



VOLUMETRIC FOG & MIST

Kronnect

Thanks for purchasing!

Volumetric Fog & Mist is an advanced full-screen post-image effect for Unity that adds realistic fog, mist, dust and clouds effects to your scenes.

This asset is highly optimized but due to the nature of its algorithm it's not suitable for mobile devices. For mobile devices, use Dynamic Fog & Mist, also included in the package. You can add both assets to your project and enable the most appropriate for the running platform (see Dynamic Fog & Mist section at the end of this document).

Demo Scenes

Just load any demo scene included and click "Play". You will be able to move around using WASD or cursor keys. Press spacebar to jump, F to change fog style and T to toggle on/off the fog.

The Fog Of War demo scene allows you to "Cut" the fog as you pass through it.

You can delete the Demo folder entirely or ignore it when importing the asset into your project.

Usage

Add the VolumetricFog script to your main camera in your scenes. Choose one of the preset and that's all!

You can of course customize any of its parameters. **Make sure you select “Custom” preset so the changes you make to parameters will be saved with the scene, otherwise they will revert to the default values associated to the selected preset.**

Special Features

Fog Volumes

You can define special zones (fog volumes) where fog alpha will automatically change. Create a fog volume from the menu GameObject / Create Other / Fog Volume. Position the fog volume over the desired area, edit the collider bounds and set the desired fog alpha and transition duration in the inspector.

Elevated Fog & Clouds

You can make the fog start above Camera position to simulate floating smoke or even clouds! Try it assigning a value above the Camera Y position to Base Height property in the inspector.

Automatic fog light alignment with Sun

A light game object existing in the scene can act as the Sun and be assigned to Volumetric. You'll find a property in the inspector, called Sun, where you can drag and drop the desired light in your scene.

After assigning a light as the Sun, the fog will react to the sun light direction, intensity and color automatically. Click “Unassign” to break the link and allow to freely customize light direction, intensity and color.

Void Areas

Another great feature included in the asset is the **void area**. This option is useful if you want a clear area around a world space position. For example, in 3rd Person View games, you may want a clear area around the character.

This option is similar to the Distance Fog feature (using Distance > 0) but Distance Fog Works having into account the distance from the Camera. So Distance parameter is useful for 1st Person View and Void Areas for 3rd Person View.

Void areas can be **spherical or boxed**. To make a spherical void area just move the radius slider to the left. To make it boxed, set the width and depth sliders.

Also, you can assign your character game object to the property field in this section, so the center of the void will follow it automatically.

Fog of War

You can also set any number of void areas just calling **SetFogOfWarAlpha** method of the Volumetric script. Just pass the world space position, the radius and the desired new alpha for the fog. Just make sure the center and size of the fog of war (configured in the inspector) are properly set (by default the fog of war is centered on 0,0,0 with a size of 1024x1024).

Call **ResetForOfWar** to reset the cleared areas back to normal.

Performance Tips

Volumetric Fog uses an extremely optimized ray-marching algorithm to provide “volumetric sense” fog in front of your player. This great effect comes at a performance price that makes Volumetric Fog & Mist not suitable for mobile devices (at least mobile devices to date).

However we have added a few optimization parameters to provide you with more control regarding the performance vs quality:

- **Max Distance:** reduce the max distance property to a value that matches your scene/requirements so no extra fog is calculated in vain.
- **Downsampling:** increase this value to improve performance. A high value will produce visible artifacts around objects. A x2 value usually works well. A x4 value works better with elevated/cloud fog.
- **Stepping:** controls the step of the ray-marching algorithm. Reduce this value to improve performance.
- **Stepping near:** additional factor for the ray-marching step applied only to close distances. Increase to improve the fog effect when stepping is reduced.
- **Sky Haze:** reduce to 0 to improve performance.
- **Distance** (starting Distance in Fog Geometry group): reduce to 0 to improve performance.
- **Noise Density:** note that low fog density will take more time to compute since the light will travel more distance and more calculations are required. Increase the noise density to improve performance.

Support

Visit kronnect.com for questions, support and more info.

Extra: Dynamic Fog & Mist

You will find a copy of Dynamic Fog & Mist included in this package as well.

Dynamic Fog & Mist is somewhat less impressive visually than Volumetric Fog but, depending on how you configure the shader, it will provide better performance.

When you import Dynamic Fog & Mist in a project where Volumetric Fog & Mist exists, Unity will show some warnings/errors in the console. You may ignore the warnings as they will only appear the first time. The errors are related to duplication of Standard Assets included in Demos folders of both the assets. Just delete Dynamic Fog & Mist copy of Standard Assets (found inside Demos folder).

Volumetric Fog Change Log

V3.2 Current version

New Features:

- New World Edge preset
- Compatibility with Gaia via Extension Manager
- Compatibility with Time of Day (assign Sun game object to Sun property in inspector)
- Ability to render either in front or behind transparent objects with a single click (inspector)

Improvements

- Ability to assign a gameobject (character) to make the void area follow it automatically
- Ability to set the baseline of the fog automatically with Camera height.
- Button in inspector to unassign the Sun
- Improved preset auto configuration, now detects water level
- Improved falloff for distance fog when views from top or bottom
- Improved fog algorithm

Fixes:

- Compatibility with Render Texture (Demo Scene 3 included, check video below)
- Fixed issues with different height base lines

V3.1 Published on 2016.02.09

- Fog of War.

V3.0 Published on 2016.01.25

- Downsampling option to improve performance. Best results when fog is used as cloud layer.

V2.2 Published on 2016.01.22

- Support for boxed void areas

V2.1 Published on 2016.01.08

- Automatic light alignment with defined Sun

V2.0 Published on 2016.01.04

- Support for void areas
- Support for elevated fog & clouds

V1.2 – Published on 2015.12.22

- Improved support for transparent objects

V1.1 - Published on 2015.12.03