This document describes the setup procedure, usage and various options of this tool. This document is not intended to describe the purpose of this tool. Please read the description on the asset store to understand what this tool does.

## Installation procedure:

- >> Download and import the package from the asset store. Make sure you import everything in the package.
- >> Make sure you don't delete anything that is newly imported and related to the package.
- >> Click on any game object. You will see the Pivot Modder inspector under the Transform component.

## **Options Description:**

Check this option to allow pivot modifications. This option enables the object's pivot to be freely manipulated using the transform handles. You should uncheck this option after use to allow normal rotation and movement of the object. Switches between rotation and position mode. Depending on the mode selected you will be able to modify position or rotation of the pivot and see mode specific options. PIVOT MODDER Places the pivot at the center of the selected object. This center is defined by the mesh Save Mesh bounding volume. Pivot Position These fields show the values for current pivot position or rotation depending on the mode Centralize Pivot selected. Current Values X 8.556 Y 1.076 Z 1.672 Vertex snap allows you to snap the pivot to the Vertex Snap Movement Threshold nearest vertex. It works only for position mode. Grid Snap Grid snap allows you to snap on both rotation and positioning using custom snapping values Snap Values (P) on each individual axes. Adjustment Factor (P) AXP AYP AZP Set values for grid snapping on individual axes for positioning the pivot. A value of O for any axis will stop snapping behaviour for that axis. You can set values for rotation snapping seperately when rotation mode is selected.

Switches tool handle to orient to global or local axis rotation. When the tool handle is oriented to global rotation then the handles align with global axes, otherwise they show local pivot rotation.

Save the modded mesh as an asset. This is required if you want to save this object as a prefab. If you create a prefab without saving the mesh as an asset, the prefab will save without any mesh. You only have to save the mesh once. Please do save the scene after saving the mesh.

Applies the changes you have made. If you don't apply the changes they are lost when the selected object gets out of focus.

Undo and Redo the applied changes. Each object has its own undo / redo history saved upto 10 actions per 200 unique objects. The undo / redo system records relative pivot changes. So for example the system sees 5 units of movement as 5 units relative to the previous pivot position, instead of recording absolute world position.

Set the minimum amount of movement of the handles that must be made for the snap action to happen. This option only works for vertex snapping.

These buttons allow you to increment and decrement individual axis values for pivot position and rotation more precisely. The amount which a single button click will increment or decrement by is the "Adjustment Factor". You can change it according to your needs.

You can set the amount by which to increment or decrement the position/rotation values when you press the increment/decrement buttons for each of the three axes.

## **NOTES:**

- >> To ensure proper functionality of this tool please don't modify the package contents in any way.
- >> As stated in the tool requirements on the asset store, this asset requires unity version 2017 and above. Otherwise the tool won't work as expected.
- >> The option for settings Grid snap values from the inspector field doesn't work with unity version, 2017.2 and below, you'll have to set them from the snap settings window in the editor.
- >> In order to save the modified object as a prefab you must first save the mesh as an asset by clicking "Save Mesh" button. This should only be done once for an object. Once the mesh is saved you can make prefab of it. If you modify pivot for an object but have not saved the mesh as an asset then the changes are linked only to the object in the hierarchy and once the object is destroyed from the hierarchy the changes are lost. So any new instances of the same mesh created in the hierarchy won't show the previous pivot changes.
- >> Due to pivot modifications colliders and NavMeshObstacles get incorrectly oriented. Hence to preserve the same orientation for both components as the one before pivot modification, the original components get added to newly created child GameObjects which you can use as the collider and NavMeshObstacle for the original GameObject. You must not modify these placeholder child objects in any way, if you do so then any subsequent pivot modifications cannot guarantee orientation preservation. Although this mechanism is in place I still advise you to first finalize any pivot modifications and then add any colliders or navMeshObstacle to the GameObject.
- >> UVs and surface Normals also get changed due to pivot rotations. The tool has functions to make them stay intact with the new rotation changes and hence your textures/materials won't appear awkwardly offset, but still it's best to create/apply textures/materials after any rotation modifications to the pivot have been finalized.
- >> Rotational modifications of pivots for non uniformly scaled objects can result in mesh skewing. It's best to first uniformly scale such an object before applying rotational modifications to the pivot.
- >> If you don't see the Pivot Modder panel in the inspector after selecting a GameObject then verify the following for the selected GameObject:
  - \* It is not a connected prefab instance (highlighted blue). In this case you can disconnect/Unpack the prefab instance by right-clicking on it in the Hierarchy and selecting Unpack Prefab. Depending on your unity version you might not see the option to unpack prefab in which case you can select the prefab instance, go to GameObject menu -> Break Prefab Instance.
  - \* It is active and if it is parented to any GameObject then the parent should also be active.
  - \* It has a MeshRenderer attached and enabled.
  - \* It has a MeshFilter attached having a mesh specified.
  - \* If the above three points are not satisfied then the GameObject should be an empty GameObject having no MeshFilter or if it has a MeshFilter then the MeshFilter has no mesh specified.
  - \* The GameObject is not amongst the bones assigned to a skinned mesh.
  - \* You have enabled Gizmos in the scene view, particularly the Transform gizmo.

## If you have any problems or queries you can contact me at:

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