

flyWithCE Flight Recorder and flyWithCE Logbook

User manual



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14. TRANSFER AND STORAGE OF DATA

Some Product features require sending of the flight declarations and recorded flights to flyWithCE web server. This data is then used to sign flights and a copy of signed flight is saved as a record on the server. Data will be used only for this purpose and will not be given to third parties. flyWithCE will make sure that data is stored safely, but will not be liable in case if data would be revealed as a result of foul play.

In case that you do not agree in data been transmitted and saved you should select "Work Offline" mode.

2. Overview

flyWithCE Flight Recorder is a small and easy-to-use device. It can record in excess of 100 hours with a 1-second recording interval. Internal batteries provide independence from the cockpit power supply or external batteries. For long flights, there is an option of using an external USB power supply.

You have also received the flyWithCE Logbook program with the device. This application will allow you to declare flight information and download flights. It can also serve as a simple logbook where you will store flights recorded with flyWithCE Flight recorder.

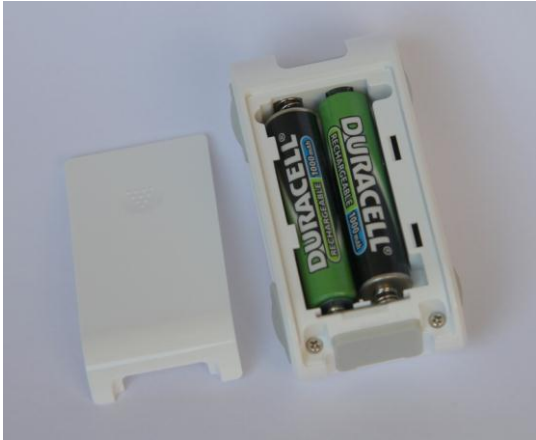
Logbook is also a great interface for third-party software. You can easily select and open flights in IGC file viewers such as SeeYou, Strepla, WinPilot 3D, etc. The program can also generate a KML file which can be viewed in the Google Earth software.

3. Flight Recorder FR100

3.1. Power supply

3.1.1. Battery power

The Flight Recorder is using two standard AAA batteries, alkaline or rechargeable. Remove the rear cover of the Flight Recorder and insert the batteries.



Rechargeable batteries are recommended, and you should make sure to recharge the batteries before each flight day. Tests have shown that the Flight Recorder will run for over 8 hours on standard 1000 mAh NiMH rechargeable batteries. After some time, the rechargeable batteries will lose capacity and it is recommended that you check the battery status during long flights.

Caution: Remove the batteries if you are not using Flight Recorder extended periods of time. Batteries might leak and this could damage the Flight Recorder.

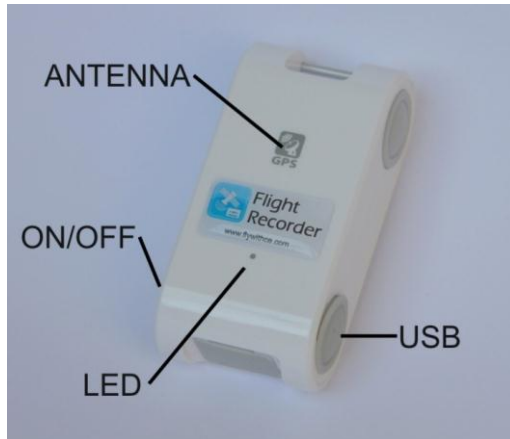
3.1.2. USB power

The Flight Recorder can also be powered through a USB connector. This option allows you to use an external power supply and record flights lasting longer than 8 hours. USB power can also be used during flight download operations. The operation of the device when powered by USB is identical to battery-powered use – just make sure that you connect the USB power supply before starting with normal operation.

It is possible to use a standard car USB power supply cable to convert a 12V power supply to USB power. Several converted products are available on the market, but do make sure that the quality of the power supply is appropriate and that it would not cause interference of other instruments inside your cockpit. You should also check for USB power supply efficiency.

3.2. Using the device

A single ON/OFF switch and LED indicator make the Flight Recorder extremely easy to use. Power up the Flight Recorder several minutes before the flight, so that the GPS module of the device will be able to determine a valid position. The initial GPS fix is much faster if you are not moving.



The LED indicator displays the current status of the flight recorder:

- **Flashing green:** Flight Recorder is ON and GPS is acquiring position
- **Green:** normal Flight Recorder operation
- **Flashing red:** less than 10% of battery available
- **Amber:** memory is full

Under direct sunlight, the LED indicator is sometimes hard to see. To check the device status, you can make a shade with your hand. The only important information is that GPS has acquired a valid position pre-flight. After this operation completes, you can store the GPS and do not need to check its status (except for battery status during long flights). If you are flying a glider made of metal or carbon fiber make sure that the GPS antenna is able to receive satellite signal.

