SHOCKWAVE WARP

Shockwave Warp is a special effect shader that simulates shockwaves on the surface of an object. The shader also has options to shrink and to fade out based on a pattern texture. These settings combined can allow many different shockwave or warp style effects to be created.

Examples Include:
• Shockwaves from point or origin (Fortnite-like pickaxe effect).
• Ripple effect.
• Disappearing effect.
• Respawning effect.
• Shrinking effect.

Advantages:

• Efficient multi-compile shader that mimics the same functionality as the Unity standard shader (Normals, Secondary Maps, Shininess, etc), but has extra settings for the special effect. Turn unneeded features off for extra performance.
• Change shader parameters with animations to create different effects.
• Fully compatible with object GPU instancing.
• Change the render mode. Choose from Opaque, Fade, Cutout, and Transparent.
• Uses a custom Inspector Drawer that displays tools tips for shader parameters, and hides disabled features for a more organised inspector.

Usage

Shockwave Warp can be used like any other surface shader. The shader parameters can be changed to create different effects.

The sample scene shows some examples of these parameters being changed via animations to create different effects.

The parameters can also be changed directly via script in the same way as any other shader. The *AircraftJet* and *HighQualCube* prefabs in the sample scene are examples of the using a script to animate the shader.

- Both objects have a *Shockwave.cs* script attached.
- There is a *ClickController* prefab in the scene with a *ClickExample.cs* script attached.

The Click Controller checks if a clicked object has a Shockwave script. If it does, it triggers the shockwave script to create an effect at the click location.

Shader Parameters

Rendering Mode: The mode used to render the shader (Opaque / Cutout / Fade / Transparent).

Main Texture: The primary shader texture.

Equitangular Normals: Use equitangular UVs (better for spheres).

Tint Color: Main Texture tint color.

Normal Texture: The normal map texture.

Bump Scale: The scale of bumpiness from the Normal Texture.

Metallic Map: Metallic map texture. Controls shininess and glossiness.

Metallic Scale: Controls how metallic the texture appears.

Smoothness: Controls how smooth the texture appears.

Occlusion Texture: Occlusion Map texture. Controls which areas of the texture receive high or low lighting.

Occlusion Strength: Occlusion Map texture strength.

Emission Texture: Emission map texture.

Emission Tint Color: Tint color of emission texture.

Fade Texture: Texture that fade effect is based on.

Fade Amount: Fade amount adjustment.

Detail Texture: Secondary detail texture overlayed on Main Texture.

Detail Normal Texture: Normal map for Detail Texture.

Detail Bump Scale: The scale of bumpiness from the Detail Normal Texture.

Detail Mask: Mask texture that determines where the Detail texture shows (Alpha of texture).

Origin Position: Local position that sine wave and shrink effect propagates from.

Shrink Amount: Adjust how much the object shrinks.

Sine Wave Amplitude: Amplitude of sine wave effect.

Sine Wave Frequency: Frequency of sine wave effect.

Sine Wave Offset: Offset of sine wave effect (controls progression of sine wave).

Sine Wave Repetition: How many times the sine wave effect repeats (number of waves).