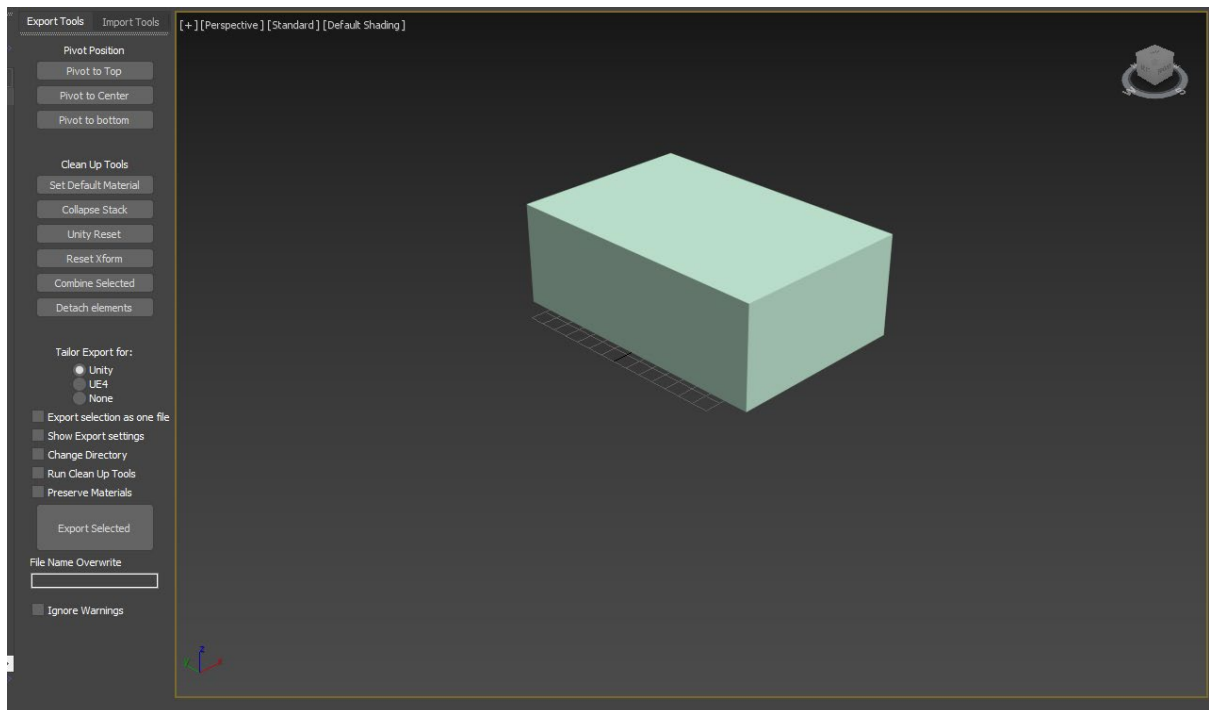


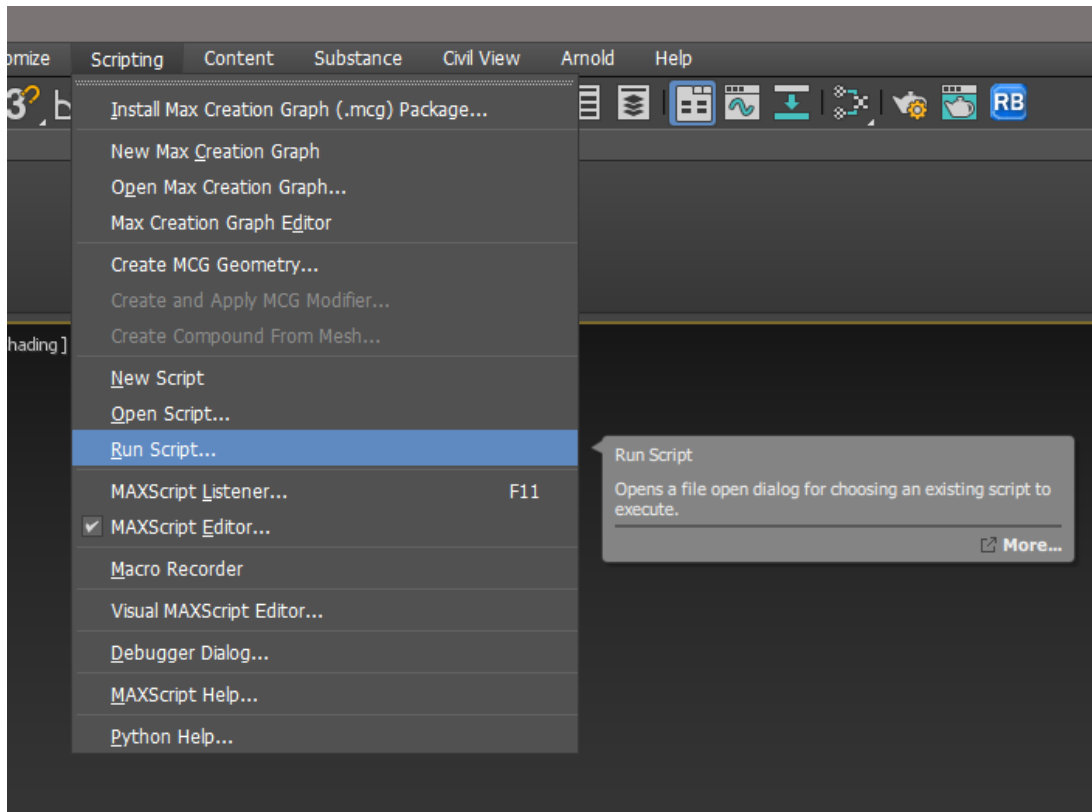
# Export Tools



The Export Tools script is designed to make the process of exporting objects from 3ds Max faster, easier, and more consistent. The tools included in the script automate several steps of preparing assets for export, reducing time spent on menial work, as well as promoting better consistency with naming conventions and axes rotation.

The script is designed to work with assets in bulk. All features in the script can be run on multiple assets at a time. The script works as an easy bulk exporter, perfect for exporting from master working files.

