# Randomizing Camera Shake Using Cinemachine

The new impulses module is pretty cool. You can generate shake patterns using Scriptable Object assets and plug them into Cinemachine Impulse Source components. This is pretty cool.

**But what if you want to randomize the shake?**

A friend of mine quickly pointed out this apparent noise, as he wanted a different shake every time a camera shake event was fired. His solution involved creating a new game object for the Cinemachine virtual camera to target and shaking that.

**I didn’t like that solution.**

### Investigating Alternatives

The field we are interested in is on one of the Cinemachine Impulse Source variants:



Notice how it asks for a Signal Source Asset? Yet if you click the gear, you will find you have several different options for types of Assets you can create.

What’s going on here?

### Unity API to the Rescue!

It turns out that Signal Source Asset is an abstract type of ScriptableObject. That’s convenient! So all we need to do is subclass SignalSourceAsset and override the abstract methods. Here’s a template:

using System.Collections;  
using System.Collections.Generic;  
using Cinemachine;  
using UnityEngine;  
  
[CreateAssetMenu(fileName = "TestShake", menuName = "TestShakeAsset")]  
public class TestShake : SignalSourceAsset  
{  
 public override float SignalDuration  
 {  
 get  
 {  
 return 1000000f;  
 }  
 }  
  
 public override void GetSignal(float timeSinceSignalStart, out Vector3 pos, out Quaternion rot)  
 {  
 pos = Vector3.zero;  
 rot = Quaternion.identity;  
 }  
}

You’ll want to set the SignalDuration to return how long the impulse should play. GetSignal is where the magic happens. That’s where you will want to call your random number generator of choice or generate other noise patterns. Don’t forget that because this is a ScriptableObject, you can add your own public fields to be customizable in the inspector.

### A Nice Little Surprise

This just worked:

