Toon Shader For Unity by Tetra Arts

v1.1.0

Documentation

Contents

Introduction

Thank you for choosing Tatoon2. First of all, English is not my main language, I apologize for the translation mistakes.

Tatoon2 has been developed to try to offer you the best quality toon shader possible in the spirit of what is currently being done. Compatible with **Built-In** and **URP** (v10 mini) rendering modes, it comes with several features like shadow customization, additional light support, additional render passes for outlines effect and many more.

Instalation

Tatoon2 for buit-in renderer

To import the package simply choose Tatoon2_Built-In_v1.x.x and import it into your project.

To create a new material with Tatoon2 you just have to create a new material and select in the shader tab of this material : Tetrarts/Tatoon2/Built-in/Tatoon2_Built-in

Tatoon2 for URP renderer

To import the package simply choose Tatoon2_Built-In_v1.x.x and import it into your project.

Warning : you must have Universal render pipeline v10 minimum installed in your project

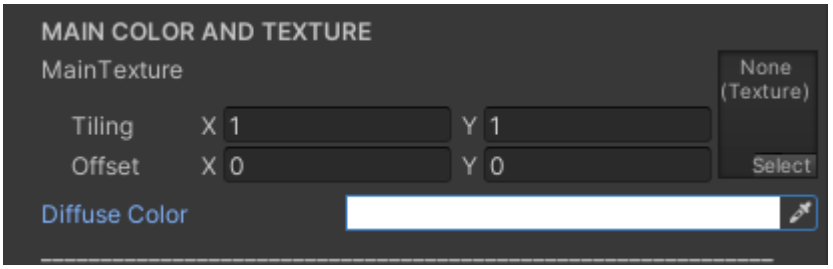
To create a new material with Tatoon2_URP you just have to create a new material and select in the shader tab of this material : Tetrarts/Tatoon2/URP/Tatoon2_URP

Built-in renderer

Tatoon2_Built-in

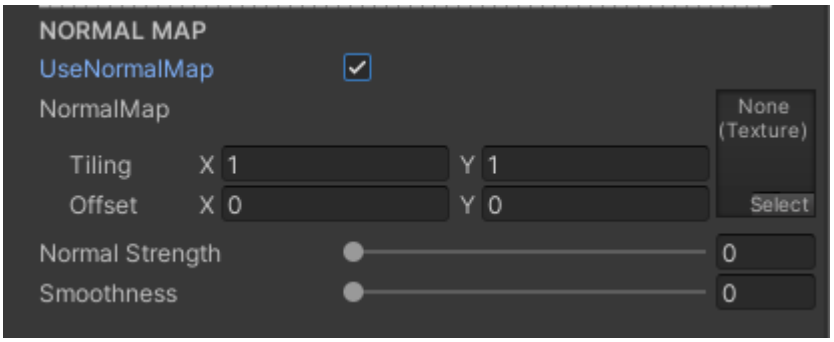
- **Main Color and Texture**

In this part we have a slot for the main texture of your model and a color setting. If you use a main texture it is recommended to set the color to white.



- **Normal map**

In this part we have a slot for the Normal map of your model and two parameters: "**Normal strength**" for the strength of the normal map and "**Smoothness**" to control the brightness of your model

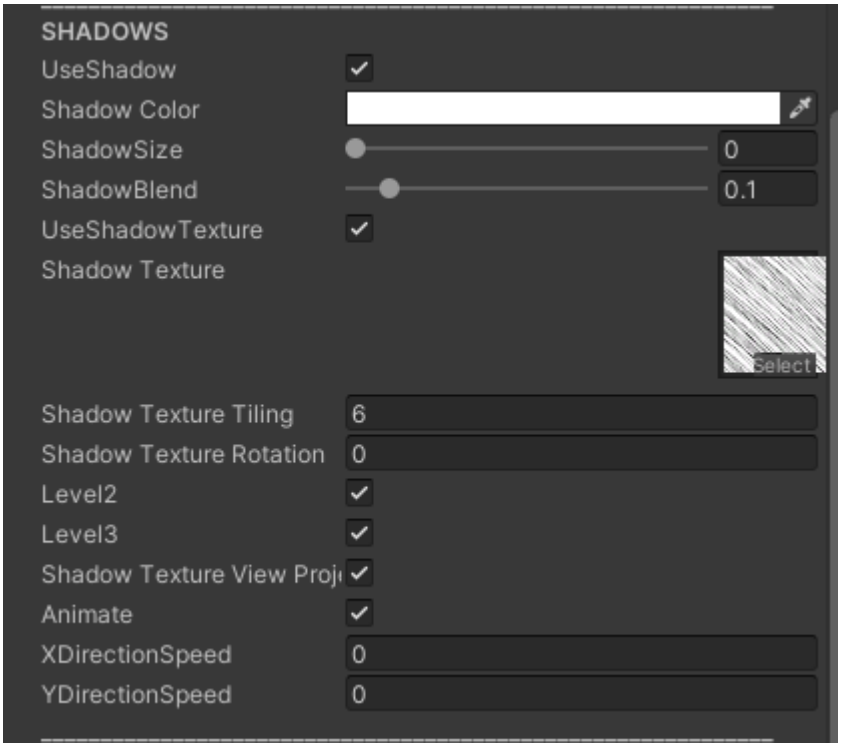


- **Emissive map**

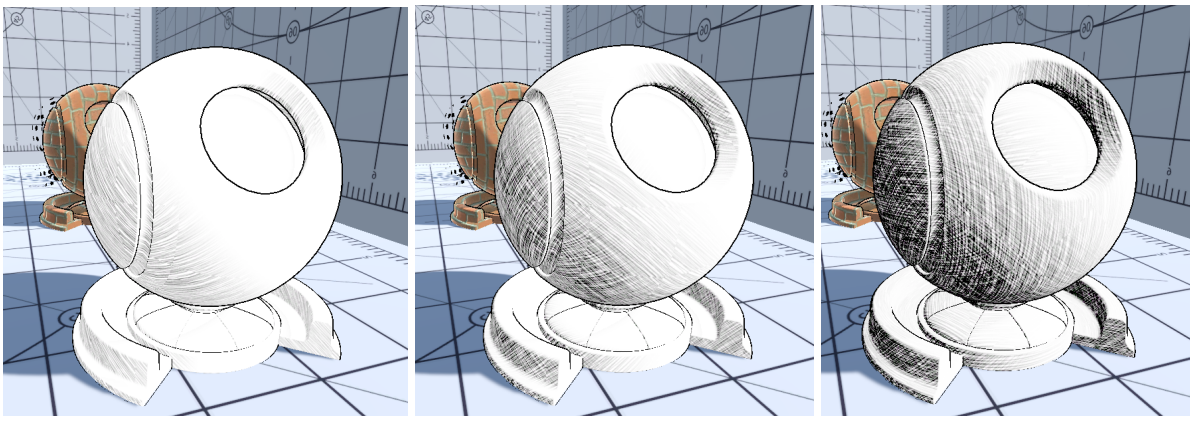
In this part we have a slot for the Emissive map of your model and an parameters: "**EmissiveColor**" for choose color and intensity of the effect.

