Sparkle Shader | **Ciconia Studio**

Overview

With this shader you can add a sparkle effect on your models. Very easy to use, you can simulate different types of materials such as asphalt, snow, sand and so on.

URP Package :
The file includes **Built-in** and **URP** shaders. The Built-in sparkle Shader v2020.1 package is only compatible with Unity 2019.3.0 or higher. The URP version is compatible with Unity 2019.3.10 or higher.
The package comes with 2 demo scenes using 1k and 2k textures in .png format

URP Setup

Support Unity versions
2019.3.0 or higher

First delete the Builtin folder and unpack the URP-Sparkle shader.unitypackage.

Tutorials

Videos |

Coming soon

Shader Properties

Main Properties | These properties affect all the maps selected in the Main Properties.

Global --> XY(TilingXY) - ZW(OffsetXY) – Controls the Tiling and the Offset of all maps contained in the main properties

Color – Specifies the RGB color of the model.

Invert Alpha – Inverts the alpha channel.

Base Color -->(Mask A) – Selects a color map. A Grayscale Map can be stored in the alpha channel and be used as smoothness value or puddles Mask

Saturation – Controls the amount of saturate or desaturate of the Base Color map.

Brightness – Controls the amount of brightness of the Base Color Map

Normal Map – Selects a normal map.

Normal Intensity – Controls the normal intensity.

Mask Map -->M(R) - Ao(G) - Dm(B) - S(A) – It's a channel-packed textures which store multiple maps in one. The Metallic in the red channel, the Ambient occlusion in the Green, the Detail mask in the Blue one and the smoothness in the Alpha channel.
Find more information about Unity Channel packed texture here.

Metallic – Controls the amount of metallic reflection.

Smoothness – Controls the amount of glossiness reflection.

Source – Selects the smoothness map stored in the metallic alpha or base color alpha

Ao Intensity – Controls the intensity of ambient occlusion.

Height Map – Selects a height map.

Height Scale – Controls the height intensity.

Emission Color – Specifies the HDR color for the emission.

Emission Map – Selects an emission map.

Intensity – Controls the emission intensity.

Mask Properties | These properties control the mask for the sparkle effects.

Enable – Enables or disables the detail mask.

Visualize Mask – Enables or disables the detail mask visualization.

Source-Use Detail Mask (B) – Enable this property to use as detail mask the map stored in the blue channel of the Mask map. If checked it will override the Detail Mask slot.

Invert Mask – Inverts the alpha channel. If no detail mask is selected, enabling this property will be defined a white color by default.

Detail Mask – Selects a detail mask map. If no map is selected, the detail mask map will be black by default. Black value means no water puddles.
In order to see water without map selected, simply enable Invert Mask.

Intensity – Controls the intensity of the detail mask.

Contrast – Controls the amount of contrast of the detail mask.

Spread – Controls the diffusion amount of the detail mask. This property is used to increase or decrease the white or black values. The black areas will show only the main properties and mask the sparkle effect.

The default value is set to 0.5.

If a map is selected in the Detail Mask slot a value of 0 means 100% black and the value of 1 means 100% white. A value of 0.5 will use the detail map without major grayscale variations.

If no detail Mask is selected the value of 0.5 in this case means 100% black.

Sparkle Properties | These properties control the sparkle effect

Source – Specify the source to make the sparkle appear. You can choose between Emissive or Smoothness.

The Emissive source will diffuse the sparkle and his intensity uniformly on the model.

The Smoothness source will take into account the directional light direction as well as the smoothness value set up in the main properties. Use the smoothness source for a more realistic approach.

Selecting None will disable the sparkle effect.

Visualize Maps – Visualize the maps to configure them more easily.

Dot Mask – Selects a dot mask. The white values will specify where the sparkle will be visible. A grayscale DotMask is selected by default.(...Ciconia Studio\Shaders_Shared Files\Textures\Grayscale Map)

Tiling – Controls the XY Tiling of the Dot mask.

Intensity – Controls the intensity of the Dot mask.

Contrast – Controls the amount of contrast of the Dot mask.

Spread – Controls the diffusion amount of the Dot mask. Keeping a value between 0.4 and 0.6 should work in most cases.

Space Projection – Selects between ScreenPosition or Vertex Position.

Both of them are linked to the camera position.

The main difference is that for the ScreenPosition the size of the sparkles remains the same regardless of the distance from the camera.

Sparkle Map – Selects a Sparkle map.

A grayscale Sparkle map is selected by default.(...Ciconia Studio\Shaders_Shared Files\Textures\Grayscale Map)

For more realistic result, the Sparkle should have a size close to the dots contained in the DotMask.

Tiling – Controls the XY Tiling of the Sparkle map.

Intensity – Controls the intensity of the Sparkle map.

Contrast – Controls the amount of contrast of the Sparkle map.

Amount – Controls the amount of sparkle dots.

Desaturate – Controls the amount of desaturation of the Sparkle map. If the sparkle source is set to Smoothness, the sparkle are automatically desaturated since smoothness only takes into account grayscale values.

Shadow Mask – Use this property to mask the sparkles in contact with all the shadows cast by the directional light.

Ao Mask – Mask the spakles using the Ao map stored in the Mask map. The Mask intensity depend on the Ao Intensity slider.

Custom Properties | These properties control the DotMask and Sparkle Map.

Tiling Instance – This value will multiply both of the DotMask and Sparkle Map Tiling values.