FLIGHT COMPUTER VIEWER MANUAL ---PRELIMINARY----

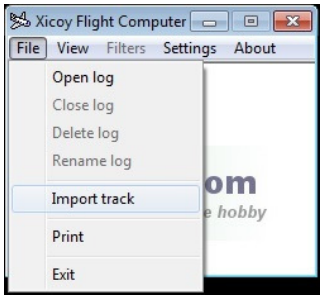
Installation:

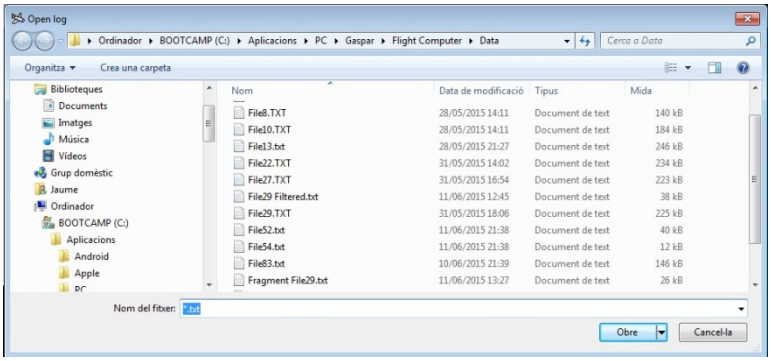
In most of the cases the software run without installation. In the case that an error "commdl32.dll" appear, then please install first the standard fadec software downloadable here: *http://www.espiell.com/FadV5cInst.zip*

Running the program:

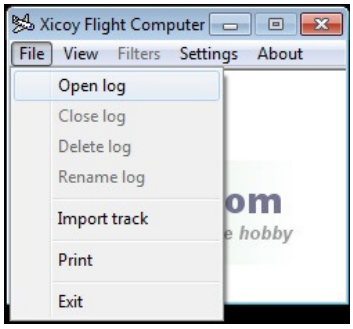
After starting the program, first you should load the file generated by the flight computer. Select "File" and "Import track"

Navigate trough the directories/disks on the computer to select the file to be loaded. If the flight computer has the GPS module installed, then the date and time of the file will show the real date/time of the flight.





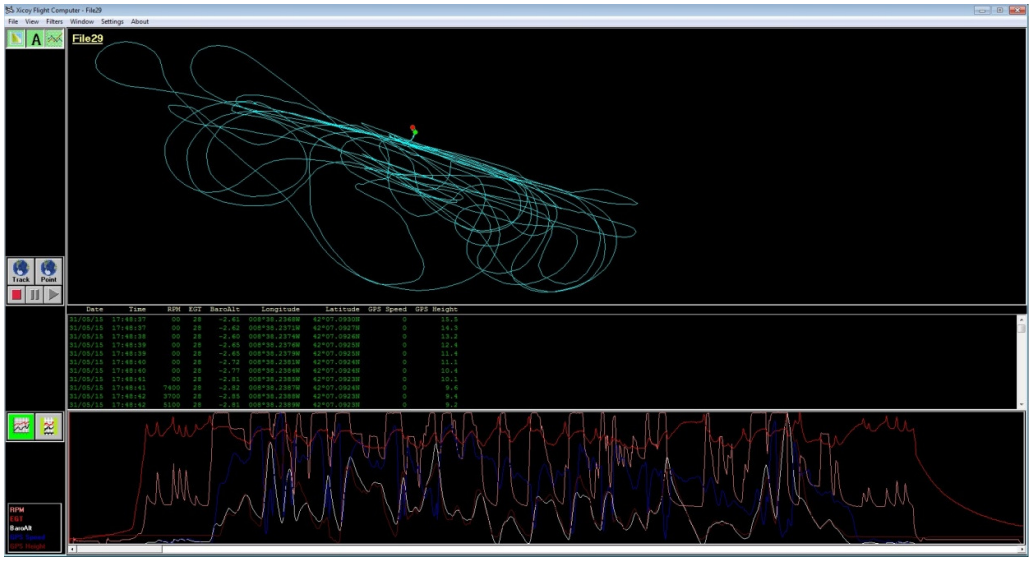
Once the source file selected, you can change the name of the workspace for an easier identification. All the imported data plus the options and filters you select while working on this session will be saved as a log file under the name you choose on this session. Therefore, it is possible to have different sessions based on same initial set of data, for example, one filtering the engine parameters and another filtering the navigation data. Saved "log" files can be retrieved later using the "open log" menu.



Once the file selected, the application will open, showing the three main data windows plus a command bar.

