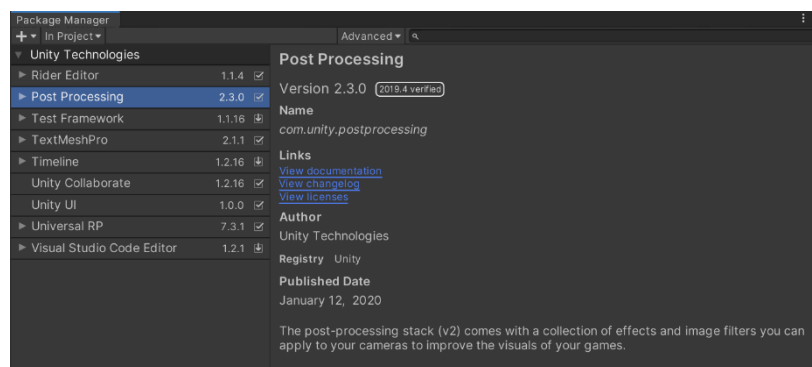




Project Setup

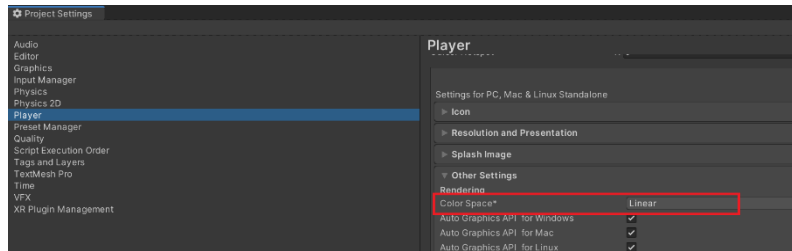
Dependencies

This project needs post-process package for the visual effect. Please make sure this package is installed in Package Manager.



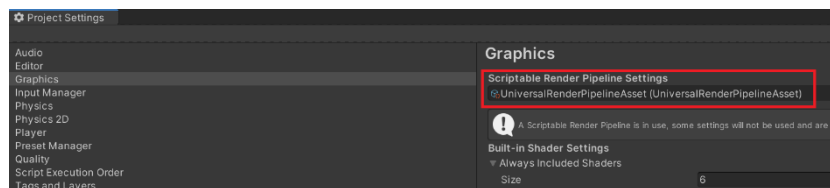
Color Space

This project is created in **Linear Color Space**. In order to make sure the effects in demo scene look right, please set the project's color space to linear in **Edit - Project Settings – Player – Color Space**.



Setup Universal Render Pipeline

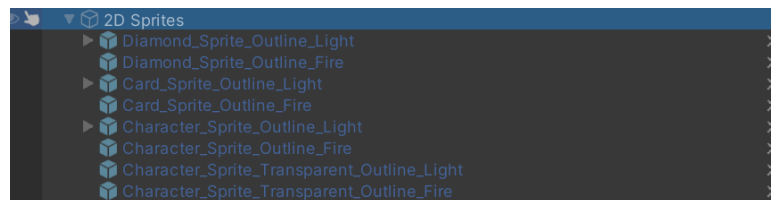
When you run the Universal Render Pipeline Demo, please make sure set the Scriptable Render Pipeline Settings to **“UniversalRenderPipelineAsset”** (which included in this package) in **Edit – Project Settings – Graphics – Scriptable Render Pipeline Settings**.



Demo

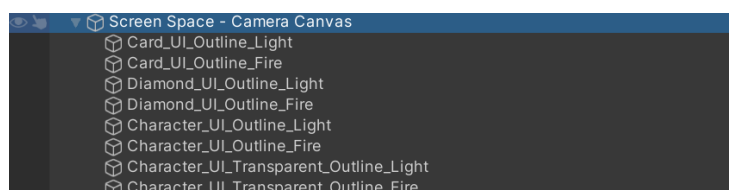
Outline Effects on 2D Sprite

In the Demo Scene, open the 2D Sprites game object, there are some example sprites under it.



Outline Effects on UI Images

In the Demo Scene, open the Screen Space – Camera Canvas, there are some example images under it.



