How to set up the fullscreen pulse shader:

(for Unity versions below 2022.1)

The following paragraph presents the steps necessary to make the fullscreen shader work in your project. Visit **https://docs.project-gamedev.com/fullscreen-pulse-shader/setup.html** for image-aided instructions.

1. Locate the **Forward Renderer** asset used by your scene. Usually, it is located in **Assets/Settings**. Also make sure your main camera is using the **Forward Renderer** under **Rendering/Renderer** in the inspector.

2. Add a new renderer feature to the Forward Renderer asset using the **Add Renderer Feature** button. Select **Full Screen Pulse Renderer Feature** from the dropdown menu.

3. Set **Settings/Event** to **After Rendering Transparents**. Select **Full Screen Pulse Material** (located in **Fullscreen Pulse Shader/Materials**) as the **Blit Material**. Make sure all other options for the renderer feature are identical to the Forward Renderer asset included in the pack (an example setup is provided in **Fullscreen Pulse Shader/Forward Render Pipeline Setup**).

4. Add a new Game Object to your scene and add **FullScreenPulseEffectController.cs** as a new component. Check **Fade In Screen Pulse** if you wish to have the screen turn black with the pulse and fade out afterwards, or leave it unchecked if you only wish the pulsating effect. Select **Full Screen Pulse Material** for the second script option, and the main camera in your scene as the third option.

5. Make any changes to the pulse effect directly in the material. Unlike regular shaders, the full screen one is not attached to a game object.

6. In order to activate the pulse, you can either check **Debug** in the material (useful for quickly trying different shader options), or call the method **PerformFullscreenPulse()** located in **FullScreenPulseEffectController.cs** from your own scripts.

Shader options:

Pulse Edge Color:

Use this to change the color of the pulse wave. The transparency of the selected color is irrelevant.

Pulse Center:

The point of the screen used as a center for the pulse. The x- and y-coordinates are between (0; 0) and (1; 1) (for example, x = 0.5 and y = 0.5 would be the center of the screen). The z- and w-coordinates can be ignored.

Pulse Length:

The duration of the pulse effect in seconds.

Pulse Strength:

Controls the strength of the distortion effect created by the pulse.

Pulse Edge Thickness:

Determines the thickness (width) of the pulse.

Stretch:

Use this option to control when the pulse disappears from the screen. Lower values will make the pulse wave disappear whilst still visible on the screen, while higher values will make the pulse wave disappear after it has "left" the screen. You may consider this option as the "distance" that the pulse wave has to "travel" before the shader effect is complete.

Main Texture:

This field is required by Sprite Renderer components; it is not meant to be given a value manually and can be ignored.

Controller:

Similar to all other shaders in the Essential 2D Lit Shaders Bundle (https://assetstore.unity.com/packages/slug/201882), this shader is time-

insensitive, meaning that the pulse effect is controlled solely by a controller-variable. See **FullScreenPulseEffectController.cs** for a practical example on how to use this controller variable in your own scripts.

Debug:

Checking this option will immediately start repeating the effect indefinitely. This is particularly useful when setting up the effect, as you can immediately see which color/thickness/distortion/etc combination you find to be the best for you.

Fade Controller:

Similar to the **Controller** option, this value controls the fading of the screen during the pulse effect. A practical example is once again provided in **FullScreenPulseEffectController.cs**.

Screen Size Ratio:

This is the ratio between the screen height and the screen width. It is automatically determined by the scene's camera and is used to keep the pulse effect circular, regardless of the screen resolution used. This is automatically set up in **FullScreenPulseEffectController.cs** when the effect is launched, so this option can be ignored.

Congratulations! You are now ready to use the shader!

In case you experience any problems with the shader, can't manage to set it up properly, or would simply like to propose an improvement, don't hesitate to contact us at **contact@project-gamedev.com**, or fill out the form at **https://project-gamedev.com/contact.html**.

Best of luck with your game development journey!