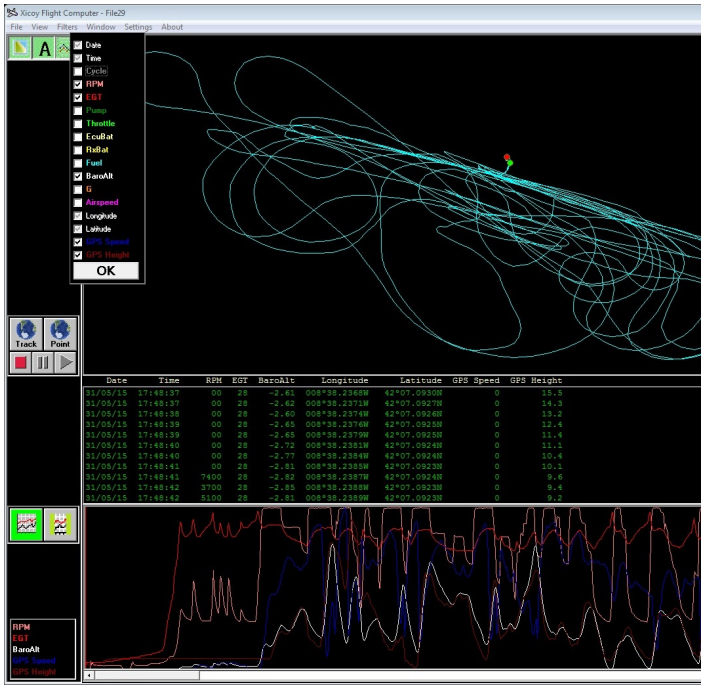
- On top, the "Map" window shows the flight path in 3D from the GPS data. The green dot represents the initial point of the flight, while the red represents the last position. The Yellow dot show the position of the airplane at current selected data point.

- Central window list all the data stored by the FlightComputer
- Bottom window shows in graphical form the data of the above window.



FILTERS:

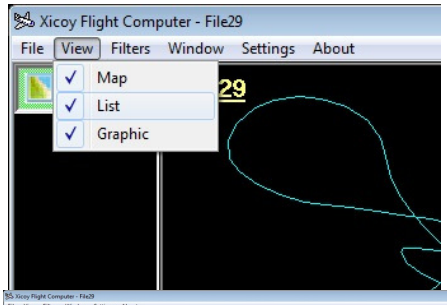
The “Filter” menu allows selecting the fields to be displayed on the list and on the graph window. Also defines witch parameters will be exported to Google Earth.

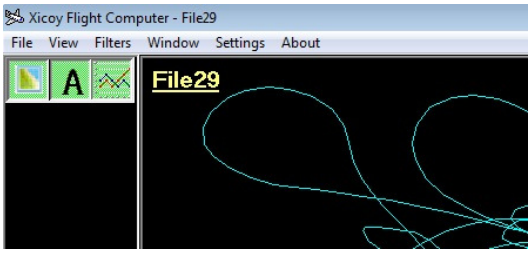


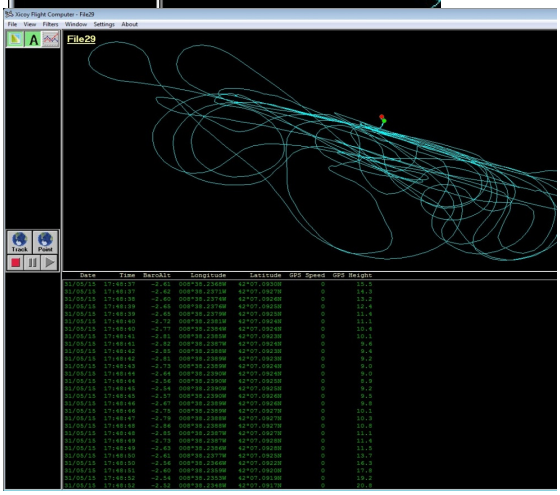
Selected fields are listed in the left bottom corner, of same color as the line of the data on the graph.

VIEWS:

The “View” menu allows selecting the displayed windows. For example, in the case that the file under analysis don’t contain GPS data, the “Map” window will not contain any data, so it is possible to close it and have the other two windows of larger size.