- **Shadows**

This part is reserved for shadow settings.

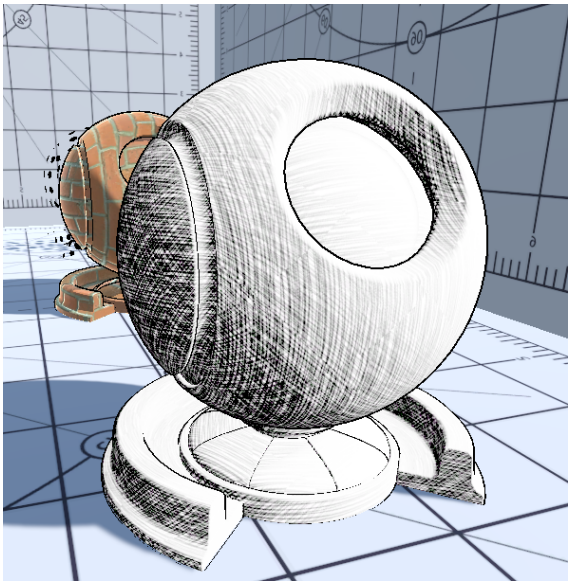


Shadow Color for the color of the shadow(white = transparent) if you use shadow texture it's recomended to set this setting to white.
Shadow Size between 0 and 1, at 0 the shadow is reduced to the minimum and at 1 the shadow covers the whole object.
Shadow Blend controls the shadow attenuation. 0 = not attenuated, 1 = fully attenuated.
UseShadowTexture unlock shadow texture settings, Allows you to inject a texture into the shadow
ShadowTexture a slot to add a texture to the shadow
Shadow texture tiling control texture size
Shadow texture rotation control texture rotation
Level2, Level3 if "UseShadowTexture" is enabled , you can activate 3 levels of shadow

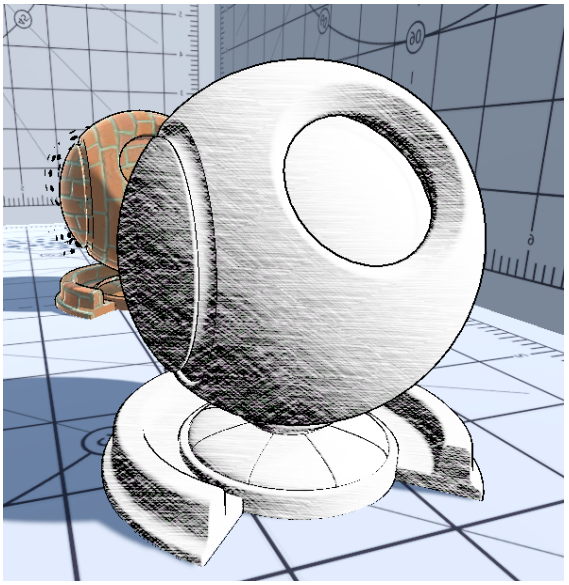


Level1 Level2 Level3

ShadowTextureViewProjection if enabled the texture projection swaps between object and view



Object Projection

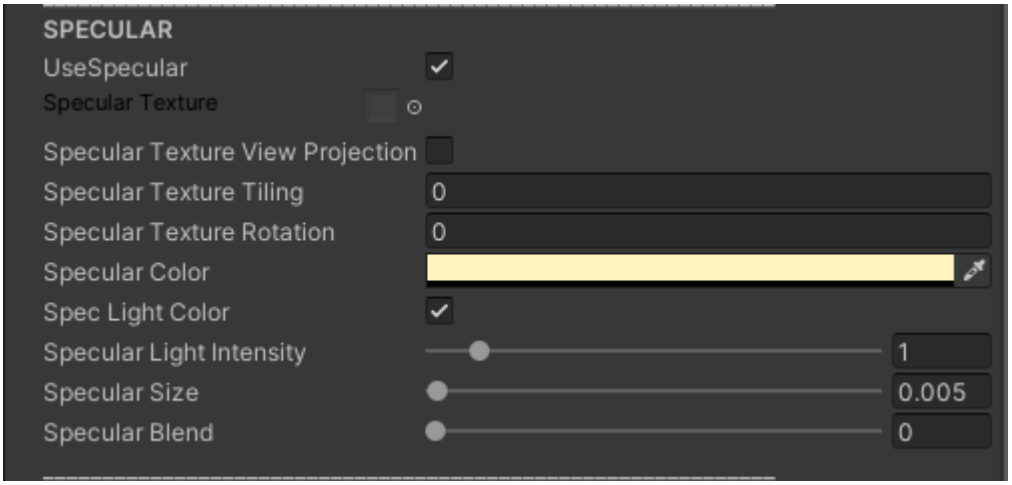


View Projection

Animate if enabled you can control the direction speed of the texture.

- ## Specular

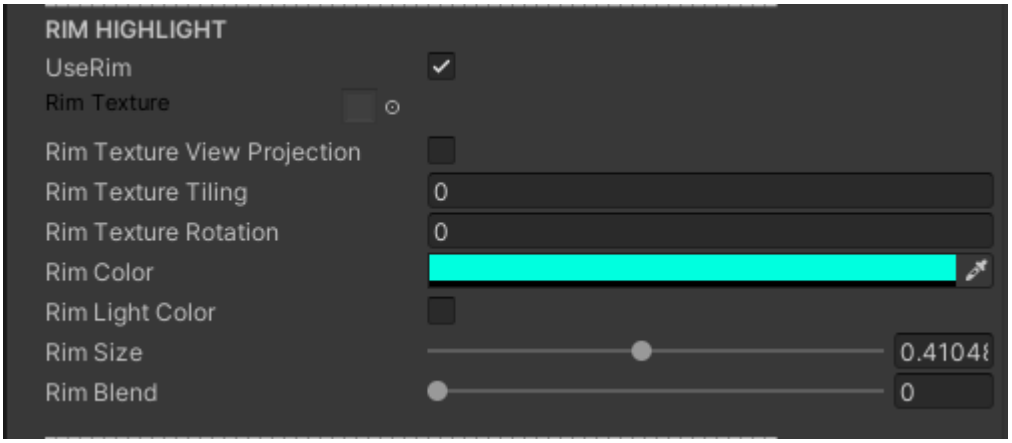
  This part is reserved for specular settings.



