

# PxrRamp

Creates a color ramp (gradient) that gradually transitions between colors specified in the colors input list.

The lists Colors and Positions must have the same number of elements. Together, they define the list of control points used for the spline interpolation.

Note: From now on, PxrRamp will internally add extra points to the spline to output the expected result. Previously, the ramp needed at least 4 points and required extra knowledge from the user. This is no longer necessary.

## Input Parameters

### Ramp Type

Controls the direction in which the ramp colors change.



S Ramp (0)

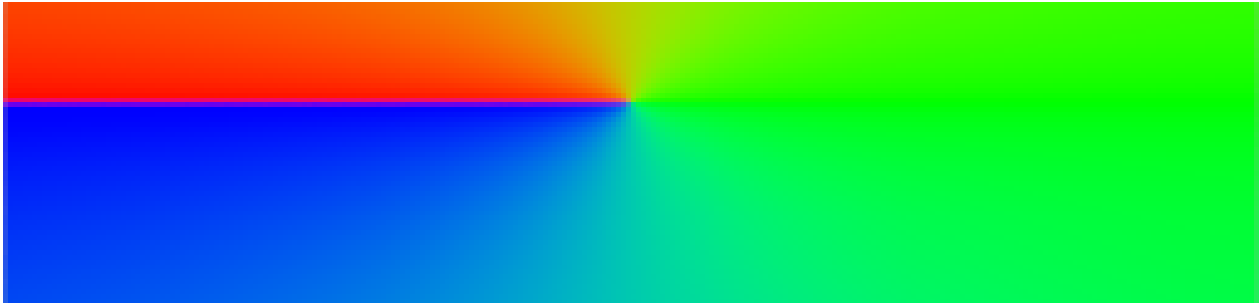


T Ramp (1)

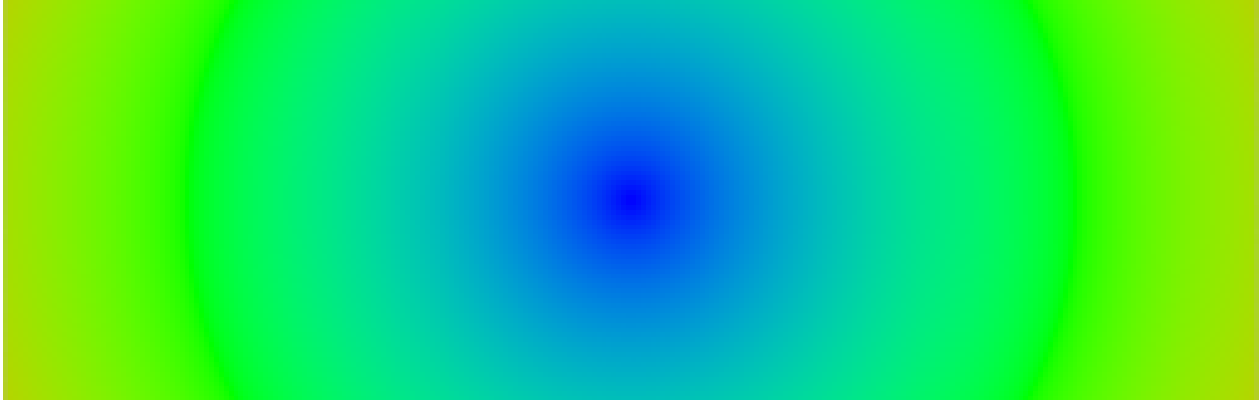


Diagonal (2)

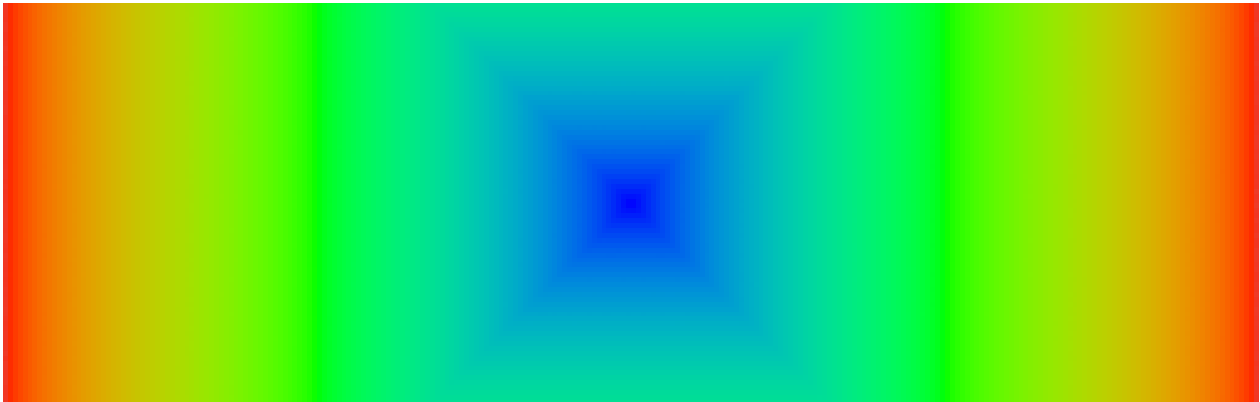




Radial (3)