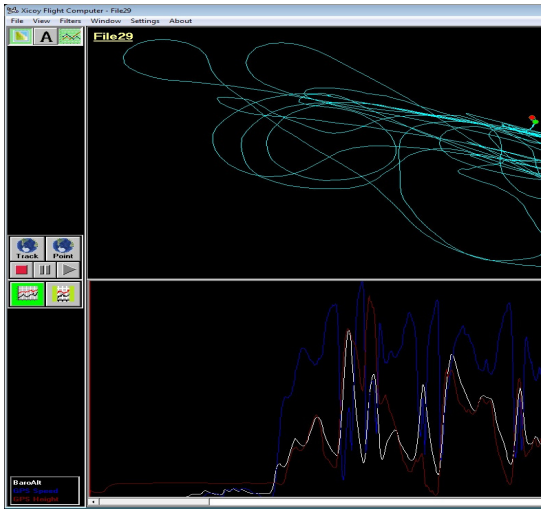


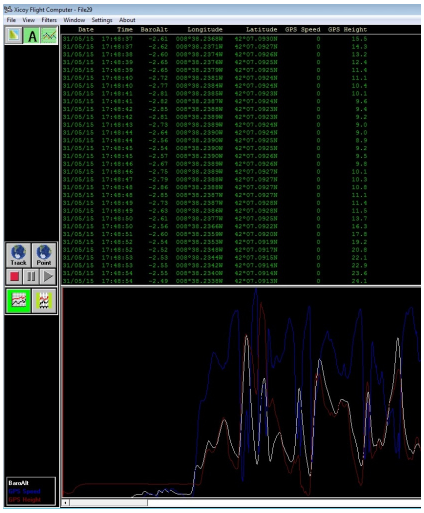




Only “Map “and “List” windows visible

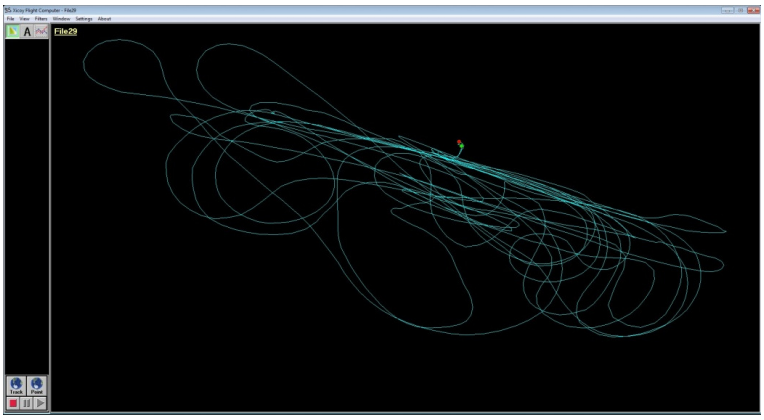
Map and Graph visible



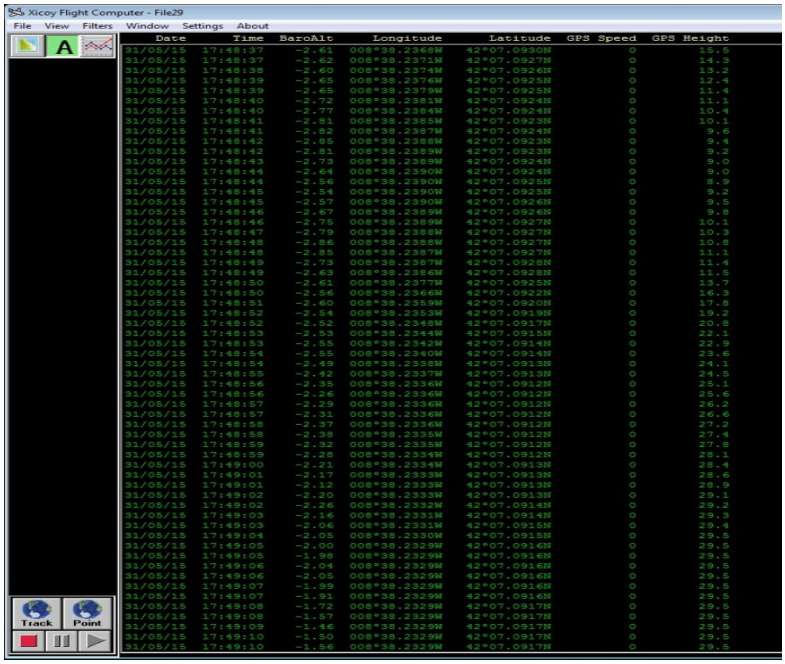


List and Graph visible

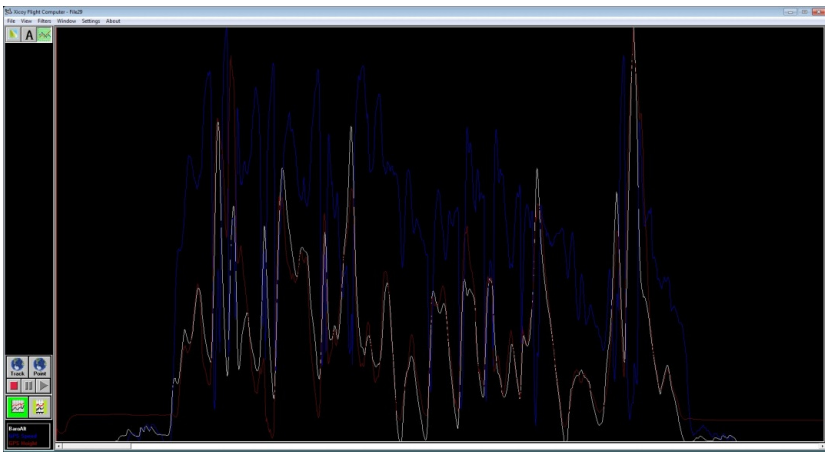
- Map Full screen



- List full screen

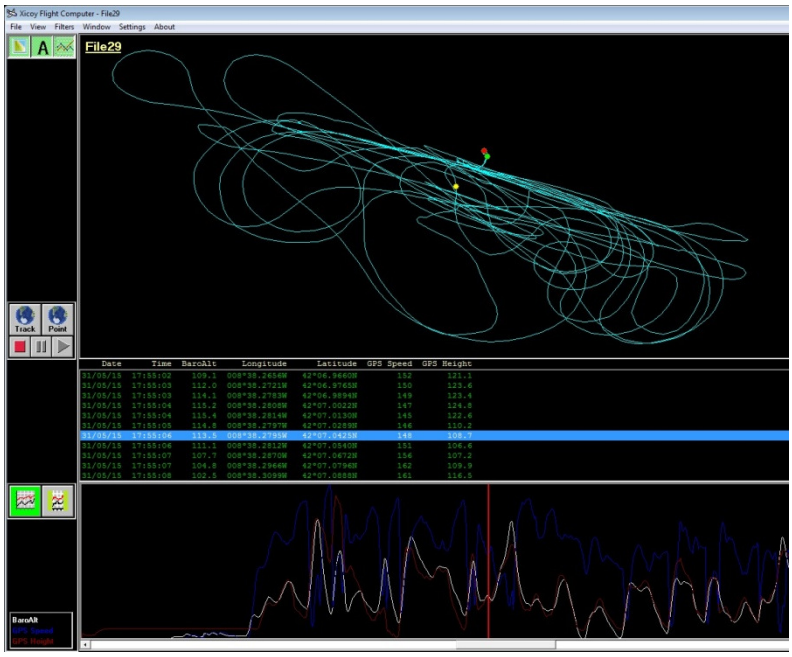


- Graph full screen

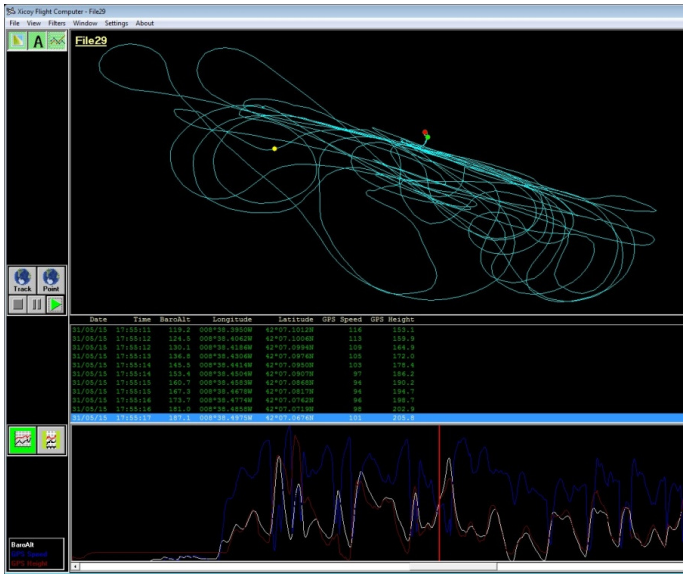


POINTERS

- The data on all 3 windows is synchronized. Clicking over a line of data on the list window, the line will be highlighted, the yellow point on the Map window will move to the correct position on the flight map, and the red marker on the graph