

These notes relate to the use of a Kobo Mini or Touch ebook reader modified to run XCSoar. They are my best shot at the time of writing. I cannot guarantee they are correct or represent ideal solutions but will correct and update them as and when I can. Please inform me of any errors or better solutions you may find. The index for other Kobo/XCSoar notes can be found at:

http://www.50k-or-bust.com/Kobo_XCSoar/Kobo_XCSoar.htm

Waypoint File Types

XCSoar will accept several types of waypoint file. However in order to be able to add, remove or edit waypoints in XCSoar a file has to be loaded which is of the .cup format. For this reason it is probably a good idea to try and standardise on the .cup format.

Default Waypoint File

XCSoar map files such as UK.xcm incorporate a waypoint file. This file is selected if no waypoint file is selected in XCSoar "Site Files". The .xcm file is actually a .zip file with its ".zip" suffix changed to ".xcm". If this suffix is changed to ".zip" the file can be unzipped in the usual way revealing the waypoints.cup file.

Coordinate Formats

The coordinate format for .cup files is based on degrees and decimal minutes.

The XCSoar waypoint editor works in the coordinate format selected by:
Config 1 / System / Setup / Units - Lat/Lon.

Marker Drop

It is possible to mark your current location by using a Marker Drop:

Menu/ Nav 2 / Mark Drop , the coordinates are logged in file:

XCSoarData/xcsoar-marks.txt file in decimal degrees and also in:

XCSoarData/user.cup in the .cup format. This point can then be selected as a waypoint for direct use or editing.

To Select A Waypoint File

Config 1 / System / Site Files / Site Files / Waypoints (Select file)

XCSoar Waypoint Editor

Config 2 / Waypoints Editor

This will come up with the list of waypoints in the user.cup file which can be selected for editing.

If you select “New” the Waypoint Editor will come up with your current coordinates. For your existing location just give this a name and select OK and your location will be added to the waypoint list. For another location touch the coordinate box “Location” and adjust the figures using the “Up” and “Down” arrows. Note that incrementing a digit from “9” to “0” will increment the next highest digit and vice versa. This can be confusing if entering a string of digits so it is important to double check very carefully before entering “OK”.

To Determine The Coordinates Of Your Current Location

For retrieve purposes the quickest way to get the coordinates of your current location is to go into “Pan” mode. Your location is then displayed in the top right corner of the map in the units selected in “Setup”.

Whatever coordinate format you are used to, if you are going to get someone to retrieve you using XCSoar make sure you are both using the same coordinate units.

To Manually Add A Waypoint To A .cup File From Google Earth

The coordinat units of .cup files are a form of Degrees and Decimal Minutes so in Google Earth / Tools / Show Lat/Long select “Degrees, Decimal Minutes” .

Click on the “Pin” symbol in the toolbar “Add Placemark” .

Drag the “Untitled Placemark” cursor and centre it on the location of waypoint you wish to create.

Open the .cup waypoint file you wish to add the waypoint to using a text editor (notepad or wordpad in Microsoft).

Copy one of the lines of the .cup file and paste it to make a duplicate line in the .cup file. It should look something like this:

```
"Whitwell",,,5317.066N,00112.550W,100M,1,,,,"
```

We will overwrite this line with the new waypoint information.

From the “New Placemark box in Google Earth highlight the latitude data and use “Control/C” to copy it to the clipboard.

Paste it over the latitude in the new line of the .cup file. (“Control/V”)

```
"Whitwell",,,53° 20.953'N,00112.550W,100M,1,,,,"
```

Now delete the degree symbol, the space and the minute symbol.

```
"Whitwell",,,5320.953N,00112.550W,100M,1,,,,"
```

Note the latitude must have this format DDMM.MMM . If your latitude is less than 10 degrees (near the equator) you will have to add a leading zero.

Now do the same for the longitude.

```
"Whitwell",,,5320.953N,1° 48.585'W,100M,1,,,,"
```

The longitude must have the format DDDMM.MMM so in this case we will have to add two leading zeros.

```
"Whitwell",,,5320.953N,00148.585W,100M,1,,,,"
```

To get the elevation from Google Earth move the little hand cursor to the waypoint. The elevation will be shown in the bottom of the window. Type this elevation over the one in the .cup file.

```
"Whitwell",,,5320.953N,00148.585W,493M,1,,,,"
```

The “M” stands for “metres”. Make sure you get the units correct.

Finally overtype the name of the waypoint with the new name.

```
"Mam Tor",,,5320.953N,00148.585W,493M,1,,,,"
```

Save the file and that's it. If you find an easier way let me know!

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