To the run the script, select *Run Script* from the scripting menu and choose the *ExportTools.ms* file you downloaded from Dropbox.



Alternatively, the script can be added to the following folder, allowing it to run automatically every time 3ds Max is loaded:

***Program Files\Autodesk\3ds Max 2022\ 3ds Max 2022\scripts\Startup***

Adding a file to this location will require admin permission, but it will only need to be done once.

By default, the Export tools script is docked on the left-hand side of the screen. It can be undocked and docked elsewhere.

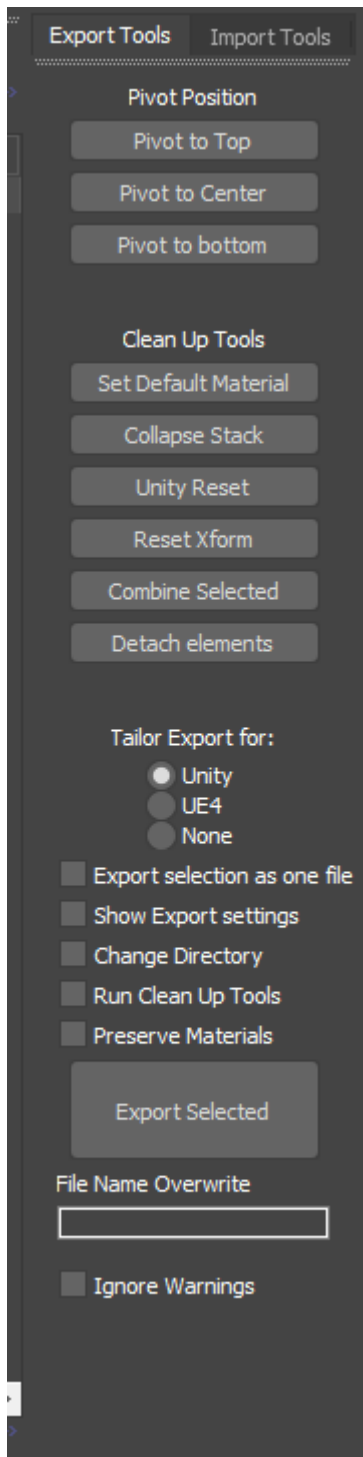
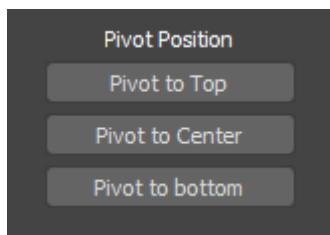