window will be placed in the selected position. Also clicking on the desired position on the graph window, or moving the bottom bar, will cause the list window and map window to be refreshed to the selected set of data.



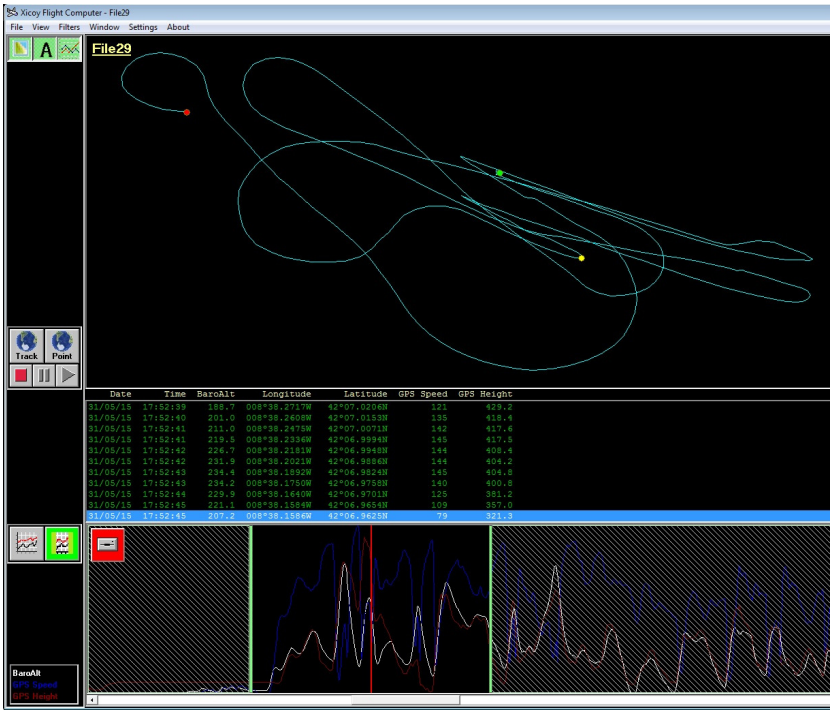
On the left window, center position, there are the 3 “Playback” buttons; they allow recreating the entire flight, displaying all the data on the 3 windows in synchronized and real time.



Reducing the data set

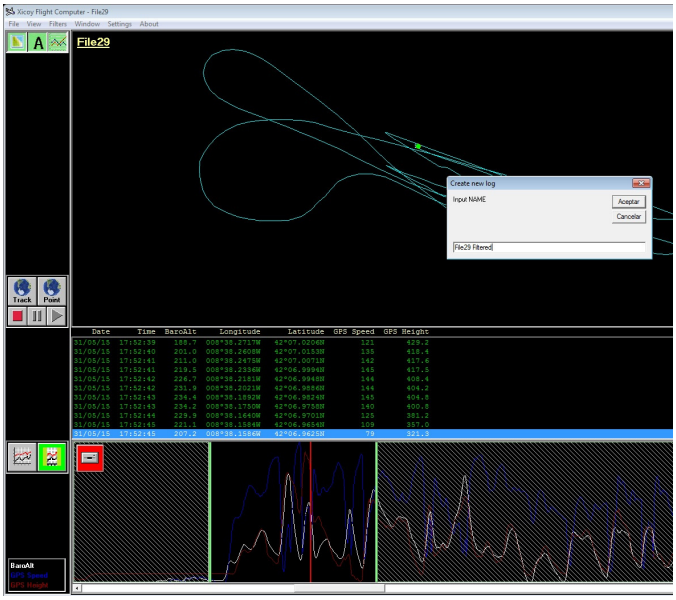
The “window” option on the menu allows selecting the full flight or part of it, for detailed study. Also this option can be activated using the two buttons on the bottom of left panel.

