AutoGrid Manuel

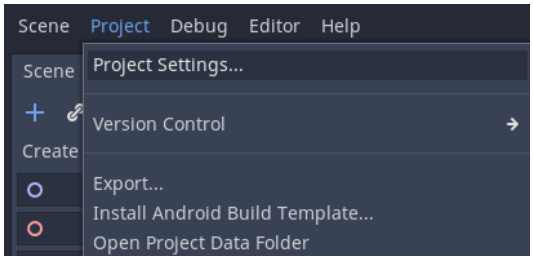
Contents

You can request feature or report a bug by opening issue from the github repository.

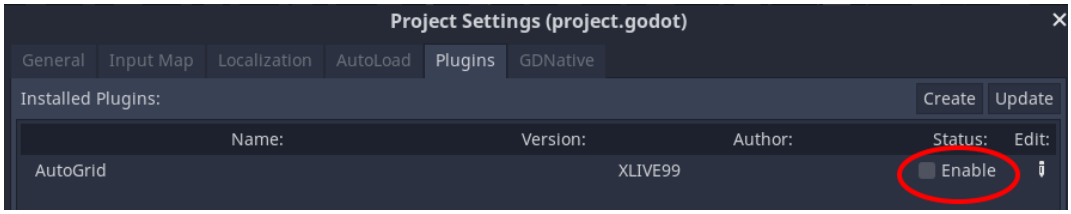
1-Installation

Move “addons/AutoGrid” folder to your game project’s “addons” folder. If you don’t have any “addons” folder in the game project, you can either create folder named with “addons” or move “addons/AutoGrid” folder with “addons” folder.

Go to **Project>Project Settings**, on pop-up window change tab to “Plugins” and activate the “AutoGrid” plugin by checking the “Enable” button.

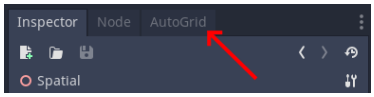


Warning! AutoGrid tested on Godot 3.2 and 3.4



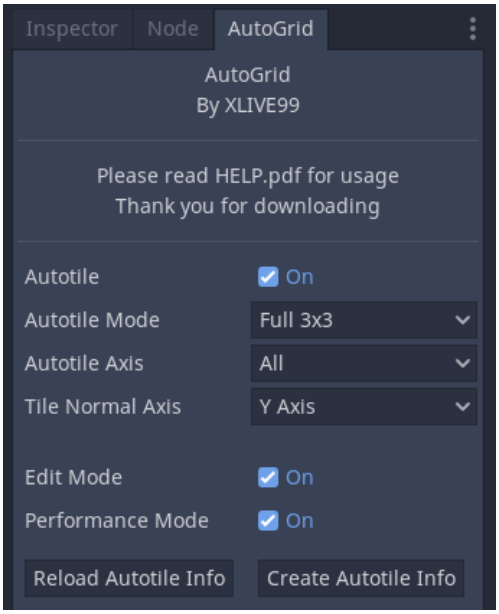
2-AutoGrid Dock Panel

After enabling the plugin, you will see the “AutoGrid” dock panel near to the “Inspector” panel.



2.1-Dock panel settings

Currently (Version 1.2) there’s only 6 option available on the AutoGrid panel.



Autotile: Enables autotile system.

Autotile Mode:

- **Full 3x3**: Checks every corner to fit the perfect tile for that place (Same as tilemap).
- **Minimal 3x3**: Checks the corners three by three (Same as tilemap).

Autotile Axis: Limits the autotile check axis. Useful when gridmap uses multiple floors. Otherwise you can just leave it “All”

- **All**: Checks all the directions to fit the tile.
- **Y & Z Axises**: Checks only Y and Z axises (up-down, forward-back).

- **X & Z Axises**: Checks only X and Z axises (right-left, forward-back). Useful for top-down games.
- **X & Y Axises**: Checks only X and Y axises (right-left, up-down). Same as 2D tilemap, useful for side-scroller games.

Tile Normal Axis: Select the tile's facing direction. If you are working on 3D environment then leave this as "Y Axis" for ground tiles. If you are working on 2D environment then select which axis is facing the tiles. If you are working on 2.5D games, use "Y Axis" for ground tiles, use "Z Axis" (or "X Axis" depends on where is your camera looking at) for background or wall tiles.

- **X Axis**: Tile's facing direction is global X axis.
- **Y Axis**: Tile's facing direction is global Y axis. Useful for ground tiles.
- **Z Axis**: Tile's facing direction is global Z axis. Useful for wall (or background) tiles.

Edit Mode: Enables the bitmap edit button.

Performance Mode: If enabled only checks for new tiles, do not check for repainted tiles (If map is too big, enabling this might increase the performance).

