

# Easy Combine

## Operation Manual

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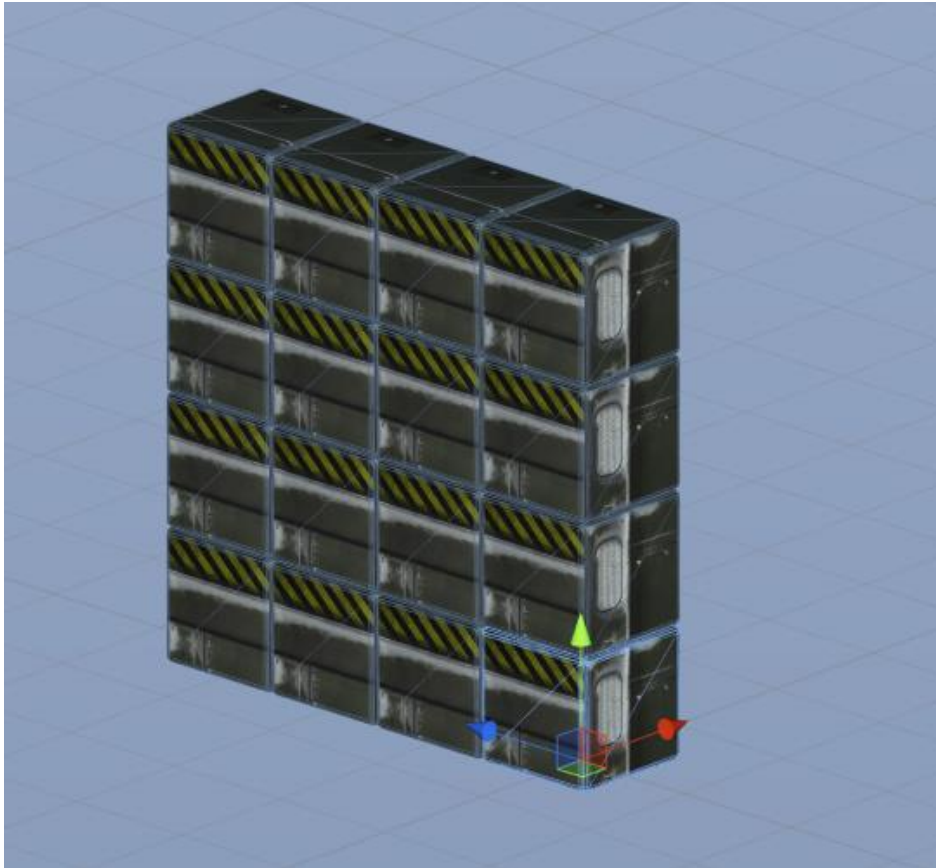
## 1 Overview

The **Easy Combine** system provides a very simplified workflow for combining mesh objects. The intention behind this plugin was to give the artists/developers a non-destructive two-click combine solution without the need of manually building complex preparatory steps in the scene.

