MapUploader 6

Quick manual

vers 6.01

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Introduction

Windows 7/10 installation

Both windows 7 & 10 require administrative rights to save data.
For more details see www.pinns.co.uk/osm/windowsten.html

For any issues uploading to Basecamp or Mapsource see Registry Problems (p28)

What does MapUploader 6 do?

- You can create your own map for your Garmin device <u>using OSM data</u>.

- It provides a GUI for uploading osm maps to Basecamp or your gps.
  Without a gui you need to be a DOS expert.

- It enables you to generate contours for most parts of the world
- It can check your TYP file against your style files
- You can add DEM (3d maps)

There are 2 modes:

Automatic

This requires no knowledge of mkgmap options and commands. Click on an option ,fill in the necessary fields and click the Create Map button.

We recommend this mode.

Manual

This allows you to load your own script.

In Settings click Advanced then tick 'Use own script'

Specify path of your your script file , ie by default it is:

 <path> \MapUploader 6\scripts/myscript.txt

Click 'Apply Script' button , bottom left .

Please note : **your script is not checked for any errors ,conflicting FIDs or missing entries.**

What else do I need?

Download essential software

From the main menu bar go to Help --> Download Essentials

A green tick means the required item has been installed.
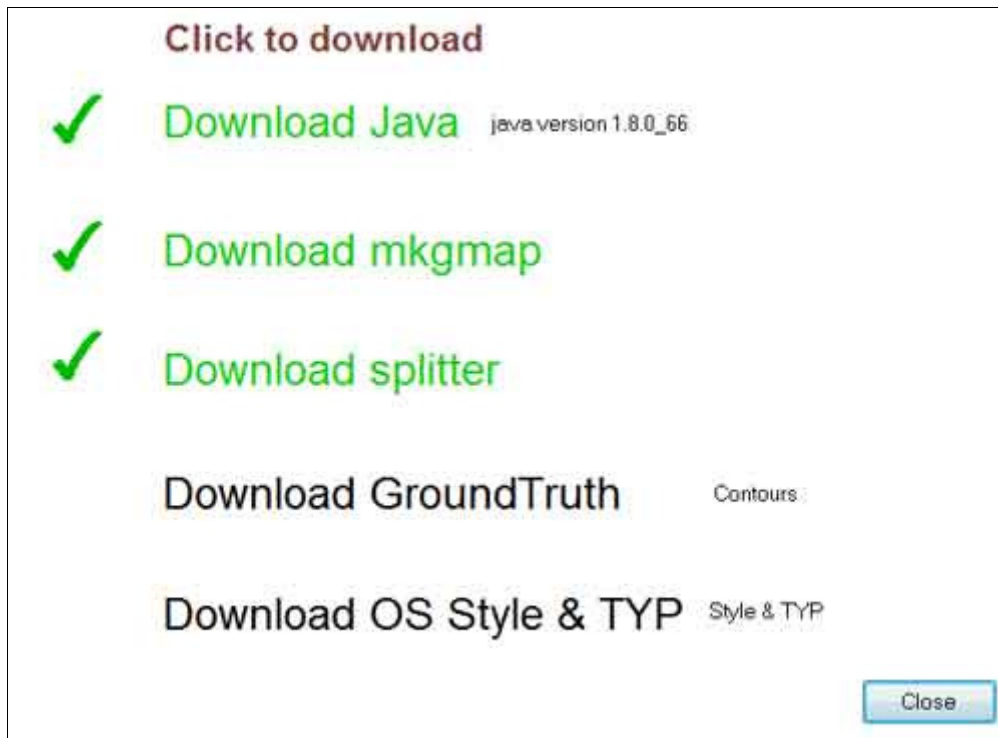
1) *Java*

You need to **download & install java** (free) from http://www.java.com/en/download/index.jsp

This is free. More than likely , it has already been installed previously.

2) *mkgmap*

Download zipfile containing *mkgmap.jar* (http://www.mkgmap.org.uk/snapshots/)

