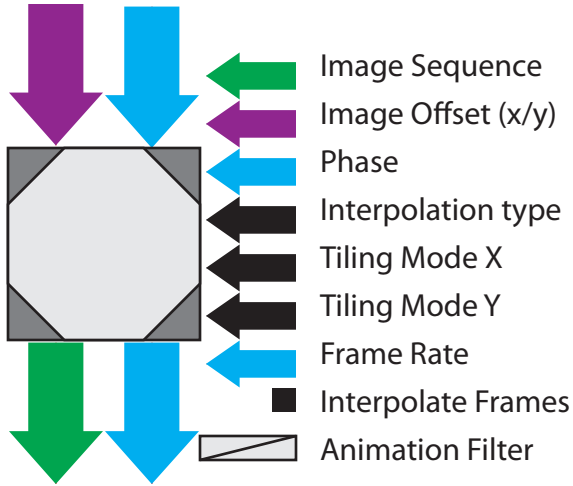
Vector

Texture coordinates

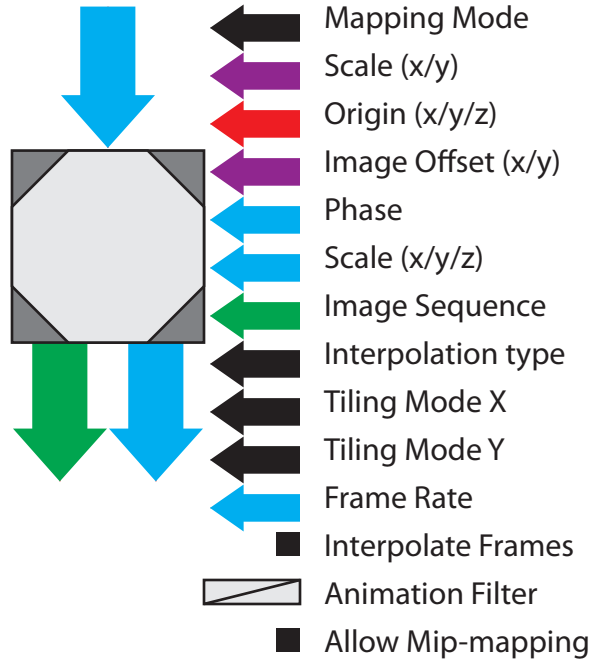
Drop selection

Check box

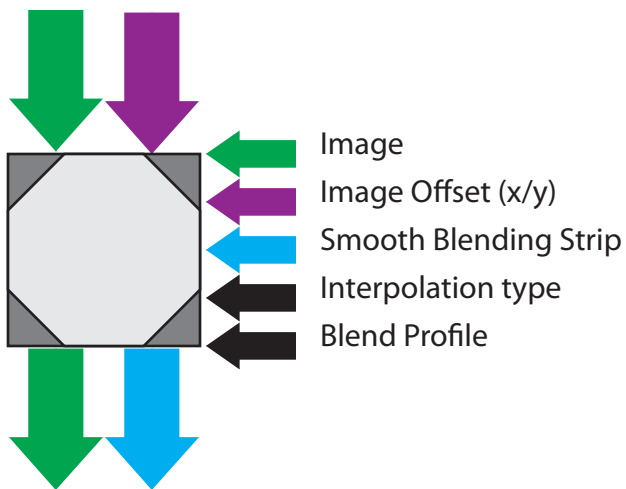
### Animation Map



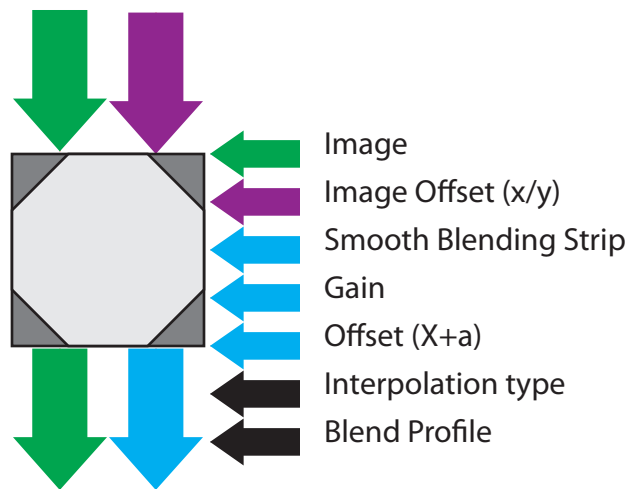
### Projected Animation Map



### Blended Image



### Blended Grayscale Image





Undefined



Color



Number



Vector



Texture coordinates



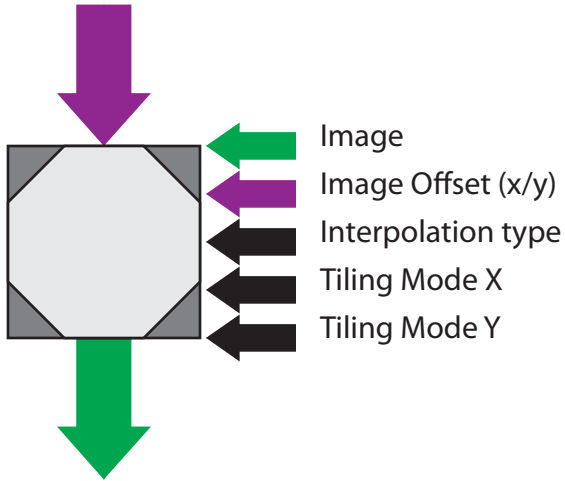
Drop selection



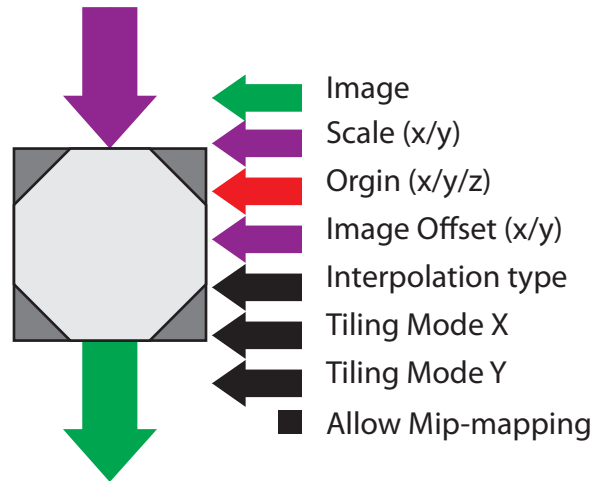
