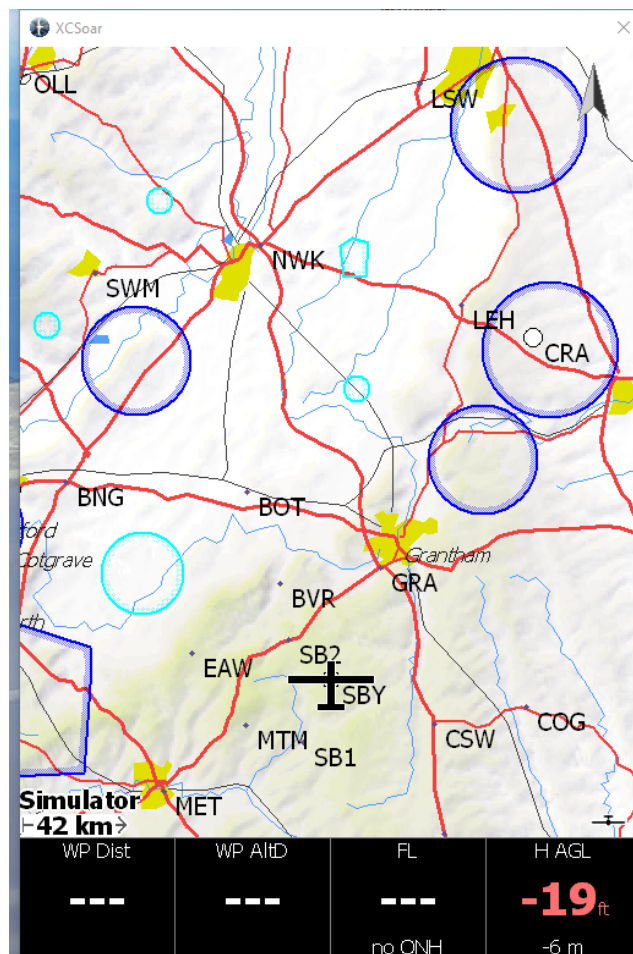


## Perkoz XC Soar Simulator

This is a 'get you started' guide to help you to try out the XC Soar navigation software installed in the Perkoz. It is not a full manual (<https://www.xcsoar.org/discover/manual.html> - 187 pages!) and it does assume you can use a windows PC and a mouse. Whist you can do what you like with this simulator, please DO NOT change the settings of the software installed in the Perkoz, it has been designed to offer basic functionality that all can use!

### How install XC Soar Simulator on a Windows PC

1. Download and unzip the files from <http://saltbyxc.co.uk/XCSoar> - you should have a file called XCSoarSimulator.exe (save this to your PC desk top) and a folder called XCSoarData (save this folder to your Documents folder).
2. Double click on the XCSoarSimulator icon, to start the program.
3. Click on the "SIM" icon on the bottom. If this does not start the simulator you may need a different version of the program , download the required version from <https://www.xcsoar.org/download/>
4. Use your mouse to change the shape of the simulator window to make it look like the image below, which is approximately the shape of the Oudies in the Perkoz.



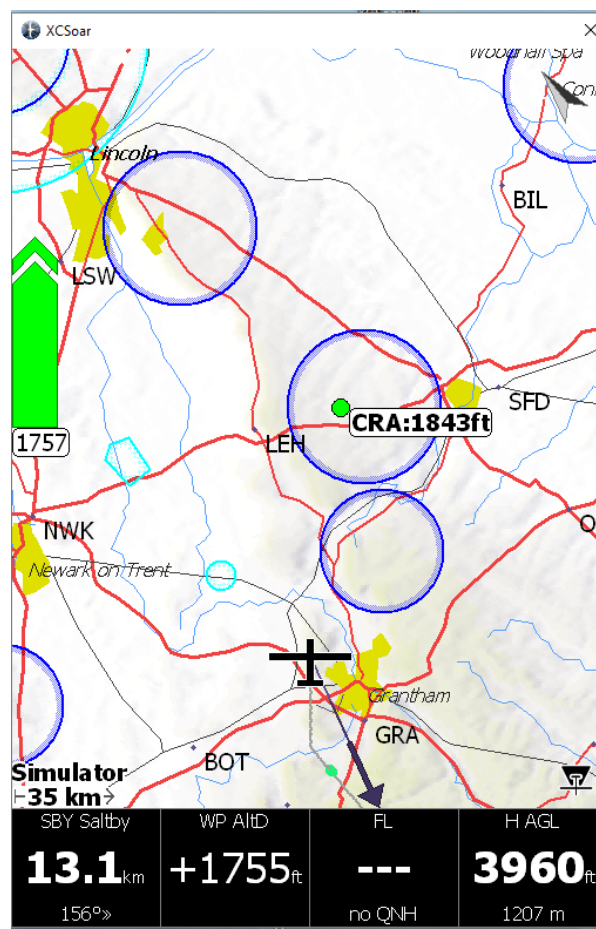
5. If you do not see the map, make sure you have put the XCSoarData folder in the right place and it has the files you unzipped in step 1. If your black buttons are on the right hand side, adjust the shape of the screen as in step 4.