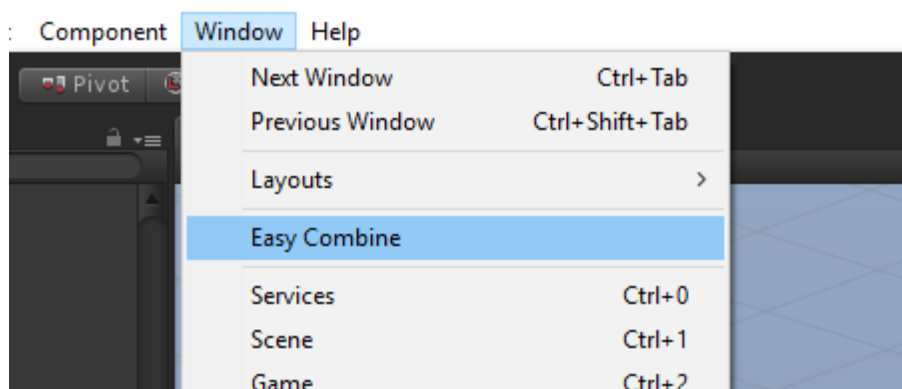
## 2 Usage

### 2.1 Combine

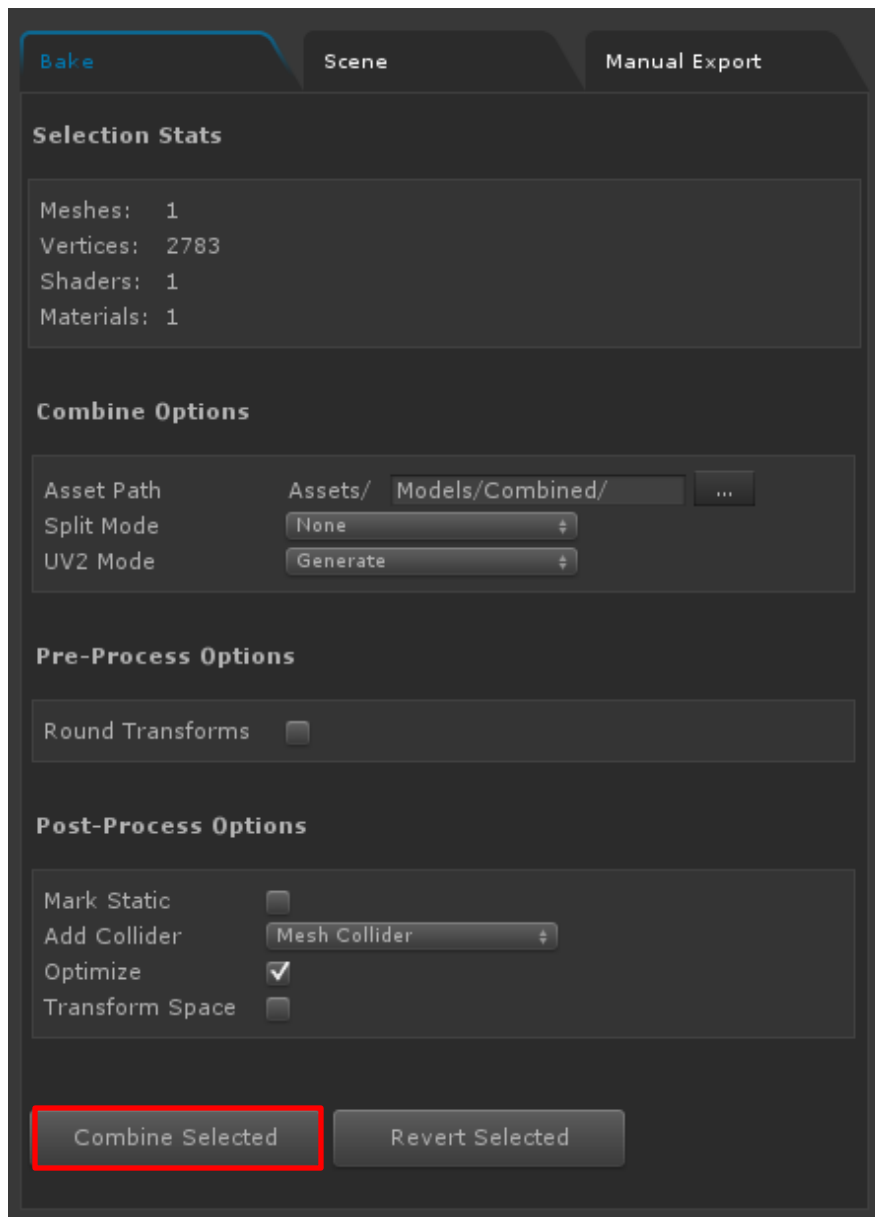
- 1 Select any game object holding a mesh reference in its root and/or in one of its child objects.



- 2 Open the Easy Combine window if not already opened.