Check box



Texture Map



ProjectedTexture Map



Undefined



Color



Number



Vector



Texture coordinates



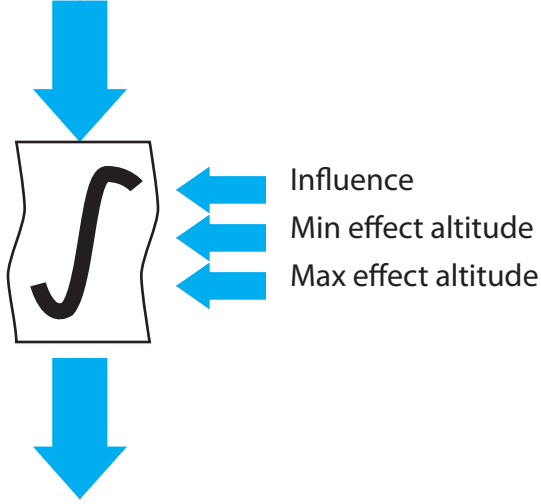
Drop selection



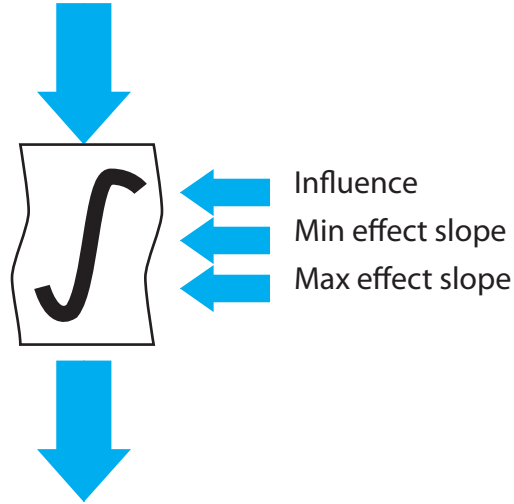
Check box



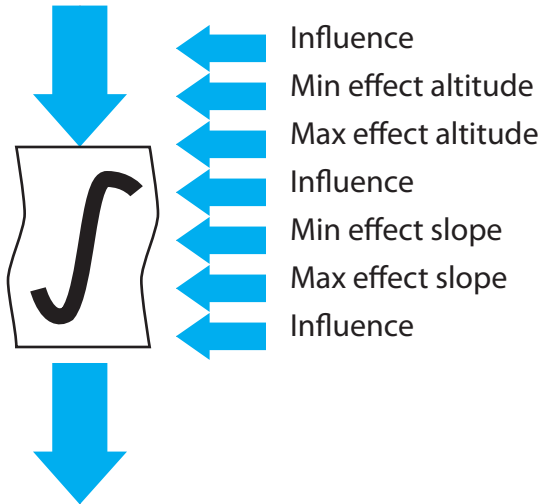
### Environment Sensitive, Altitude



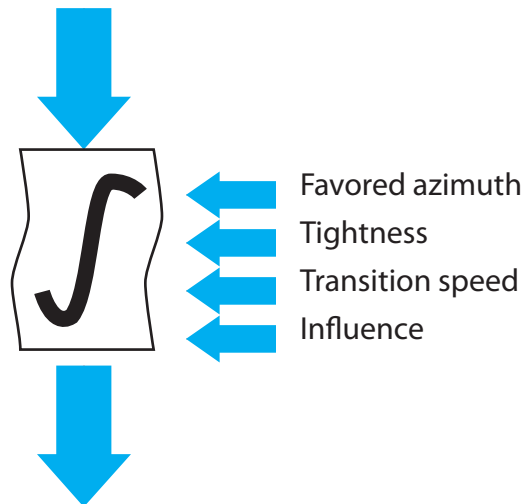
### Environment Sensitive, Slope



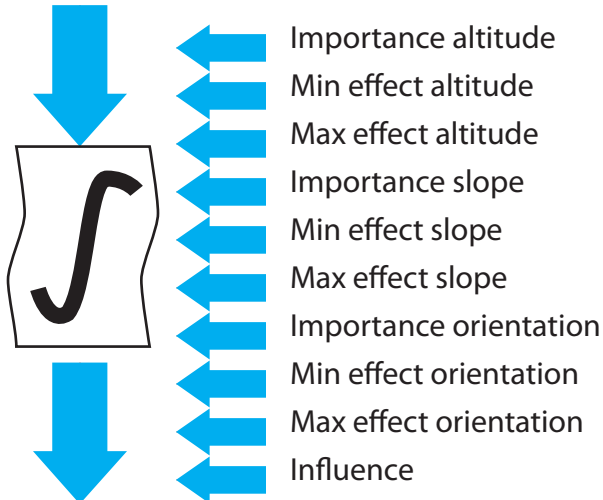
### Environment Sensitive, Altitude and Slope