Once the “window” option is activated, the graph window shows two shaded areas, which define the discarded data. These areas can be modified by moving the green bars using the mouse.



The Map window will display only the flight path inside the defined window, same as the list window. Exporting the data to Google Earth with this option activated will export only this data. For example, it is possible to select only the data during approach and landing, discarding all the other data, for a clear view of the path on Goggle Earth.

The red button on top/left side of the graph window allows saving the selected set of data in a new log, discarding all other data. A small window asking for the name of this reduced set of data will be shown.

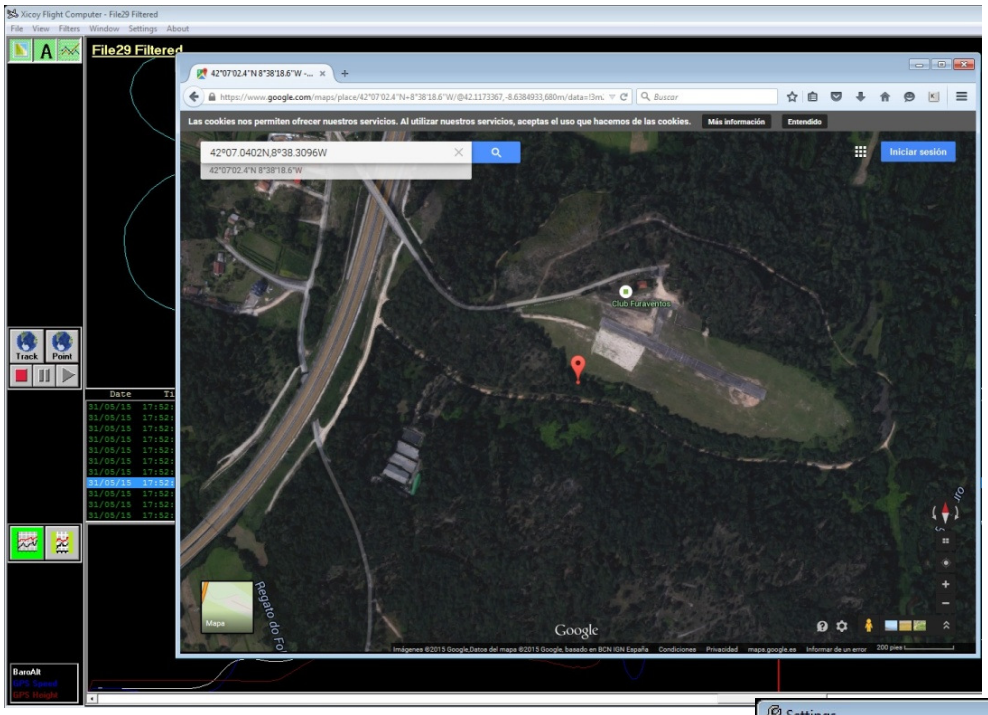


EXPORT TO GOOGLE MAPS/EARTH

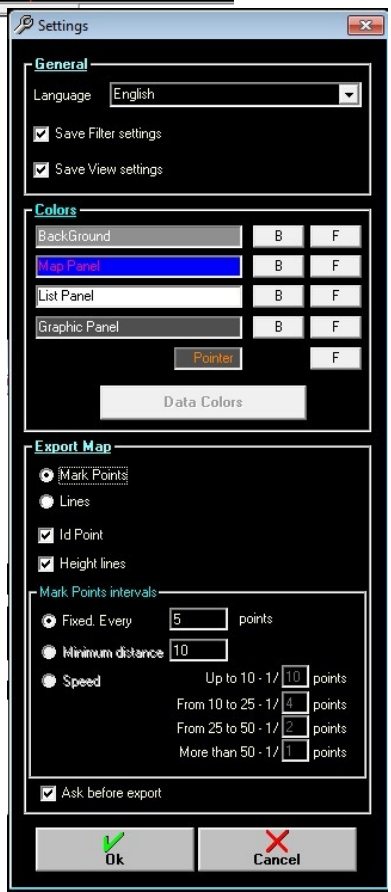
Two options are offered.

- Single point. The airplane position on the currently selected line of data is displayed on GoogleMaps, it is necessary to have a internet connection
- Full log export. All the flight (or the selected part of it) is displayed on Google Earth. Goggle Earth should be previously installed in the computer, including and internet connection.

