# FBX file troubleshooting

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# Overview

The purpose of this document is to outline potential issues when importing .fbx file format, 3d geometry in Swift CG+ graphics projects.

# Basic FBX checks

## My FBX file “does not work”

Reason 1: It may be a problem with the FBX created in your modelling package.

Solution 1: Reimport the FBX file into your modelling software. This will give you a clear idea of what is and isn't exported by your modelling software into FBX. See the FBX documentation with your modelling software or with the FBX plugin for details on what can and cannot be exported.

Solution 2: Make sure that you have the latest version of the FBX plugin for your modelling software. The latest version can be found at the autodesk website http://www.autdesk.com/fbx

# Import Dialog Errors

## When importing, I get the error : Cannot Open Image 'XXX' When importing, I get the error : Texture Image 'XXX' not found

**Reason:** Swift CG + cannot find the specified image when loading. Images may or may not be embedded into the FBX file depending on how the FBX file was exported. Swift CG + searches for images first inside of the FBX file, and then in a separate Images directory if the image was not found there. If Swift CG + finds the image nowhere, you see this error message.

**Solution 1:** Reexport the FBX file from your modelling, and make sure that the option to embed textures is checked in the exporter.

**Solution 2:** Provide the missing images in a directory, and point the “Image Override Directory” in the Swift CG + FBX import dialog to point at that directory.

# Visibility Issues

## You have imported FBX into Swift CG +, but see nothing on the screen

**Reason 1:** You did not have a graphic open when you imported the FBX file. In this case, the FBX file assets are imported into the project, and the FBX file is stored on the custom menu for you to drag into your scene.

**Solution 1:** Create a new graphic and either reimport the FBX file, or open the Custom Browser window and drag the FBX file onto the scene.

**Reason 2:** Camera, lighting and/or the scale of the model may mean that is not in view, or may not be visible.

**Solution 2:** Follows these steps in order :

Check the Background Checker Board option on the View. This displays a checkerboard background. If your object was not lit, you will now see it's black silhouette against the black background. If this solves your problem, you need to light your scene see correctly:

- Select the global camera. Pan the camera around, zoom the camera in/out. If the model comes into shot then your default camera position is incorrect. Go back to your default camera view, and move the camera until you are able to view the scene.
- Insert a transform node at the top of the scene, beneath the camera and lights so that it effects everything in the fbx file.
- Call it scaleTRFM or something similar.
- Go to the global camera and set it up pointing at the origin of the scene (this is where the grid and axis intersect in the view window).
- Select scaleTRFM and check the box “Link Scale”
- Now, try typing the following values into the Scale X box. (Remember to press enter between each one). 0.001, 0.01, 0.1, 1.0, 10.0, 100.0, 1000.0.
- If you see the model appear at any point, then you have a model scale issue.

**Reason 3:** The material opacity if set to 0. (fully transparent) This is more apparent if the bounding box is visible but the mesh itself is not.

**Solution 1:** If exporting from Maya, make sure the “Maya Transparency Hack”

checkbox is checked when exporting.

**Solution 2:** Go into the material for the mesh and set the opacity to 1.

# Mesh Issues

## The imported mesh is missing faces The imported mesh is inside out

**Reason 1:** The mesh contains triangles that have inverted normals/face windings.

**Solution 1:** Select the shader for the affected mesh. Goto the State Tab, then Operations, and disable Back Face Culling. NOTE – if this does not work, you should turn back face culling back on, as it has a performance hit.

**Solution 2:** Go back into your modelling package, and fix the mesh winding.

## One or more of the imported meshes have corrupt polygons.

**Reason 1:** This occurs when a mesh is exported without being triangulated first.

- Although Fbx import will attempt to triangulate the meshes itself, it does not always do a good job.

**Solution 1:** Triangulate all of your meshes in your modelling software before exporting them to FBX.

# Texture and Material Issues

## My object is completely black in the scene

**Reason 1:** The object may not be lit

**Solution 1:**

- Check that you have a light in the scene and add one if not.
- Check that your mesh shaders are lit.
- Check that the light node diffuse, ambient and specular highlight colours are all set to white (1,1,1)

**Reason 2:** The material has a black diffuse, ambient and specular colour

**Solution 2:** Check the material diffuse, ambient and specular colours, experiment with setting each to white (1,1,1)

**Reason 3:** A black texture is applied to the shader

**Solution 3:** Go to the shader tab, and take the texture off the shader.

## My object is completely white in the scene

**Reason 1:** Exported FBX shaders were exported with an emission value of white (1,1,1). solution Go to the material for the shader, and set the emission value to black (0,0,0)

# Animation Issues

## My animations do not show up in the timeline!

**Reason1:** Animations are always added as a new block in the main method of your script.

**Solution 1:** Make sure the Main method is selected. You can cut and paste the animators or the animation block into other places from there.

**Reason 2:** The animation was a mesh warp, skinning animation or other non supported type in Swift CG +.

**Solution 2:** Recreate the animation using those available to Swift CG +. Only rigid body (translate, rotate scale) animations are supported. Character skinning, mesh animations and inverse kinematics are not supported.