ILLUSTRATE

Thanks for purchasing **Illustrate: Stylized Toon Shader**! I hope that this asset serves you well. If you have any questions, feel free to reach out to us via email or on our Discord server!

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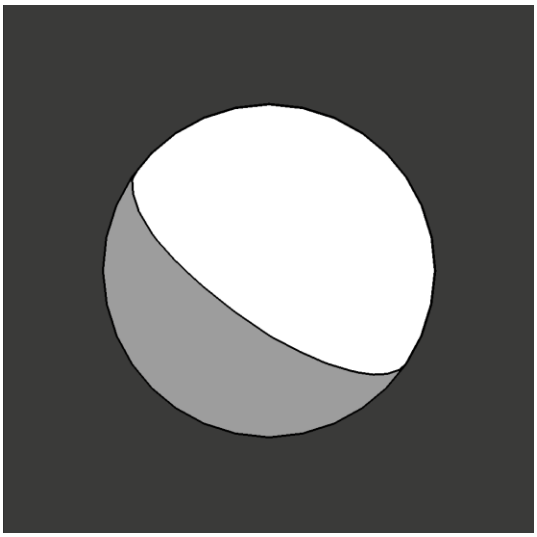
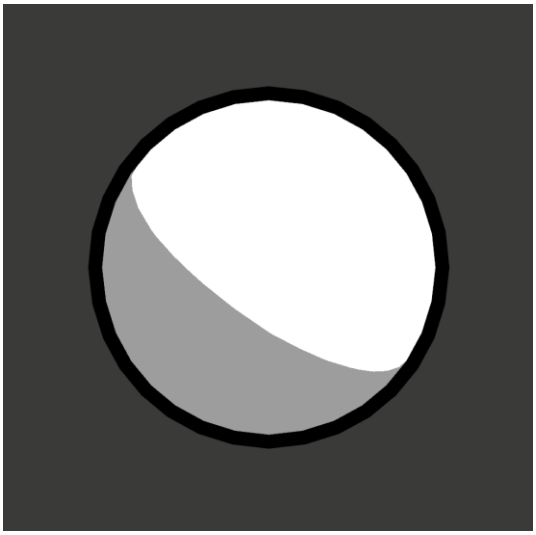
Outlines

Illustrate comes with two different ways to achieve outlines: traditional and renderer feature (2022.2+ only). Traditional outlines use a prepass in the shader to render outlines that follow the mesh's shape but cannot follow sharp edges or alpha clipped textures correctly. Screen space outlines use a renderer feature to add outlines after your scene is rendered. This allows for more flexible outlines sourced from scene depth, normals, and/or color that follow your scene more precisely.