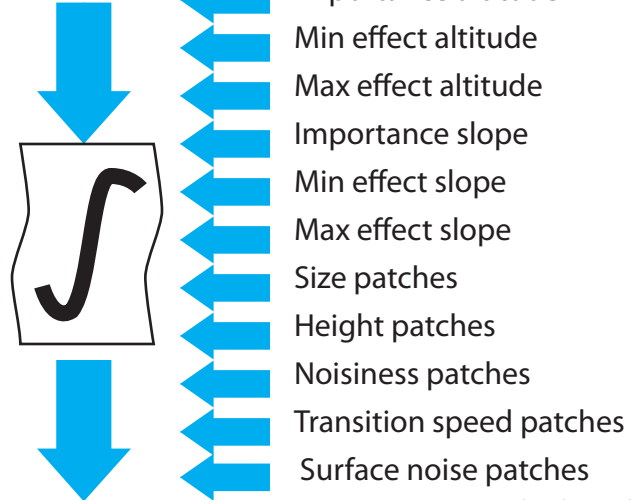
### Orientation



### Environment Sensitive, Altitude and Slope



### Patches



Undefined

Color

Number

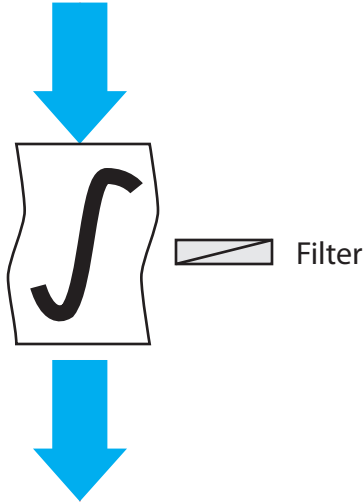
Vector

Texture coordinates

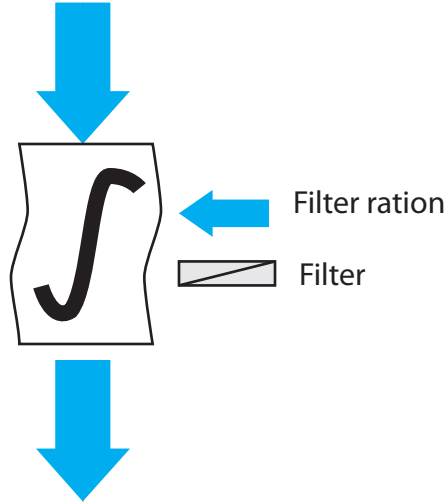
Drop selection

Check box

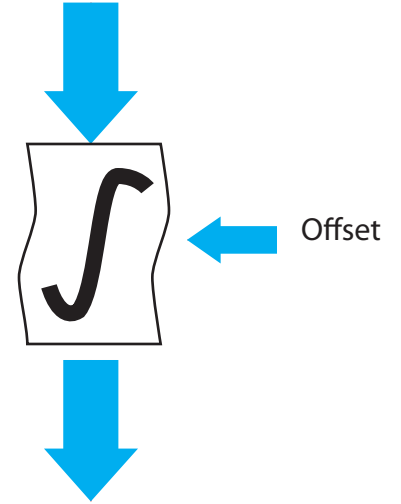
Filter



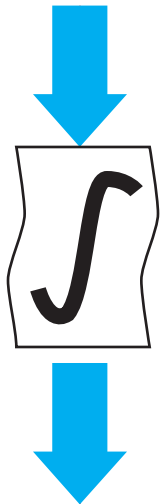
Partial Filter



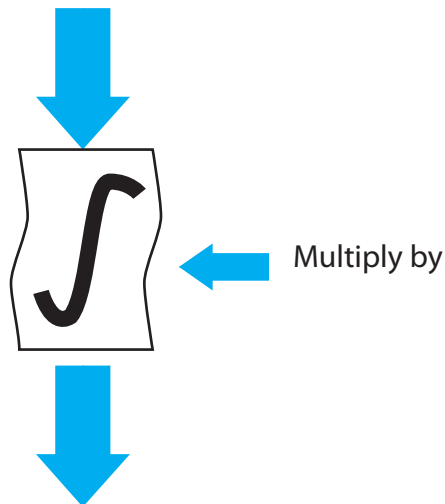
Offset (X+a)



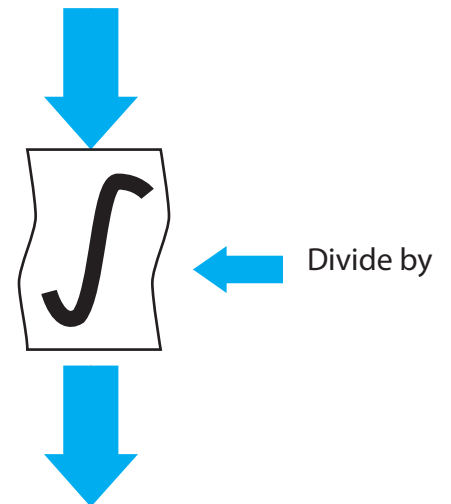
Opposite (-X)



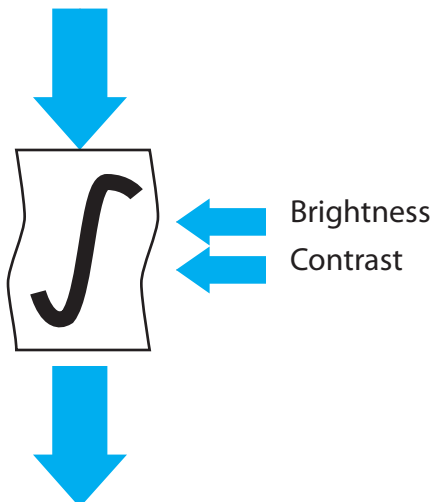
Multiply (aX)



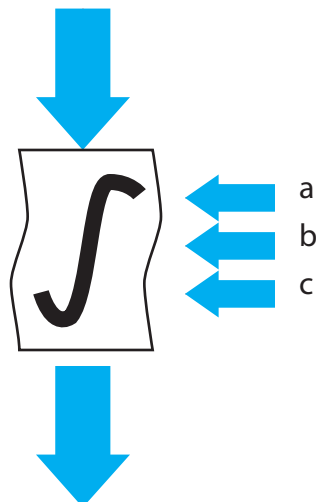
Divide (X/a)



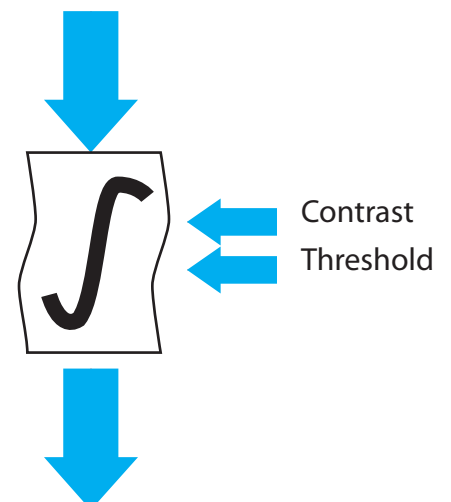
Brightness Contrast (aX+b)



Parabolic ( $aX^2 + bX + c$ )