### How to play with XC Soar Simulator

Your mouse now acts on the simulator in the same way your finger would on the Oudie. So to press the simulated 'Oudie' screen, left click with your mouse, to swipe the screen, hold the left mouse button down and move it across the simulated screen. Try clicking one of the turn points or airspace areas on the screen and see the information you get. Use the menu items that come up to get back to the main screen above.

To zoom out, swipe downward (hold left mouse button down and move mouse down the simulated screen). To zoom in, swipe upwards. In real life you would just swipe the Oudie screen up or down.

Now let's give the simulated glider some altitude! Press (left click) the bottom right "H AGL" (Height above ground level) button. You can now add height by clicking the +100 button, click it a few times to give yourselves a few thousand feet. To make the simulated glider move, swipe the glider in the direction you want to travel. This may take a few attempts. You should see that the glider is now moving, or rather the map is moving and the figures in the boxes are changing. If you make the glider move towards the Barkston Heath airspace you should get something that looks like this

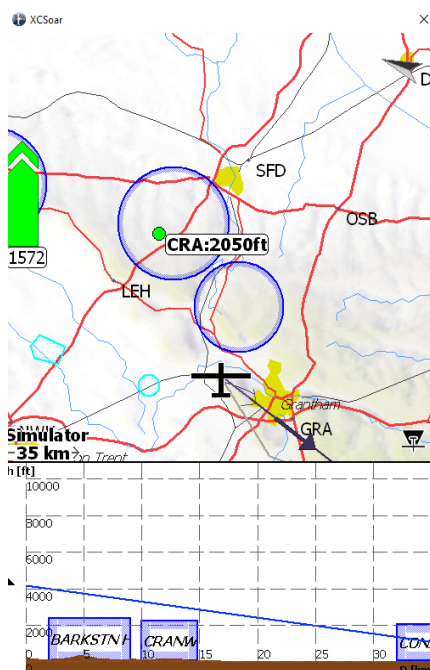


The four 'info boxes' at the bottom of the screen are;

- Current way point, in this case SBY (Saltby). It is 13.1km away on a relative bearing of 156 degrees.
- WP AltD is your estimated arrival height at that waypoint, not including an 800 foot safety height. So in this example, you are 1755 feet above the height required to arrive back at Saltby at 800 feet (enough for a circuit), so in theory you would arrive back at Saltby at 2555 feet QFE.
- FL is your flight level, which does not work in simulator mode as no QNH has been set, this will work in the Perkoz so long as you correctly set the take-off altitude on the S7 vario.
- H AGL is the height above the ground, useful as an estimate for when you are flying away from Saltby, over significantly lower or higher ground.

The white "CRA:1843ft" box says that you could glide to Cranwell and arrive at 1843 feet above your 800 safety height. Try zooming out and clicking on another airfield, such as Darlton (DRL) and see what your arrival height there would be. These calculations are based on the calculated polar curve of the Perkoz in 20m mode. Wind (indicated by a grey arrow with black number next to it, not shown in these images) is taken into account.

Now try left swiping the screen, this takes you to a screen that shows a cross section of the airspace;



The top 2/3 of the screen is the same map as before, the bottom 1/3 shows a cross section of the airspace and terrain you are currently heading towards. In this case our track will take you over the ATZ at Barkston and Cranwell, but you would fly into the airspace about 32km away.

Clicking on the airspace on the map will give you more details, including radio frequencies, class, base and top and distance.

Right swiping will take you back to the original screen. Left swiping again will take you to the third screen, which is a Flarm radar screen, showing the position of Flarm traffic relative to you (this traffic is also shown on the main map, but is not part of the simulator).

Some more advanced things to try

- Double press (click) the main screen and select **NAV -> Task -> Manage -> Browse** to select and load a task. Try creating a new task. You only need to 'declare' the task if you want the declaration to be sent to the IGC logger in the glider.
- **Nav -> Alternates** gives you a list of your nearest airfields, you can press one and use GOTO to navigate to it

Please have a good play with the simulator, before you start 'playing' with the Oudie whilst flying. As mentioned before, please DON'T adjust the "Display" or "Config" settings on the Oudies! Have fun and feel free to ask questions.