There are various versions; if the latest version causes a problem, download another version.
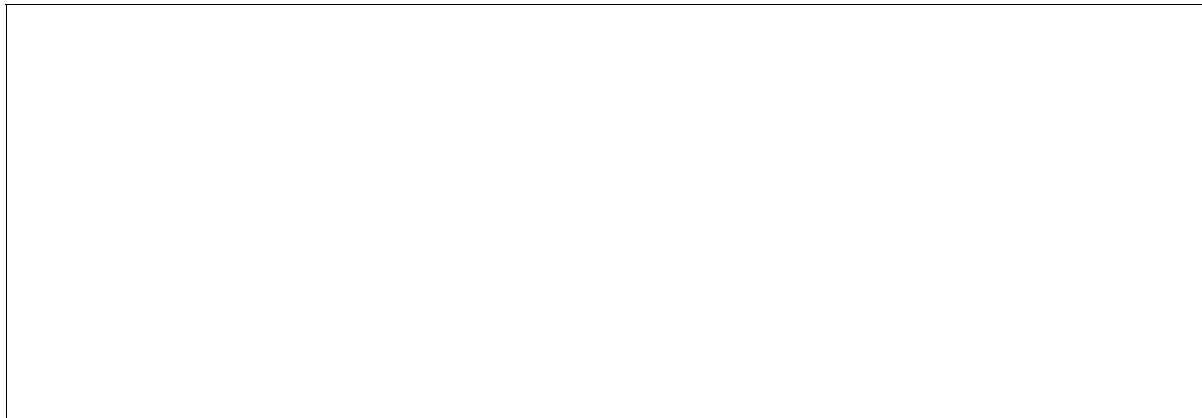
Unzip and place in the same folder as MapUploader 6.

Make sure you also include the Lib folder.

Because versions get updated fairly regularly is good practice to place all the mkmap folders in one folder - ie mkgmapversions/

This also applies to Splitter - see below

3) *Splitter*

Download zipfile containing latest *splitter.jar* (http://www.mkgmap.org.uk/splitter/).

This could also be in the same folder as MapUploader 6. Its even better to place it in a folder

, ie splitterversions/
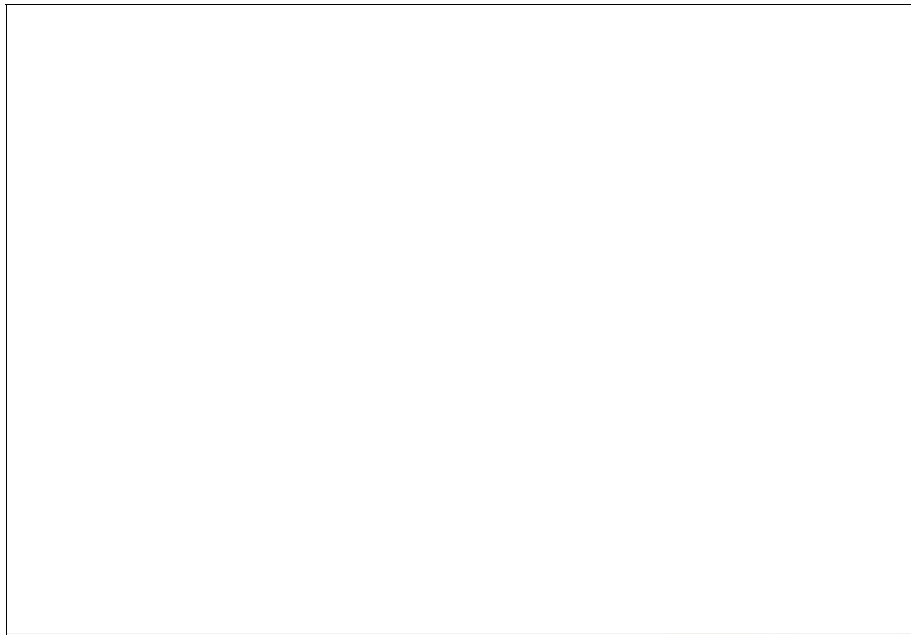
mkgmap.jar
This is needed to create your maps - ensure you have the latest update.

splitter.jar is needed if the osm file is too large for mkgmap to handle.
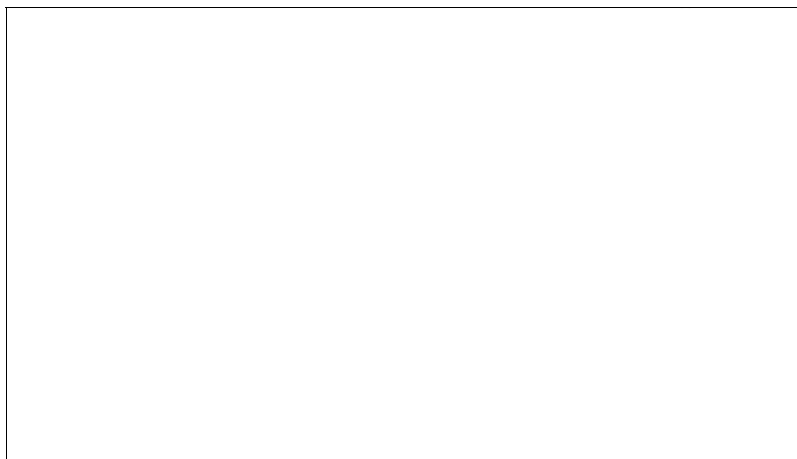
PLEASE NOTE: certain mkgmap.jars and splitter.jars may give errors when parsing pbf files.