Absolute



# Function editor node

## Filter Nodes

Undefined



Color



Number



Vector



Texture coordinates



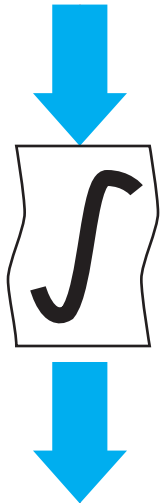
Drop selection



Check box

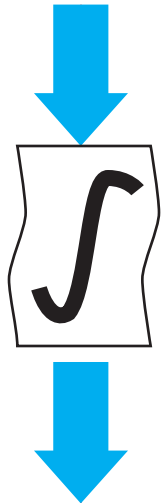


Gamma



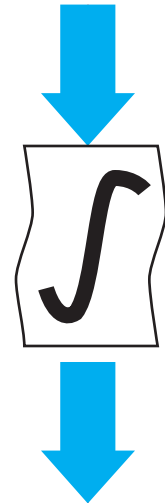
Gamma

Bias



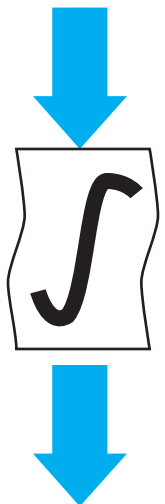
Bias

Gain



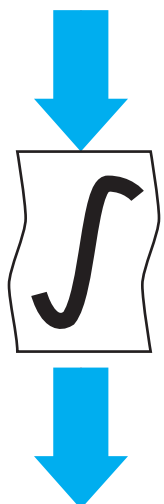
Gain

Power



Exponent  
Lower clip

Gaussian



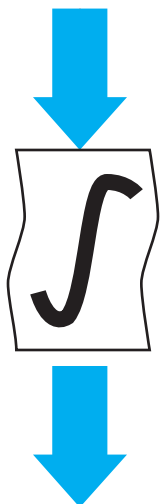
Contrast  
Threshold

Floor



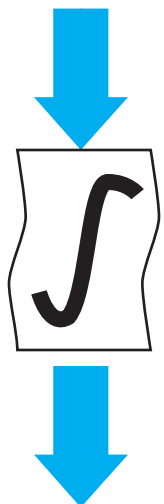
Floor

Ceiling



Ceiling

Clamp



Lower clip  
Upper clip

Clip



Contrast  
Brightness  
Lower clip  
Upper clip

# Function editor node

## Filter Nodes

Undefined

Color

Number

Vector

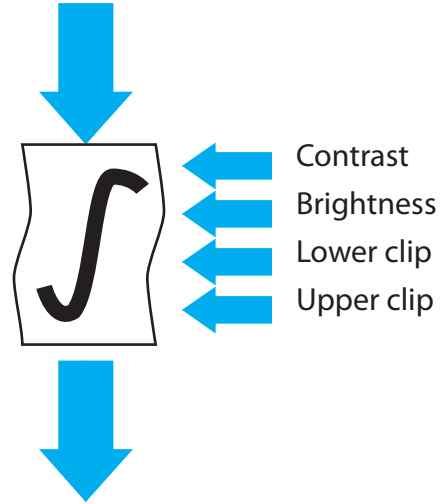
Texture coordinates

Drop selection

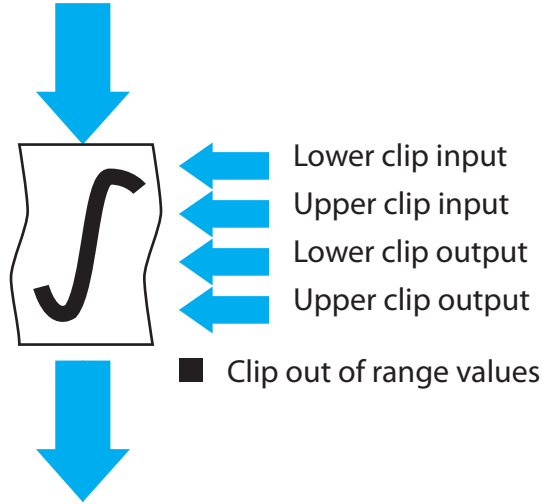
Check box