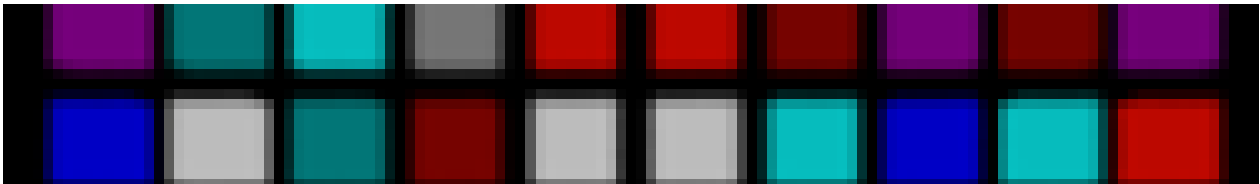
Circular (4)

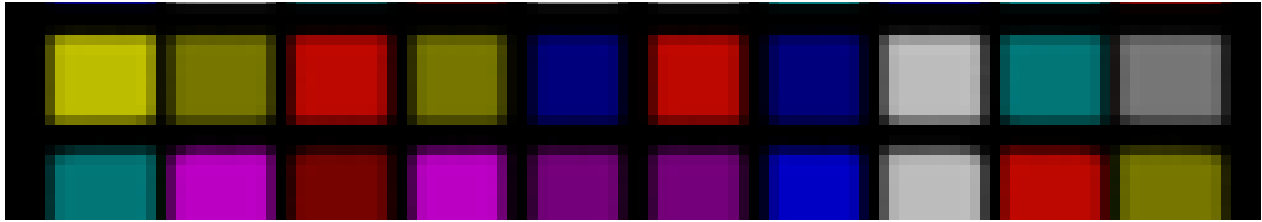


Box (5)



4 Corner (6)





Random Object Color (7)

### Tile

Determines whether the ramp texture is repeated.

### Positions

The list of positions for the colors on the ramp. The positions range between 0 and 1, which are the two endpoints on the ramp.

### Colors

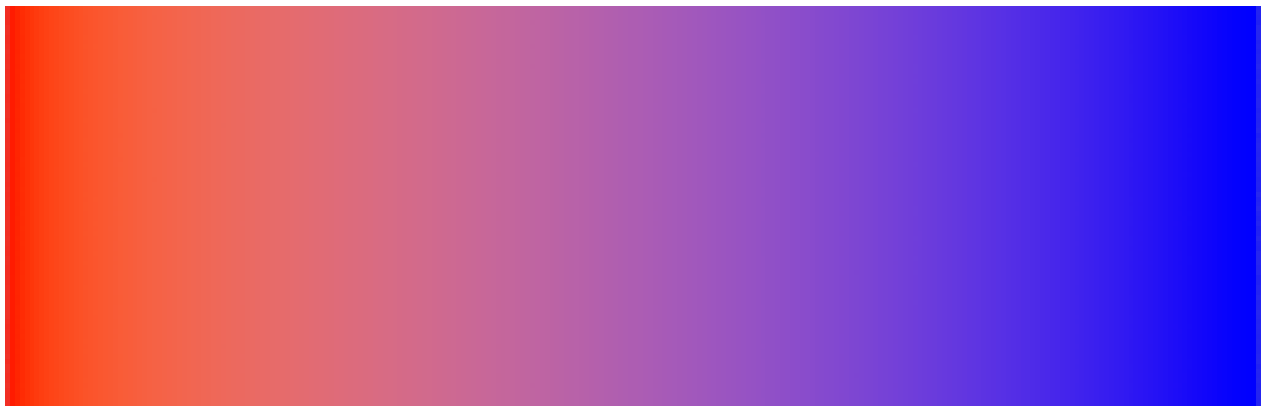
The list of colors on the ramp. There is a color at each of the positions specified in the positions list.

### Reverse

If enabled, this flips the ramp so it reverses direction.

### Spline Type

Controls the way the intermediate colors between the colors listed in the colors list are calculated. Or you may choose "none" for no blending between the selected colors.

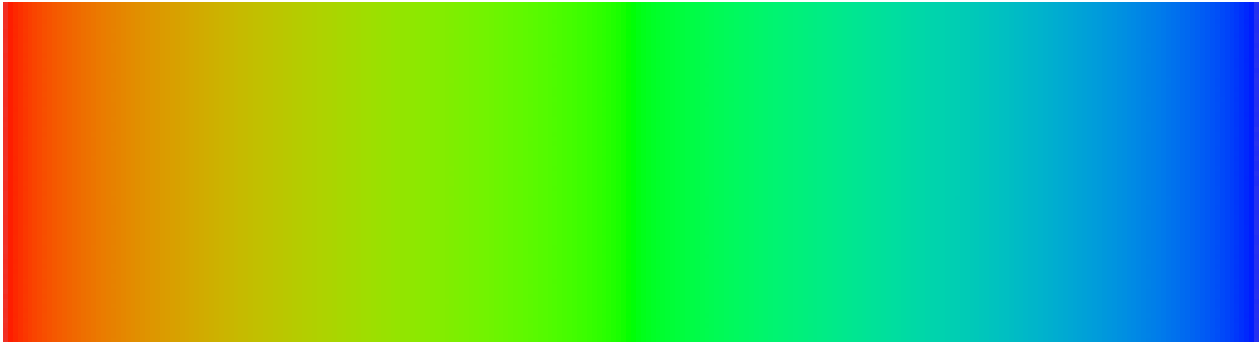


Linear (3)