Specular Texture a slot to add a texture to the specular
SpecularTextureViewProjection if enabled the texture projection swaps between object and view.
SpecularTextureTiling control texture size
SpecularTextureRotation control texture rotation
SpecularColor control color of specular
SpecLightColor use light color for specular color
SpecularLightIntensity intensity of light color
SpecularSize control specular size
SpecularBlend control the specular attenuation

- Rim highlight

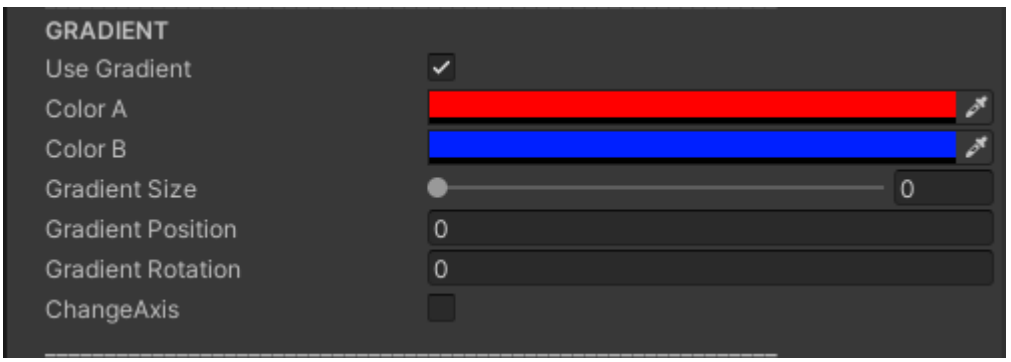
This part is reserved for rim settings.



Rim Texture a slot to add a texture to the rim
RimTextureViewProjection if enabled the texture projection swaps between object and view.
RimTextureTiling control texture size
RimTextureRotation control texture rotation
RimColor control color of rim
RimLightColor use light color for rim color
RimLightIntensity intensity of light color
RimSize control rim size
RimBlend control the rim attenuation

- Gradient

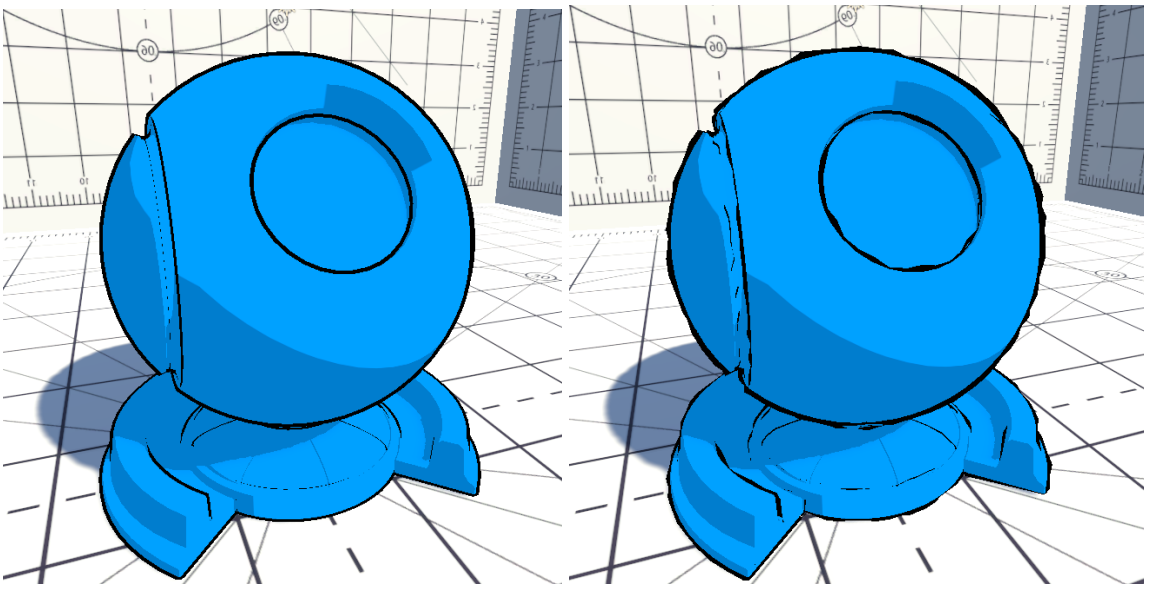
This part is reserved for gradient settings.
ColorA,ColorB main colors of the gradient
GradientSize control the gradient size.
GradientPosition control the gradient position
GradientRotation control the gradient rotation
ChangeAxis switch between XY axis and XZ axis



- Outline

This part is reserved for Outline settings.

OutlineColor control the outline color, Color is HDR you can use it for glow effect with post processing
OutlineSize control outline size
OutlineNoise if enabled make your outline noisy



Without noise With noise
OutlineNoiseScale control the noise amount

Tatoon2_Built-in_Transparent

- **Opacity**

I simply added an Opacity parameter to the Tatoon2_Built-in_Transparent shader. It is located in the MainColor & Texture section. This Shader does not contain an Outline parameter

Tatoon2_Built-in_Cutout

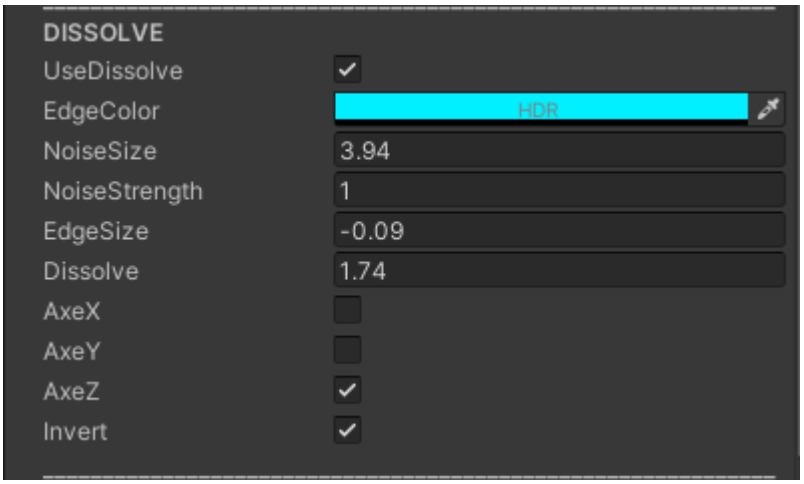
- **Cutout**

I simply added an Cutout parameter to the Tatoon2_Built-in_Cutout shader. It is located in the MainColor & Texture section. This Shader does not contain an Outline parameter

