Built-In Mirror Shaders | **Ciconia Studio**

Overview

These Shaders let you create advanced real time mirror reflection. There were created to enhance visual for mirror plans using the MirrorReflection script provided by Unity.
The shaders give you full control on adding additional detail like dirt or broken effects.

The file includes only built-in shaders. The Mirror Shaders v2020.1 package is only compatible with Unity 2019.3.0 or higher. A lower version of Unity will download the version 2.1.

The Demo scene have changed since the latest release and for optimization reasons, some models provided for free to illustrate the demo scenes have not been kept for this version.
However, you can still download the previous version of the package, with all its contents using Unity 2019.2 and lower.
The shaders have been completely revised and optimized for Unity 2019.3 and higher.

Tutorials

Videos |

[Mirros Shaders V2]

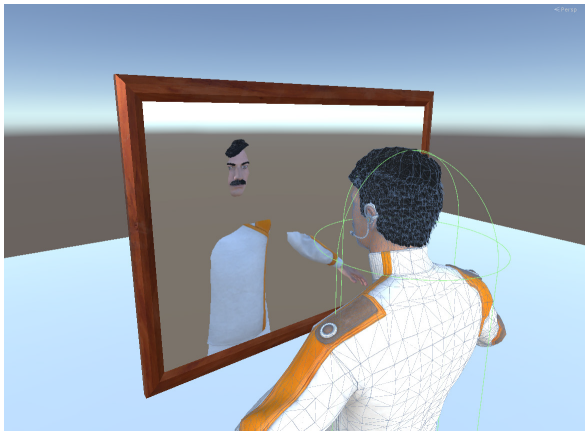
Create a mirror with Unity plane |

- Right click within a folder in the project window.
- Create/Material
- Select the new material created
- In the inspector window, go to the shader drop-down list
- Select CiconiaStudio/CS_Mirror/...
- Add the material to the plan object.
- Add the Mirror Reflection script to the model too.

Import a custom object |

1. Before importing a custom mirror object in Unity, make sure that the **local** Y axis (Green) is turned in the same direction as the reflection. If it's not, just rotate the pivot point.

2. After importing the object in some cases, you will see a clipping artifact. It may be because the Y axis is turned in the wrong side of the plan.
   To avoid this problem just go to the script properties on the inspector and enable «Flip Y axis».
   It can also be because the reflection depth must be adjusted.



Flip Y axis disabled

Few things to know |

Every mirror in your scene must have its own material.
In the script properties you can :
- Flip the Y axis of the reflection
- Adjust the reflection depth
- Change the reflection resolution
- Choose by layers what objects are reflected or not

Shader Properties

Mirror Properties |

Intensity – Controls the intensity of the real reflection

Tinted Glass– Controls the opacity of the glass. A value of 0 means completely transparent.

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 – Selects a color map.

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

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

Exclude Reflection from Saturation and brightness – When enabled, affects the colors captured by the reflection.

Normal Map – Selects a normal map.

Normal Intensity – Controls the normal intensity.

Refraction – Controls the amount of refraction. The refraction is affected by the normal map.

Mask Map -->M(R) - Ao(G) - 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 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. Only available if the Mask Map contains information in the green channel

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

Visualize Dirt– Enables or disables the detail mask visualization.

Invert Mask – Inverts the color of the mask. 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 100% Mirror reflection.
To be more specific, white areas will show Dirt Properties and black areas will show the Main Properties which contains the real reflection.
In order to see Dirt without map selected, simply enable Invert Mask.

Intensity – Controls the intensity of the detail mask. Lowering the value can be useful to add real reflection on the dirt map.

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

Spread – Controls the diffusion amount of the detail mask. A value of 0.5 is neutral, which means that if a Detail Mask is selected a lower value will turn the white to black and vice versa.

Additional Reflection | These properties control the cubemap reflections.

Color – Specifies the RGB color of the reflection.

Cubemap – Selects a cubemap.

Intensity – Controls the intensity of the reflection.

Blur – Specifies the amount of blur.

Reflection Blend – Controls the diffusion of the reflection depending on the Detail Mask. A value of 0 means that the reflection is only visible on the black areas. Increase the value to add cubemap reflection to the white area as well.

Invert – If enabled, the reflection will be spread from the white areas(0) to the black areas(1)

Dirt Properties | These properties control the secondary maps.

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

Color – Specifies the RGB color of the model.

Base Color – Selects a secondary color map.

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

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

Blend Main Normal – Enables or disables the blending of the Main Normal Map with this Normal Map.

Normal Map – Selects a secondary normal map.

Scale – Controls the normal intensity.

Metallic Map -->(Smoothness A) – Selects a metallic map. The smoothness map can be stored in the Alpha channel.

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 secondary base color alpha.

Use Ao From Main Properties – Enables the Main ambient occlusion to be visible in the puddles

Broken Properties | These properties controls the effect of broken glass.

Enable– Enables or disables the broken effect

Color -->(Opacity A) – Specifies the RGB color. The alpha channel controls the opacity of the broken effect. A value of 0 will make the broken effect completely invisible.

Broken Map -->(Mask A) – Selects a color map. A Grayscale mask need to be stored in the alpha channel *(Black will be fully transparent*)

Brightness – Controls the amount of brightness of the Broken Map.

Broken Normal – Selects a broken normal map.

Scale – Controls the normal intensity.

Refraction – Controls the amount of refraction. The refraction is affected by the normal map.

Metalness– Controls the amount of metallic reflection.

Smoothness – Controls the amount of glossiness reflection.