

# Guide - Grid Engine for Unity

## Creating a new grid

- Either right click in the project view or go to the game object menu on top.
- Go to the Grid Engine sub menu and click on Rectangle grid.
- After setting the inspector values (explained below), you need to actually use the grid (fill it with tiles etc). See below the inspector settings for how to do that.

## Inspector settings in Rectangle Grid

- Cell width - The width of the actual tiles' sprites. This is affected by the pixels to units.
- Cell depth - The depth (y coordinate) of the actual tiles' sprites. This is affected by the pixels to units.
- Cell height - The height of the layers. This is affected by the pixels to units.

## Inspector settings in Rendering Handler

- Tiles - A list of sprite arrays (one for each tile) and a bool.
  - It's a sprite array, because it allows for animated tiles, if more than one sprite is added to the array.
  - The bool is to set the animation to pick random sprites from the array instead of following the order set in the array.
- Non view-obstructing tiles - A list of ints (indexes) for the tiles that don't obstruct the view to tiles behind or below them. This means that tiles behind and below this type of tile will also be rendered.
- Buffer X - How many tiles outside the camera should be rendered (on the x axis). This is to ensure that there is always tiles drawn at the edges of the camera.
- Buffer Y - How many tiles outside the camera should be rendered (on the y axis). This is to ensure that there is always tiles drawn at the edges of the camera.
- Current lighting mode - The current lighting mode selected, either layered or sun based.
- Selected time of day - The time of day in the scene. This selection will change the tint of the tiles.
- Midday colour multipliers - Multipliers for the RGB values tinting the tiles for the midday time of day.
- Morning colour multipliers - Multipliers for the RGB values tinting the tiles for the morning time of day.
- Night colour multipliers - Multipliers for the RGB values tinting the tiles for the night time of day.
- Max tint - The maximum tint a tile can have, when tinting for the lighting system.

- Tint increase - The increase of tint. It is used for the lighting system using the sun.
- Animation next time - The timer for when animations should progress to the next sprite. So animated tiles will be animated in 1 frame per the animated next time.
- Cam is the camera to render to. If nothing is selected, it will try and find the main camera.

## Using the grid

- To actually fill the grid with tiles, you need to go and write code. You can use the public methods on the grid.
- Create a script for your scene and create a public variable for the grid.
- Start with resizing the grid to the size you want by calling `mygrid.SetGridSize(...)` (mygrid being your reference to the grid).
- There are public methods to place, fill a rectangle, add/remove layers etc.