If edit mode is checked two buttons will appear at the bottom of the dock panel, these buttons will create or reload the autotile info for AutoGrid.

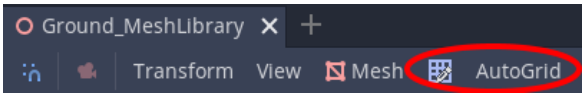
3-Creating Bitmask

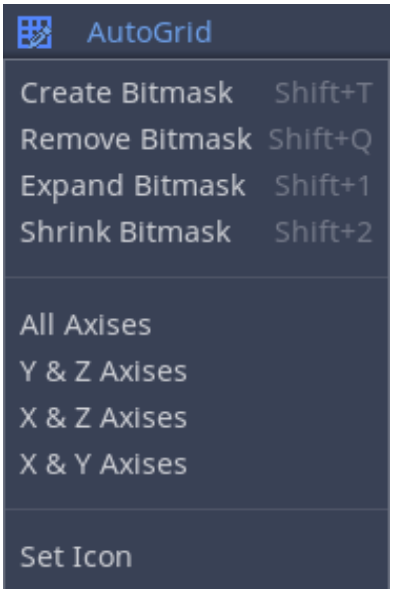
3.1-Setting up the scene

Set the scene as shown in Creating a MeshLibrary. If link doesn't work, then create new spatial scene and create bunch of "MeshInstance" node with tiles. You can also set navmesh or collision shape by adding node to "MeshInstance".

3.2-Setting the bitmask

Enable "Edit Mode" from the AutoGrid panel. Select a "MeshInstance" you want to create the bitmask of it (If you already select the MeshInstance while enabling the Edit Mode then the button won't show up. You need to re-select the MeshInstance). If MeshInstance is selected edit button will appear as "AutoGrid". It has 9 options available.





Create Bitmask: Creates a bitmask for the selected MeshInstance.

Remove Bitmask: Deletes the bitmask of the selected MeshInstance.

Expand Bitmask: Expands the bitmasks.

Shrink Bitmask: Shrinks the bitmasks.

All Axises: Shows the full bitmask.

Y & Z Axises: Shows Y & Z axises of the bitmask (Global).

X & Z Axises: Shows X & Z axises of the bitmask (Global).

X & Y Axises: Shows X & Y axises of the bitmask (Global).

Set Icon: Sets the icon for the AutoGrid tile to be created (Default is the first child of the scene, blue transparent sphere will placed on the selected icon).

After creating the bitmask you can simply paint the bitmask by clicking on white cubes. Painted cubes will become red. If MeshInstance is not selected the bitmask will become transparent. You can click again to the red painted cube to disable it.

Rotating the bitmask is only visual. Bitmasks axis is global not local. Rotating the bitmask won't change anything.

3.3-Reloading the bitmasks

If you already created the bitmasks but you can't see the painted bitmasks in the scene (If you re-open the Godot Engine, bitmasks of the scene will reset itself). You can reload bitmasks info from clicking on the "Reload Autotile Info" button at the bottom of the AutoGrid panel.

4-Creating Autotile Info

AutoGrid's autotile system works with autotile info (.agrid) which created from the plugin itself. Autotile info files won't visible at Godot FileSystem.

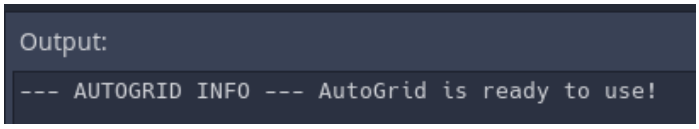
Before creating the autotile info, be sure you are in the MeshLibrary scene (Where you created the bitmasks). You can create autotile info by simply clicking the "Create Autotile Info" button at the bottom of the AutoGrid panel. AutoGrid will ask for the save location and a name for the file to be created. After saving the file, you will see newly created node at the bottom of the scene, **do NOT change it's name or other tile's names!** Now you need to create a MeshLibrary again from "Scene>Convert to>MeshLibrary", and done! You have successfully created the autotile info.

5-Using The Autotile

Autotile system works with the global axis. So autotile doesn't check the orientation of the tiles.

Be sure to enable the "Autotile" from the AutoGrid panel. Select the gridmap which has autotile info. If autotile info is not available for the selected gridmap, AutoGrid will warn you through console. Autotile will work for every tile you created bitmask of it but some glitches can occur, for better performance please paint with the tile which name ends with "_agrid", it's icon will be the icon you selected while creating the autotile info.

When a GridMap node selected you will see some console message if the "Autotile" is ready to use as seen below.



Autotile system only checks for newly created tiles if performance mode is enabled. If you repaint the tile, AutoGrid won't detect it as newly created tile, therefore autotile won't work for that tile. For these kind of cases disable the "Performance Mode" from the AutoGrid panel. This will cause to use more performance.