Example of Single Point:



Full Log export can be further configured using the settings menu/Export Map box:



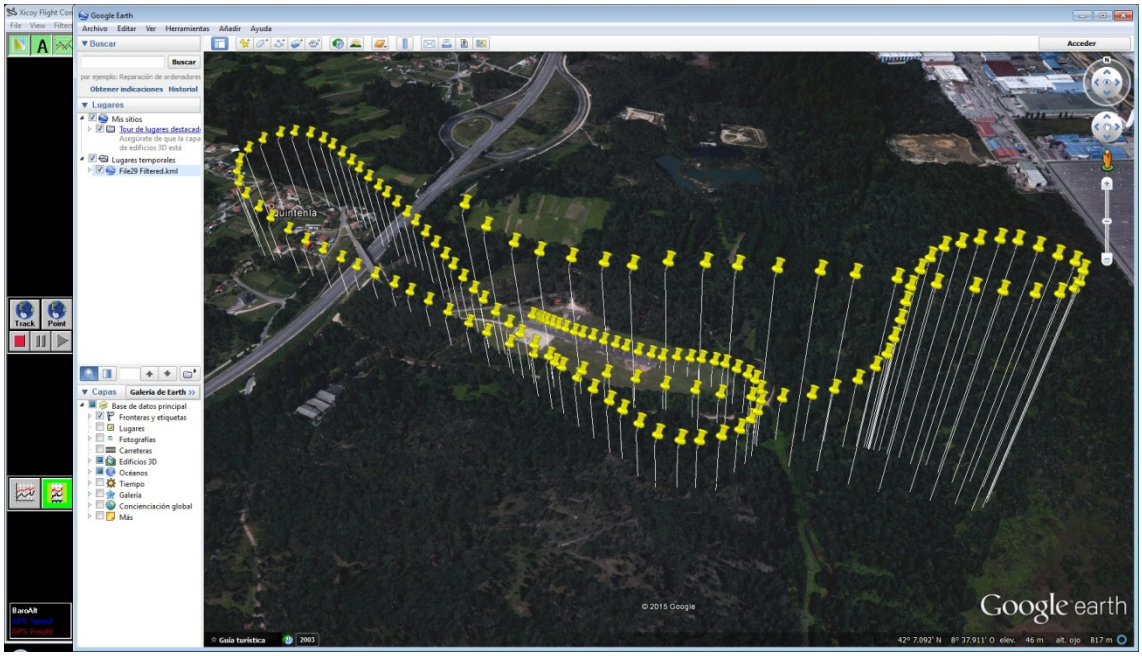
Selecting “Mark Points”, Google Earth will display the isolated points on the space, but each point will display the data (filtered previously by the “filter” menu.

Selecting “lines”, the flight path will be displayed as a continuous line, but no data, besides position and height will be available.

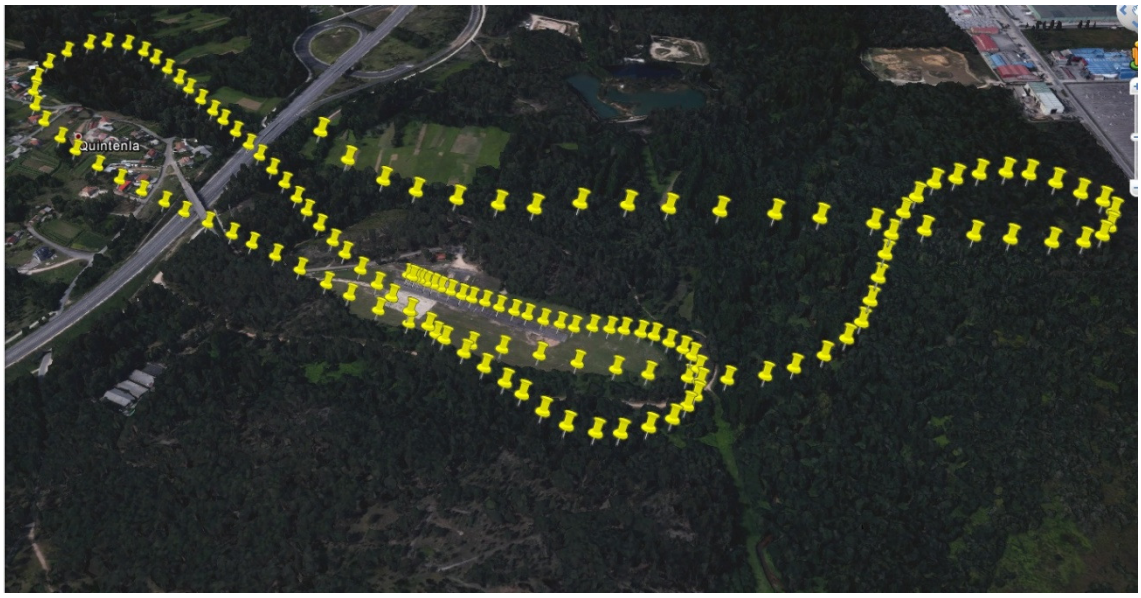
Mark Points Intervals box will allow selecting how many points are exported to Google Earth for a clear view. Is it possible to decimate the points (one of each x), to set a minimum distance between points, or to decimate the points in function of speed.