Screen Space Renderer Feature



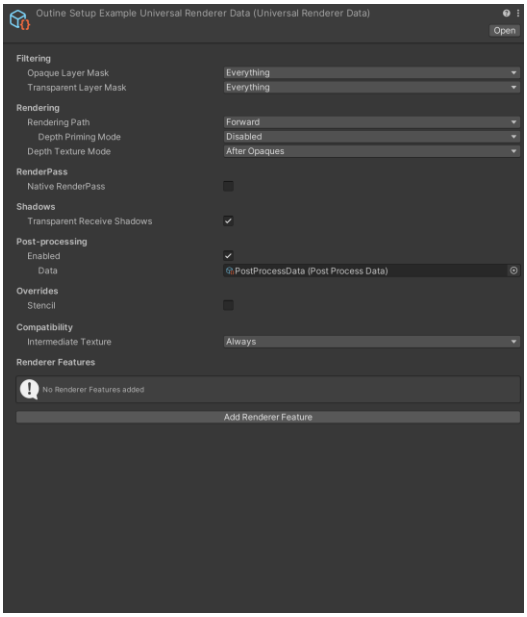
Traditional Outline

Traditional Outlines

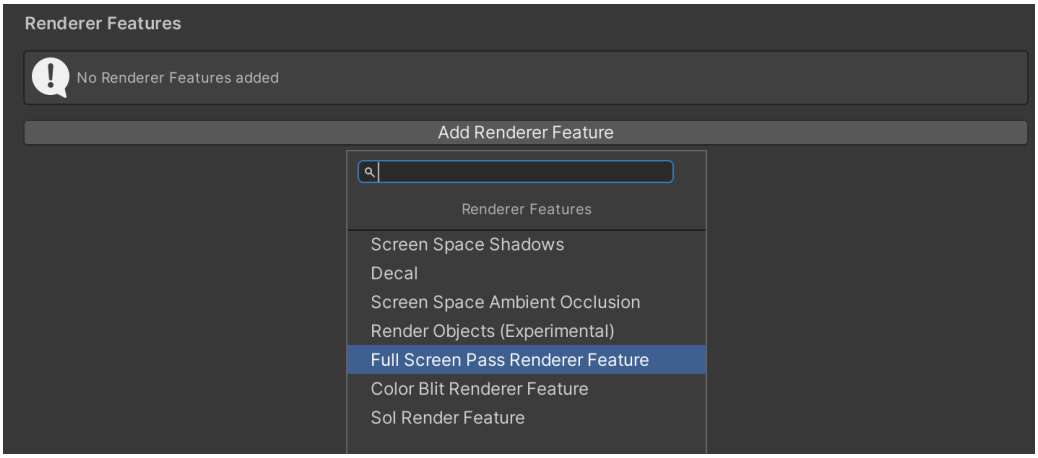
To setup traditional outlines in Unity 2021, you will need to set your depth priming mode to disabled In your URP renderer asset.

Setting up the Renderer Feature

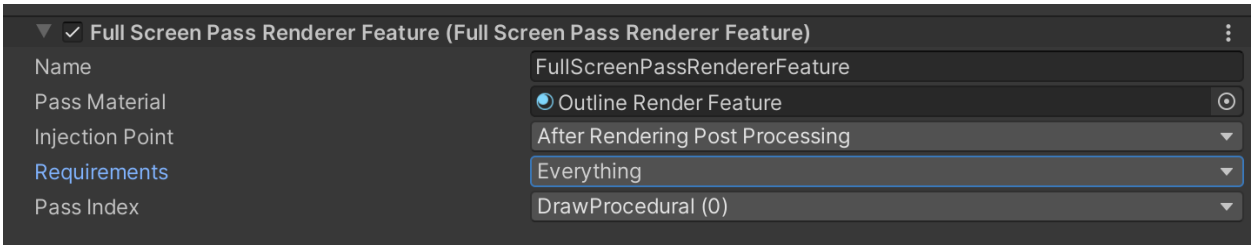
Open your Universal Renderer Data object:



Then, click the Add Renderer Feature button and select the Full Screen Pass option:



Lastly, change the Pass Material to the Outline Renderer Feature material and set the requirements to everything. You can edit your outlines in the material's properties.



Illustrate Shader

Coloring

Main Color/Main Texture – defines the main color/texture for the material.

Color Adjustment

Clamp Adjustments – if enabled keeps pure black and white intact while adjusting.

Hue/Saturation/Value – applies an adjustment to this component of the color.

Color Variation

Applies an adjustment that varies along with the position of the object. Uses a Perlin noise function to determine variation.

Variation Scale – determines the scale of the noise used for variation.

Variation Source – determines how the noise position is determined.

Hue/Saturation/Value – applies an adjustment to this component of the color.

Posterize Colors

Breaks the value component of the color into steps creating banding like a posterization effect.

Steps – determines the number of color bands.

Normals

Normal Mode – determines the method used for calculating the mesh normals.

World Normals – standard normals for a mesh.

Spherize Normals – projects the normals of a sphere onto the mesh. Used for soft vegetation.

Custom Normal Direction – aligns all normals with a single vector. Commonly used for grass.

Align to View – sets the normal vector to always point at the view camera.

Smooth Normals – blends between world normal and spherized normals based on a percentage.

Lighting

Lighting Mode – should this material be lit or unlit?

Light Ramp Multiplier – determines how hard or soft the lighting is.

Light Ramp Offset – adds an offset to the lighting ramp.

Light Color/Shadow Color – sets the base color of lit and unlit areas.

Multiply by Light Color – should the material also incorporate scene lighting data while making calculations? Includes directional light and ambient light but not point lights.

Use Shadows – determines if the shader should use shadows.

Posterize Light – breaks the value component of the light into steps like a posterization effect.

Light Steps – determines the number of light bands.