### Smooth Clip

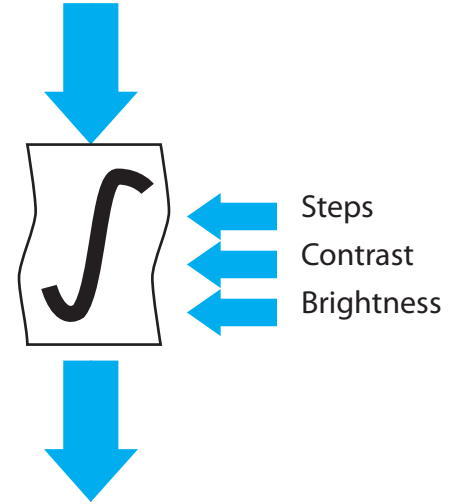


### Map

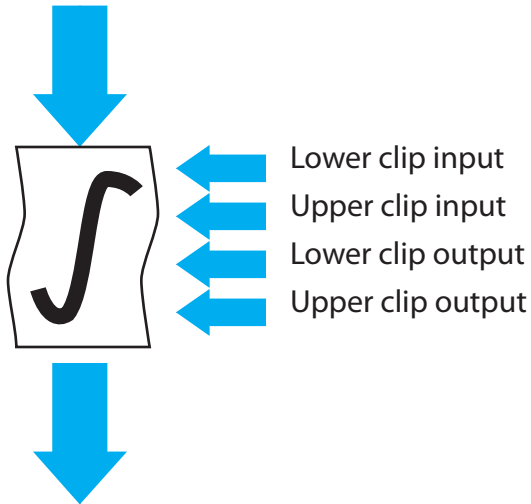


■ Clip out of range values

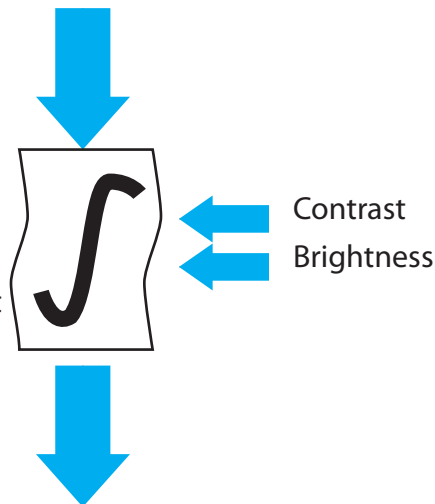
### Quantize



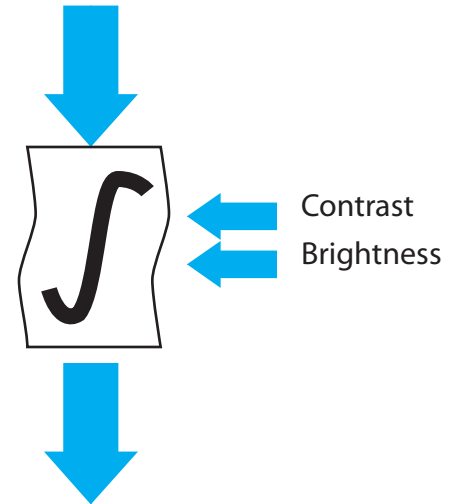
### Smooth Map



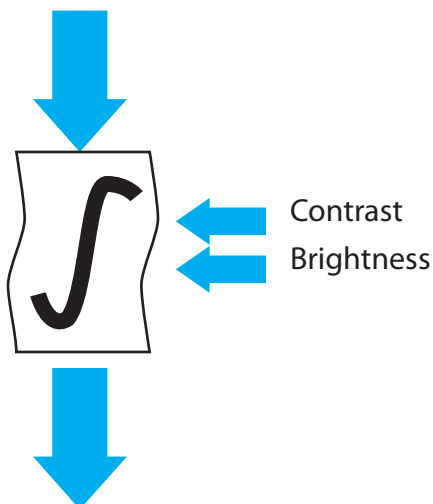
### Saw wave



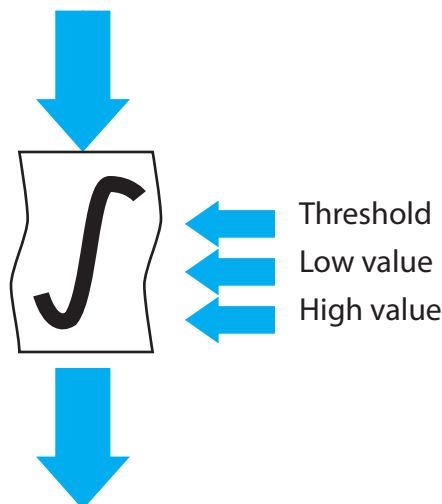
### Absolute wave



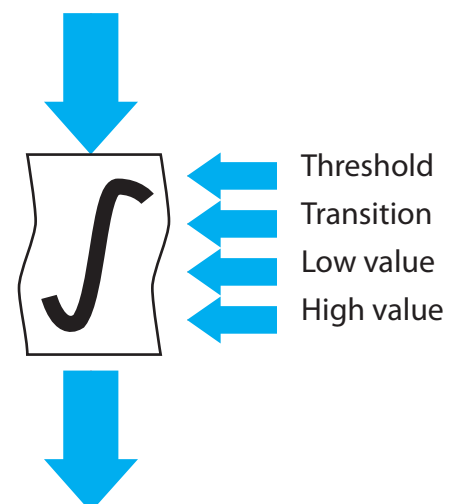
### Sine wave



### Threshold



### Smooth Threshold



# Function editor node

## Constant Nodes

Undefined



Color



Number



Vector



Texture coordinates



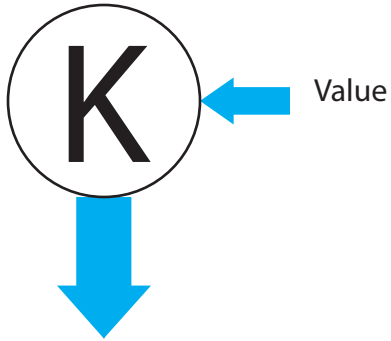
Drop selection



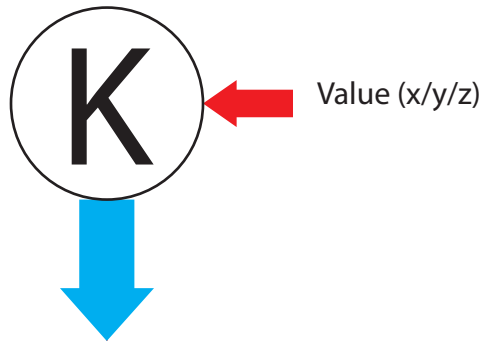
Check box



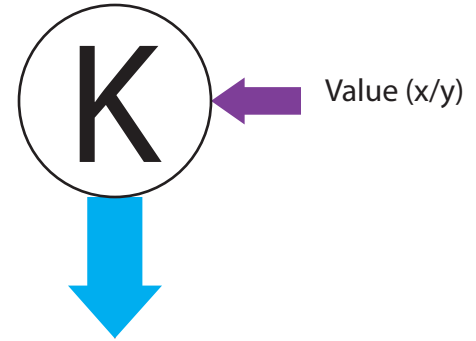
Connectible Constant, Number



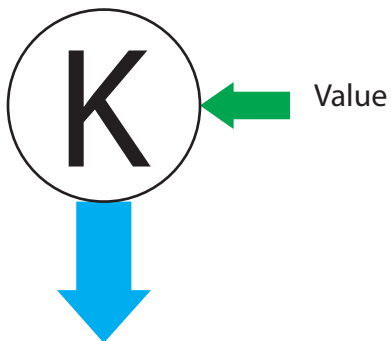
Connectible Constant, Vector



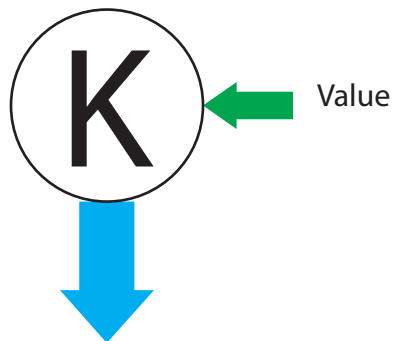
Connectible Constant, Texture Coordinates