The “Height Lines” option allows displaying a line from the point to the ground, to show better the current height

- Example of Mark Point including the height lines



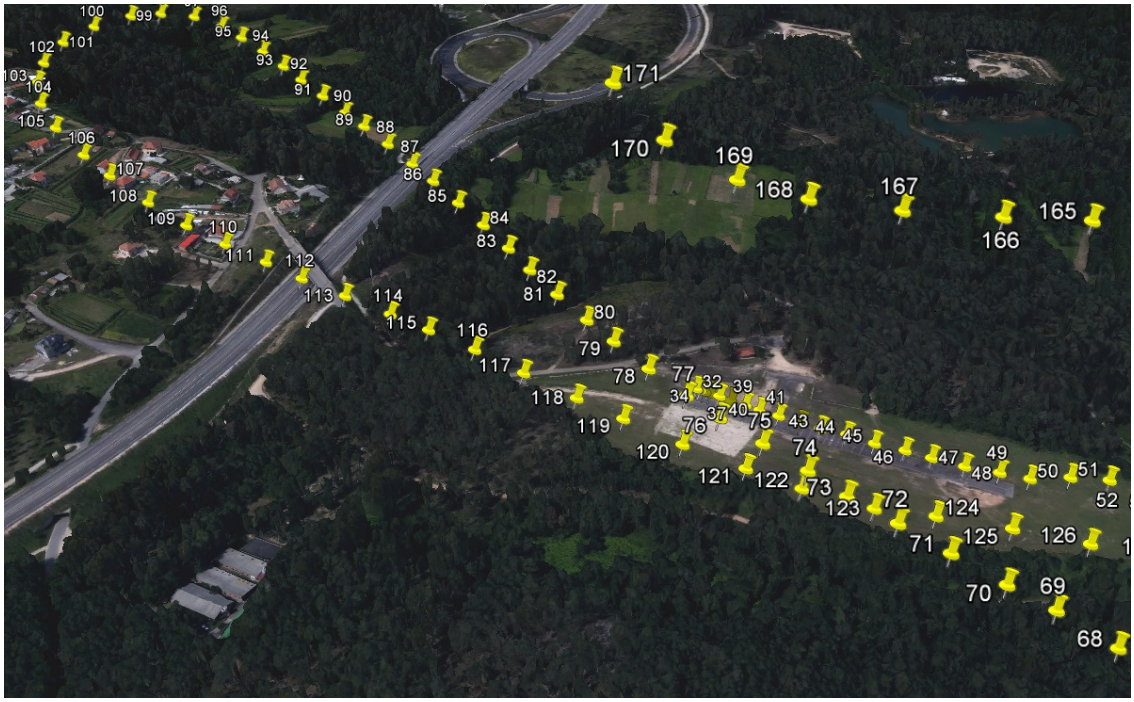
- Same but without the height lines



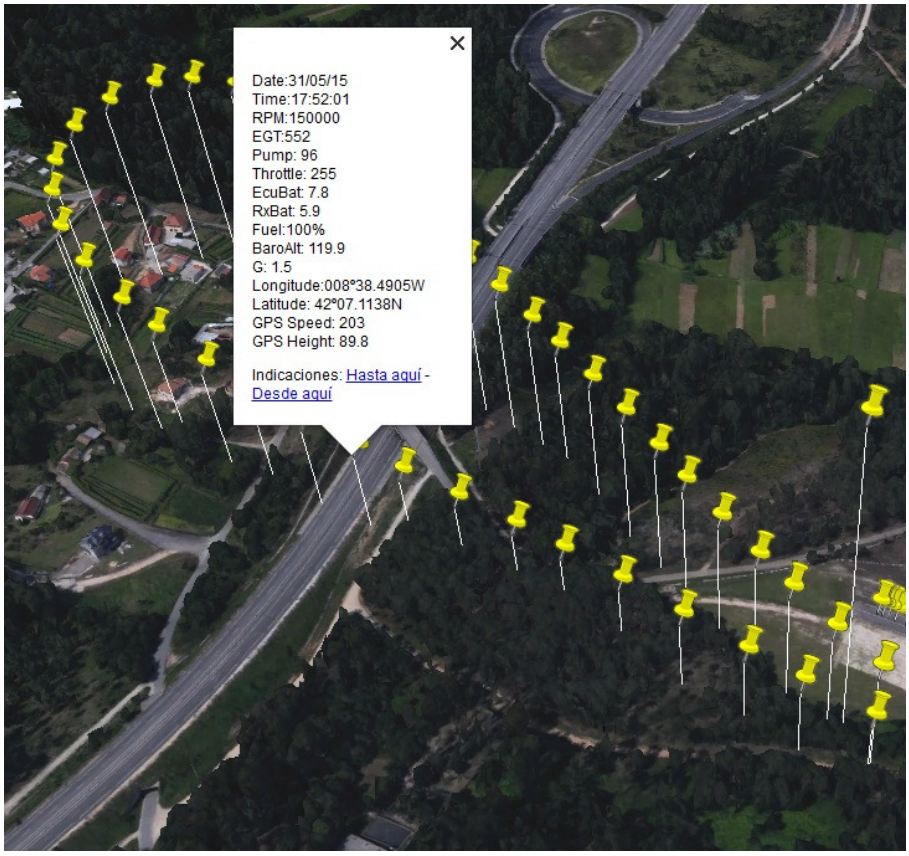
- Continuous line including height lines:

- Same but without height lines

- Including the point number. In current version, in place of point number is possible to choose one of the recorded parameters.