After landing simply turn off the Flight Recorder. If you will make several flights in one day, the device should be turned off for at least 40 seconds after each flight. Flight information declaration and flight download is described in the Logbook sections of this manual.

When memory is full (amber led is on) you should first download contents of the flight recorder. Then enter new (or newly recharged) batteries. To clear the memory you can:

- Enter Options – Recorder settings and Erase memory option.
- Turn on the flight recorder and then press the reset button for 3 seconds. Led should start blinking red and green. After blinking stops turn off and then back on the device.

Caution: the Flight Recorder will overwrite old recordings when its memory is full. You should download data regularly to avoid this issue.

3.3. Technical specification

General	
Dimensions	70 mm x 37 mm x 24 mm
Weight	<50 grams (without battery)
RoHS	yes
Warranty	1 year
Hardware	
GPS	20-channel GPS receiver
Antenna	built in patch antenna
Battery	2 x AAA battery
Battery operation	> 8 hours with fully charged 1000 mAh NiMH batteries
Flight recorder	
Recording time	400,000 fixes which is 111 hours with 1 s interval rate
Recording interval	adjustable between 1 – 30 seconds
Recorder data	date and time, position, GPS altitude, ground speed
IGC certification	No

4. Flight Recorder FR300

4.1. Power supply

Flight recorder has internal battery which can be recharged by plugging the device to:

- USB port on your PC or notebook
- USB charger (either AC or 12V car charger)

During charging the device should be switched off. Green light will be on while recharging. When battery is fully charged then green light will switch off.

4.2. Using the device

After you turn on the device with ON/OFF switch:

- Red LED will flash
- Blue led will turn on

Power up the Flight Recorder several minutes before the flight, so that the GPS module of the device will be able to determine a valid position. The initial GPS fix is much faster if you are not moving. Blue LED will start blinking after valid position is determined.



On the top of the device there is pilot event button. By pressing this button Flight Recorder will record an event which will be also saved in IGC file and will be displayed in IGC viewer. When pressing the button the blue LED will flash quickly.

The LED indicator displays the current status of the flight recorder:

- **Blue:** obtaining GPS position
- **Flashing blue:** Flight Recorder is recording positions - normal Flight Recorder operation
- **Fast flashing blue:** pilot event button was pressed
- **Red:** battery low

Important information is that GPS has acquired a valid position pre-flight. After this operation completes, you can store the GPS and do not need to check its status (except for battery status during long flights). If you are flying a glider made of metal or carbon fiber make sure that the GPS antenna is able to receive satellite signal.

After landing simply turn off the Flight Recorder. If you will make several flights in one day, the device should be turned off for at least 40 seconds after each flight. Flight information declaration and flight download is described in the Logbook sections of this manual.

Important: When memory is full or near full you should first download contents of the flight recorder and then recharge the batteries. To clear the memory use Erase memory option on Options – Recorder tab.

4.3. Technical specification

General	
Dimensions	78 mm x 28 mm x 18 mm
Weight	32 grams
RoHS	yes
Warranty	1 year
Hardware	
GPS	V1: 65-channel GPS receiver V2: 48-channel GPS receiver
Antenna	built in antenna
Communication	USB 1 and 2 built in connector (no cable needed)
Battery	Built in 450mAh rechargeable battery
Battery operation	> 10 hours
Flight recorder	
Recording time	71 hours with 1 s interval rate
Recording interval	adjustable between 1 – 30 seconds
Recorder data	date and time, position, GPS altitude, ground speed, pilot event
IGC certification	No

5. Software installation

The installation is performed in three steps:

- install USB driver for Flight Recorder
- install Microsoft .NET framework 2.0 (optional)
- install the Logbook application

5.0.1. Install the USB driver for Flight Recorder

There are two types of USB drivers. Each type of device requires different USB driver. For flyWithCE Flight Recorder FR300 you will need serial number, which is located on the back side of the device.

