

Kobo/XCSoar Basic UK File Setup

These notes relate to the modification of Kobo Mini and Touch ebook readers by fitting a GPS chip (technically a GPS module) for navigation only or an altivario module such as the Bluefly. The notes are my best shot at the time of writing. I cannot guarantee they are correct or represent ideal solutions but I will correct and update them 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

Base Map, Airfields And Waypoints

The “UK.xcm” file contains terrain, topography and elevation data for the UK. It also has a list of gliding waypoint and “landables” (gliding clubs, airfields etc.) embedded in it. If no waypoint list is selected in XCSoar the embedded list of waypoints and landables from the UK.xcm file is selected and displayed on the map. If a waypoint file is selected the waypoints embedded in the UK.xcm file are suppressed.

For the mostpart these sailplane waypoints and landables are of no interest for paraglider and hang-glider pilots so it is worth having some kind of waypoint file selected which will inhibit them. I use a file with a few waypoints near corners of obstructive airspace (Derbyshire WPTs Open 01.cup) which sometimes helps me to navigate around them.

However this also inhibits the display of the landables from the list embedded in the map which indicate airfields.

An alternate way to show airfields is by using the ASSelect program to generate a file showing airspace. As well as showing ATZs selections can be made which allow the user to see unlicensed airfields.

ASSelect

This enables selected UK airspace to be extracted using a downloadable program at <https://asselect.uk> .

If you select “OpenAir” format it will produce a file something like uk2019-11-07.txt

UKHeights File

A “Heights Layer” file (named something like “UKHeights2019-09-25.txt”) is available from soaringweb.org which can be loaded as “More Airspaces”. This puts large figures showing the maximum height which can be freely flown in

particular areas in the UK. Again, I usually select “OpenAir” format. This file is usually selected in “More Airspaces” in XCSoar on the Kobo.

Unfortunately, unless it is set up correctly it does not appear clearly if at all on the Kobo display. It is created as blocks of class G airspace so has to be set up appropriately. There is a function associated with the airspace called “Use Black Outline” which needs to be set to “on”.

Config 1 / System / Map Display / Airspace. / "Unknown" at the top of the list needs to be set to “Display”.

Config 1 / System / Map Display / Airspace / Use Black Outline - Set to On.
(Affects all airspace)

The following should affect class G airspace only. I cannot properly understand how this works so if you figure it out please let me know.

Config 1 / System / Map Display / Airspace / Colours / Class G
Change Border Colour (Choose Darkest)
Change Fill Colour (Choose Darkest)

Airspace Clip

Airspace above a selected height can be hidden to reduce clutter on the display. I normally set this to 7500 feet for the UK.

Config 1 / System / Map Display / Airspace / Airspace display – select “Clip”
Config 1 / System / Map Display / Airspace / Clip altitude – select clip alt.

Marking Parachute Drop Zones

Parachute drop zones are probably some of the scariest areas we (or at least I!) might accidentally fly into if we are not very careful. There is a fairly simple way of marking them distinctively like this one which shows Hibaldstow:



To do this I edited the ASSelect file uk2019-11-07.txt on an ordinary text editor.

First I identified the code which makes the drop zones. All the drop zones are listed together in alphabetical order. The first one is Beccles:

```
*  
AC Q  
AN BECCLES DZ  
AL SFC  
AH FL130  
V X=52:26:12 N 001:37:10 E  
DC 1.5
```

```
*  
AC Q  
AN BODMIN DZ  
AL SFC  
AH FL120  
V X=50:29:59 N 004:39:57 W  
DC 1.5
```

```
*  
The last one is Weston on the Green.
```

I copied all the drop zones to another text file in order to work on them easily.

In the work file for each each DZ I made a copy immediately following so each DZ was listed twice:

```
*  
AC Q  
AN BECCLES DZ  
AL SFC  
AH FL130  
V X=52:26:12 N 001:37:10 E  
DC 1.5
```

```
*  
AC Q  
AN BECCLES DZ  
AL SFC  
AH FL130  
V X=52:26:12 N 001:37:10 E  
DC 1.5
```

```
*
```

The last line of each “DC 1.5” draws a circle radius 1.5 Nm on the map.

I changed these to “DC 1.0” and “DC 0.5” to draw smaller circles inside the original.

```
*  
AC Q  
AN BECCLES DZ  
AL SFC  
AH FL130  
V X=52:26:12 N 001:37:10 E  
DC 1.0
```

```
*  
AC Q  
AN BECCLES DZ  
AL SFC  
AH FL130  
V X=52:26:12 N 001:37:10 E  
DC 0.5  
*
```

I then copied all this text back onto the end of the original file and re-named the file “AS Select uk2019-11-07 Plus DZs.txt” . On my Kobo this airspace file now shows all the drop zones as in the picture above.

I saved the working file so I can use it again when the AS Select is updated, however, I will have to check to see if any drop zones have been added or taken away in the update and edit the file appropriately.

It is quite possible to add the text of the UKHeights file to the end of the AS Select file in a similar way so all the airspace is in one file.

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