EZ Camera Shake v1.0.1

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Contents

Overview

This package provides an easy-to-use implementation of a procedural camera shake animation. It works on both static and moving cameras.

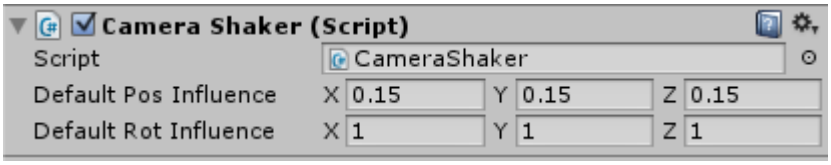
Included in this package is a bonus camera follow script, which can be used in a variety of situations.

Setting Up the Camera Shake

In order for the ***CameraShaker*** component to work properly, there are 2 rules that must be followed:

1) Your Main Camera must be the child of a GameObject, and its local position and rotation must be set to (0, 0, 0)
2) Any scripts that move the camera must NOT be placed on the same object as the ***CameraShaker*** script. Put these on the Camera's parent instead.

The ***CameraShaker*** component has 2 fields:



- **Default Pos Influence:** The default influence shakes have over the camera's position. This can be altered on a per-shake basis.
- **Default Rot Influence:** The default influence shakes have over the camera's rotation. This can be altered on a per-shake basis.

Using the Camera Shake

Managing CameraShaker Components

Using the camera shake script can require management of different instances, if you have multiple cameras.

If you only have one main camera with the ***CameraShaker*** script in your scene, then you can use the ***CameraShaker*.Instance** static field to access the main camera.

If you have more than one camera in your scene, then you can use ***CameraShaker*.GetInstance(name)** static method to access the different instances. **Name** corresponds to the Gameobject name the ***CameraShaker*** script is attached to.

Alternatively, you can implement your own manager if the previous two options do not meet your needs. All you need to store are references to the needed ***CameraShaker*** components.

The CameraShakeInstance

The ***CameraShakeInstance*** is a class that holds data about a shake. The ***CameraShaker*** component holds a list of all active ***CameraShakeInstances***, and applies the shake values of each one additively.

CameraShakeInstances have these main properties:

- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are smooth and slow, higher values are rough and fast.
- **PositionInfluence:** How much this shake influences the position of the camera. These values are measured on the local axes of the camera.
- **Rotation Influence:** How much this shake influences the rotation of the camera. These values are measured on the local axes of the camera.
- **CurrentState:** The current state of the shake. A shake can be fading in, fading out, sustained, or inactive.
- **DeleteOnInactive:** Whether or not the ***CameraShaker*** component should delete this instance when its state is inactive.

CameraShakeInstances also have several other methods and properties that control the shake:

- **StartFadeIn:** Fades in over the given time span.
- **StartFadeOut:** Fades out over the given time span. Will set the state to Inactive when finished, so make sure to set **DeleteOnInactive** if you don't want it to be deleted.
- **ScaleMagnitude:** Scales the magnitude value.
- **ScaleRoughness:** Scales the roughness value.

Shake Methods

There are several different methods you can use to initiate a new shake. All methods return their corresponding ***CameraShakeInstance***, which can be used to modify shake properties at runtime.

Shake

Initiates a camera shake using a predefined ***CameraShakeInstance***. This package includes a set of presets that can be used by this method under the ***CameraShakePresets*** class, or you can define you own presets and use them here.

ShakeOnce

Initiates a one-shot shake that fades in and then fades out automatically. This kind of shake is best used for explosions, bumps, or other short-lived shakes.

StartShake

Starts a sustained shake that will continue until it is told to stop using **StartFadeOut**. You must store the ***CameraShakeInstance*** variable returned by this function in order to stop the shake or alter its properties.

Scripting

CameraShaker

Shake
Initiates a shake using the given CameraShakeInstance.

Parameters:
- **Preset:** The CameraShakeInstance to initiate.

Returns:
- A reference to the created shake.

ShakeOnce (Overload 1)
Initiates a one-shot shake.

Parameters:
- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.
- **FadeInTime:** The time, in seconds, for the shake to fade in.
- **FadeOutTime:** The time, in seconds, for the shake to fade out.

Returns:
- A reference to the created shake.

ShakeOnce (Overload 2)
Initiates a one-shot shake.

Parameters:
- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.
- **FadeInTime:** The time, in seconds, for the shake to fade in.
- **FadeOutTime:** The time, in seconds, for the shake to fade out.
- **PosInfluence:** How much this shake influences the position of the camera. This is relative to its local axes.
- **RotInfluence:** How much this shake influences the rotation of the camera. This is relative to its local axes.

Returns:
- A reference to the created shake.

StartShake (Overload 1)
Initiates a sustained shake.

Parameters:

- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.
- **FadeInTime:** The time, in seconds, for the shake to fade in.

Returns:

- A reference to the created shake.

StartShake (Overload 2)
Initiates a sustained shake.

Parameters:

- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.
- **FadeInTime:** The time, in seconds, for the shake to fade in.
- **PosInfluence:** How much this shake influences the position of the camera. This is relative to its local axes.
- **RotInfluence:** How much this shake influences the rotation of the camera. This is relative to its local axes.

Returns:

- A reference to the created shake.

ShakeInstances
Returns the list of CameraShakeInstances.

CameraShakeInstance

CameraShakeInstance (Overload 1)
Creates a new one-shot instance.

Parameters:
- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.
- **FadeInTime:** The time, in seconds, for the shake to fade in.
- **FadeOutTime:** The time, in seconds, for the shake to fade out.

CameraShakeInstance (Overload 2)
Creates a new sustained instance.

Parameters:
- **Magnitude:** The intensity of the shake.
- **Roughness:** How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.

StartFadeIn
Starts a fade in of the shake.

Parameters:
- **FadeInTime:** The time, in seconds, for the shake to fade in.

StartFadeOut
Starts a fade out of the shake.

Parameters:
- **FadeOutTime:** The time, in seconds, for the shake to fade out.

ScaleMagnitude
Scales this shake's magnitude while preserving the initial Magnitude.

ScaleRoughness
Scales this shake's roughness while preserving the initial Roughness.

Magnitude
The intensity of the shake.

Roughness
How rough the shake is. Lower values are slow and smooth, higher values are fast and jarring.

PositionInfluence
How much this shake influences the position of the camera. This is relative to its local axes.

RotationInfluence
How much this shake influences the rotation of the camera. This is relative to its local axes.

DeleteOnInactive
Whether or not this shake should be deleted by the ***CameraShaker*** component when its state is Inactive.

NormalizedFadeTime
A normalized value (about 0 to about 1) that represents the current level of intensity.

CurrentState
The current state of the shake. A shake can be FadingIn, FadingOut, Sustained, or Inactive.
