

# Custom Transform Tool Documentation

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## Overview

The **Custom Transform Tool** is an advanced Unity Editor extension designed to simplify and enhance the process of transforming objects in the Unity scene. It provides a robust set of features, including grid, vertex, and edge snapping, as well as alignment, distribution, and parenting tools. The tool's user interface is scrollable, ensuring accessibility even when working with large scenes or complex hierarchies.

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## Installation

1. **Download the Script:** Obtain the `CustomTransformTool.cs` script and place it in your Unity project under the `Assets/Editor` folder.
  2. **Open the Tool:** In Unity, navigate to `Tools > Custom Transform Tool` from the top menu to open the tool's window.
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## Features

### 1. Transform Settings

- **Position, Rotation, Scale**
  - **Position:** Set the world position of the selected object(s).
  - **Rotation:** Set the world rotation of the selected object(s) in degrees.
  - **Scale:** Set the local scale of the selected object(s).
- **Snap Mode**
  - **Grid:** Snap objects to a customizable grid. You can toggle snapping for each axis (X, Y, Z) and set the grid size.
  - **Vertex:** Snap objects to the nearest vertex of a collider in the scene.
  - **Edge:** Snap objects to the nearest edge of a collider in the scene.
- **Apply Transform**

- Apply the specified position, rotation, and scale to the selected objects, with snapping if enabled.

## 2. Alignment & Distribution

- **Align Mode**
  - **Center:** Align objects to the center of the first selected object on a specified axis (X, Y, Z).
  - **Min:** Align objects to the minimum position along a specified axis.
  - **Max:** Align objects to the maximum position along a specified axis.
- **Align to X Axis**
  - Align selected objects along the X-axis based on the chosen align mode.
- **Distribute Evenly**
  - Distribute selected objects evenly between the first and last selected objects.

## 3. Parent/Child Management

- **New Parent**
  - Set the new parent for the selected objects.
- **Reparent Selected Objects**
  - Set the selected objects as children of the specified parent object.
- **Center Child to Parent**
  - Center the selected child objects relative to their respective parents.

## 4. Transform Presets

- **Save Preset**
  - Save the current transform settings as a preset.
- **Load Preset**
  - Load and apply a saved preset to the selected objects.

## 5. Transform History

- **Save Transform State**
  - Save the current transform state of the selected objects.
- **Load Transform State**
  - Load and apply a saved transform state.

## 6. Gizmo Customization

- **Gizmo Color**
    - Set the color of the transform gizmo in the scene view.
  - **Gizmo Size**
    - Set the size of the transform gizmo in the scene view.
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## Usage Instructions

1. **Open the Tool:** Navigate to **Tools > Custom Transform Tool** in Unity.
  2. **Select Objects:** Select one or more objects in the Scene or Hierarchy.
  3. **Adjust Transforms:**
    - Enter desired position, rotation, and scale values.
    - Enable snapping if necessary, and choose the appropriate snap mode.
  4. **Apply Transforms:** Click the "Apply Transform" button to apply the changes to the selected objects.
  5. **Use Alignment & Distribution:** Align or distribute objects as needed using the provided buttons.
  6. **Manage Parent/Child Relationships:** Reparent objects or center them relative to their parents.
  7. **Save & Load Presets:** Save current transform settings as presets and apply them later.
  8. **Customize Gizmos:** Adjust the gizmo color and size to your preference for better visualization.
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## Advanced Snapping Details

- **Grid Snapping:** Useful for aligning objects in a structured layout, such as level design or grid-based placement.
  - **Vertex Snapping:** Ideal for placing objects precisely at points of interest, like connecting pieces of a mesh or aligning to a specific point on another object.
  - **Edge Snapping:** Helps in positioning objects along the edges of other objects, useful in scenarios like aligning walls, platforms, or any geometry that requires precise edge matching.
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## FAQs

### **Q: What versions of Unity does this tool support?**

A: The tool is designed to work with Unity 2020.3 and later. It should be compatible with most modern versions of Unity.

### **Q: Can I undo actions made with this tool?**

A: Yes, all transformations and actions performed with the tool are recorded in Unity's Undo system, allowing you to undo them as usual.

### **Q: How do I reset the gizmo settings?**

A: Simply adjust the Gizmo Color and Gizmo Size to your desired defaults using the sliders in the tool.

**Q: What happens if I reparent an object that is already a child?**

A: The object will be reparented to the new specified parent, changing its hierarchy in the scene.

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## Troubleshooting

- **Tool not appearing:** Ensure the script is placed in the [Assets/Editor](#) folder, and there are no compilation errors in your project.
  - **Snapping not working:** Double-check the selected snapping mode and ensure the objects you are snapping to have colliders.
  - **Scrollbars missing:** Ensure the tool window is not too small. Resize the window to see if the scrollbars appear.
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## License

This tool is free to use and modify. Attribution is appreciated but not required. If you extend or improve the tool, consider sharing your version with the community.