Tatoon2_Built-in_Dissolve

- **Dissolve**

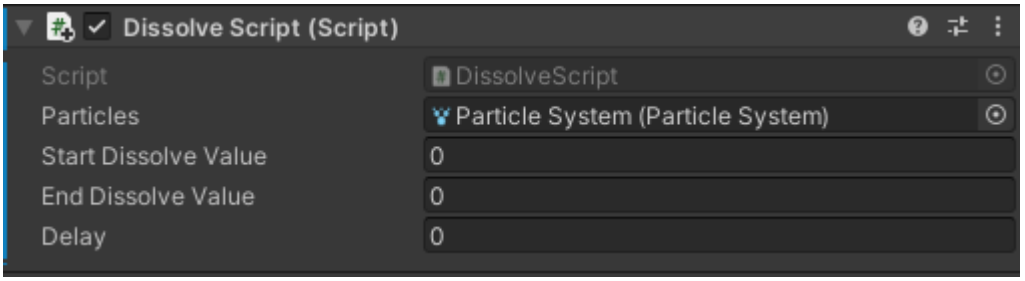
This shader contains all the options of the Tatoon2_built-in_OutlineIncluded shader with an additional dissolve section. The DissolveScript is also available to control the dissolve effect at runtime.



UseDissolve Enable Dissolve section.
EdgeColor Control the color of the edge between color and transparent.
EdgeSize Control the size of the edge between color and transparent
NoiseSize Control the size of the noise procedural of the effect
NoiseStrenght Control the amplitude of the noise procedural of the effect
Dissolve Control the movement of the effect on the Y axis of the object
AxeX, AxeY, AxeZ, Allows you to choose the axis on which the effect will be performed
Invert, invert axis.

- Dissolve Script

Dissolve script allows to control the dissolve action via the LaunchDissolve(); function (see demo scene) you can use it on MeshRenderer as well as on SkinedMeshRenderer. You can also add a particle system to enhance the effect.



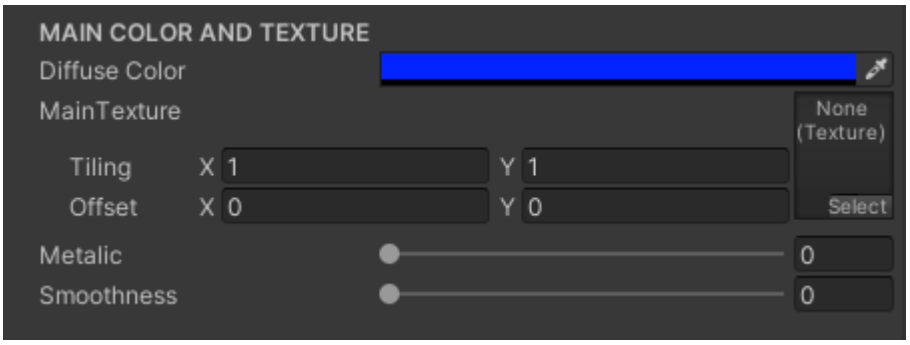
Patricules for adding particule system to the effect (See demo Scene)
Start Dissolve Value Value of Dissolve setting at start
End Dissolve Value Value of Dissolve setting at end
Delay Time durartion

URP renderer

Tatoon2_URP

- **Main Color and Texture**

In this part we have a slot for the main texture of your model and a color setting. If you use a main texture it is recommended to set the color to white.
I also added two parameters to control the metalic and smoothness



- **Normal map**

In this part we have a slot for the Normal map of your model and one parameter "**Normal strength**" for the strength of the normal map

- **Emissive map**

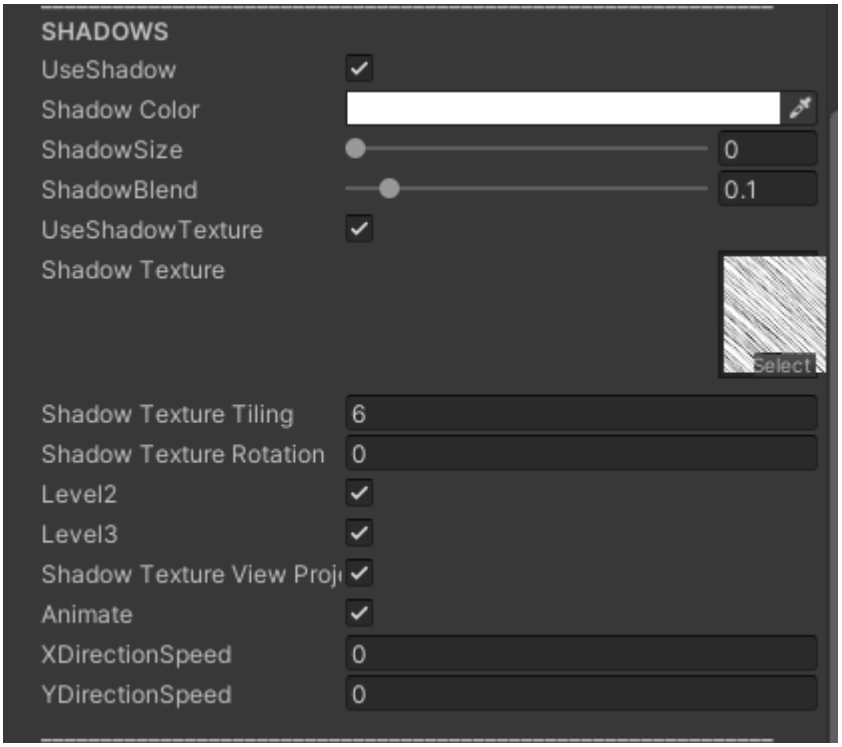
In this part we have a slot for the Emissive map of your model and an parameters: "**EmissiveColor**" for choose color and intensity of the effect.

- **Metalic / Smoothness**

In this part we have a slot for the Metalic map of your model and two parameters: "**Metalic**" and **"Smoothness"**

- **Shadows**

This part is reserved for shadow settings.



