

EXOA

FLOOR MAP DESIGNER - MANUAL

27/03/2022

[Latest online Version is accessible here](#)

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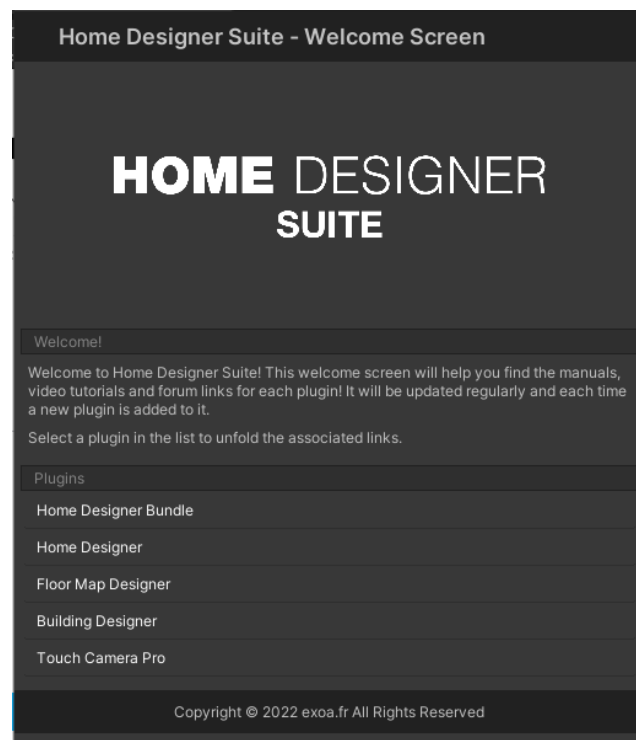
INTRODUCTION

Floor Map Designer allows you or your players to design their own room(s). These rooms are then accessible directly to be played in-game!

The designer right now supports drawing rooms of any size, with any number of corners; Adding windows, doors and wall openings. Walls, doors and free openings have a thickness, which means the rooms have a small offset internally to be able to have inside walls. The tool also generates an outside wall around all the rooms, that you can make transparent at any time.

The floor map can be used standalone or with the other plugin “Home Designer” to add furnitures and materials on walls and floors.

When you first open the plugin, you should see this welcome screen with useful links to manuals, videos and other modules:



HOW TO INSTALL

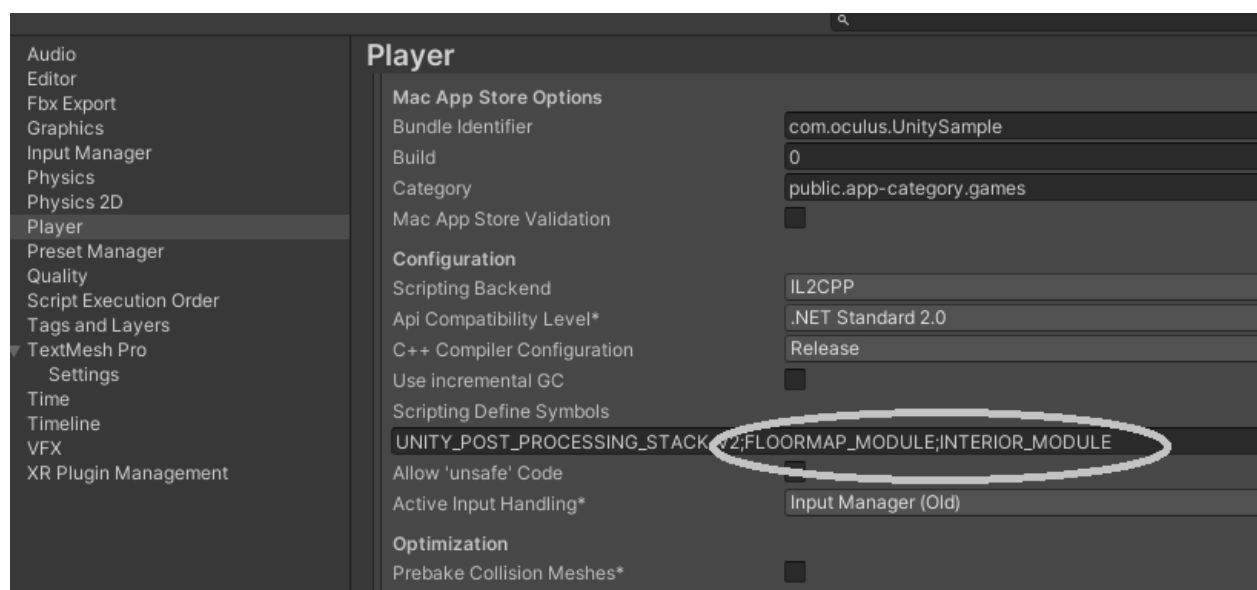
If you already have a previous version installed, you should remove the Exoa/ folder prior to installing a new version as updates are usually not compatible with each others.