If it does, download an earlier version.

MapUploader needs to know where your jars are located - Settings --> All Settings see later

4) *a style folder*

This folder holds important files, ie lines,points,polygons,relations telling mkgmap how to create its map.

When you download mkgmap you will find a '*default*' style in 'examples\styles' .

If you do not have any styles then copy the 'default' folder in the styles folder created by MapUploader 6 or download our os50 style & TYP file.

Place all style folders, containing points, lines etc in the subfolder 'styles' located in the same directory containing MapUploader 6.exe.

Reload MapUploader 6 then select your file from the drop down combo box.

If in doubt go Settings--> All Settings

5) *a TYP file*

This file adds colour to your map and creates customized pois. You can use any version of *TYPwiz* to create TYP files.

Alternatively, *osmstyle2typ* creates a TYP file for your style, containing all the elements referred to in the style. Download from pinns.co.uk\osm

You can specify 2 TYP files , one for a gmapsupp and one for Basecamp/Mapsource etc – see Two TYP files.

Key Memory Settings

java memory

By default this is set to 1024 , ie java -Xmx1024m -ea -jar

This will certainly not be adequate for larger maps!

Problem: Your PC might not have sufficient memory to set aside more memory.

Try doubling memory first ; if that works then double this again etc.

If it doesn't work reduce memory to a different value!

Just change the numbers in the 'memory' box.

Max-Jobs

This refers to the maximum number of threads (simultaneously running tasks)

By default this is set to 'auto' . A message in DOS should tell you how many threads were set (ie 8)

For most PCs this number might be too high. Set max-jobs to 3. If it works increase this number , if it doesn't then decrease the number.

Max-nodes

You may find that mkgmap seems to hang up at a given tile. Nothing appears to happen for 5 mins. In which case, your map has been split using a max-nodes value which is too high: there are too many nodes in one tile.

When splitting large files you want to reduce the number of maxnodes.
Half the default value ; if this works increase, if not decrease.

Checking mkgmap & splitter versions

From main menu go Help --> check mkgmap version or check splitter version

Checking for style errors

From main menu go Help --> check-styles

This will check your current style.

You must have latest mkgmap (2577+)

It highlights incorrect use of type numbers:ie

'Warning: routable type 0x07 is used for non-routable line with resolution 24. This may break routing. Style file lines, line 211 '

Explanation:

Certain numbers are reserved by Garmin for routing. If you used 0x07 for power lines then this could cause routing problems - more importantly, it is a waste of routing type.

Most reliable types are from 0x1 to 0x13 then 0x15,16 & 17 (& 1A for ferries).

Settings

The program needs you locate your mkgmap.jar and splitter.jar

Go Settings --> All Settings

Click OK to save settings
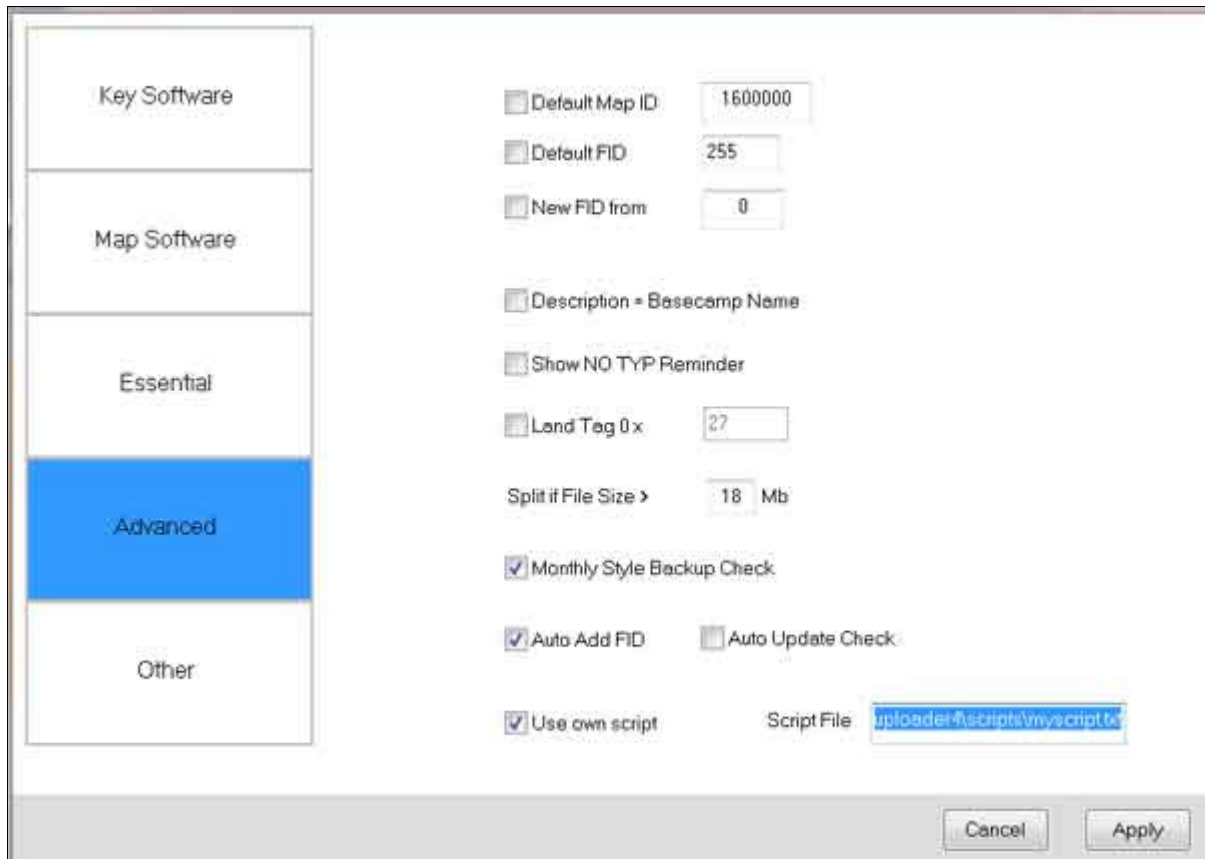
You can also set locations for

