

SKYBOX PLUS  
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## Introduction

Thank you for purchasing!

**Skybox Plus** is a beautiful, dynamic, skybox solution that includes real-time, animated haze & procedural clouds as well as hand-painted, multi-layered, clouds.

We hope you find the asset easy and fun to use. Feel free to contact us for any enquiry.

Visit our Support Forum on <https://kronnect.com> for help and access to the latest beta releases.

**Kronnect Games**

Email: [contact@kronnect.com](mailto:contact@kronnect.com)

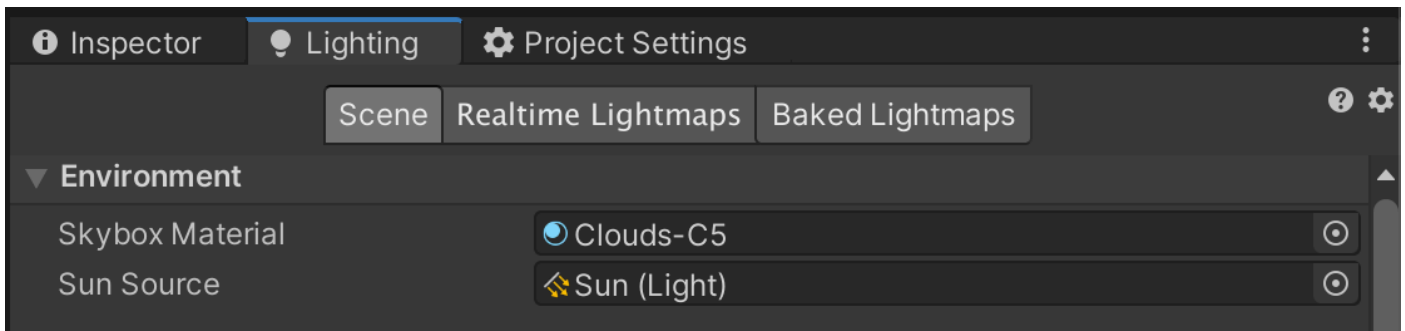
Kronnect Support Forum: <https://www.kronnect.com/support>

## Quick Start and Demo Scene

1. Import the asset into your project or create an empty project.
2. Go to Demo folder and run the demo scene to quickly test the different skyboxes.
3. Examine the Resources/SkyboxPlus/Materials folder. You'll find lot of ready to use skybox materials.

## How to use the asset in your project

- 1) Select Window / Rendering / Lighting Settings to open the Lighting settings tab.
- 2) In the Lighting settings tab, assign the skybox material into the Skybox Material field:

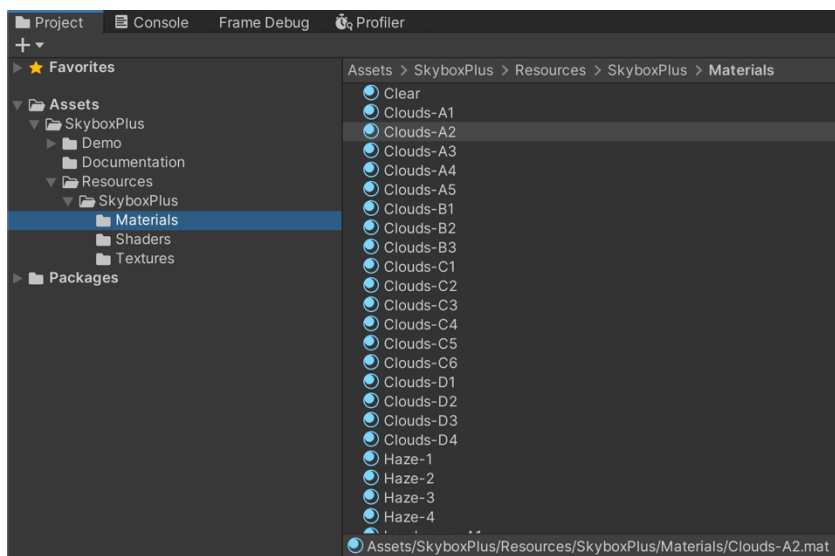


Note: if you're using Single Pass Stereo or MultiView (VR), add the script "SkyboxPlus" to your main directional light (no needed otherwise).