1. Create a new Unity Project and import the plugin
2. You will then need to install these dependencies from the asset store :

- [DOTween \(HOTween v2\)](#)
- [Lean Touch](#)

These plugins are free (you don't need to buy the pro versions).

3. You will also need to install Unity's FBX Exporter plugin from the Package Manager window, under "Unity Registry"
4. Layers and Tags will be added automatically to your project.
5. If you have an error related to the "newtonsoft json" dll, simply remove the one provided in this plugin. It should be under Exoa/Common/Packages/...
6. If the icons are not rendering please check the troubleshoot section.
7. If you encounter other errors, make sure you have these symbols in your "Player Settings > Other Settings" :



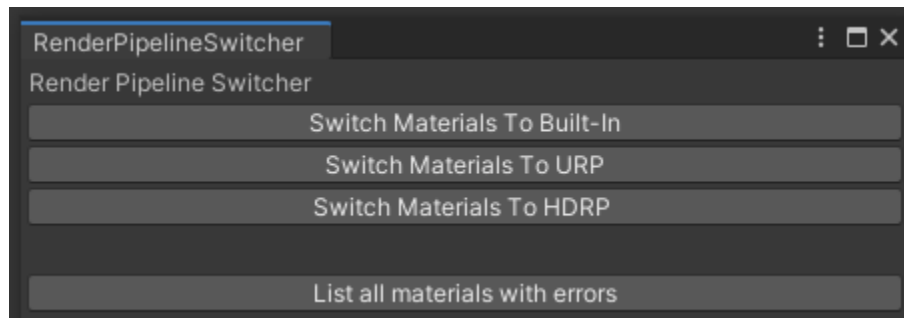
- Add "FLOORMAP_MODULE" if you have in your project "FloorMap Designer" or "HomeDesigner BUNDLE"
- Add "INTERIOR_MODULE" if you have in your project "Interior Designer" or "HomeDesigner BUNDLE"

The demo scenes should also be added automatically in your build settings. If it's not the case, you can add manually "HomeDesigner" (if you own HomeDesigner) and "FloorMapEditor" (if you own Floormap Designer) in your build settings.

HOW TO SWITCH TO URP OR HDRP

By default the package has its materials using built-in shaders, but you can now switch them to URP or HDRP shaders. Once you've installed the rendering pipeline you need, you just have to use the new helper window to switch all the package's custom shaders. You can open the window from the top menu "Tools > Exoa > Render Pipeline Switcher"

Then click on the desired action to switch to built-in/URP/HDRP shaders :



This feature is only converting materials using Exoa/ shaders.

After clicking on a convert button, you can check the console to see how many materials have been converted.

On HDRP, the grid floor might not appear well, because the emissive maps are not rendered the same way. Depending on your directional light's emission value you will have to adjust the "Emissive Intensity" value on the grid floor material.

Example :

Light Emission : 0 => Material Emission Intensity => 10000

Light Emission : 10000 => Material Emission Intensity => 1000000

HOW TO INTEGRATE WITH HOME DESIGNER

If you want to integrate “Home Designer” with “Floor Map Designer”, you just have to import both packages in the same unity project. They are compatible and share the same code base.

HOW TO CREATE A FLOOR MAP

- Open the scene “FloorMapDesigner” and hit Play
- On the top left corner, the first menu lets you save/load/create a new floor map.
- Click on “New” to start your new floor map.
- The next menu below has a “+ADD” button, click on it then click on “ROOM” and close the menu by clicking on the scene
- Now you can click on the grid to place room points, when you’re done, press “Esc” on your keyboard to stop drawing, or click the “DRAW ENABLED” button in the left menu to disable it.
- You can move your points at any time. You can delete a point by pressing ALT + Click on it, or right click > delete on it.
- After creating your rooms, you can add doors, windows and free openings. When you add one of them to the list, you can configure its size, and place it multiple times on the floor map. When you need to have another kind of opening with a different size, just create a new one with the “+ADD” button.
- To save your floor map, open the save/load menu on the left, enter a name and hit “SAVE” it will be saved locally. You can also press Ctrl+S.