Shaders / Particle System

There are two shaders and one particle system include in this asset:

AnimatedSpriteOutline/Outline Light and **AnimatedSpriteOutline/Outline Fire** are two outline effects.



AnimatedSpriteOutline/Particle is used by ripple effect particles.



How to use

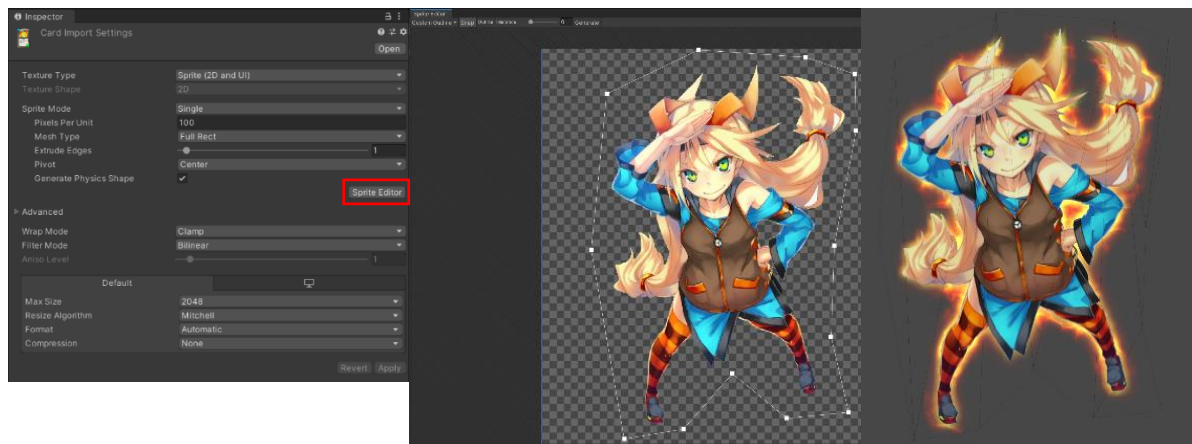
2D Sprite

For apply the outline effects on 2D Sprite, please follow steps below:

1. The outline effects will performance well on the texture with enough bound paddings. Enlarge the paddings is for avoid cutting the outline's shape.

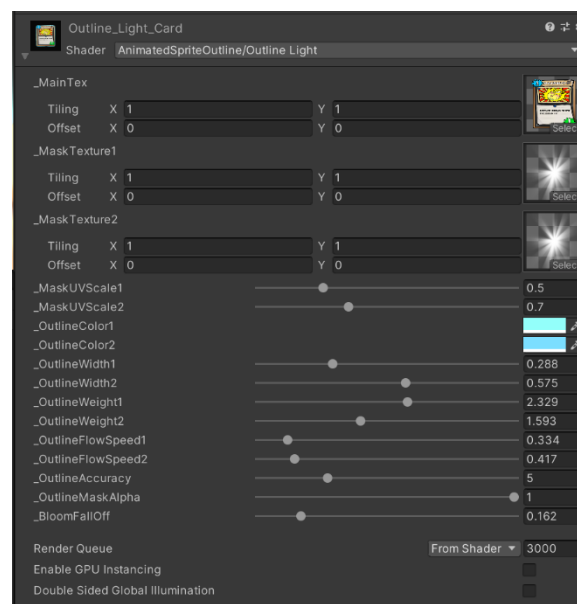


2. Make sure texture **Import Settings – Texture Type** is **Sprite (2D and UI)** and **Import Settings - Sprite Mode - Mesh Type** recommend to be **Full Rect**; The effects under **Tight Mode** depend on the SpriteRect's paddings. Or you need to set the **Custom Outline** in **Sprite Editor** to fit the outline effects.



