

# Adapting 3D Objects for Oculus Home

The purpose of this document is to explain the process needed to download, convert, and resize 3D objects so that they can be imported into Oculus Home.

I've already converted and resized several objects, which can be downloaded from:

<http://cscotttdavis.com/Oculus3D/>.

## **\*Disclaimer\***

I actually know very little about how to create and manipulate 3D objects. I have basically had to figure out and reverse-engineer how to do various things, often through trial-and-error, and there are almost certainly better ways to do some of these things than the way I'm doing them here.

I have also built on information and existing files from other people, and I have tried where possible, to give credit and provide links.

Please also note that these objects will be *static*, because I don't know how to enable dynamic physics (or if it's even possible for imported objects). I've searched in vain, but haven't been able to find very much information on how physics works in Oculus Home objects. As a result, the items you import will *not* be affected by gravity and can not be dropped or thrown.

If anyone knows (or discovers) how to make an object *dynamic*, please let me know and I'll update this information, along with credit and links.

## **Downloading Objects**

The first thing you need is to download your object from the web site of your choice (I use [Sketchfab](#)). Make sure they are in GLTF format, which will be a .zip file containing a .gltf file, a .bin file, and a textures folder. Unzip the file and save the contents somewhere on your hard drive.

## **Converting and Resizing for Oculus Home**

Oculus Home requires files to be in the GLB format, so it will need to be converted. If you have [glTF-Shell-Extensions](#) installed, you can simply right-click and choose "Pack to Binary glTF...". If not, then you can use this GLTF to GLB Packer web site: <https://glb-packer.glitch.me/>, as follows:

Launch the web site and then drag the contents of extracted file (the .gltf file, the .bin file, and the textures folder) and drop them onto the page. This should immediately initiate a download of an "out.glb" file. Save this file as the name of your object.

At this point, you now have a 3D object that could be imported into Oculus Home, however, it would almost certainly be way too big, so it will need to be resized. I use this online editing site: <https://glitch.com/~glb-scale-o-matic>.

Launch the web site and then drag the GLB file that you downloaded and drop it onto the page. On the right-hand side, you should see the current dimensions, along with a place to set new ones. If you know what size you want, type it and click the appropriate button ("Set Width", "Set Height", or "Set Depth"). If you want to match the size of an existing object, drag it to the page first to determine the dimensions to use. Otherwise, just estimate it. When you set a dimension, all of the others will also change to maintain the object's proportions (so it isn't stretched or distorted).

Press the "Download" button to initiate the download of a "scene.glb" file. Save this file. *Note: It is recommended that you use a slightly different name than before (perhaps by appending "resized"), in case you need to get back to the original file.*

At this point, you should have a 3D object that can be imported into Oculus Home (*see “Importing into Oculus Home” below*).

## **Importing into Oculus Home**

Open your “Documents” folder, then open the “Oculus Home” folder that is inside it. Inside that folder should be an “\_Import” folder (if there isn’t one there, create one). Any GLB files located within this folder will show up as imported items in your item Inventory. You can also create subfolders, if you’d like to organise your imported items (by type, source, or some other method).

To import your 3D object, simply drag a copy of the final GLB file into the “\_Import” folder (or a subfolder).

*Note: Oculus Home objects have a file-size limit of 15 MB. If the GLB file is larger than 15 MB, it cannot be imported into Oculus Home. Also note that “resizing” an object just changes its scale, which determines how big it appears in your Home, but doesn’t reduce the size of the file itself.*

## **Testing and Further Resizing**

At this point, you will need to launch Oculus and try placing the new object into your Home. If it is too big or too small, then you will need to go back to the “Converting and Resizing” step and try a different size. *Note: I recommend going back to the original .glb file, rather than resizing the already resized file.*

## **Credits**

### **IS301**

Other than what I worked out for myself, the vast majority of info came from this excellent video about importing and resizing existing 3D objects: <https://youtu.be/EN31ATtbwe8>.

I have since discovered this companion blog entry, that goes into a bit more detail: <https://is301.com/2018/10/importing-3d-models-into-oculus-home-from-sketchfab/>.

I am quite sure that I would never have been able to convert and resize 3D objects without the information that IS301 posted.

### **r/OculusHomeObjects**

Another source of valuable info was the r/OculusHomeObjects group on reddit: <https://www.reddit.com/r/OculusHomeObjects>. They also have links to several repositories of Oculus Home objects.

## **Contacting Me**

If you have any questions or can offer any additional information about dynamic physics or 3D objects in general, please feel free to email me at: [oculus@cscottdavis.com](mailto:oculus@cscottdavis.com).

I also have several public Homes on the Oculus Rift (Oculus User **cScottD**), that are decorated with objects I’ve created and adapted:

<https://www.oculus.com/place/381753139286928/>

<https://www.oculus.com/place/256540878356987/>

<https://www.oculus.com/place/341125913165534/>

Please feel free to visit them and let me know what you think!