Figure 1 The Export Tools dialog

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## Pivot Position

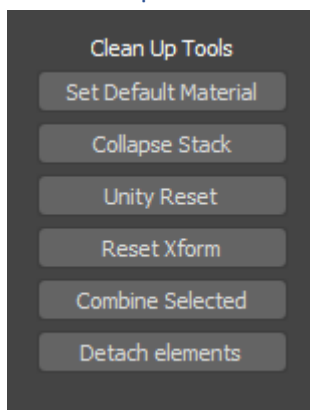


**Pivot to Top** – This moves the pivot position to the top centre for each of the selected objects, and moves the objects to 0,0,0 in the scene. The pivot position will be in line with the vertex highest up on the Z axis.

**Pivot to Centre** – The pivot position is moved to the centre of each selected object, and the objects are moved to 0,0,0 in the scene.

**Pivot to Bottom** – The pivot position is moved to the bottom centre of each of the selected objects, and the objects are moved to 0,0,0 in the scene. The pivot position will be in line with the lowest vertex on the Z axis.

## Clean Up Tools



The clean up tools are designed to make preparing assets for exporting faster and help with consistency.

**Set Default Material** – This will overwrite the materials of the selected object with a Standard (legacy) material. The material is set to a default mid grey and named *[the object name]\_MAT*

**Collapse Stack** – This collapses the modifier stack of the selected objects and sets them to Edit\_Poly.

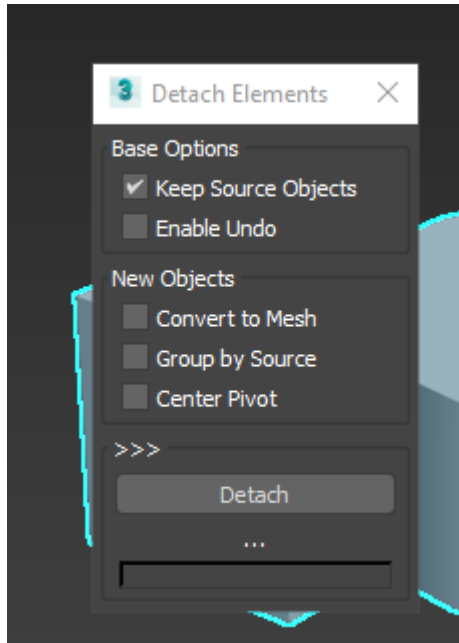
**Unity Reset** – This resets the position and rotation of the selected objects to be correct for importing into Unity. Visually, in 3ds Max, the objects will not change position or rotation, but their xform will have been reset and the rotation axes will be: *x +90, y 0, z 0*.

This tool will display a warning message when pressed, warning you that the xform will be reset during this process, unless *Ignore Warnings* is checked.

**Reset Xform** – This resets the Xform of the selected objects. The modifier stack is collapsed afterwards. This tool will display a warning message when pressed, warning you that the xform will be reset during this process, unless *Ignore Warnings* is checked.

**Combine Selected** – This combines the selected objects into a single object.

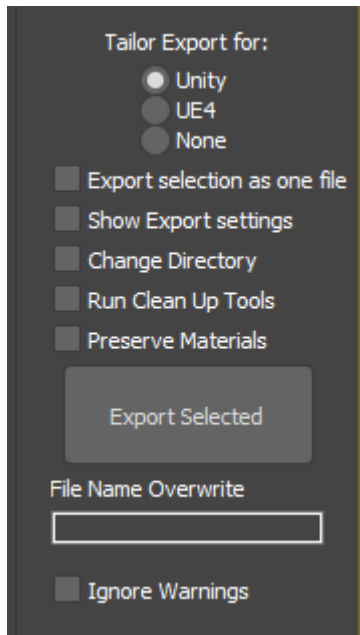
**Detach Elements** – This runs the detach elements script, written by Anubis and taken from Scriptspot.



