Reconstructed Lit Shader

This shader is the standard lit shader ported into Shader Graph. This allows you to easily create custom shader effects, without having to manually re-implement metallic maps, normal maps, emission etc. With this shader, you can both create your own custom shaders in Shader Graph, and keep all beloved properties of the default lit shader. Enjoy!

1. Built-in Render Pipeline (BIR)

How to set up the reconstructed lit shader:

This shader is, in principle, the same as the regular lit shader you would use in your Unity project, only reconstructed so you can add your custom shader effects to it. The setup is thus the same as with any other shader – create a material and assign the reconstructed lit shader to it. Then assign the new material to your in-scene objects. That's it!

Shader options:

Albedo Texture:

The main (albedo/color) texture used by the shader.

Albedo Color:

An additional color multiplied with the one already present in the albedo texture. Use this to further customize the look of your sprite.

Alpha Cutoff:

This is a threshold value – all parts of the texture whose alpha-value is less than the alpha cutoff will not be rendered.

Metallic Map:

The metallic map is a black-and-white texture that determines the surface type of the object. It is used to make certain parts of the sprite reflect light like a metal would (metallic), and others like sand would (smooth).

Metallic:

This value determines how “metallic” the surface should be, i.e. whether it should reflect light like a metal or a wet surface, or should absorb it like sand or another rough, non-metallic surface.

Normal Map:

The normal map is used to simulate a 3D-surface by containing information on how the light should be reflected by the surface.

Normal Strength:

This value is multiplied with the normal map and is used to make the effect stronger or weaker. A negative value will mirror the 3D-effect (i.e. protruding surfaces will now be concave, and vice versa).

Emission Map:

A black-and-white map that determines which parts of the sprite will emit light. The white pixels of the texture are areas where the emission will have an effect, and the black pixels are the areas with no emission.

Emission Color:

The emission color for the primary emission. As it is an HDR color, an RGB-value as well as an intensity can be specified.

Emission Extra Intensity:

Since the default HDR color has a limited intensity (-10 to 10), this shader offers an additional intensity option that allows you to make your emission even stronger.

Ambient Occlusion:

The regular ambient occlusion from the standard lit shader.

2. Universal Render Pipeline (URP)

How to set up the reconstructed URP lit shader:

This shader is, in principle, the same as the regular URP shader you would use in your Unity project, only reconstructed so you can add your custom shader effects to it. The setup is thus the same as with any other shader – create a material and assign the reconstructed URP shader to it. Then assign the new material to your in-scene objects. That's it!

2.1 Universal Renderer

(default renderer when creating a 3D URP project)

Shader options:

Albedo Texture:

The main (albedo/color) texture used by the shader.

Albedo Color:

An additional color multiplied with the one already present in the albedo texture. Use this to further customize the look of your sprite.

Alpha Cutoff:

This is a threshold value – all parts of the texture whose alpha-value is less than the alpha cutoff will not be rendered.

Metallic Map:

The metallic map is a black-and-white texture that determines the surface type of the object. It is used to make certain parts of the sprite reflect light like a metal would (metallic), and others like sand would (smooth).

Metallic:

This value determines how “metallic” the surface should be, i.e. whether it should reflect light like a metal or a wet surface, or should absorb it like sand or another rough, non-metallic surface.

Normal Map:

The normal map is used to simulate a 3D-surface by containing information on how the light should be reflected by the surface.

Normal Strength:

This value is multiplied with the normal map and is used to make the effect stronger or weaker. A negative value will mirror the 3D-effect (i.e. protruding surfaces will now be concave, and vice versa).

Emission Map:

A black-and-white map that determines which parts of the sprite will emit light. The white pixels of the texture are areas where the emission will have an effect, and the black pixels are the areas with no emission.

Emission Color:

The emission color for the primary emission. As it is an HDR color, an RGB-value as well as an intensity can be specified.

Emission Extra Intensity:

Since the default HDR color has a limited intensity (-10 to 10), this shader offers an additional intensity option that allows you to make your emission even stronger.

Ambient Occlusion:

The regular ambient occlusion from the URP standard lit shader.

2.2 2D Renderer

(default renderer when creating a 2D URP project)

Shader options:

Albedo Texture:

The main (albedo/color) texture used by the shader.

Albedo Color:

An additional color multiplied with the one already present in the albedo texture. Use this to further customize the look of your sprite.

Alpha Cutoff:

This is a threshold value – all parts of the texture whose alpha-value is less than the alpha cutoff will not be rendered.

Normal Map:

The normal map is used to simulate a 3D-surface by containing information on how the light should be reflected by the surface.

Normal Strength:

This value is multiplied with the normal map and is used to make the effect stronger or weaker. A negative value will mirror the 3D-effect (i.e. protruding surfaces will now be concave, and vice versa).

Emission Map:

A black-and-white map that determines which parts of the sprite will emit light. The white pixels of the texture are areas where the emission will have an effect, and the black pixels are the areas with no emission.

Emission Color:

The emission color for the primary emission. As it is an HDR color, an RGB-value as well as an intensity can be specified.

Emission Extra Intensity:

Since the default HDR color has a limited intensity (-10 to 10), this shader offers an additional intensity option that allows you to make your emission even stronger.

If you are satisfied with this shader, be sure to check out our other shaders (some of which are also built on top of the reconstructed one) on our Unity Asset Store page (https://assetstore.unity.com/publishers/55724), or on our website (https://www.project-gamedev.com/shaders.html).

If you experience any issues with this shader, or would like to propose an improvement, feel free to contact us at contact@project-gamedev.com, or by using the contact form on our website (https://www.project-gamedev.com/contact.html).

Keep on creating!

Project G.A.M.E.D.E.V.