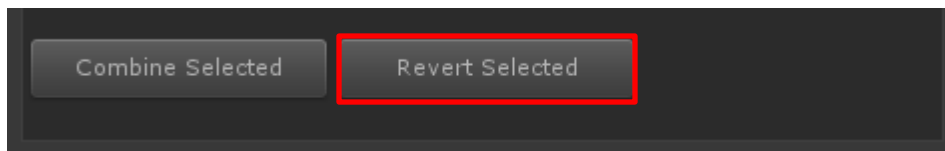
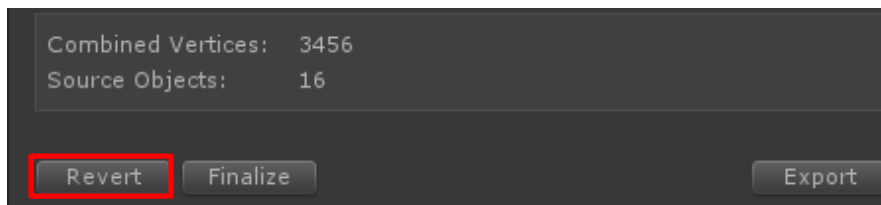


- 3 Click **Combine Selected** to combine the selected objects using the default settings.



## 2.2 Revert

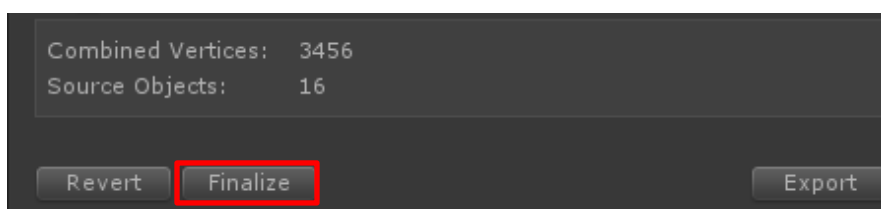
- 1 Select a game object that has been previously combined.
- 2 Either click **Revert Selected** in the Easy Combine window or **Revert** in the inspector of the object.



## 2.3 Finalize

Before your game/application is ready for release, you can finalize all baked object to reduce the overhead caused by the system.

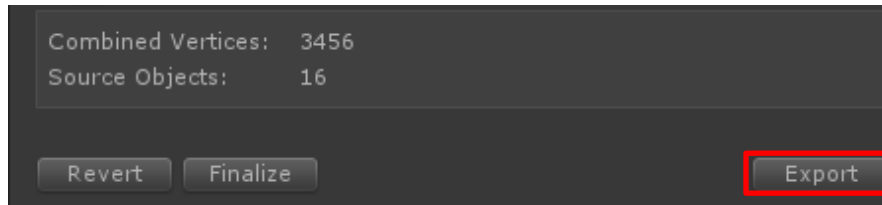
- 1 Select a game object that has been previously combined.
- 2 In the inspector for the selected object click **Finalize**.



**Note:** A finalized object cannot be reverted. The finalizing process cannot be undone.

## 2.4 Export

Every combined object can be exported to a Wavefront (.obj) file.