3. Create a new material;

Light outline effect:

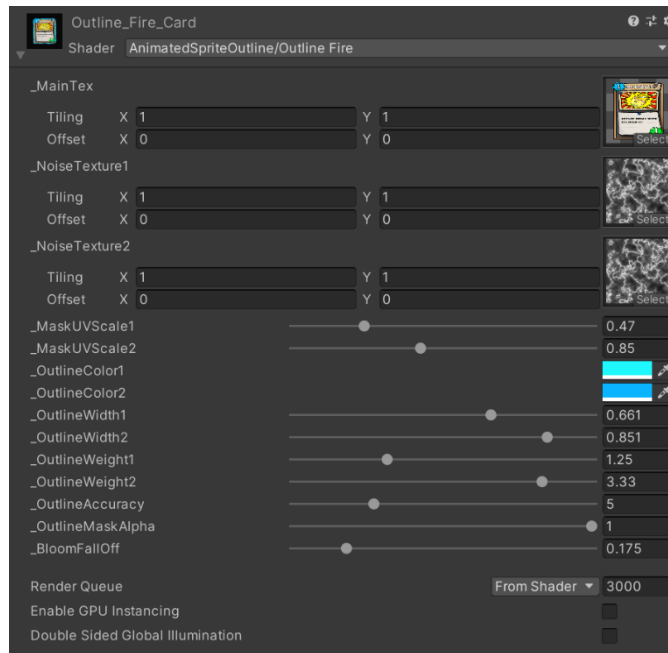


4. Select “AnimatedSpriteOutline/Outline Light” shader for the material created on step 3;
5. There are two outlines blend together to determine the outline shape and behaviour;
6. Select your sprite texture as `_MainTex`. Select **Light.png** as `_MaskTexture1` and `_MaskTexture2`. You can also replace them to your mask textures, these two textures will mask on the outline and rotate in clockwise and counter clockwise. Mask textures determine the outline shape;
7. The `_MaskUVScale1` / `_MaskUVScale2` determine the scale of the mask textures.
8. The `_OutlineColor1` / `_OutlineColor2` determine the color of the two outlines. The displayed color of the final outline effects is the mixture of the two colors;
9. The `_OutlineWidth1` / `_OutlineWidth2` determine the width of outline1 and outline2.
10. The `_OutlineWeight1` / `_OutlineWeight2` determine the intensity of outline1 and outline2. By default we set the outline1 to a smaller width and larger weight than outline2.
11. The `_OutlineFlowSpeed1` / `_OutlineFlowSpeed2` determine the light flow speed of outline1 and outline2.
12. The `_OutlineAccuracy` determine the precision of the outline shape, lower accuracy will lead to Jaggies. Recommend set this value to 5, larger value impact the performance and will cause a lower frame rate.
13. The `_OutlineMaskAlpha` is used for translucent texture. The color of the texture will mix with the outline color without this property. If the minimum alpha of a texture is 0.3. We need to set `_OutlineMaskAlpha` less than 0.3. That will prevent the outline color blend with the part which has alpha value larger than or equal to 0.3. For the opaque texture, we only need to set the value to 1.



14. The `_BloomFallOff` is used to decrease the Bloom post process effect on the sprite. This property is used when you want the bloom effect only applied on the outline effect but not your sprite texture. Increase the `_BloomFallOff` will decrease the bloom effect on the sprite without influence on the outline.

For Fire / Electric outline effect:



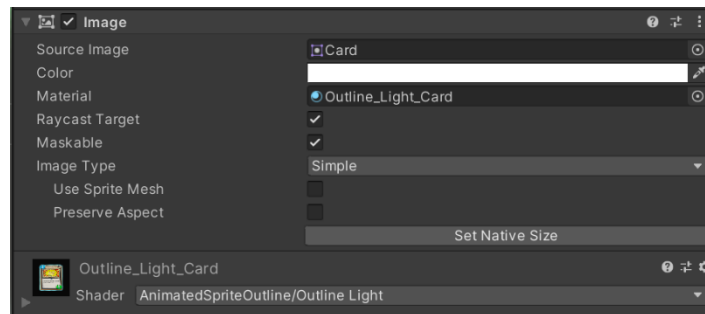
4. Select “AnimatedSpriteOutline/Outline Fire” shader;
5. There are two outlines blend together to determine the outline shape and behaviour;
6. The two noise textures will be distorted up towards. Other properties are all same with the Outline Light steps 7~14 mentioned above.