Shadow Color for the color of the shadow(white = transparent) if you use shadow texture it's recomended to set this setting to white.
Shadow Size between 0 and 1, at 0 the shadow is reduced to the minimum and at 1 the shadow covers the whole object.
Shadow Blend controls the shadow attenuation. 0 = not attenuated, 1 = fully attenuated.
UseShadowTexture unlock shadow texture settings, Allows you to inject a texture into the shadow
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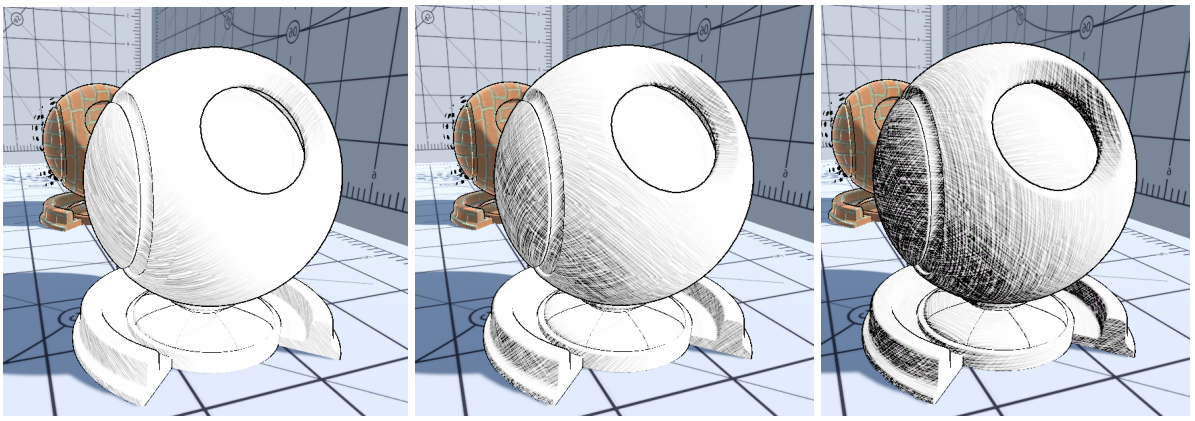
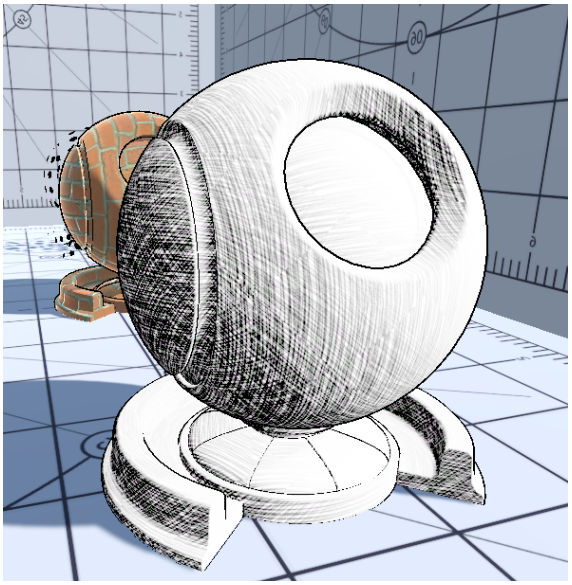
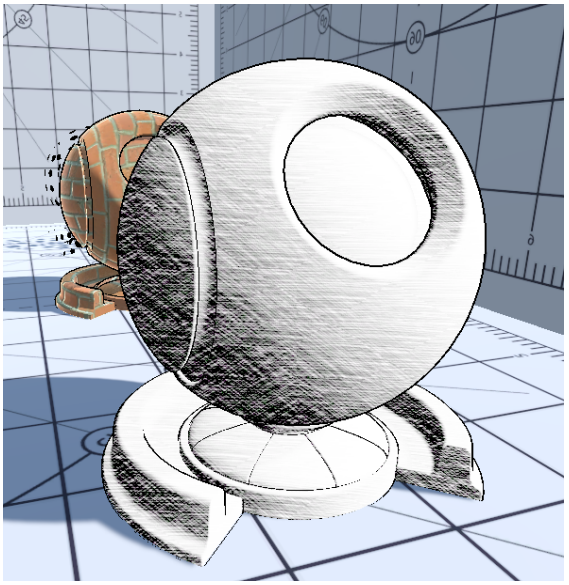
Level2, Level3 if "UseShadowTexture" is enabled , you can activate 3 levels of shadow



Level1 Level2 Level3

ShadowTextureViewProjection if enabled the texture projection swaps between object and view



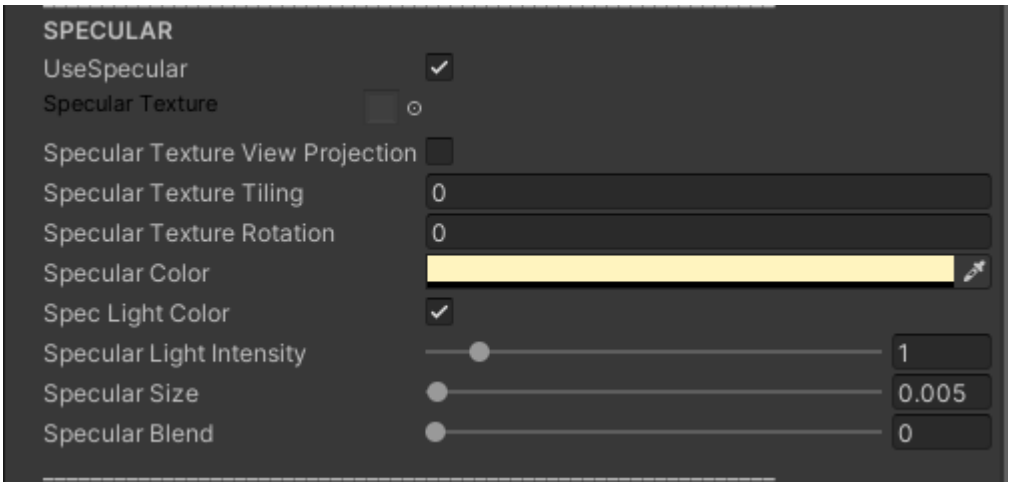


Object Projection View Projection

Animate if enabled you can control the direction speed of the texture.

- ## Specular

  This part is reserved for specular settings.