Device	Serial number	Driver VCP	Driver PL2303
FR300	Higher or equal than 01-0560	X	
FR300	Lower than 01-0560		X
FR100	Any		X

5.0.1.1. USB driver VCP

There are two options how you can install USB driver:

- **Computer is connected to the Internet**
If you are connected to the Internet, turn ON the device and plug the device in USB port. Driver will be downloaded from Windows update web site and automatically installed.
- **Computer is not connected to the Internet**
Install USB driver from CD-ROM:
 - o on 32 bit operating systems run: VCP_V1.3.1_Setup.exe
 - o on 64 bit operating systems run: VCP_V1.3.1_Setup_x64.exe

5.0.1.2. USB driver PL2303

To install the USB driver run the application that starts with PL2303 and follow instructions.

Important: Install the driver before you connect device with PC for the first time.

Note: First versions of the flyWithCE Flight Recorder had different drivers for Windows Vista and Windows XP. If you have this CD-ROM it is recommended that you download and install the latest driver from the flyWithCE web site.

5.0.2. Install Microsoft .NET Framework 2.0 (optional step)

This library is automatically installed by the Logbook installation. If you do not have an Internet connection available or you are on a slow connection (the framework installation demands a 22M bytes download), then you should run the **dotnetfx.exe** installation before you installing the Logbook application. Most new operating systems have .NET Framework 2.0 or newer already installed.

5.0.3. Install the Logbook application

To install Logbook, run the **logSetup202.exe** application and follow the installation wizard. The installation will also check if your system requires the installation of Microsoft .NET Framework 2.0. It is normal for the installation to pause for a while before completing.

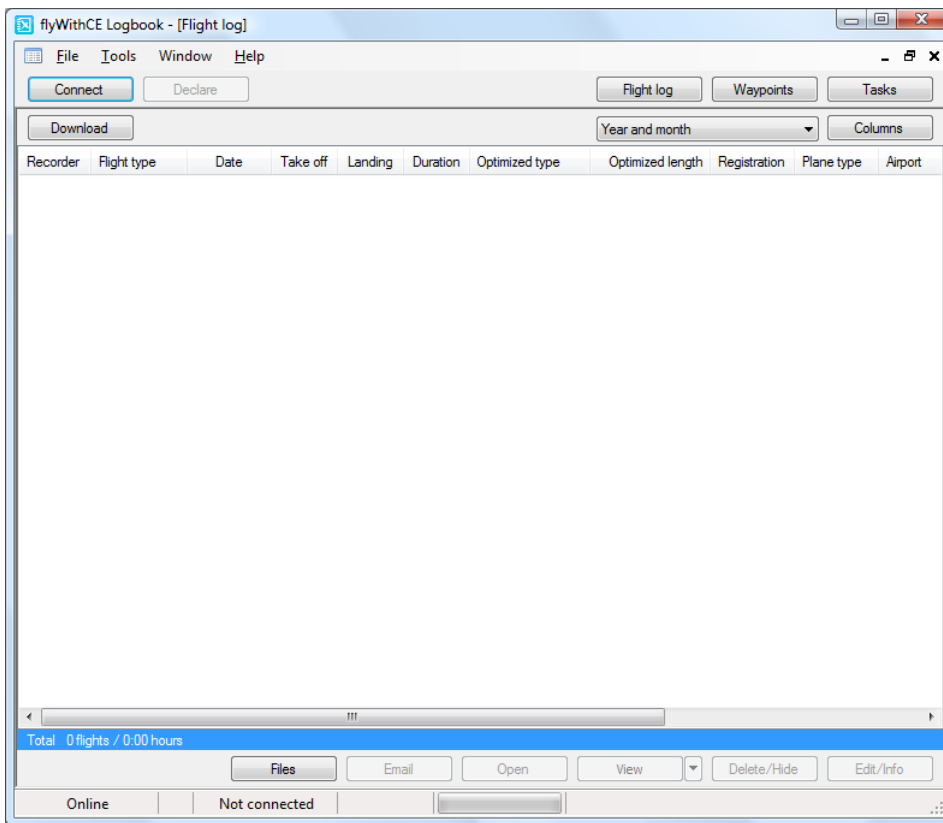
6. Logbook application

6.1. Logbook operation

Logbook application has several windows where are displayed:

- flight log
- waypoints
- tasks

When you run Logbook application flight log window is maximized. To switch between these windows you can use buttons displayed in the top right corner (**Flight Log**, **Waypoints** and **Tasks**) or you can use **Windows** menu option.



There are other buttons that are located in the top right corner:

- **Connect** – connect to Flight Recorder
- **Declare** – flight declaration

At the bottom status line displays current status.