CHANGING THE SAVE/LOAD SYSTEM OR LOCATION

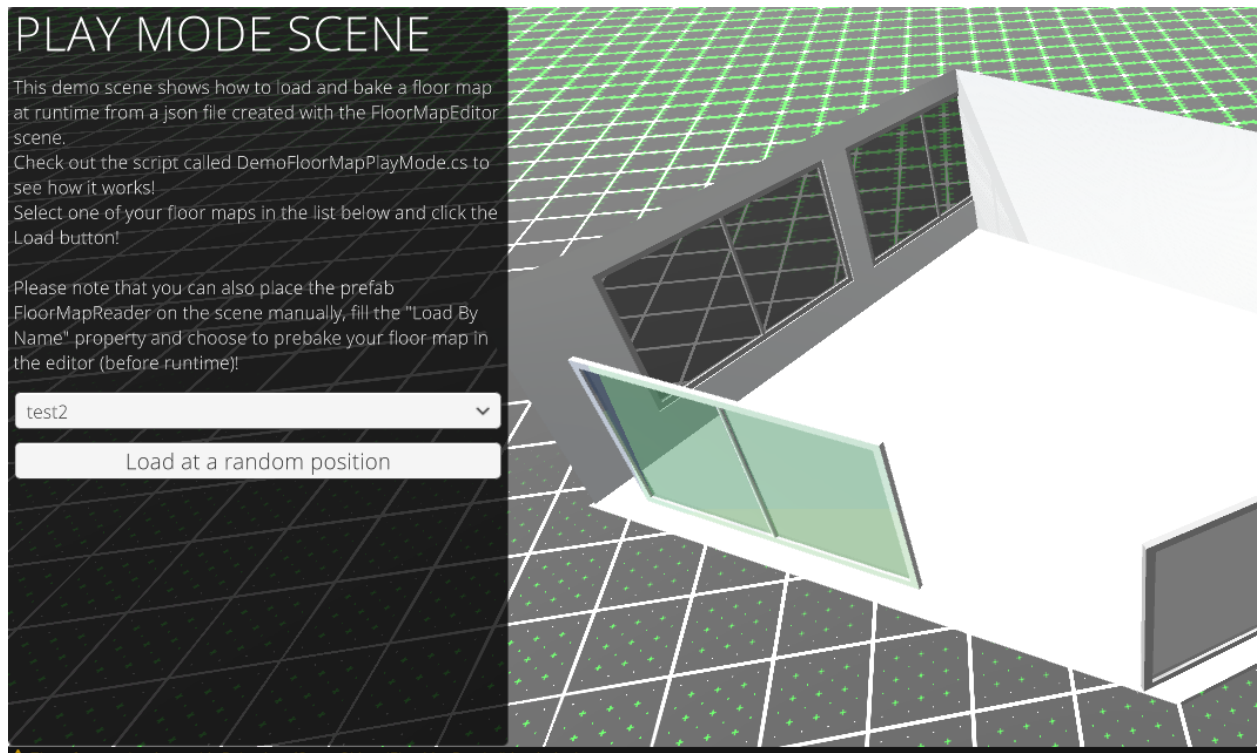
If you need to save the levels somewhere else, Open the SaveSystem.cs and edit the GetBasePath() to return the path you need.

To save the levels in a different way, for example to a server, you're going to have to override the SaveSystem class. Please note that an online saving module is on the roadmap, but no release date is set for now.