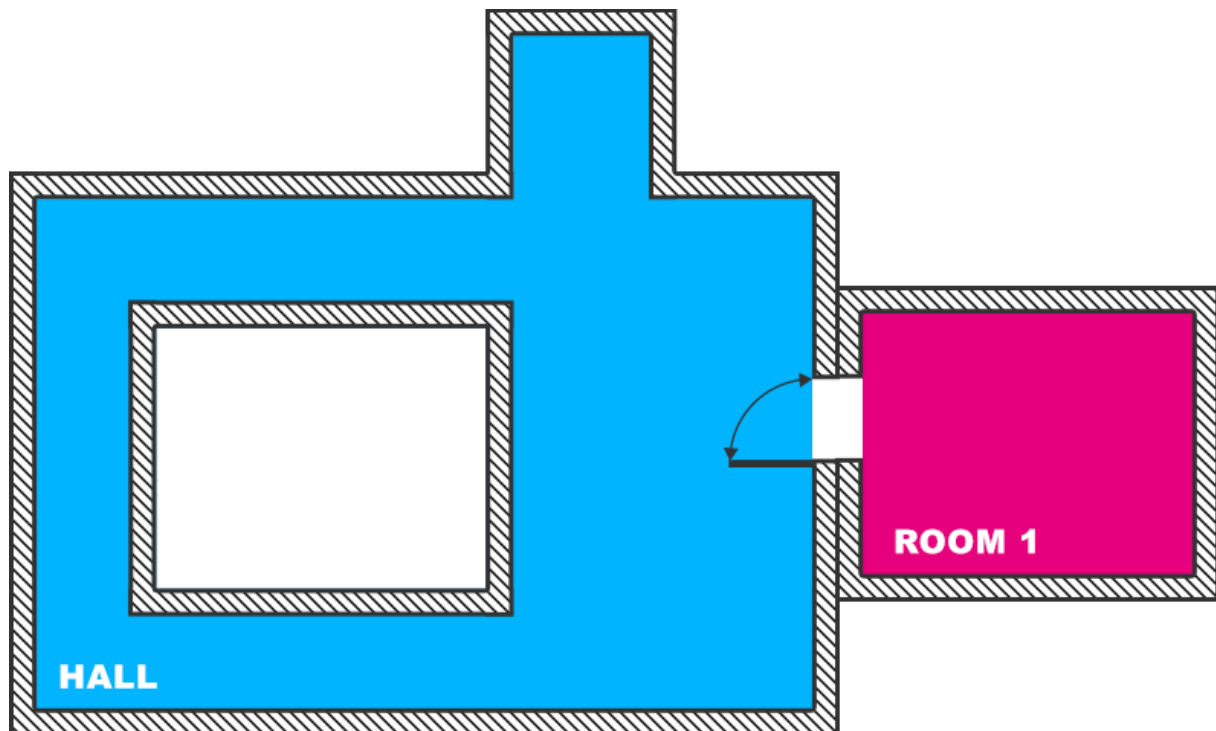


An exported mesh will keep its world transform in the file.



### 3 Enlighten - Best Practice

Consider the following scene setup:

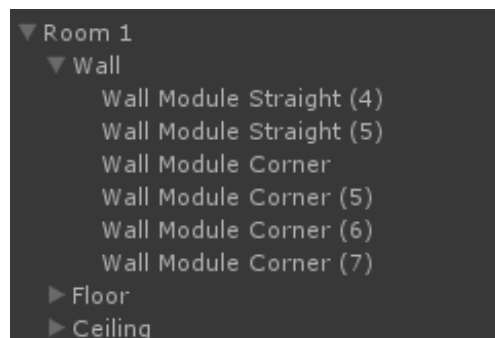
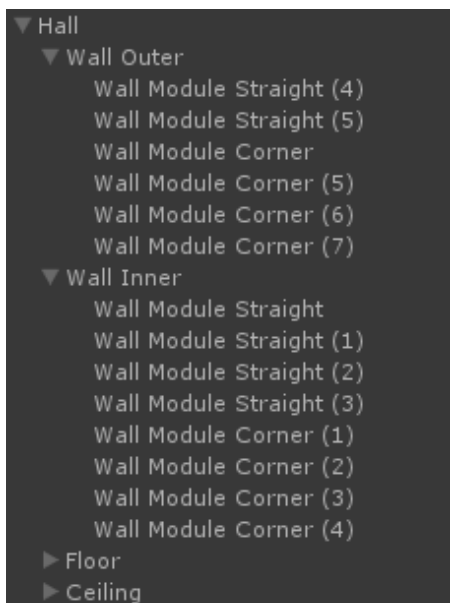


Composed by the following modules:

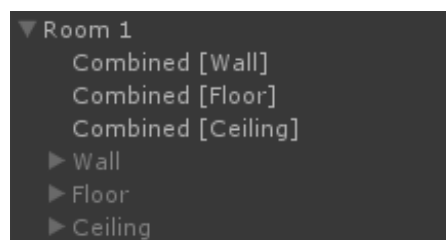
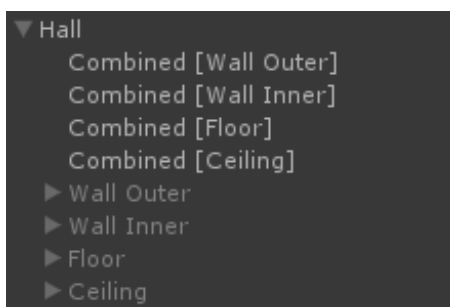


Please follow the guidelines below to achieve the best results with Unity's Enlighten baking engine.

- 1 Use one common shader for all modules.
- 2 Make coherent spatial geometry groups with one parent object per group.



- 3 Check if the objects are perfectly lining up. Enable the [Round Transform](#) option if the modules use an integer grid scale.
- 4 Combine the single groups.