Specular Texture a slot to add a texture to the specular
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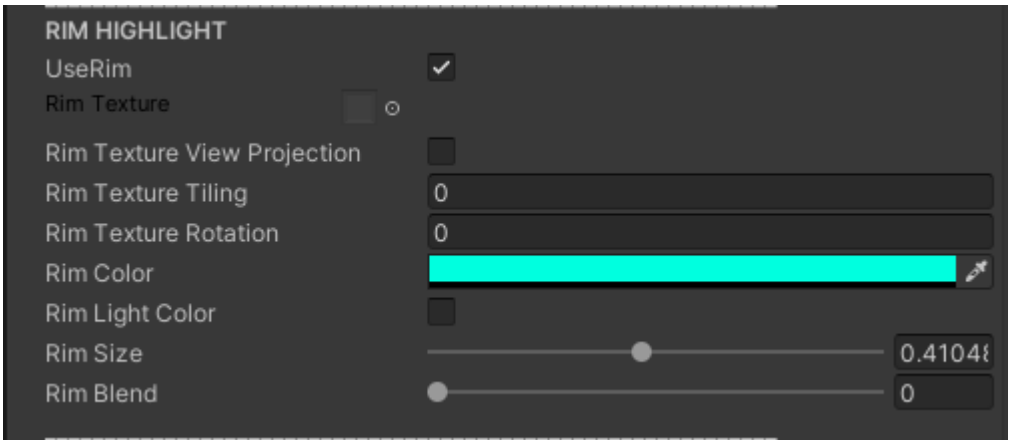
SpecularTextureTiling control texture size
SpecularTextureRotation control texture rotation
SpecularColor control color of specular
SpecLightColor use light color for specular color
SpecularLightIntensity intensity of light color
SpecularSize control specular size
SpecularBlend control the specular attenuation

- Rim highlight

This part is reserved for rim settings.

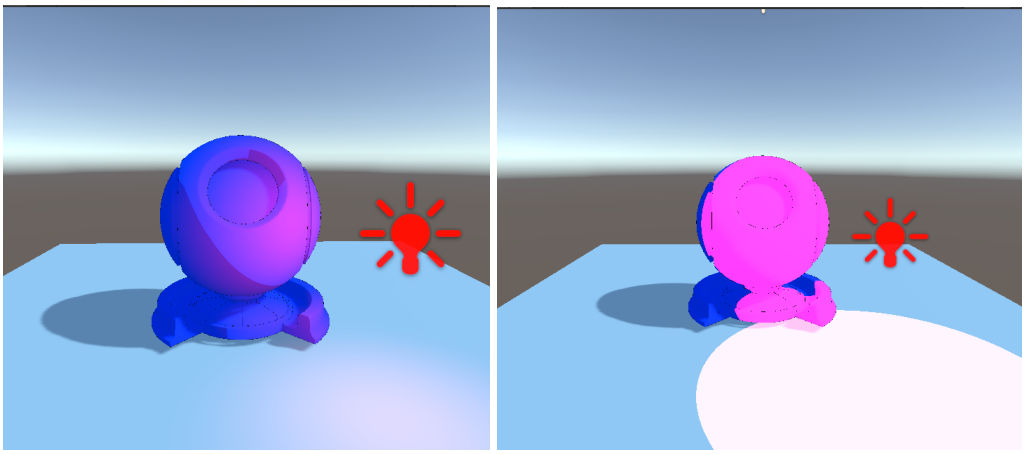


Rim Texture a slot to add a texture to the rim
RimTextureViewProjection if enabled the texture projection swaps between object and view.
RimTextureTiling control texture size
RimTextureRotation control texture rotation
RimColor control color of rim
RimLightColor use light color for rim color
RimLightIntensity intensity of light color
RimSize control rim size
RimBlend control the rim attenuation

- Gradient

This part is reserved for gradient settings.
ColorA,ColorB main colors of the gradient
GradientSize control the gradient size.
GradientPosition control the gradient position
GradientRotation control the gradient rotation
ChangeAxis switch between XY axis and XZ axis

- **Additional lights**



Normalize off Normalize on

Here you can normalize your additional lights to give them a flatter effect on the shader

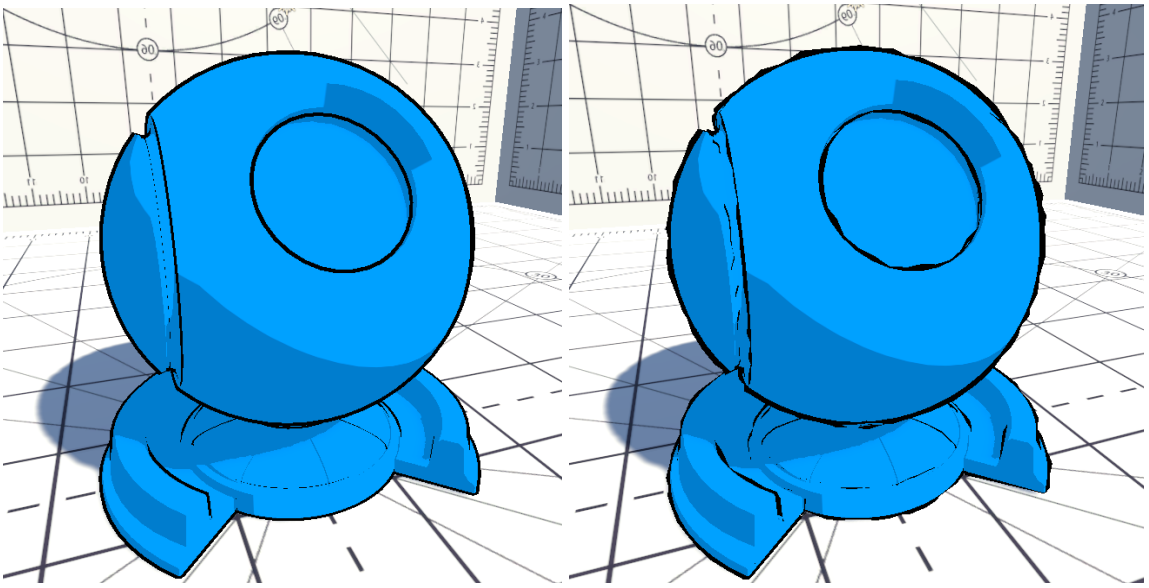
- **Outline**

This part is reserved for Outline settings.