Detach elements allows you to quickly separate a single object into its individual elements.

*Keep Source Objects* will keep the original object as well as its elements. *Enable Undo* will make the detach operation undoable in the undo stack. *Convert to Mesh* will convert the newly made elements to Edit\_Mesh. *Group by Source* will group all the elements together. *Center Pivot* will centre the pivot for each element.

## Export Selected



By default, exported files will be tailored for Unity, but exports can be tailored for UE4 or no specific engine. Unless *Export selection as one file* is toggled on, all selected objects will be exported into individual FBX files, one per object, named after the object name in 3ds Max.

[Tailoring an export for Unity](#) will mean *Unity Reset* will be run before exporting files. This will display a warning message, unless *ignore warnings* is turned on as it will involve resetting xform.

[Tailoring for UE4](#) will add the prefix *SM\_* (static mesh) to exported files. Position and rotation of objects will be untouched as UE4 uses the same axes as 3ds Max.

[Tailoring for none](#) will not change position/rotations or change names.

[Export selection as one file](#) – Checking this box will export all selected objects into a single .FBX file, instead of creating one file per object. Toggling this option on will also make the *File Name Overwrite* input box active – this will allow you to input a name for the .FBX file. If no name is inputted, the file name will be called the name of the first object selected.

[Show Export settings](#) – Checking this option will mean the regular FBX Export dialog box is displayed when clicking *Export Selected*. By default, this dialog is hidden, and previous settings are used. Note that the dialog will only appear at the start of the export queue, so changed settings will apply to all selected objects being exported.

[Change Directory](#) – Checking this will allow you to change the export directory next time you export an object. By default, you will not be asked to select a new directory if you have set one in a previous export since loading 3ds Max – toggling *change directory* is the only way to change the export directory.

Note that you will only be prompted to select a new directory once at the start of the export queue. All objects in the queue will be exported into the same directory.

**Run Clean Up Tools** – This is a quick way to export basic objects without using any of the *Clean Up Tools* buttons. Toggling this on will move objects to 0,0,0 (but will not change the pivot positions), set a default standard material, reset the xform and collapse the modifier stack. If *Export selection as one file* is ticked, objects will not be moved to 0,0,0.

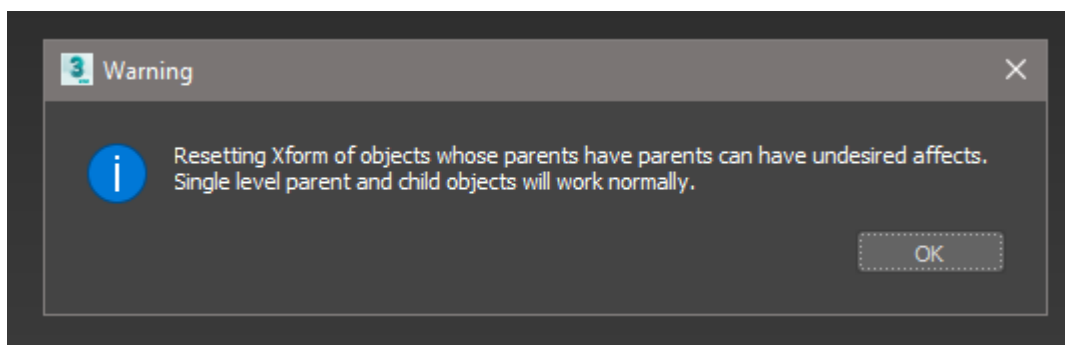
Toggling this on will display a warning message telling you that this function includes resetting xform, unless *Ignore Warnings* is turned on.

**Preserve Materials** – Checking this on will allow you to use *Run Clean Up Tools* while preserving your set materials. As mentioned, *Run Clean Up Tools* will overwrite materials with a default material if this is unchecked.

**Ignore Warnings** – This is a toggle to turn the warning messages on or off. By default, warning messages will be displayed, but checking this box will turn them off.