style editor	:ie notepad++
TYPWiz	: typ editor
IMG2TYP	: extracting TYPs from img (gmapsupp.img)
TDB Editor	:tdb editor
Archive Folder	

Set Splitter File Size

Some files do not require splitter - it is even advisable not to use splutter
The default is 10Mb . Any file size larger will require splitter.

Description & Basecamp name

Clicking this will ensure descriptions are the same as your basecamp name.

Default Map ID

With MapUploader 6.89+ this has been removed from Settings. Instead click the 'lock' icon next to the map id to unlock or lock it – same applies to the FID
It is possible to always give your gmapsupps the same map IDs - this has   advantages on modern gps devices in that all address searches are linked to the same map id.

However, a word of caution :

If you have two or more gmapsupps with the same map ID , ONLY ONE WILL SHOW in the list of available maps ! Use the Conflict Detector Tool from Tools to check if there is a conflict.

New FID from

As more and more maps are published more FIDs are 'reserved' for official TOPO use.
To make sure your files do not clash use this option and set to a higher number.

Add extra commands

When clicking Create Map or Splitter you may want to include some additional commands

From the main menu Go Options --> mkgmap Options

Or

Click the'No options' button.

If options are set then text is changed to 'check options'

Possible mkgmap Options

With **mkgmap** you could put

```
--show-profiles=1
--housenumbers
--pois-to-areas-placement
--link-pois-to-ways
--adjust-turn-headings=1
--process-destination
--process-exits
--precomp-sea=seatiles # directory where tiles are kept
```

anything following the # will be ignored

you could also include mp files ie

```
C:\a_MapUploader 6\contours\22222222.mp
C:\a_MapUploader 6\contours\22222223.mp
C:\a_MapUploader 6\contours\22222224.mp
C:\a_MapUploader 6\contours\22222225.mp
C:\a_MapUploader 6\contours\22222227.mp
C:\a_MapUploader 6\contours\22222226.mp
```

In this case mp files are not split but added as separate imgs

under **splitter**:

```
--geonames-file=cities5000.zip
```

any spaces will be ignored.

Each command needs to be on a new line.

For more information about mkgmap options go Help --> Show Mkgmap Options

for splitter go Help --> Show Splitter Options

TIP

If you are using multiple pbf files refer to them in the **splitter** section : ie

--geonames-file=cities5000.zip

K:\osmosis\bin\england.osm.pbf
K:\osmosis\bin\wales.osm.pbf
K:\osmosis\bin\scotland.osm.pbf

Click Splitter and your (3) pbfs will be split.