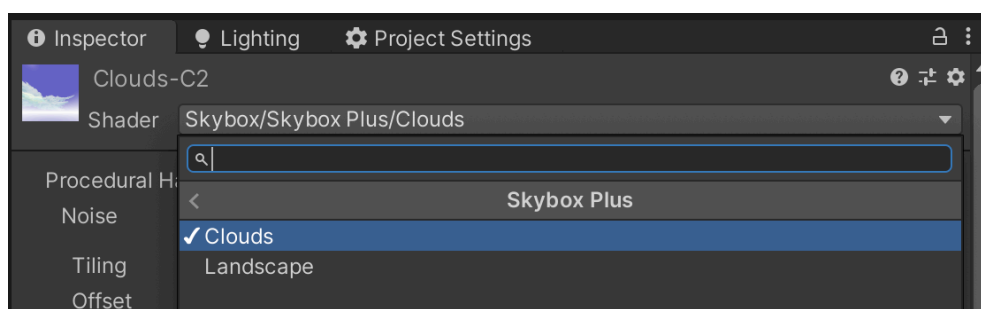
## Creating a new Skybox Plus material

To create a new Skybox Plus material you can:

- 1) Duplicate any of the sample skybox plus materials provided in the Resources/SkyboxPlus/Materials folder:



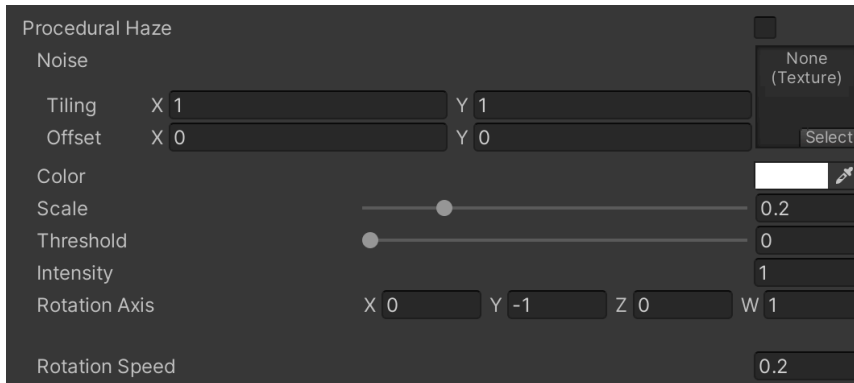
- 2) OR create a new material and use either the SkyboxPlus/Clouds or SkyboxPlus/Landscape shaders:



## Skybox Plus material options

Select your Skybox Plus material. The inspector will show the following options:

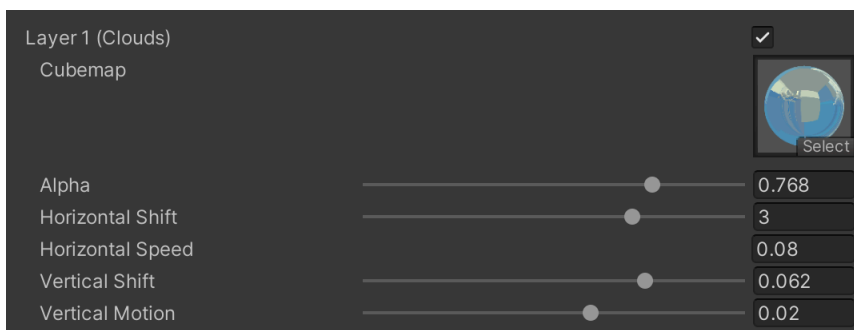
### Procedural Haze



Procedural haze projects dynamic noise in the skybox. It allows you to achieve a foggy sky or a noise-based cloud skybox. You can combine procedural haze with cubemaps (next sections).

