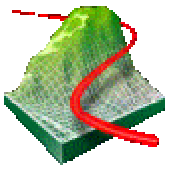
CompeGPS Pocket AIR 1.0



COMPE GPS

Preliminary project

Contents

1 INTRODUCTION 3
2 POCKETPC INTERFACE 3
3 MAPS 3
4 IGC FLIGHTS WITH DIGITAL SIGNATURE 3
5 COMPETITION ASSISTANTS 3
6 DEMS, HEIGHT ABOVE LAND, COLLISION POINT 4
7 WIND SPEED CALCULATION AND MCCREADY SPEED 4
8 'FLYING IN A THERMAL' SYSTEM 5

1 Introduction

Here at CompeGPS, our new software CompeGPS Pocket LAND is now available; capable of transferring GPS data onto a PocketPC, open maps, manage waypoints, routes, tracks, etc.

The idea of this project is to create a program similar to our LAND software, taking advantage of our experience with this program, but including new features which will be useful for air sports.

In order to be able to carry this out, we count with the support of several manufacturers of flight instruments that have accepted to manufacture a small GPS-Variometer that will be connectable to a PocketPC. Present day PocketPC GPS do work with barometric altitude.

This project would imply the first flight instrument created by CompeGPS. With a PocketPC and this GPS-vario, other flight instruments such as GPS, varios, etc, will become practically unnecessary.

2 PocketPC INTERFACE

The CompeGPS Pocket LAND software includes a main menu and quite small sized buttons that make the use of the PocketPC pencil indispensable when you wish to click on any button.

In the case of the new AIR software, when in flight, these buttons will disappear. A new auxiliary menu will appear in it's place with extra-large buttons, sized to be able to click on them with gloved fingers when we are flying-

3 Maps

CompeGPS Pocket LAND is capable to working with large sized raster maps, as well as vectorial maps. The AIR software will be able to work with vectorial maps with air space.

With CompeGPS AIR PC you will be able to select any map, or any part of a map and transfer it to a PocketPC. In this way, while we plan the flight with the PC version, we can transfer tracks, waypoints, routes and maps to our PocketPC!

4 IGC flights with digital signature

At the end of the IGC tracks, CompeGPS Pocket AIR will store a digital signature, in order to authenticate the track. In this way these tracks can we sent to the "Online Contest" and other virtual competitions. CompeGPS Pocket AIR will also be compatible with our other software CompeGPS Competition enabling all paragliding and hang gliding competitors the world over to use it.

5 Competition assistants

CompeGPS Pocket AIR includes the following features making it useful for competition flight.

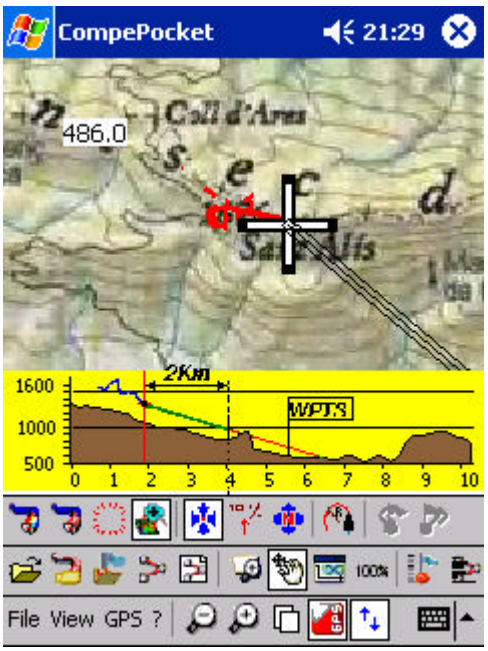
- The routes will be introduced with the parameter "waypoint radius". In this way the program will know if a waypoint in a route has been reached or not.
- When we get near to a waypoint an arrow will appear on the map indicating where the next one is located, thus helping us to decide how best to reach the actual waypoint.

- When we get near to the Start Point the CompeGPS Pocket AIR screen with show two pieces of information in very large letters: distance to the outer part of the cylinder and the present time.

6 Dems, height above land, collision point

It will also be possible to import elevation maps into CompeGPS PocketAIR. 3D viewing will not be possible but all the features WILL be available.

- At all times, while we are flying, we will be able to know our ALTITUDE OVER LAND.
- Using the course and the glide rate, we will be informed of the landing point or “collision point”.
- The cross section of the course we are flying will be shown on which the collision point will also be indicated.

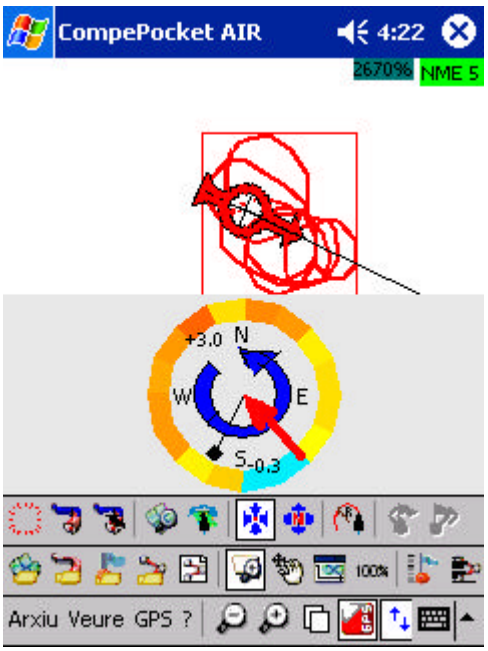


7 Wind speed calculation and McCready speed

As with other modern variometers, CompeGPS Pocket Air will calculate the present speed of the wind and the optimum McCready speed. In order to do so, the **POLAR** of our wing will have to be introduced. The **POLAR** can be calculated on your PC with CompeGPS AIR.

8 'Flying in a thermal' system

When flying in a thermal, a new screen will supply us with auxiliary information that will help us turn in thermals.



This image is the vertical representation of the last turn, as seen from above. A colour code indicates the lift encountered in each point of the turn. With this information you will be able to determine in which section of the thermal offers greater lift.