Next, click Create Map and

Creating a map
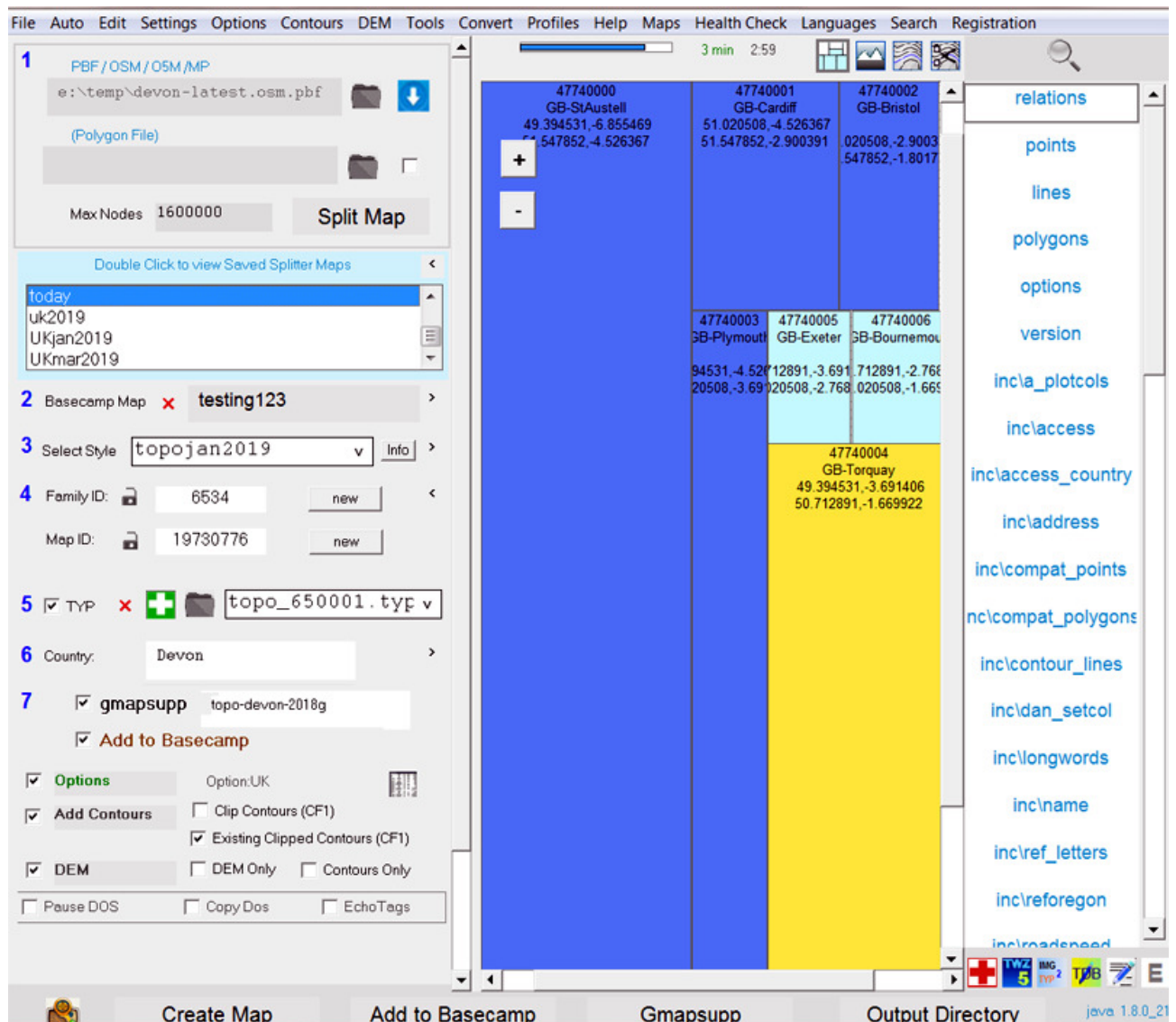
1 How to download an osm map

We suggest you download a reasonably small country first , for example Luxembourg

Download from geofabrik.de , ie

Click Tools --> Download from Geofabrik

http://download.geofabrik.de/openstreetmap/europe/luxembourg.osm.pbf

Once downloaded there is no need to 'unzip' it as mkgmap will do this automatically (the lib folder contains the relevant library).

Click on the grey folder button to load the osm file.

map directory

By default this is set to c:\garmin\maps ; all mapsource maps are placed in a subfolder located at c:\garmin\maps. Registry problems often occur when the map directory is set differently .

So , if you your call your map **'my_country'** the files will be located in :

c:\garmin\maps\my_country

You can access this directory by clicking the '?' button

gmapsupp directory

All gmapsupps can be found in a subfolder \gmapsupp located in the same folder as MapUploader 6.exe. . Click the Locate Gmapsupp button.

Mkgmap options

- routable   this makes your map routable but depends on your style
- index   this allows for searches
- transparent   this makes the map transparent
- address   this enabled address sesarches depending on your style
- POI line   this creates POIs for lines depending on style
- POI area   this creates a POI for polygons depending on style
- sea   this creates sea polygons - some flooding may occur
- drive right   tick this if you drive on the right in your country
- Unicode   tick this to add unicode characters tom your map but see below !