The Noise texture field allows you to change the default noise texture used by the asset. Skybox Plus provides a perlin noise texture of 256x256 size inside the Resources/SkyboxPlus/Textures folder.

### Layers (Clouds or Mountains)



The Skybox Plus/Clouds shader supports up to 4 layered cubemaps (you can combine up to 4 cubemaps). And the Skybox Plus/Landscape supports up to 7 layered cubemaps. The main difference of a cloud layer vs a mountain layer is how it blends with the sky. The cloud layers allow the Sun shine through the clouds while the mountains are fully opaque and cannot animate.

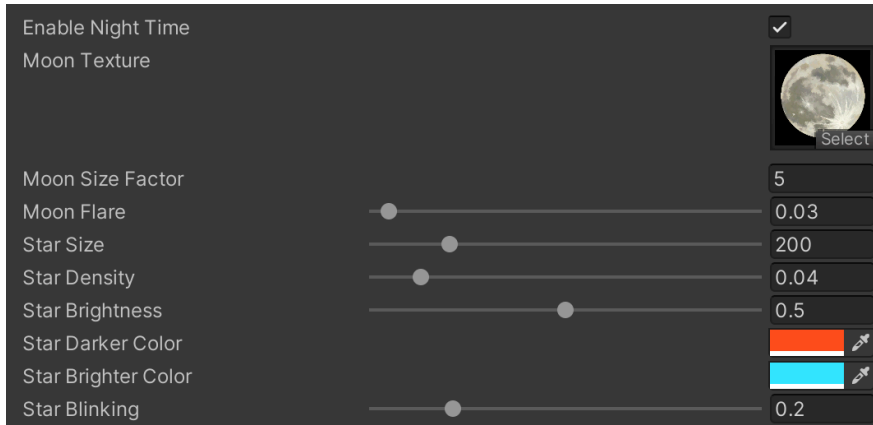
### Sun settings



This section allows you to change the Sun size, corona brightness and overall tint color.

- c) All objects from the root to the children
- d) All objects belonging to a layer
- e) Custom targets specified by script (see Advanced Topics & Notes)

## Night time (Moon + Stars)



If you want the skybox to cover the night correctly, you must enable the “Night Time” checkbox (shown in the picture above). Enable this option only if you want a day/night transition or a night skybox.

## Other settings



Finally, in this section you can customize the overall sky color, the final exposure (brightness) and fog color & amount. The fog is shown on the horizon and extends vertically based on the Fog Amount value.

## Skybox Plus performance considerations

Skybox Plus shaders are designed to provide the best performance. However, note that performance also depends on the number of layers enabled in the material.

The procedural haze option uses 3 texture fetches on the noise texture producing a very fast effect. Each cubemap layer adds a texture fetch over a cubemap of 4K size. Finally, the Moon texture is 256 in size and adds another texture fetch.

This means that if you use the Landscape shader and use all options, the shader will use 11 fetches over quite large textures so it can be expensive on mobile.

To achieve the best performance, follow this recommendation:

- Consider including 2 or 3 material variants in your game and choose one or another based on a quality setting that you include in your game. So if user choose the Best Quality, you can enable the material with most features. Conversely, if the user choose Best Performance, you can use a simpler material.

## Frequent Asked Questions

I change my directional light color but it doesn't reflect in the Sun or skybox material.

There're two properties in the skybox material that affects the overall lighting: Sun Color and Exposure ("\_SunColor" and "\_Exposure" respectively). You can modify them in a script using "material.SetColor("\_SunColor", yourColor) for example.

Single Pass Stereo VR support?

In Single Pass Stereo or MultiView, you need to add the script "SkyboxPlus" to the main directional light.

Can Moon use a different direction?

Yes. Add the "SkyboxPlus" script to the main directional light and assign any object you want to represent the Moon to the "Moon" field.

## Suggestions

Please feel free to contact us to suggest new skybox ideas or variations ([contact@kronnect.com](mailto:contact@kronnect.com)).