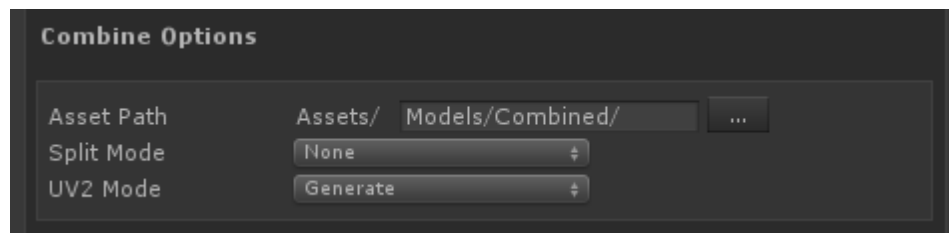
Combing the objects using spatial groups will give you optimal results with Unity's baking process

Combining all elements to one single mesh is absolutely possible, but will most likely lead to baking artefacts.

## 4 Interface

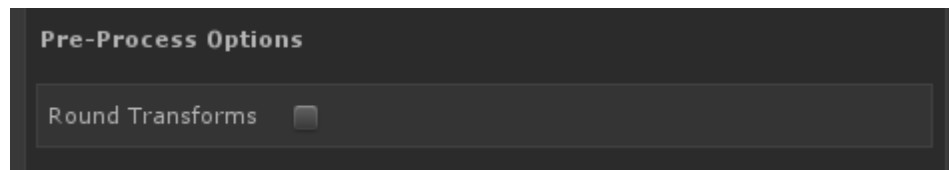
### 4.1 Bake

#### 4.1.1 Combine Options



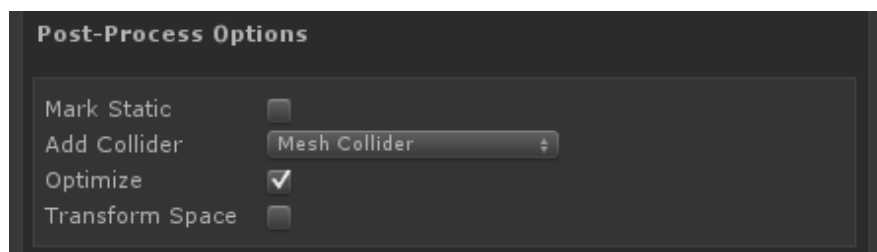
Parameter Name	Description						
<b>Asset Path</b>	<p>The output path where the combined mesh assets get saved.</p> <p><b>Note:</b> This path must be relative to the current project's root in the Asset directory.</p>						
<b>Split Mode</b>	<p>Tells the system how to group the meshes.</p> <table> <tr> <td><b>None</b></td><td>Combine all single meshes into one mesh and create submeshes for all materials.</td></tr> <tr> <td><b>By Shader</b></td><td>Create a single mesh object for every shader found in the selection.</td></tr> <tr> <td><b>By Material</b></td><td>Create a single mesh object for every material found in the selection.</td></tr> </table>	<b>None</b>	Combine all single meshes into one mesh and create submeshes for all materials.	<b>By Shader</b>	Create a single mesh object for every shader found in the selection.	<b>By Material</b>	Create a single mesh object for every material found in the selection.
<b>None</b>	Combine all single meshes into one mesh and create submeshes for all materials.						
<b>By Shader</b>	Create a single mesh object for every shader found in the selection.						
<b>By Material</b>	Create a single mesh object for every material found in the selection.						
<b>UV2 Mode</b>	<p>Tells the system how to handle the UV2 channel.</p> <table> <tr> <td><b>Generate</b></td><td>Automatically unwraps the combined mesh and stores it in the UV2 channel.</td></tr> <tr> <td><b>Keep</b></td><td>Preserves the content in the UV2 channel if present. Use this option if the light mapping UV2 data was created in an external 3D application.</td></tr> </table>	<b>Generate</b>	Automatically unwraps the combined mesh and stores it in the UV2 channel.	<b>Keep</b>	Preserves the content in the UV2 channel if present. Use this option if the light mapping UV2 data was created in an external 3D application.		
<b>Generate</b>	Automatically unwraps the combined mesh and stores it in the UV2 channel.						
<b>Keep</b>	Preserves the content in the UV2 channel if present. Use this option if the light mapping UV2 data was created in an external 3D application.						