You can download our os50 style which also includes a matching typ file,os50.typ

3 IF you have ticked upload to Basecamp then you need to provide the name as seen in Basecamp. In our example, tick 'upload to Basecamp and give it a name, ie luxembourg

You can leave the overview name blank . This name is used to define your folder

4 point to your TYP file
You can download the TYP default.typ to match the default styleYou can download the TYP default.typ to match the default style

5 Add a description related to the map ;
This gets used when creating a gmapsupp - see below

Country

Enter the name of your country.Useful when you have ticked 'address'.

gmapsupp

Tick this if you want to bypass Basecamp and create a gmapsupp which can be copied to your gps.

You can give the gmapsupp a different name. When created click the 'Locate Gmapsupp' button.

Please note:

For those with fairly modern gps devices it is possible to obtain 2 descriptions for your map, viewable when you select a map :

Description 1 (large) - name of gmapsupp
Description 2 (small) - your description

Give your gmapsupp a name like : Map of Luxembourg

This will create 'Map of Luxembourg.img' when you click locate gmapsupp.

Unicode

When you click the Unicode option mkgmap creates a map with labels showing Unicode characters, ie Greek, Arabic,Chinese,Russian etc

IMPORTANT NOTE !

Selecting this option could create maps which are incompatible with your GPS device, particularly if you have a fairly new device.

There are no problems with older devices, Basecamp or Mapsource

Create Map

Finally, click Create Map. A bar chart gives some indication of progress made . The last file contains address information if this address option has been set. As it takes data from all the img files, the more imgs to longer it takes.

If it can't find mkgmap.jar then go Settings --> All Settings and locate mkgmap.jar

If it can't find the style then check if you have place 'default' in the MapUploader 6\styles folder.

After a 30 scs the Upload to Basecamp button will turn green

Click Yes, if you want it to be uploaded to Basecamp.

It has created a luxembourg subfolder in your map directory containing all the essential files, including a copy of your typ file, if specified, with the correct FID.

Basecamp

Click the little basecamp button to load basecamp - locate the program in Settings --> All Settings.

Basecamp should be found in :

c:\Program Files (x86) /Garmin/Basecamp

or

c:\Program Files/Garmin/Basecamp

Using Selected Splitter files

When you split a map splitter creates smaller pfd files.

They can be saved under a group name

Double click on one of these groups to show all the 'smaller' maps.

When this frame is highlighted (light blue), your selection is used when clicking on ' Create Map'

To save your temporary splitter files go File → Save Splitter Files.

There are 3 options:

a)   Select your Tiles individually
b)   Go Edit → Select All
c)   Edit → Deselect All
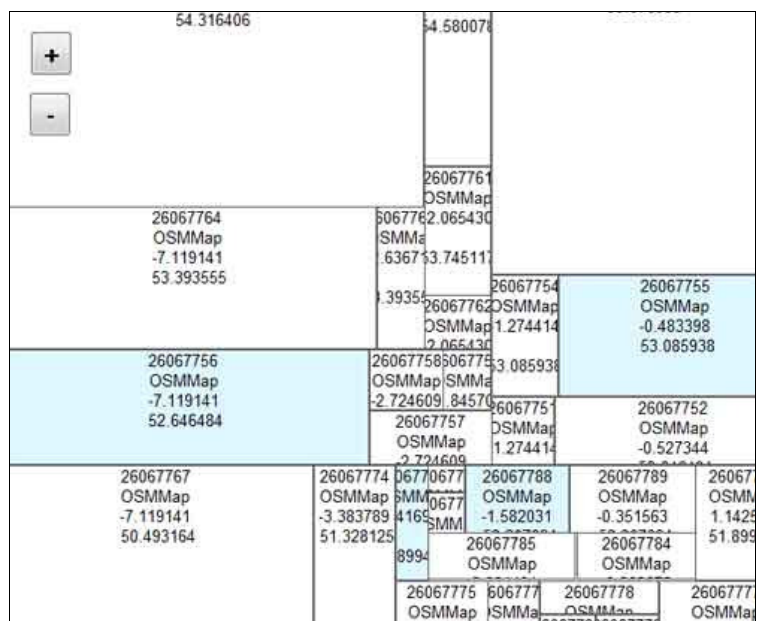
Removing Saved Splitter Files

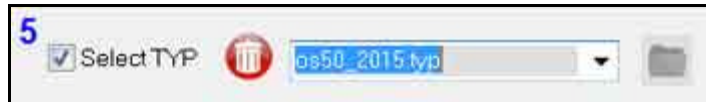From the main menu go File → Delete Selected Arg files.

Select the group you want to delete and click 'Delete'.