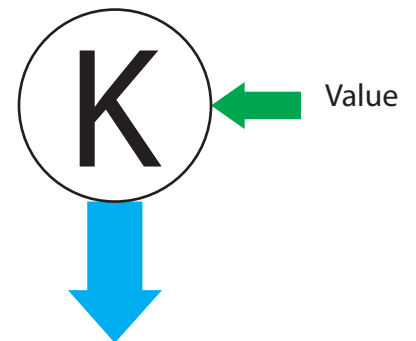
Connectible Constant, Color



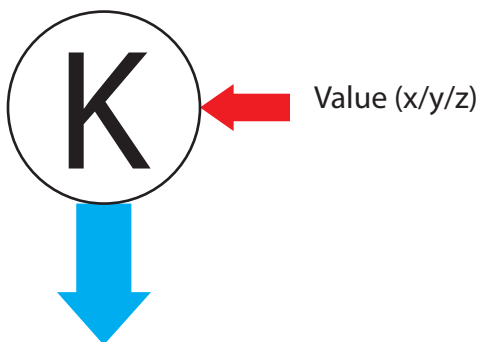
Constant Color



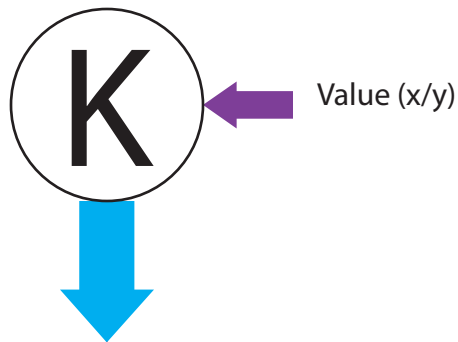
Constant Number



Constant Vector



Constant Texture Coordinates





Undefined



Color



Number



Vector



Texture coordinates



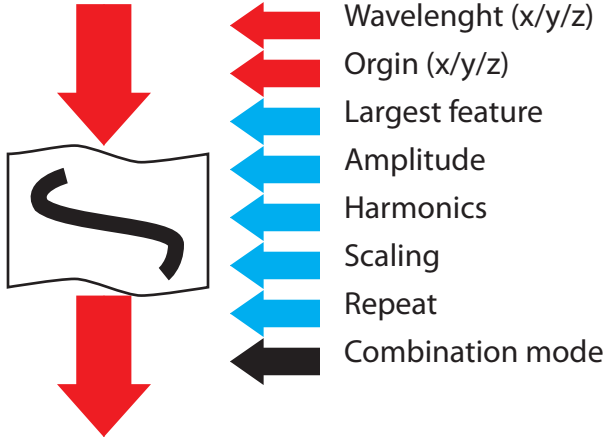
Drop selection



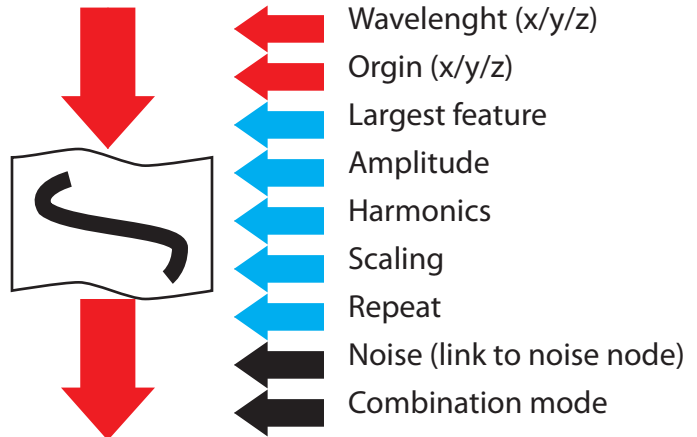
Check box



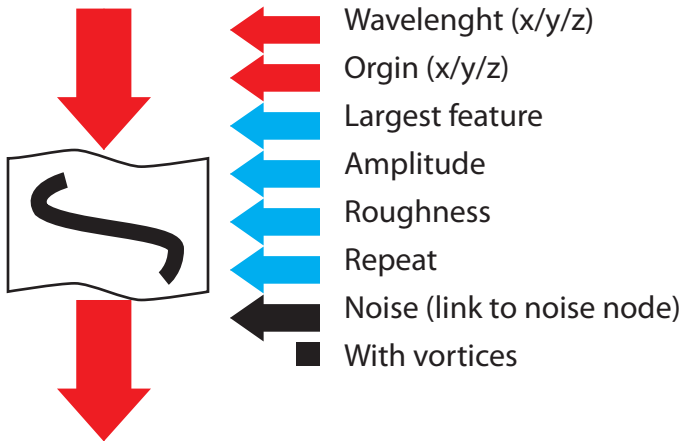
### Simple Turbulence



### Vue 4 Style Turbulence



### Advanced Turbulence



# Function editor node

## Combiner Nodes

Undefined



Color



Number



Vector



Texture coordinates



Drop selection



Check box



Blender



Ratio



Combination mode



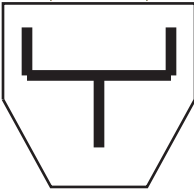
Combiner



Combination mode



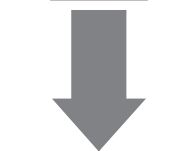
Color Combiner



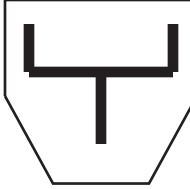
Combination mode



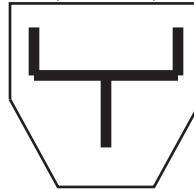
Allows luminous colors



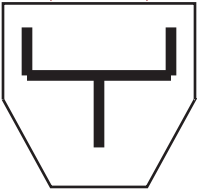
Add



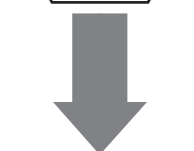
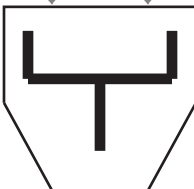
Subtract



Multiply



Divide



Undefined



Color



Number



Vector



Texture coordinates



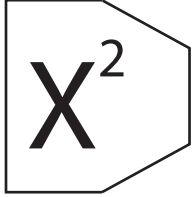
Drop selection



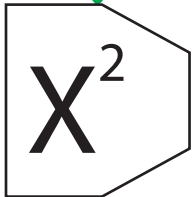
Check box



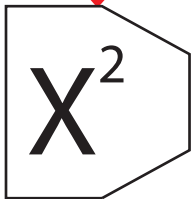
Conversions,  
Color to Brightness



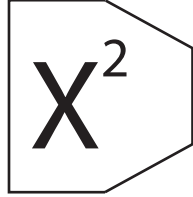
Conversions,  
RGB to HLS



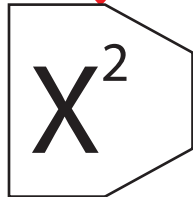
Vector Operations  
XYZ Product



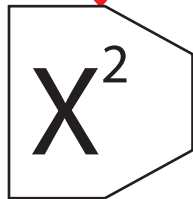
Conversions,  
Vector to RGB



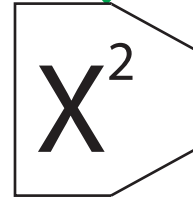
Conversions,  
HLS to RGB



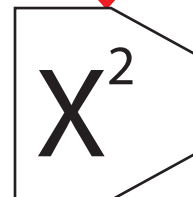
Vector Operations  
Rotation and Twist



Conversions,  
RGB to Vector



Vector Operations  
Offset



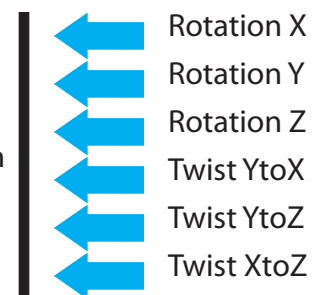
Offset (x/y/z)