OutlineColor control the outline color, Color is HDR you can use it for glow effect with post processing

OutlineSize control outline size

OutlineNoise if enabled make your outline noisy



Without noise With noise

OutlineNoiseScale control the noise amount

Tatoon2_URP_Transparent

- **Opacity**

I simply added an Opacity parameter to the Tatoon2_URP_Transparent shader. It is located in the MainColor & Texture section. This Shader does not contain an Outline parameter

Tatoon2_URP_Cutout

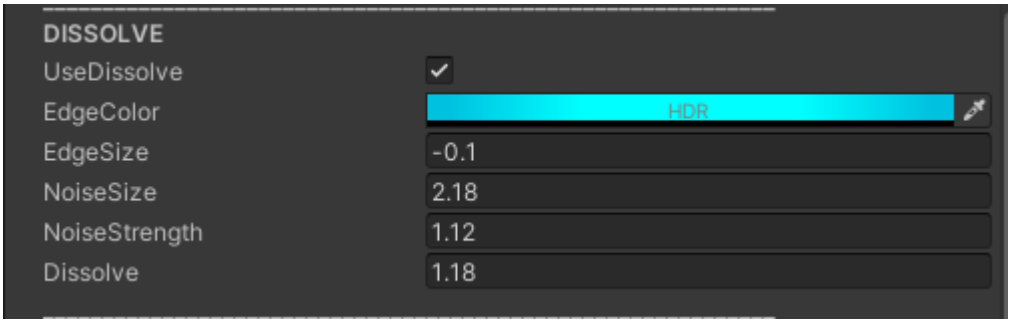
- **Cutout**

I simply added an Cutout parameter to the Tatoon2_URP_Cutout shader. It is located in the MainColor & Texture section. This Shader does not contain an Outline parameter

Tatoon2_URP_Dissolve

- **Dissolve**

This shader contains all the options of the Tatoon2_built-in_OutlineIncluded shader with an additional dissolve section. The DissolveScript is also available to control the dissolve effect at runtime.

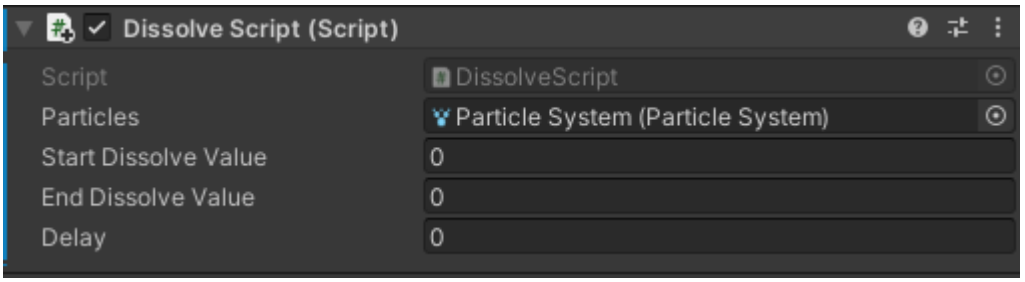


UseDissolve Enable Dissolve section.
EdgeColor Control the color of the edge between color and transparent.

EdgeSize Control the size of the edge between color and transparent
NoiseSize Control the size of the noise procedural of the effect
NoiseStrenght Control the amplitude of the noise procedural of the effect
Dissolve Control the movement of the effect on the Y axis of the object
AxeX, AxeY, AxeZ, Allows you to choose the axis on which the effect will be performed
Invert, invert axis.

- Dissolve Script

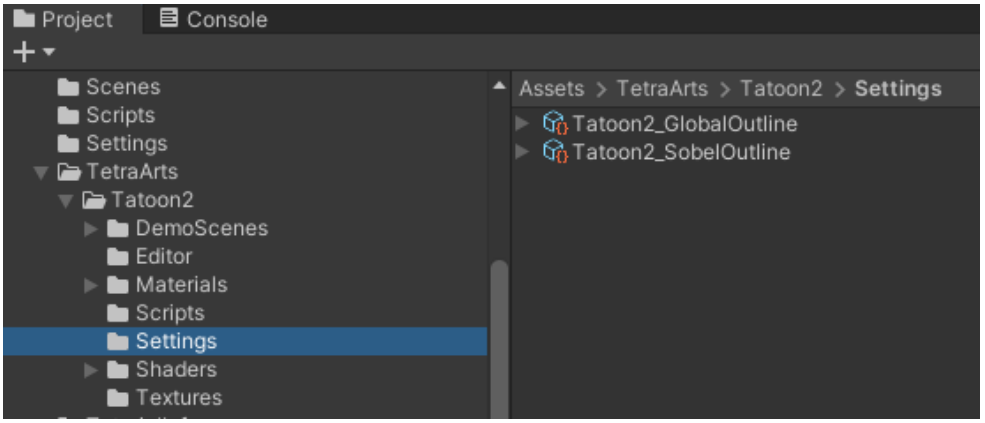
Dissolve script allows to control the dissolve action via the LaunchDissolve(); function (see demo scene) you can use it on MeshRenderer as well as on SkinedMeshRenderer. You can also add a particle system to enhance the effect.



Patricules for adding particule system to the effect (See demo Scene)
Start Dissolve Value Value of Dissolve setting at start
End Dissolve Value Value of Dissolve setting at end
Delay Time durartion

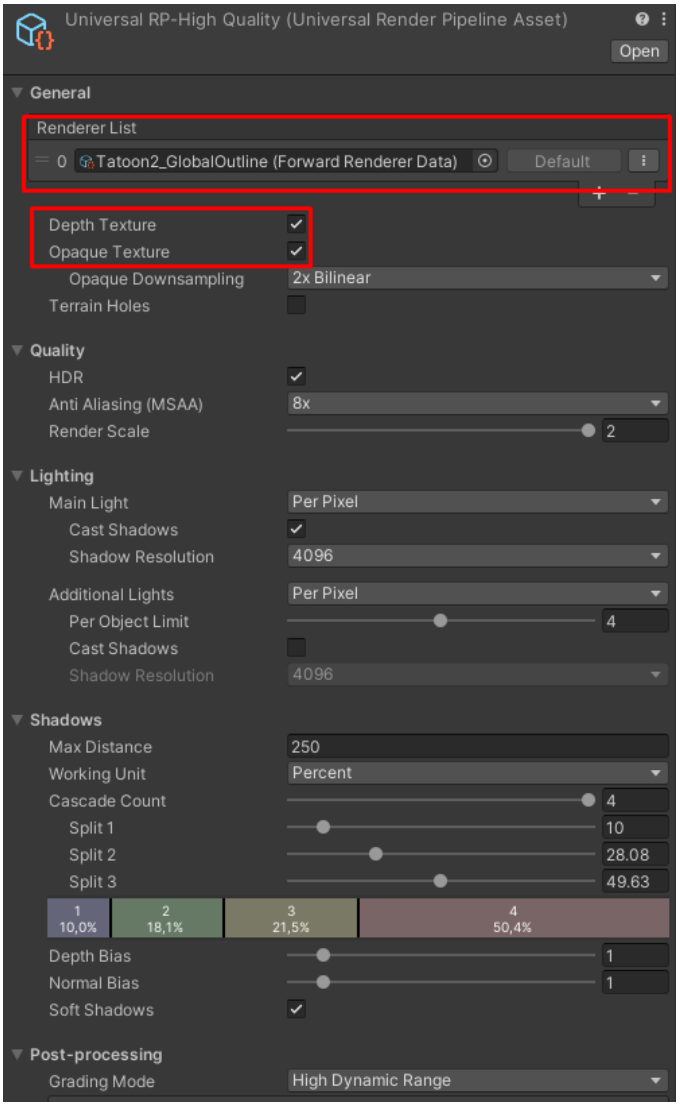
Outlines passes

The URP render mode allows us to add additional passes to the render. You can find the additional outlines passes in the Assets/TetreArts/Tatoon2/Settings path.