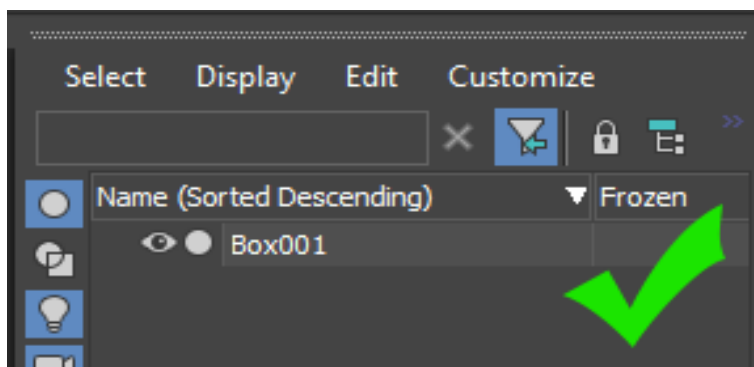
## Warning Messages Explained

Several features of the Export Tools script involve resetting Xform of objects. Whenever this is part of a feature, a warning message similar to the one below is displayed.



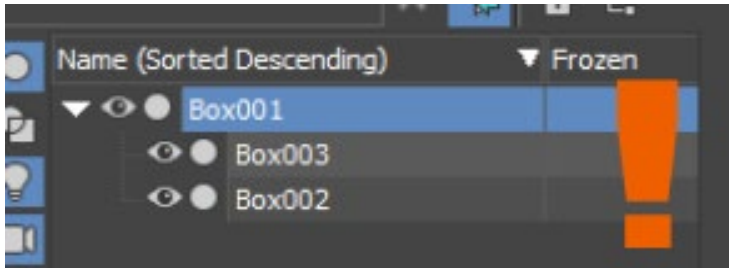
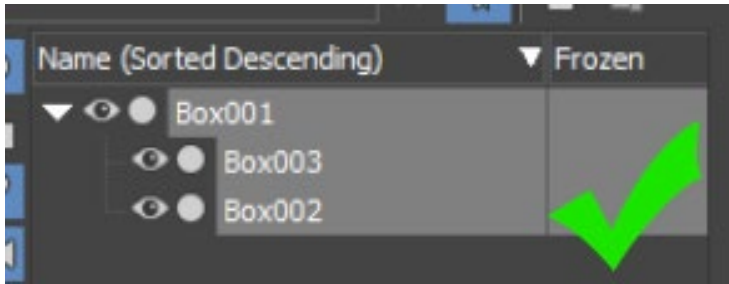
This warning message tells you that resetting Xform of certain objects – those that have parents with parents – can have undesired affects, namely rotation issues.

Resetting Xform of single level objects should never cause issues.

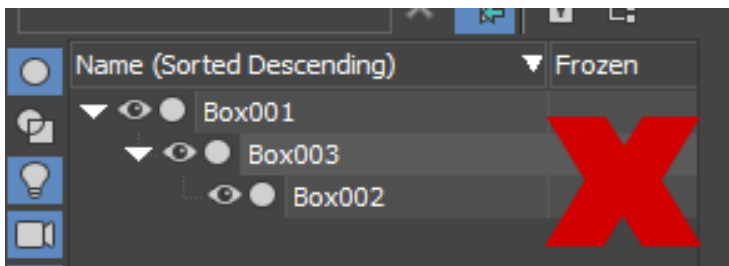


Resetting Xform of parent and child objects should also not cause issues if both the parent and child are being reset together, or only the child object is being reset. Resetting the parent object only will likely cause rotational issues for any children.





Resetting the Xform of objects with a more complicated hierarchy, i.e. when a parent object is a child to another object, is very likely to cause rotational issues and isn't recommended.



In this instance, it is only advisable to reset the Xform of the bottom child object, as doing so will not affect its parent.

When feasible, it's advisable to unparent objects with complicated hierarchies before running a tool that involves resetting Xform, much like resetting Xform manually.

When exporting objects with complicated hierarchies, it's not advised to export them with *tailor export for Unity* or *Run Clean Up* tools set. Instead, run *Unity Reset* separately, after removing parent links, and then tailor your export for *none*, after you have reparented objects.