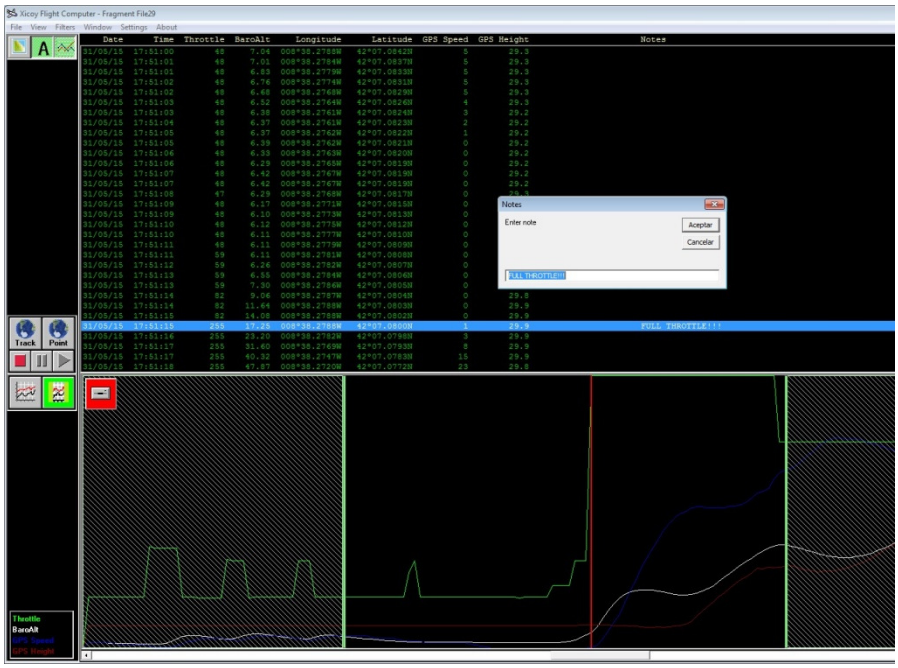


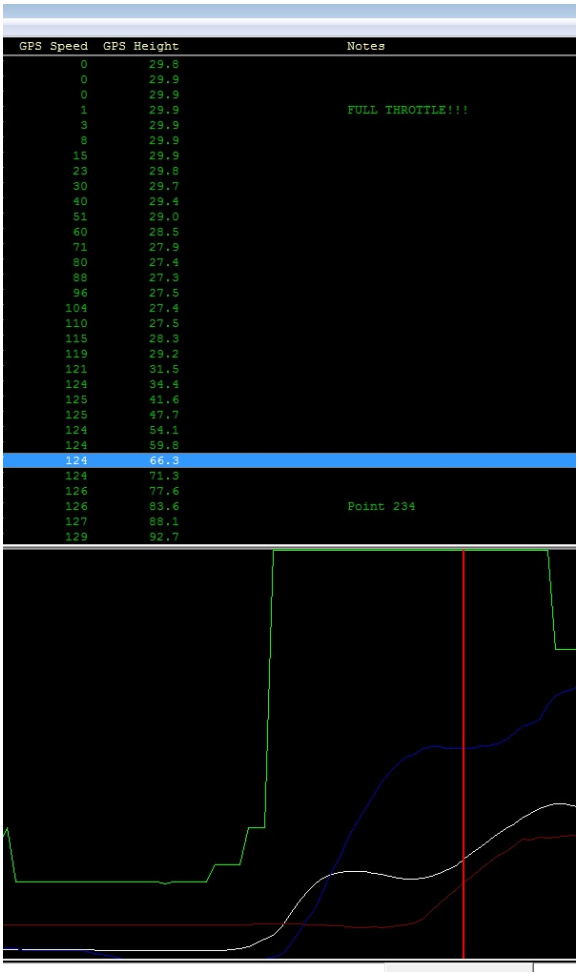
Selecting one point, all data of this particular point is displayed.



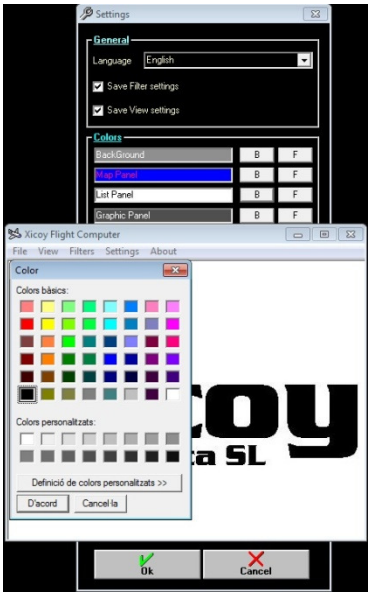
Adding notes/comments:

It is possible to add comments on the data lines for future display. Double click on the selected line and enter the comment.



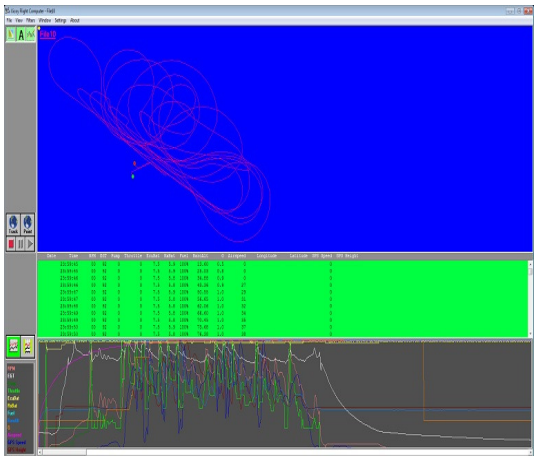


Language and Color Setup:



On “settings” window, it is possible to select the language, to store the filter and view settings, and to modify the colors of the text, background and data lines on the graph. Clicking on the different buttons will open the color palette.

It is possible to personalize all windows.



The color of the data can be changed too; the color selected will be applied to the text and to the line on the graph screen.