

Making a Map in the Map Editor

A map in Battlefield Academy is built up from a grid of tiles, with 3d objects placed on them. As well as the visual look, the tiles determine the passability and cover values of each square, although certain objects can override these values.

The default size for a map is 32x32 tiles. If you wish to change the size or proportions of the map, click the button at the bottom left of the sidebar

This opens up the map resize dialogue. You can either create a new map of the required dimensions, or resize the current map. Resizing the current map can cause issues if care isn't taken to avoid lopping off key features or leaving placed units stranded off map. If just the size of an existing map is changed, the playable area will shrink or expand from tile 0,0. If this isn't what is desired, the x and y offset values can be used to shift the point at which the new sized playable area is applied.

Tiles

Once the size is correct, the basic terrain is be laid out with tiles. To work with terrain tiles, press the top left button on the sidebar.

The tiles are grouped into palettes. Selecting a palette name from the second window down in the sidebar displays all the terrain tiles within that palette in the larger window below. While within the larger palette window, the tooltip displays the tile's terrain type. Clicking on a tile within the large palette window selects it and allows you to place the tile onto the map with a click of the mouse (or hold the mouse button down to paint large swathes). All tiles are rotated in 90 degree increments using the R key. Over the map, the tooltip displays the existing tile's terrain type, rather than that of the tile you are painting with.

Each terrain style found in the game - snow, desert, French - has a tile palette and an overlay tile palette. These two types of tiles work in subtly different ways.

- The tiles from the tile palette are used to block out the functional landscape and set terrain types - open ground, forest, sand dunes, water etc.



- The tiles from an overlay palette sit on a layer over the top of normal tiles. An alpha channel on the overlay tiles allows parts of the tile beneath to be seen.

These two layers of tiles can be edited independently of one another. Selecting an overlay tile from the palette window and clicking on an already laid down overlay tile will replace it without changing the tile underneath. A tile can be changed without effecting the overlay layer above it. Pressing the "Delete" key while working with terrain tiles will remove any overlay tile underneath the mouse pointer.

Certain overlay tiles change the terrain type of a tile they are placed over. Roads, paths and tracks can be laid out across multiple tiles and overwrite their terrain types. Rough stones are placed to turn a terrain tile into "difficult ground" that becomes impassable to vehicles.

Overlay tiles are also used to disguise the joins between tiles. The "blend" and "edge" tiles in each overlay tile set are used to smooth different terrain types into the default tile type, without effecting the functional values of the terrain type beneath. In a similar way, there are overlay tiles for river and stream banks, designed specifically to be overlaid onto the edges of water tiles to provide a more naturalistic look.



Hills

Holding the Ctrl key allows the player to change the height of tiles on the map. Left click raises a tile in set increments, right click lowers. Hills are best used sparingly, as complex geometry can prove very tricky for the game's LOS rules to interpret.

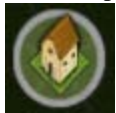
Objects

To work with objects on the map, press the centre button in the top row of the sidebar. Objects are grouped together in palettes in much the same way as the tiles. Selecting one of the palette names - desert objects, snow objects, French objects - from the second window down in the sidebar displays all the objects within that palette in the larger window below.

To place an object, select a name from the list in the larger window. The object is then attached to the cursor and can be placed as seen on the map with a left mouse click. Objects can be rotated in 90 degree increments using the “R” key. They can also be freely rotated using the “Page Up” and “Page Down” keys. Objects can be scaled up and down using the “Home” and “End” keys. Pressing “Delete” will remove any object currently under the Cursor.

Certain objects, such as buildings and fortifications, change the terrain type of a tile they are placed over as well as blocking the LOS. Bridges create a passable tile beneath them over water, while boulders create impassable terrain for vehicles. These objects’ placement is often constrained to within a tile’s boundary, to prevent the placed object falling between two tiles and creating visually misleading terrain.

Trees are a special case. The terrain tile “forest” specifies that the tile provides cover for infantry units and is impassable to vehicles. However, it is the objects placed on it that cause the tile to block LOS.



Rather than have every tree block LOS, and so severely constrain their use, only tree meshes labelled as “Blocking” will alter the tiles LOS properties. Any tile that is designated as a forest and you wish to block LOS must have at least one “blocking Tree” on it. All other trees can be freely placed, although obviously care must be given not to create misleading terrain that look like forest but don’t act like forest. Trees are also unable to be scaled or rotated. As they placed in such large numbers, trees are randomly scaled and turned each time the mouse is clicked to place one.

Hedgerows are another special case. These objects can only be placed on the boundary of tiles. They cannot be rotated, but they can be scaled up and down to provide some visual variation.

Pressing “O” toggles on “damaged” mode. Any object placed uses its damaged state, allowing you to create wrecked villages or shattered forests. Pressing “O” again toggles the mode off again.

Units

Once the map has taken shape, we can populate it with units.

To work with Units, press the right hand side button on the top level of the sidebar. The first press brings up a list of Allied units. A second press will toggle the list to the Axis side.

Select a unit type from the list, move over the map and press the left mouse button to place the unit on a tile. Press “R” while holding the mouse cursor over an already place unit will rotate it in 90 degree increments. Pressing “Delete” in similar circumstances will remove the unit.

Placing a unit on a tile that already contains a unit will load the second unit into the first. There is no limitation on what units can be loaded , so it is up to you to avoid King Tigers being carried in the backpacks of an infantry unit.

The same care must be taken in where units are placed. There are no limitations to where a unit can be deployed, so to avoid problems once the mission is being played we must guard against tanks being placed inside bunkers or units in lakes for example.