TYP files

Original TYP file is used for Gmapsupps *only IF the Basecamp/Mapource option has been ticked*

Extra Options

 If the 'Include Options' checkbox is ticked the + sign is coloured green else it is red.

Place one # in front of the a line to ignore the line

Place ## at the beginning of the line to indicate end of list - ie any lines after ## will be ignored.

Use [ ] to exclude code within brackets ie

```
[
F:\vb6\a_MapUploader 6\mps\SS_Building.mp
F:\vb6\a_MapUploader 6\mps\SS_Buildingline.mp
F:\vb6\a_MapUploader 6\mps\SS_Buildingline_.mp

]
```

'[' Bracket must be at the beginning of a line and ']' at the end or on a new line.

Click Apply to apply your changes.

You can add extra osm files or contour files (.mp) created using our Create Contours option from the main menu bar - see Creating Contours.

Adding Extra Splitter Files

To include a selection of splitter files select your archive from the green combo box and click 'Select Individual Files'.

This might come in handy if you always want to include extra maps in addition to the current (split) maps

Creating Contours

From the main menu bar click DEM/ Contours --> Create Contours

For more information download our *DEM & Contours Tutorials*

Profiles

Profiles can be useful if you are creating maps with different styles and TYP files.

 Click on an option and then click Apply to select your option. The option is show on the main windows title bar.

Create a profile by RIGHT clicking and select style,TYP file or Option.
Enter values for Map IDs or FIDs

Tick 'Use Current Settings' then apply IF you like to include your current settings like routable etc.

It also includes map description ,name of country and the lock value for map ids and fids

Removing from Registry

From main menu go --> Registry

Double click on an entry.

You are given 2 options:

1) remove from registry

2) delete all files in the folder

Caution: files can not be undeleted.

Style Doctor

MapUploader 6 reads TYP files and matches the existence of its elements with those included in your styles.

TYP and Style file

- It highlights any highways,polygons & pois which are used in your style file but NOT in your TYP file.
- It reads the draworders of your polygons and checks it for transparency - polygons with transparency and a draworder <2 may not appear correctly!
- Creates a printable report
- It reads all files, even those include in an 'INC' folder. List is show on top header.

Draworder Min : Any polygon is highlighted if it has a draworder below the minimum set.
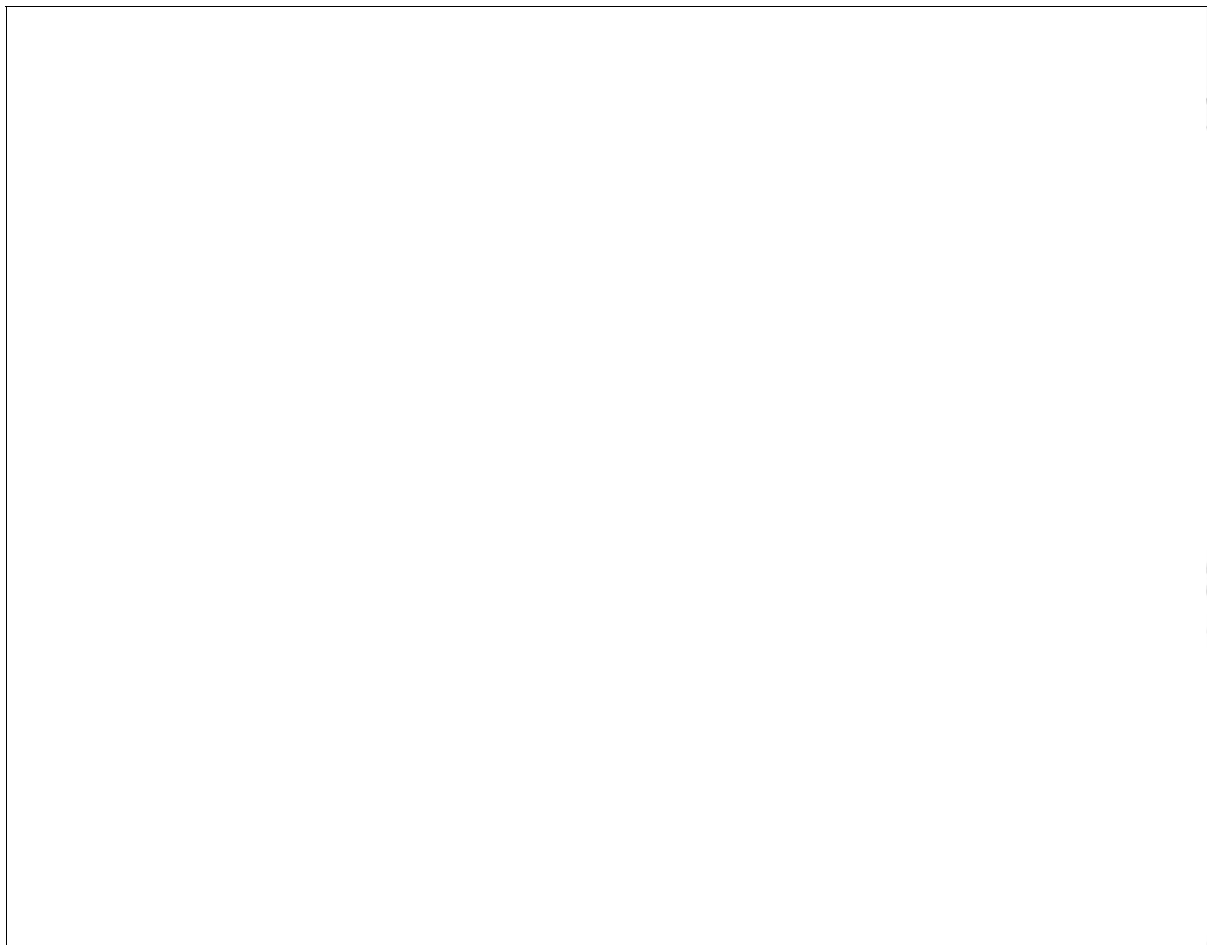
Style Check