Catmull-Rom (4)



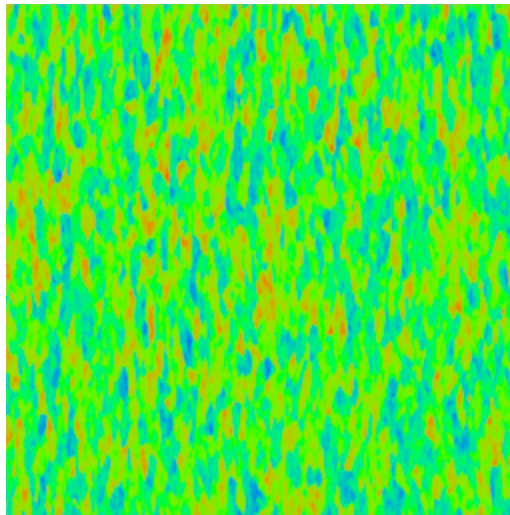


None (5)

### Spline Map

If connected to a pattern, this is the 1D manifold that controls the map of the ramp. For example, if you connect this to a noise pattern, then the direction of the changing colors in the ramp will follow the noise pattern. This map takes precedence over the manifold value if both are connected.

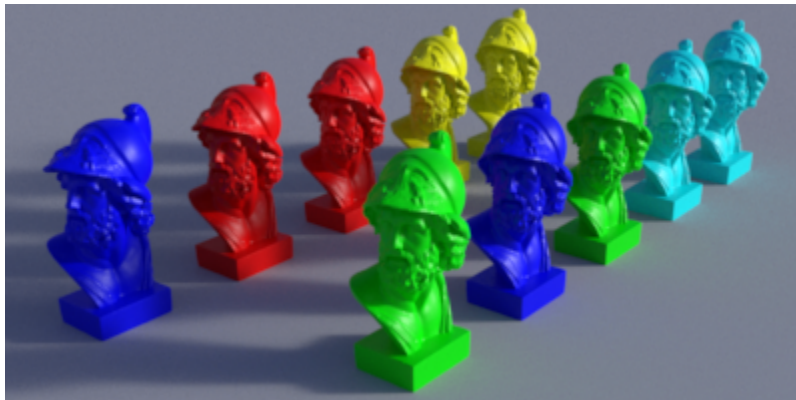
The following image shows a PxrVoronoise pattern (with frequency set to 10) connected to a ramp through the splineMap parameter. The black values from the noise pattern are mapped to red from the ramp, and the white values from the noise are mapped to blue from the ramp, and the values between that are mapped to the green color from the middle of the ramp.

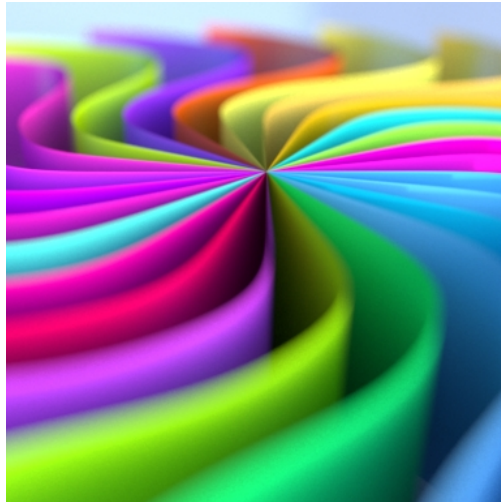
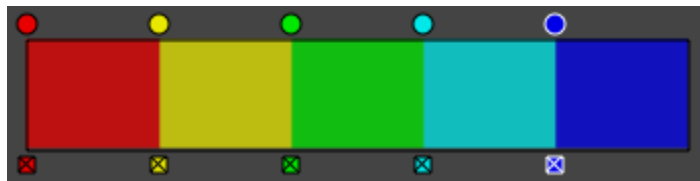


### Random Source

When Ramp Type is set to "Random Object Color", PxrRamp will use either the object's ID (Attribute "identifier:id") or the object's name (Attribute "identifier:name") to compute a random seed. This seed will be used to pick a color in the ramp.

This example uses the "None" Spline Type, but other spline types are supported.





### **Random Seed**

Change this value to get a different set of random variations.

### **Manifold**

Controls the 2D placement of the ramp. Defaults to using the s and t values of the surface geometry to place the ramp colors on the surface.

### **Output Parameters**

#### **resultRGB**

The clamped color result.

#### **resultR**

The R channel from the resultRGB output.

#### **resultG**

The G channel from the resultRGB output.

#### **resultB**

The B channel from the resultRGB output.