



# Fracture - Box Destruction

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*Thanks for purchasing this great asset! You won't be disappointed.*

*If you have any questions or there are any problems at all,*

*please email me at: [alex\\_dunn@hotmail.com](mailto:alex_dunn@hotmail.com)*

*- Alex*

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## Information

The fracture destruction suite is the grand plan, which this box destruction tool is part of. This tool enables you to dynamically fracture and destroy box primitives at run time.

Forum Thread : [Fracture - Dynamic Destruction](#)

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## Getting Started

To use this tool, please follow these steps:

- a. In the scene you want to use the destruction tool, select from the Unity menu strip the 'Game Object' drop down, then inside the 'Create Other' menu, click the button that says, 'Shard Pool...'.
  - b. This will generate a new game object in the scene (called '\_Shard Pool') and underneath that object is a bunch of pre-generated, blank shards. (FYI, the layer of the shard pool will determine the layer of the shards when used with the system, so if you have a non standard layer setup in your Physics settings, you might want to consider altering the layer of the shard pool to achieve the best results.
  - c. Place the 'BoxFracture' script on any unity cube (or other 1x1 unit box) in the scene. This will automatically add a rigidbody, box collider and destruction trigger to the object, if one doesn't already exist.
  - d. The destruction trigger is a script that will trigger the destruction based on collision impact, the fracture will dynamically form around the impact point, and be based on impact force.
  - e. The 'BoxFracture' script has a few options on it.
    - i. First is the immediate toggle box, with this ticked, the fracture will happen immediately when triggered (i.e. it will compute the shards within the frame).
    - ii. If this tick box is not ticked, a new option will appear, 'Shards Per Frame'. The fracture component will now compute the fracture over the course of



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several frames.

- iii. The last option on the fracture component is the 'Shards' option. This foldout allows you to specify a range that defines how many shards this object will break into on trigger, the actual value is random between the Min and Max option.
- f. Should you wish to implement your own triggers, you will have to get a reference to the Trigger component and call :

```
public void TriggerDestruction(Vector3 triggerPosition, float magnitude)
```

The 'triggerPosition' parameter is the world space position at which the destruction will pivot around. The magnitude parameter, is the impact force, supplying a smaller number here will result in smaller shards around the impact point, but much larger shards elsewhere, and vice versa. (Magnitude should be in the range 0~1 for the best results).

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## Sticky Zones

Sticky Zones, are used to hold broken fragments in place once an object has been destroyed. Imagine shattering a pane of glass inside a window frame. Some of the glass might stay in the window frame, sticky zones help you achieve this effect fast!

In order to create sticky zones you need to select the destructible object in the scene and in the inspector window select the sticky zone tab and press the 'Add New' button in the bottom left corner.

A full list of sticky zones on the selected destructible object is visible above the 'Add New' button.

Once you have created a sticky zone, you can select it by pressing the 'Select' button next to it in the list. This will activate a transform gizmo in the scene view. If you need to scale a sticky zone, once you have it selected hold the 'S' key to activate the scale gizmo.