

Tilemaps in Prefabs

To make a compatible prefab:

- Select a Grid with child Tilemaps or a single Tilemap,
- Make a Grid Selection using the Tile Palette or Tile+Painter.

Then use the Hierarchy window's TilePlus Bundler context-menu command or the main menu's Tools/TilePlus/Prefabs/Bundle Tilemaps command.

If a Grid or a single Tilemap is selected, then all the tiles and child Prefabs of the Tilemaps are bundled.

If a Grid Selection is made, you'll be prompted to confirm that you want to use the Grid Selection to limit which tiles and Prefabs are bundled. If so, ALL tiles and Prefabs in any Tilemap within the selection are archived.

This command archives Tilemap contents into one or more TpTileBundle assets (Bundles, from now on) and optionally creates a special type of prefab. But at this point its use is restricted to simple situations:

- Archive a single selected Tilemap into a Bundle asset along with a TileFab asset.
- Archive a single selected Grid and its child Tilemaps into multiple Bundle assets along with a TileFab asset, with optional prefab creation.

To be clear: Compatible prefabs can only comprise a Grid with child Tilemaps and any Prefabs parented to the Tilemaps. If you try to use a multiple selection, or any Grid or Tilemap are in or part of a prefab, then the process will complain and quit.

The bundler generally follows this process:

- Is the Grid or Tilemap in a prefab or are you editing in a preview scene? Start again.
- If the selection was not a grid, you're asked if you want to continue. No: Start again
 - If the selection isn't a grid, then you can't make a prefab, just archives.
- For each tilemap:
 - Is the Tilemap part of a Prefab? Start again.
- Select destination folder. Advice: use a different folder each time!
 - Is the folder the Assets folder? Start again.
- If the selection was a grid, you're asked if you want to make a Prefab of the Grid and all child Tilemaps (a Tilemap prefab).
 - If making a Prefab, you're asked if you want to bundle any Prefabs which are children of the Tilemap GameObjects.
- If the selection was a single Tilemap, you're asked if you want to add any Prefabs which are children of the Tilemap GameObject, and if those should be saved as new Prefabs or

Variant Prefabs.

It's simpler than that sounds! The choices are presented to you via several dialog boxes and file pickers.

With this information, the bundler creates the TpTileBundle assets: one for each Tilemap, then adds all the TPT tiles to the asset. For Unity tiles, it preserves the information in the Tilemap for each tile (color, transform matrix, and flags) as well as a reference to the original Unity tile asset.

If you elect to archive prefabs, please note that references to the prefab assets are archived; new copies of the prefabs aren't created. This means that if you delete one of these prefabs then the reference is null, and the prefab won't be available when the TpTileBundle asset is used.

Note that GameObjects that are instantiated because the Tiles' GameObject field caused the Tile to instance a GameObject into the scene are not archived. When the TpTileBundle asset is painted (programmatically or via the Tile+Painter) the Tiles re-create the prefab in the scene for you.

A TileFab asset is also created in the same folder. This asset has references to all the new TpTileBundle assets and is used with the TpAnimZoneLoader tile or for loading using methods in the TileFabLib library.

If you're making a Tilemap prefab, it's placed in the folder that you selected earlier. Don't delete the TileFabs and Bundles created during the bundling process: the Prefab requires them.

The created prefab can be used just like any other prefab with one exception: it's "Locked," and the TilePlus tile instances are also "Locked."

This locked status is a hint to Tile+Painter and the Tile+Brush to use particular care when it encounters TilePlus tiles in a Prefab. Essentially, you can't edit this sort of prefab in a Prefab editing context or "Stage" to avoid any chance of corruption, and you can't edit the TPT tiles or the prefab itself.

Regardless of which brush you use, painting, erasing, or any other operation will either revert or just not occur.

You'll also find that you can't open one of these prefabs in a prefab editing context. Tilemaps with locked tiles display a closed-lock symbol in the hierarchy window.

However, you still have the original Grid and/or Tilemaps; unlike normal Prefab creation via Drag and Drop, the source isn't linked to the created prefab. If you ever need to recreate the original for editing just drag the Prefab into a scene and use the Unity menu command "Prefab/Unpack Completely."

A small component called TpPrefabMarker is added to the Prefab, specifically, to the same GameObject as the Grid. Please don't remove it UNLESS you unpack the Prefab. If you do unpack, REMOVE the component. If you don't then it will overwrite all the tiles with tiles from the TileFab whenever your game starts running. At best, a time waster but at worst, you'll get profoundly

confused. Here's why:

When a Prefab is dragged into a scene or instantiated at runtime, PrefabMarker loads the tiles from the TileFab on to the appropriate Tilemaps. This component can be seen at the top-level of the Prefab in the Project folder.

You'll see a reference to the TileFab. While you can change this to a different TileFab, be aware that the unpopulated Tilemaps themselves are in the Prefab and would need to be compatible with whatever TileFab you change to.

The BundleLoadFlags field should usually be set to Normal. Use of other settings should be experimental only.

It's important to remember that the Locked Tilemap shouldn't be edited, moved, picked, flood-filled, etc.

The system will actively try to thwart you from doing so, but you can finagle your way around it if you try hard enough. If you do manage to edit a Locked Tilemap somehow and save the prefab overrides, then the prefab can become corrupted and unusable, even if no TPT tiles were modified.

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