Offset (x/y/z)



Matrix  
Transformation



Undefined

Color

Number

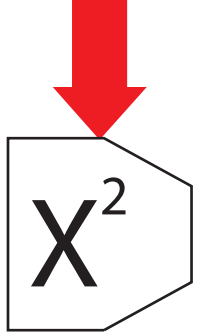
Vector

Texture coordinates

Drop selection

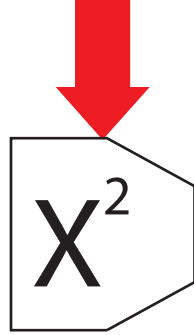
Check box

Vector Operations  
Orientation Rotation

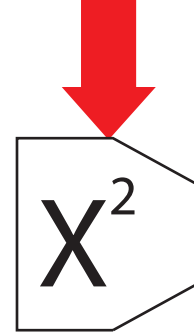


Transformation

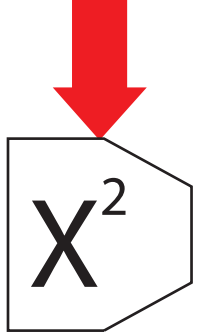
Vector Operations  
Orientation to Direction



Vector Operations  
Direction to Orientation

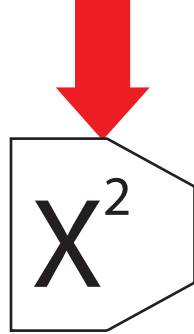


Vector Operations,  
Projection



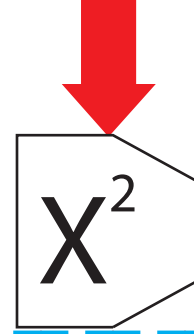
Mapping mode

Vector Operations,  
Matrix Transformation

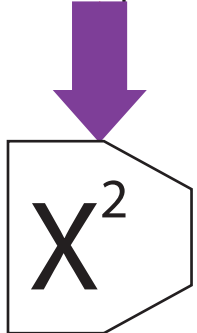


Line 1 (x,y,z)  
Line 2 (x,y,z)  
Line 3 (x,y,z)