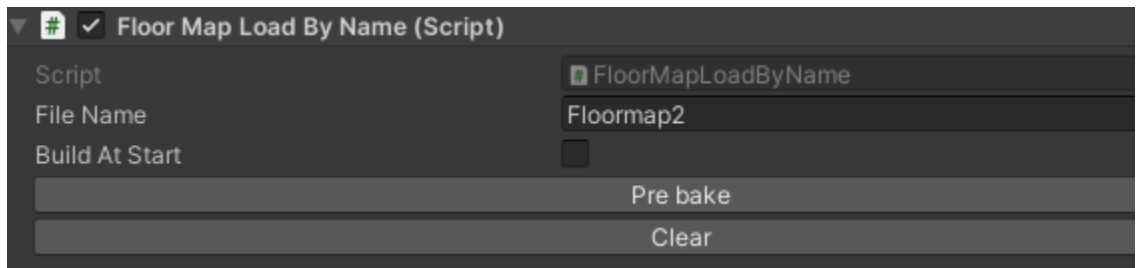
HOW TO LOAD A PROJECT BACK INSIDE ANOTHER SCENE

Once the project has been created using the editor, you can load it back in another scene (your app/game). You have 3 ways to import your creation :

- **By code:** open the scene “FloorMap_PlayMode” and select the project you want to spawn at runtime. Check “DemoFloorMapPlayMode.cs” to see the code!



- **By dragging a prefab:** drag the prefab called “FloorMapReader” and fill the field in “Load By Name” component by your project name. You also have the option to pre-build your creation in editor, or have it built at runtime from the Start() function or from calling FloorMapLoadByName::LoadFile(fileName); from any other script.



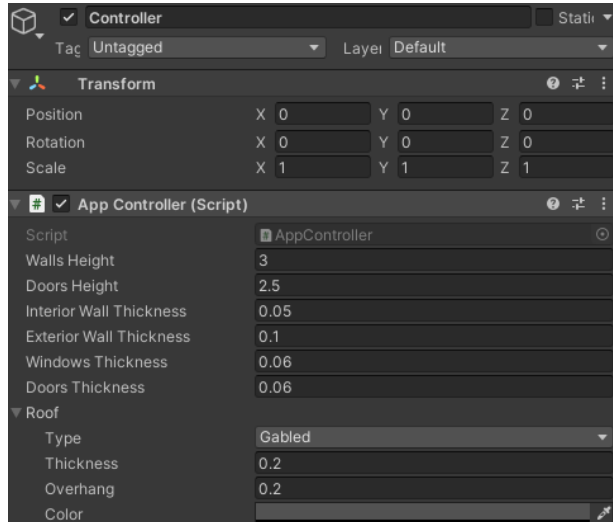
- **By exporting the FBX:** there is a new export to FBX button at the top right of the editor, that will export your project as fbx using the Unity FBX Exporter. Please note that this feature is currently only available in the Unity Editor so you will not have this option if you build a desktop app.



In this plugin everything is serialized as json so the users can re-edit their levels at any time, and save them as a single lightweight string locally or online in a database, but sometimes you will want to export the mesh as a baked fbx file, so this feature can be really handy.

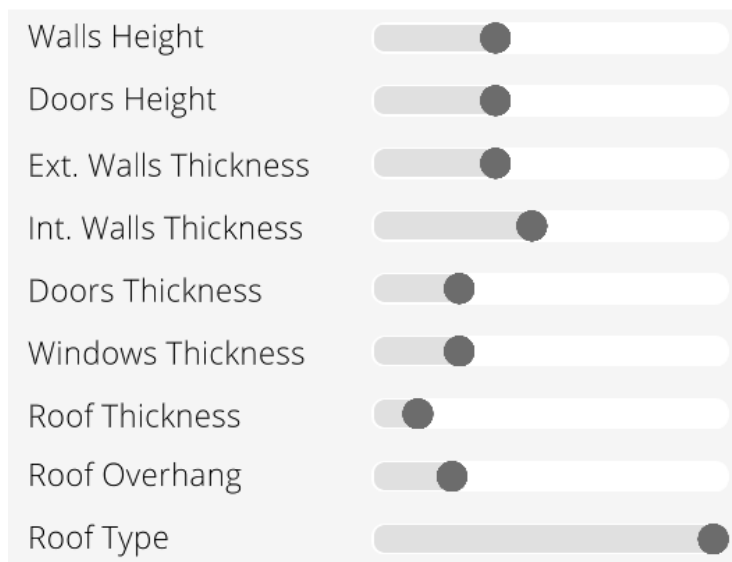
HOW TO CHANGE GENERATION SETTINGS

In each scene there is a script called AppController on the Controller game object where you can change some settings like walls thickness, doors height, roof type etc :



You also have access to the same settings at runtime, these settings will be saved with your project.