Additional Light Ramp – determines how hard or soft additional lights should be.

Specular

Adds a specular effect in the direction of the main directional light.

Specular Color – determines the color of the specular effect.

Specular Ramp – determines how hard or soft the specular effect should be.

Specular Ramp Offset – add an offset to the specular effect.

Rim Light

Adds a Fresnel effect while lighting the material.

Rim Light Color – determines the color of the rim light effect.

Rim Light Ramp – determines how hard or soft the rim light effect should be.

Rim Light Ramp Offset – add an offset to the rim light effect.

Rim Light Intensity Lit/Shadow – determines the brightness of of the effect in lit/shaded areas

Use Modified Normals for Specular/Rim Lighting – should lighting effects use world normals or modified normals.

Gradient Shading

Applies a gradient shading to the material.

Gradient Source – determines the metric used to interpolate the gradient.

Space – are these calculations run in world space or local space.

Sensitivity – how sensitive is the gradient.

Offset – adds an offset to the gradient.

Position Offset – adds a pre-offset to the gradient.

Mask – what channel should be used to interpolate the gradient.

Halftone

Turns shadows and highlights into dots similar to a newspaper or manga.

Scale – the size of the dots.

Multiplier – softens the ramp for the dots.

Glint

Adds a metallic glint to the material.

Glint Color/Texture – controls the visual appearance of the glint.

Glint Scale – controls the scale of the glint.

Multiply by Light Ratio – when enabled removes the glint form shaded areas.

Emission

Adds an emissive effect to the material.

Emission Color/Texture – controls the visual appearance of the emissive effect.

Scale – controls the scale of the effect.

Source – controls whether the effects UVs are calculated in screenspace.

Scroll Emission Texture – combine two scrolling textures for a random effect.

Intensity Lit/Shadow – determines the brightness of the effect in lit/shaded areas.

Noise

Adds a noise texture to the material.

Noise Texture – controls the texture of the effect.

Scale – controls the scale of the effect.

Source – controls whether the effects UVs are calculated in screenspace.

Fresnel Effect – determine how much the effect should dissipate when viewed head on.

Intensity Lit/Shadow – determines the intensity of the effect in lit/shaded areas.

Fluttering Vertex Offset

Adds a simple flutter effect to individual vertices. Ideal for leaves.

Amount – how much offset should be added to the material.

Scale – sets the scale of the noise texture.

Direction – sets the direction of the offset.

Framerate – sets the framerate of the noise scrolling.

Movement Speed – sets the speed of the noise scrolling.

Source – multiplies the noise amount by a channel. See the gradient shading for examples of the parameters and how this works.

Swirling Vertex Offset

Adds a swirling effect to vertices. Rotates vertices around the center point of the mesh.

Amount – how much offset should be added to the material.

Scale – sets the scale of the noise texture.

Direction – sets the direction of the offset.

Framerate – sets the framerate of the noise scrolling.

Movement Speed – sets the speed of the noise scrolling.

Source – multiplies the noise amount by a channel. See the gradient shading for examples of the parameters and how this works.

Sway Vertex Offset

Adds a swaying effect to vertices. Ideal for grass and flowing cloth.

Amount – how much offset should be added to the material.

Scale – sets the scale of the noise texture.

Direction – sets the direction of the offset.

Framerate – sets the framerate of the noise scrolling.

Movement Speed – sets the speed of the noise scrolling.

Source – multiplies the noise amount by a channel. See the gradient shading for examples of the parameters and how this works.

Wave Vertex Offset

Adds a swaying effect to vertices. Ideal for grass and flowing cloth.

Amount – how much offset should be added to the material.

Scale – sets the scale of the noise texture.

Offset Direction – sets the direction of the vertex offset.

Primary Movement Direction – sets the direction that the primary wave will move.

Secondary Movement Direction – sets the direction that the secondary wave will move.

Framerate – sets the framerate of the noise scrolling.

Movement Speed – sets the speed of the noise scrolling.

Source – multiplies the noise amount by a channel. See the gradient shading for examples of the parameters and how this works.

Outline

Adds a traditional outline to the meshes.

Color – sets the color of the material.

Width – sets the width of the outline.

Use Normal Surface Outline – disable to fix outline breakage on sharp surfaces.