UI Canvas

For apply the outline effect on UI canvas, please follow steps below:

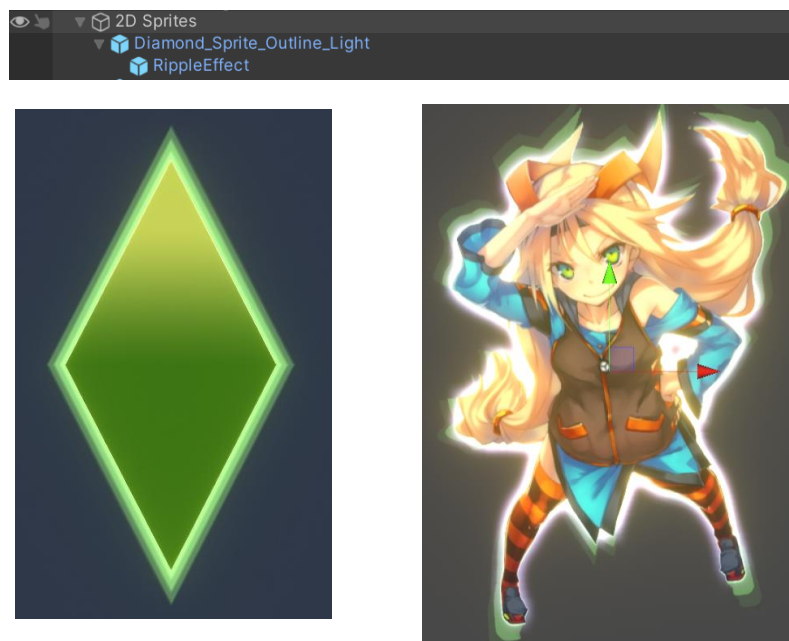
1. Although the outline effects can work on Screen Space – Overlay canvas, we recommend set the Canvas Render Mode to Screen Space – Camera. This is due to the post process effect couldn’t work on Screen Space – Overlay, but it can work on Screen Space - Camera. For let the outline effects look nice under the bloom post process effect, we choose Screen Space – Camera to display. But you can still use the outline shader on Screen Space – Overlay without post process effect on it.

2. All the other steps are same with 2D Sprite, set the image component material to the outline material we create for 2D Sprite is enough.



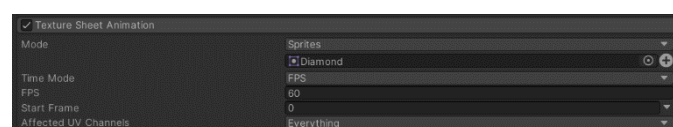
Particle System/Ripple Effect

To make the outline effect more expressive, we made a ripple effect particle system behind the sprite outline.



By using this particle effect to your sprite. You should follow steps below:

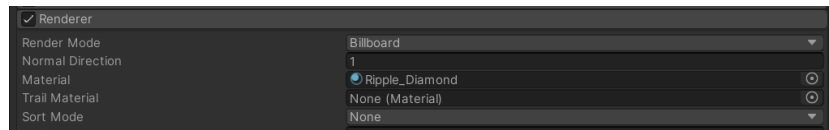
1. Set the Sprite in **Particle System – Texture Sheet Animation** to your sprite texture;



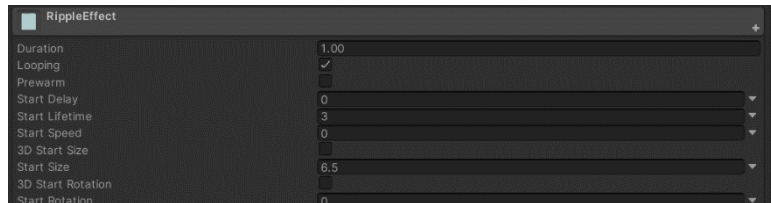
2. Create a particle material then choose AnimatedSpriteOutline/Particles as its shader;



3. Set the **Particle System – Renderer – Material** to the material created in step 2.



4. Modify the Start Size let the ripple particles fit with your sprite.



5. For changing color of the ripple effect, you could change the Color Tint of the particle material.



Video tutorial

There also has a video tutorial:

<https://www.youtube.com/watch?v=SPTqx4cvkFE>

Thank you for using **Animated Sprite Outline**. If I left something unclear or if you encounter any problem to this project. Please don't hesitate to contact with me at:

Email: hurrywon@163.com

Unity Connect: <https://connect.unity.com/u/lobeyjon-game>