Settings



SHORTCUTS

GENERAL KEYS

Ctrl + S : Save

Ctrl + D : Open Save Folder

F : Recenter camera

POINTS

Left Click : Add/Drag Point

Alt + Left Click : Delete Point

Right Click : Point Settings Popup

Escape : Stop Drawing

SWITCH PERSPECTIVE

Press "Space Bar", or press the top right "camera" button

IN TOP DOWN ORTHOGRAPHIC MODE

Mouse Wheel : Zoom In/out

Left/Right/Middle Mouse Button Press & Drag : Drag Camera

IN PERSPECTIVE MODE

Mouse Wheel : Zoom In/out

Left/Middle Mouse Button Press & Drag : Drag Camera

Right Mouse Button Press & Drag : Rotate Around Center

TOUCH SIMULATION IN BOTH MODES

Alt+Left Mouse Button Click : Set the center point of the simulated fingers

Alt+Left Mouse Button Press & Drag : Drag Camera

Ctrl+Left Mouse button Press & Drag : Two fingers simulation for Pinch (Zoom In/Out)
and Twist (Rotate around fingers center point)

ROADMAP

- Integrate with the New Input System from Unity
- Online saving system.
- At+Explorer integration
- Rounded room corners.
- Undo system

TROUBLESHOOTING

I have errors while loading/saving

The project includes a special version of the Newtonsoft.Json library modified to be working with IL2CPP on any platform. If your project already includes Newtonsoft.Json, you should consider keeping the one included here to avoid loading/saving errors on il2cpp builds.

I have two times the newtonsoft Json dll

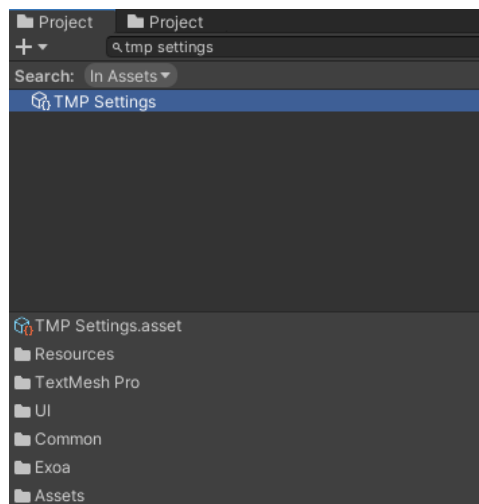
If you are on Unity 2020+ you may have to remove the unity "Version Control" or "Unity Collab" package, to have their newtonsoft package removed. Or you can remove the newtsoft dll from the Exoa/Commons/ folder but you might have loading/saving issues. If you install the latest Unity 2021 you should be good as they finally renamed their own json dll.

The thumbnail generator is not working properly with HDRP

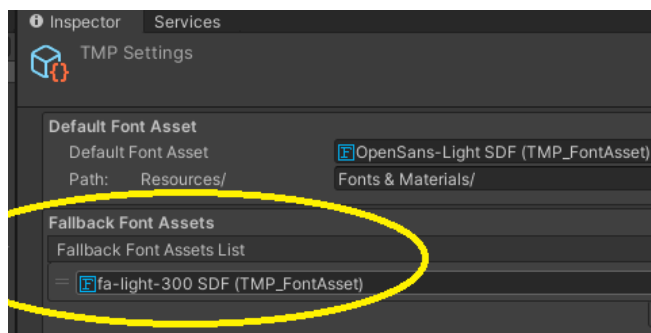
It's a none issue, I don't have any fix for now, so if you need to generate your thumbnails, you will have to switch to built-in RP, or create your thumbnails manually.

Icons are not rendering in the UI

You should have only one "TMP Settings" file (the one included in the plugin) if you have other ones, remove them :



On it, there is a fallback setting which is responsible for rendering all the icon unicode characters. Make sure the font awesome font is set like so :



OTHER PLUGINS

- [Home Designer](#)
- [Floor Map Designer](#)
- [Level Designer](#)
- [Touch Camera Pro](#)
- [Assets Manager Pro](#)
- [Packages Manager Free](#)
- [Tutorial Engine](#)

SUPPORT

Please post your questions and issues on the new forum : <http://support.exoa.fr/>

You can still contact me for anything else at contact@exoa.fr, but keep your technical questions and issues on the forum please! There is a chance that your email falls into my spam box so you have a better chance to get an answer through the forum!