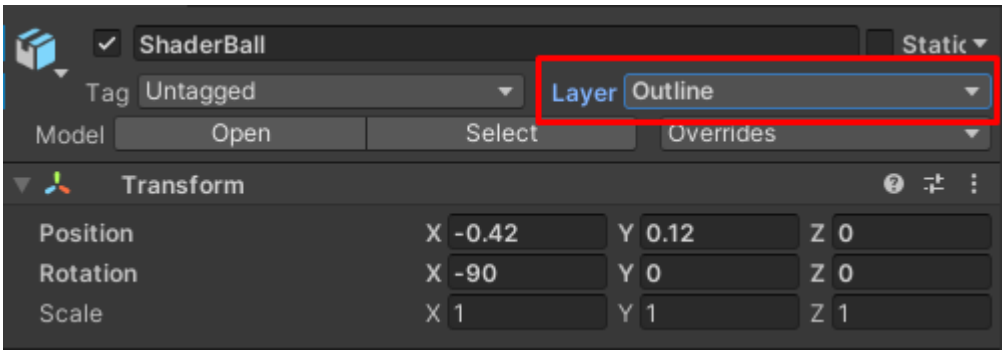
To use them, just drag and drop the forward renderer of your choice into your universal renderer asset.

ATTENTION don't forget to check the DepthTexture and OpaqueTexture parameters of your Universal Renderer Asset.

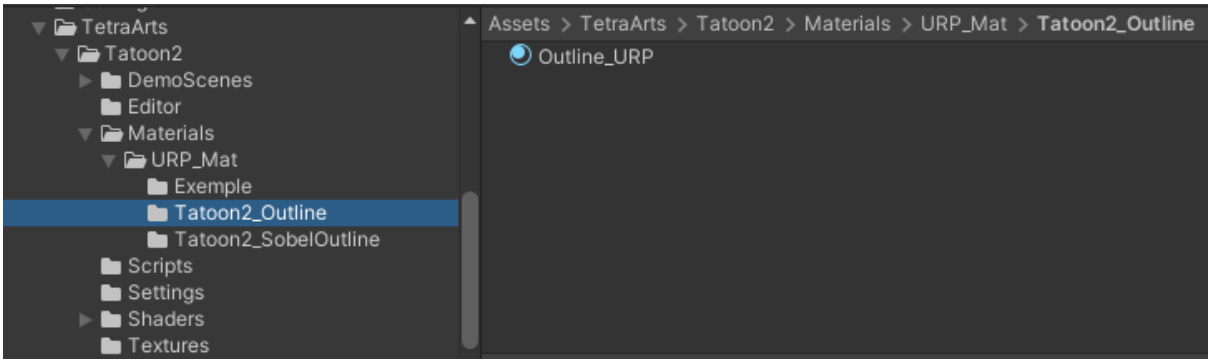


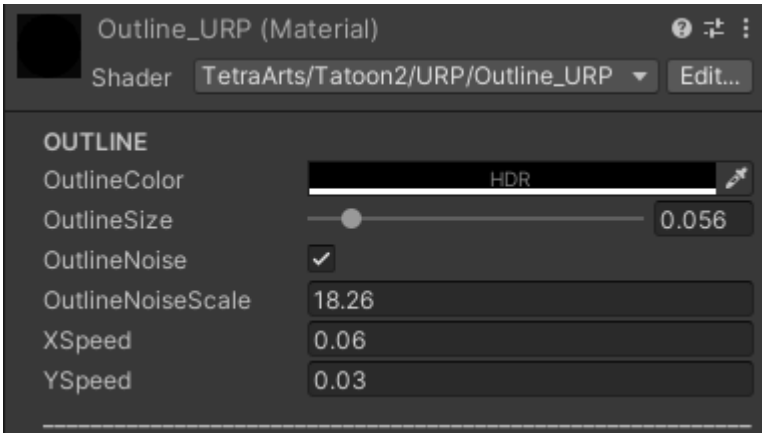
- **Global Outline**

After following the steps in the "OutlinePasses" chapter,
we need to create a new Layer named Outline and assign it to the objects in your scene that you want to outline.



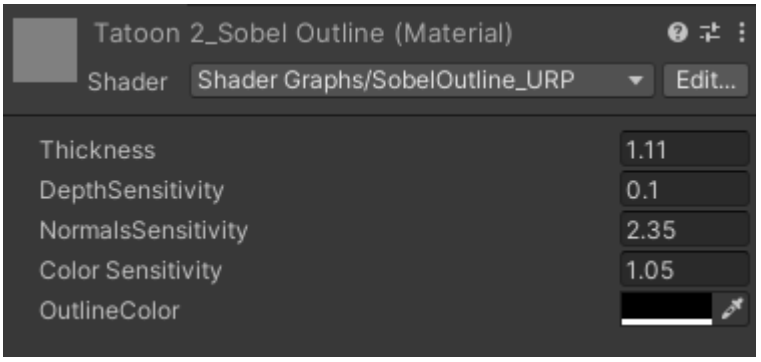
You can now play with GlobalOutline Material in
Assets/TetraArts/Tatoon2/Materials/URP_Mat/Tatoon2_Outline





- **Sobel Outline**

After following the steps in the "OutlinePasses" chapter, we can play directly with a SobelOutline Material from,
Assets/TetraArts/Tatoon2/Materials/URP_Mat/Tatoon2_SobelOutline



Thickness Control the scale of the outline
DephtSensitivity Control the influence of the outline in the depth
NormalSensitivity Control the influence of the outline in the edge of your objects
ColorSensitivity Control the influence of the outline by color changement
OutlineColor Control the outline color.

Contacts

If you encounter difficulties, bugs, if you have suggestions or if you simply want to be informed of the evolution of this pack, do not hesitate to contact me via any means at your disposal at the bottom of this paragraph. Wishing you the best for your projects.

EMail : tetraarts66@gmail.com
Discord serveur : https://discord.gg/K74aZe8Ypk
Facebook : https://www.facebook.com/Tetra-Arts-101632025535867
Twitter : https://twitter.com/MrDupat