### 4.1.2 Pre-Process Options



Parameter Name	Description
<b>Round Transform</b>	<p>Enable this option if the single game objects (modules) use integer values in their transforms and you want to ensure that there are no visual gaps between them.</p> <p>This is useful when working with modular model units that must tightly fit together.</p>

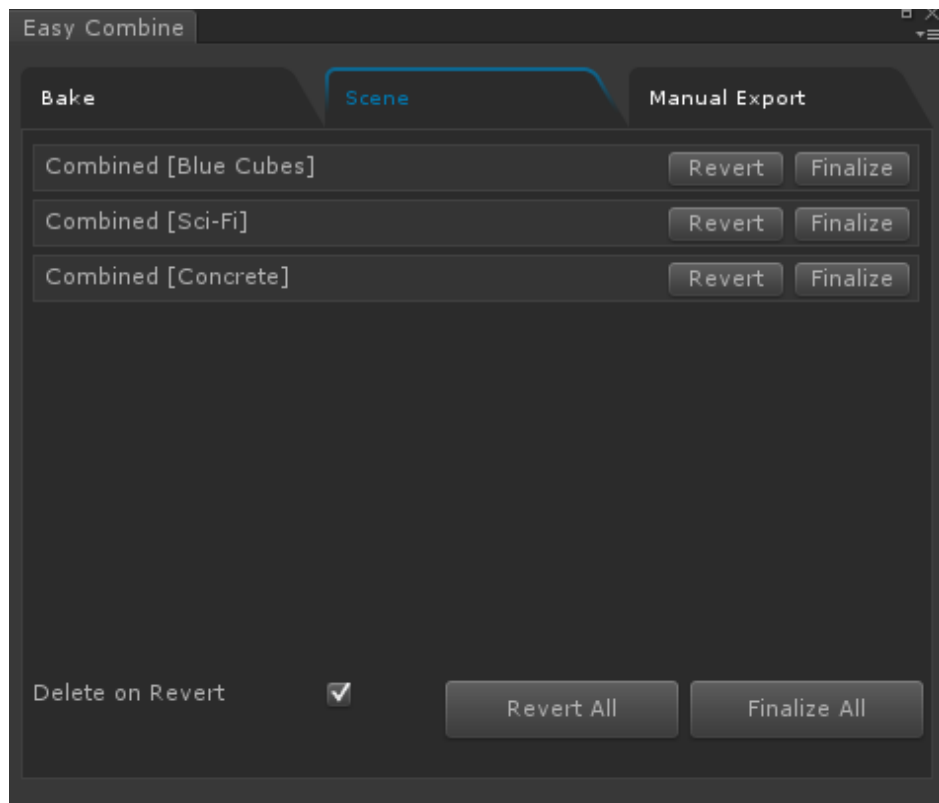
### 4.1.3 Post-Process Options



Parameter Name	Description
<b>Mark Static</b>	When enabled the resulting game object gets marked as static.
<b>Add Collider</b>	<p>Options to add a collider to the resulting object.</p> <p><b>None</b> No collider gets added.</p> <p><b>Mesh Collider</b> Adds a mesh collider.</p> <p><b>Box Collider</b> Adds a box collider.</p>
<b>Optimize</b>	When enabled the resulting mesh gets optimized after being combined.
<b>Transform Space</b>	When enabled the resulting mesh gets transformed to the local space of the selected parent object. This is only possible when one single parent object is selected.

## 4.2 Scene

The **Scene** tab provides batch functionalities to manage all combined objects found in the scene.



Parameter Name	Description
<b>Revert</b>	Releases the combined mesh and reverts the state. The original object will be visible again.
<b>Finalize</b>	<p>Makes the combined mesh persistent.</p> <p>The finalize method deletes all original objects from the scene and removes the control component from the combine objects.</p> <p><b>Note:</b> This cannot be undone!</p>
<b>Revert All</b>	Reverts all combined meshes found in the current scene.
<b>Finalize All</b>	<p>Finalizes all combined meshes found in the current scene.</p> <p><b>Note:</b> This cannot be undone!</p>
<b>Delete on Revert</b>	When enabled the combined mesh asset gets deleted when a combined mesh gets reverted.