- Road Class -As far as possible it checks for any possible routing problems
- Places - Creates a list of all references to place=
- Resolution - Creates a list of sorted resolutions
- Levels - Creates a list of sorted Levels
- mkgmap - Creates a list of any reference to mkgmap:
- name - creates a list of any reference to name
- add - creates a list of any reference to 'add'
- set - creates a list of any reference to 'set'

DEM & Contours

For detailed information download our DEM & Contours Tutorial

Splitter

Use the yellow << button to load the osm.pbf file and click the blue Splitter button.

If it can't find splitter go Settings --> All Settings and locate splitter.

max nodes

Splitter splits large osm.pbf files into smaller ones. Depending on your PC and the country you may need to reduce the number of max nodes to say 800 000 for countries which are densely plotted.

max areas

Again, if splitter throws errors, reduce this number.

Splitter creates new osm.pbf files and a template.args file for mkgmap.

You do not need to know anything about this file.

Once created you can now create your new map BUT click the Template.args button as well.

Creating maps from large osms can take up to 20+ minutes!

Using KML & GPX files

You can use gpx or kml files as part of your OSM maps.

MapUploader 6 comes with two tools to convert routes/highways found in gpx or klm files to a file type understood by mkgmap, ie .mp

Tools → Convert KML to MP

Tools → Convert GPX to MP

Files are created in <MapUploader 6> \mps folder

Uses:

Many public footpaths/streams are available as gpx or kml and can be added to your map without having to be plotted in Openstreetmap

The tool allows for 2 different types.

Above an example of official footpaths (striped yellow red 0x100f05) being added to a map as an mp file.

Google: public rights of way kml etc

Google : prow kml (UK only)
.

Registry Problems

In W10 (not surprisingly!) you may encounter a problem uploading your maps to the registry .

1) Ensure you run MapUploader as administrator

2) Make sure your map target directory is **c:\garmin\maps** (see Settings→Essential)

The quickest fix is to download and install our free Devon Map as this will provide the necessary privileges for all future uploads. You can always uninstall the map afterwards.

Download map at:

www.pinns.co.uk/devon/devonmap.html

Errors

mkgmap is notoriously vague about errors

there are 3 types of errors

1) errors in style files

2) error caused by lack of memory

3) errors because of wrong version of mkgmap or splitter

style errors

Generally, there is some indication as to where the error is located.

To see the error more clearly click the Pause DOS option bottom left.

memory errors

Reduce the memory value as mentioned before or locate the run.bat file by clicking the 'Locate run.bat' button and dbl click it outside MapUploader.

Deleting maps

Go Registry to locate the map you wish to remove from Mapsource/Basecamp

Please note: this only removes it from the registry. The subfolder containing the files is not deleted, but there is an option to do so.

Archiving maps

You can only archive non TOPO maps.

From the main menu go Maps → Archive Garmin Map Products

Select a map and click Archive button.

By default maps are moved to [MapUploader 6 path]\archived

This can be altered in Settings → Essential .

How to reinstall maps

You normally click on a .reg file to reinstall maps. However, since maps are now in a different folder the original .reg file cannot be used unless you move all files to the original folder – the .reg file gives a clue as to where they were originally.

There are 2 options

1) move files to original folder and click on original .reg file – we recommend this option

2) double click on _new.reg . This will reinstall your maps ; however, they are now pointing to your archives folder and therefore cannot be 're-archived'