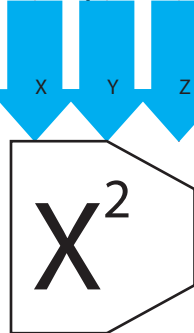
Vector Operations  
Decomposer 3



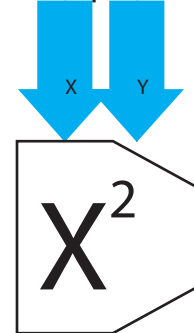
Vector Operations  
Decomposer 2



Vector Operations  
Composer 3



Vector Operations  
Composer 2



Undefined



Color



Number



Vector



Texture coordinates



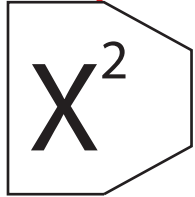
Drop selection



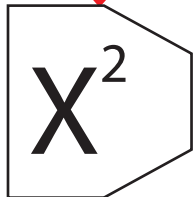
Check box



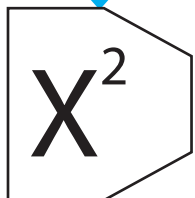
Vector Operations  
Length



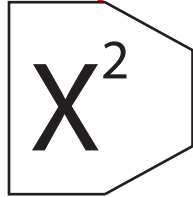
Vector Operations,  
Vector Product



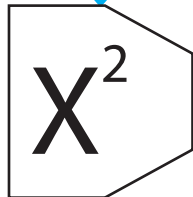
Floor



Vector Operations  
Normalize



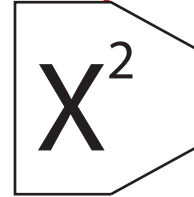
Sine



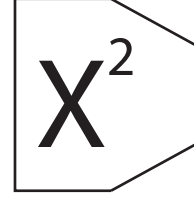
■ Input in degrees



Vector Operations  
Dot Production



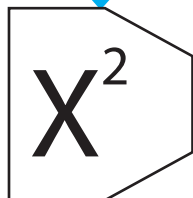
Arc Cosine



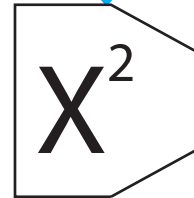
■ Output in degrees



Fractional Part



Invert



Undefined

Color

Number

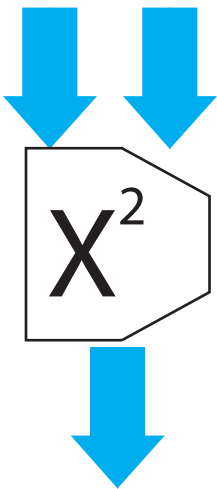
Vector

Texture coordinates

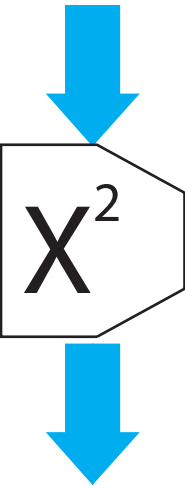
Drop selection

Check box

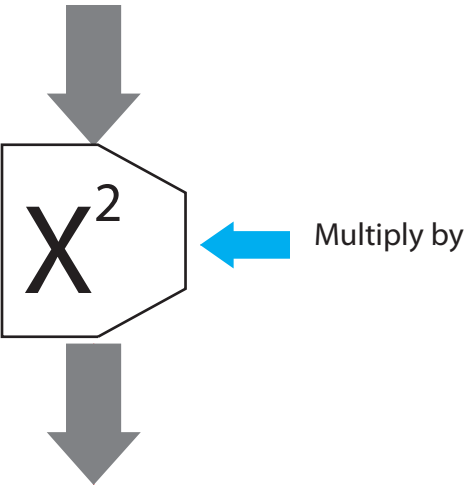
Power



Square Root



Multiply





Undefined

Color

Number

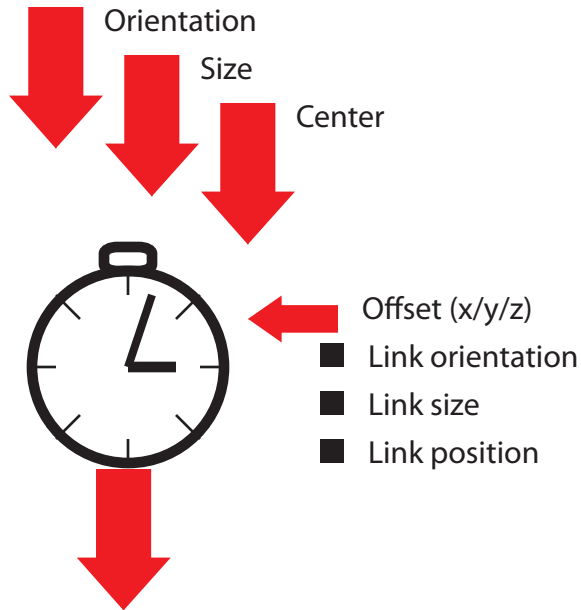
Vector

Texture coordinates

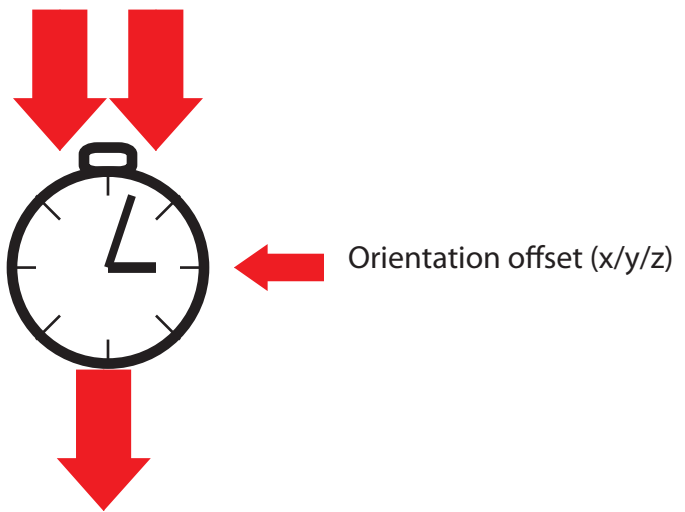
Drop selection

Check box

### Link Relationship



### Track Relationship



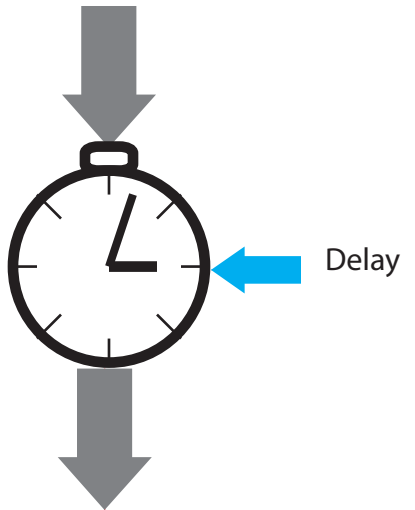
### Derivative



### Integral



### Delay



Undefined



Color



Number



Vector



Texture coordinates



Drop selection



Check box



### Simple Controller

Current Target



Accuracy



### PID Controller

Current Target



Proportional  
Integral  
Derivative



### Speed Limiter



Max speed



### Acceleration Limiter



Max  
acceleration



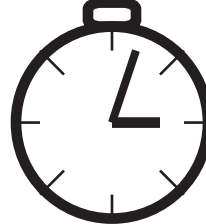
### Low Pass



Decay time



### Distance Constrain



Center(x,y,z)  
Min distance  
Max distance



### Axis Constrain



Point 1 (x,y,z)  
Point 2 (x,y,z)



### Grid Constrain



Grid step



Undefined



Color



Number



Vector



Texture coordinates



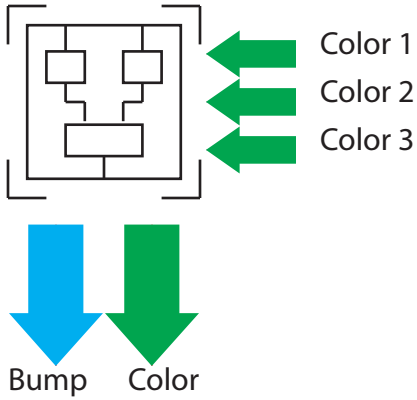
Drop selection



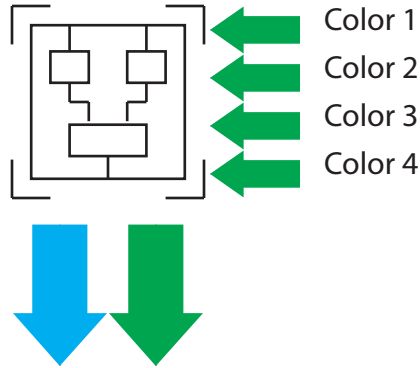
Check box



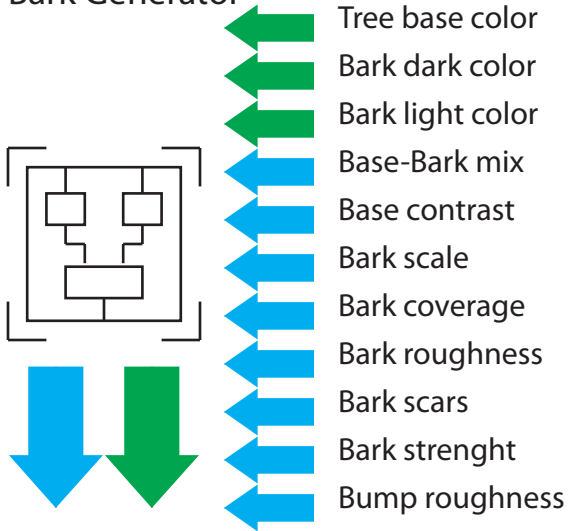
### 3 Color-Bump Variation



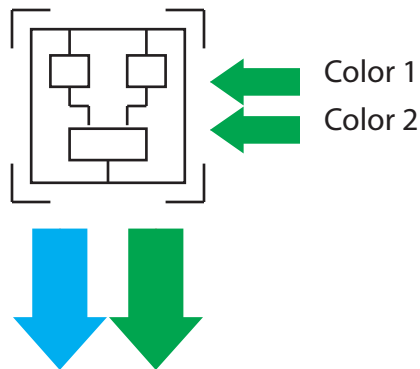
### 4 Color-Bump Variation



### Bark Generator



### Grainy 2 Color Production



### Flat Area

