

Basic JOSM Editing

Introduction

Our projects here focus on transportation infrastructure. A very substantial part of the relevant objects on OSM have been modeled, but they simply don't contain the level of detail we would like them to have. While you will not likely be modeling a substantial amount of features from scratch it is still important to learn the basics of both drawing objects and editing their tags.

Draw Mode

You go into **Draw Mode** by hitting the **A** key. You will then be able to drop a node simply by clicking on the map.

If you want to drop an isolated node *double click*, otherwise your next node will be part of a way connected to your first node and so on. In a similar manner however, double clicking will result in dropping the *last* node on your way, leaving you free to start over.

If you want to draw a closed way then draw a way as just mentioned and as your polygon nears completion, double click on the first node in order to close your way.

In order to delete objects you must be back in Select Mode. Simply hit the delete key after selecting the relevant object. (remember that on a Mac in order to get the delete key to work you must press the **fn+delete** keys together.

Selection

Selection mode has more options than simply clicking and highlighting on one object.

If you click and drag every object that is *fully* within the subsequent rectangle that you draw will be selected.

If you hit the **S** key while already in select mode you will enter Lasso Mode which allows you to draw a shape which like the default rectangle will select any object *fully* within it.

If you wish to select multiple objects by clicking simply press down on the **shift** key and all of the separate objects which you then click on will be selected together.

Basic Geometry

W Tool

For adding geometric detail to nodes, JOSM provides the W tool. Simply select a way and hit the **W** key.

The tool ends up selecting a node near your cursor and highlights it in red. Wherever you click it will move to. Also notice the dotted lines leading to the nodes adjacent to the selected node. These lines are just there for reference, you will only be moving the location of the selected node.

If you wish to *add* rather than *move* nodes using the W tool, hit the **control** key while the tool is activated. Rather than a node being highlighted and wherever you click being its new location, the new location will have a new node altogether. The reference lines are now solid and point to whatever nodes your new node will be inbetween.

Alignment

If you select a way and hit the **L** key, the way will then be realigned into a perfect line. This has its uses as when someone may have sloppily drawn a parking aisle and you are trying to fix it. However roads in real life tend to bend so make sure when aligning any segment you aren't ruining accuracy.

Squaring

This function is more fit for polygons but if you select a way that's not already perfectly straight and hit the **Q** key, the way will adjust so that only perfect edges remain. If you do this to an isolated way that was curving, depending on how much it was curving it will either turn into a straight line or you will find yourself with an isolated corner.

If you highlight an entire polygon then of course it will square the corners. If the closed polygon is made up of separate segments and you only highlight some of them, then only the corners on those segments will square, and the unhighlighted segments will adjust to match the dimensions of the new polygon. This could result in unintentional warping however so be careful.

Circling

Analogous to the squaring function is also a circling function. After selecting a way this function will make it so that the nodes are equally placed apart and the degree which the ways between them curve is the same. It will not work if the way is already perfectly straight.

Joining and Separating

Most roads on OSM are too extensive to be part of the same way. It's best in some cases that they be made up of separate ways, though in some cases it may be convenient for certain stretches of road to be part of the same way.

Splitting

To split a way simply select a way, select the node at which you wish to split the way, and then hit the **P** key. If the way already has a history a window will pop up asking you to choose which way will subsequently get the old history. Usually it won't matter and you can just hit *Okay* but be aware that the option is available.

Combining

The opposite of splitting a way is combining a way. In which you select the two separate ways you wish to combine and hit the **C** key. Just like with splitting, you may also get a window having to do with conflict resolution. Obviously with two preexisting ways with their own tags and histories it can get a bit more complicated. The proper procedure is on a case by case basis.

Merging Nodes

Simply select the nodes you wish to merge and hit the **M** key. Keep in mind that you are allowed to merge multiple nodes.

Ungluing Nodes

Sometimes nodes may be joined to a way and you may need to them apart. In which case highlight a node, press the **G** key, and the nodes at that location will become unglued to whatever they were previously joined to whether a way or other nodes.

If you use the unglue function at an intersection for example, every way that passes over that intersection will get a duplicate of the node, essentially allowing you to take the intersection apart.