6.2. Flight Log window

In the Flight Log window there are several buttons logically grouped into three groups:

- Flight Recorder operation
 - o **Download** – reload selected flight
- Flight view settings
 - o Grouping settings
 - o **Columns** – select which columns should be displayed
- Flight operation
 - o **Files** – open Windows Explorer (or File Explorer)
 - o **Email** – Email IGC files
 - o **Open** – open file in IGC viewer
 - o **View** – open file in Google Earth with exporting option
 - o **Delete/Hide** – delete or hide recordings
 - o **Edit/Info** – edit or view flight properties

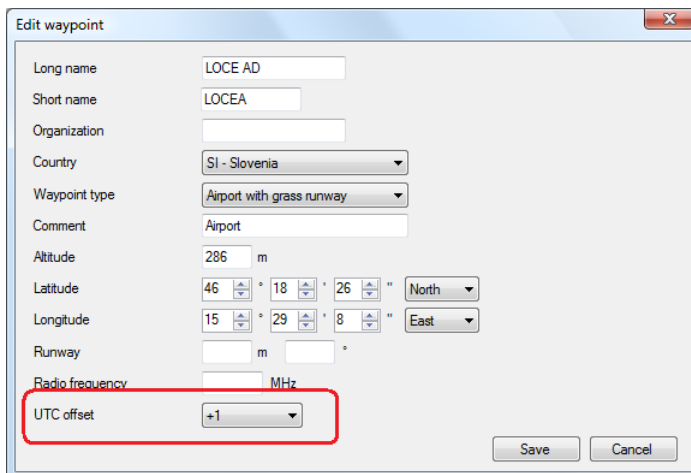
Blue line at the bottom provides a summary of all listed and all selected flights.

6.3. UTC or local time

When letter U is added to time this means that UTC time is displayed (example: 10:55U). To display local time you have to:

1. Select takeoff airport in flight declaration.
2. Change takeoff airport at later time (this will void IGC signature).
3. Selected airport must have selected appropriate time zone.

Select UTC offset for airport:



The screenshot shows the 'Edit waypoint' dialog box with the following fields and values:

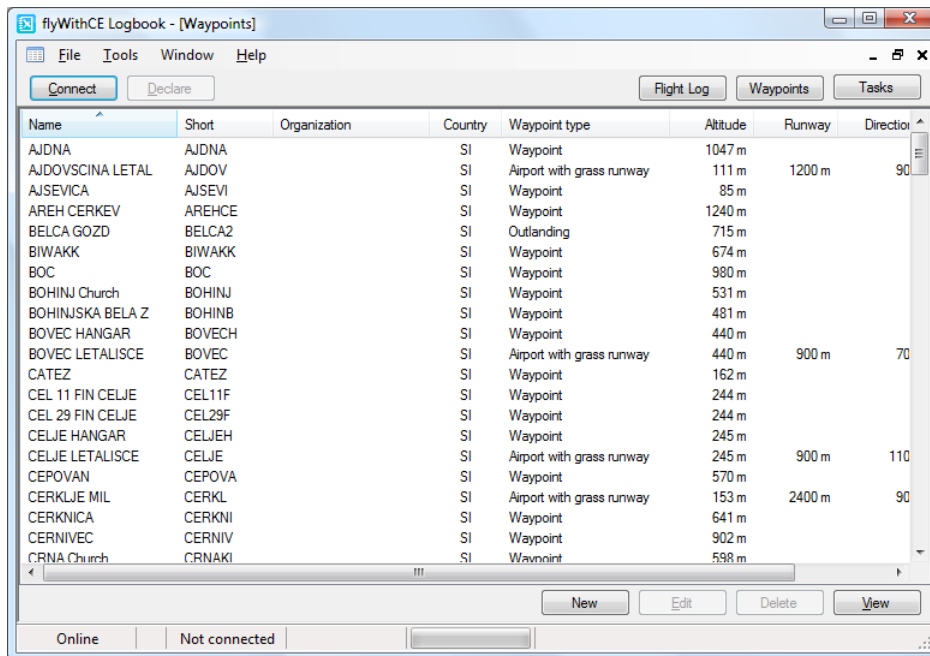
Long name	LOCE AD
Short name	LOCEA
Organization	
Country	SI - Slovenia
Waypoint type	Airport with grass runway
Comment	Airport
Altitude	286 m
Latitude	46° 18' 26" North
Longitude	15° 29' 8" East
Runway	
Radio frequency	
UTC offset	+1

Buttons: Save, Cancel

6.4. Waypoints window

On the bottom of the Waypoint window there are four buttons:

- **New** – add new waypoint
- **Edit** – edit selected waypoint
- **Delete** – delete selected waypoint
- **View** – view selected waypoint in Google Earth

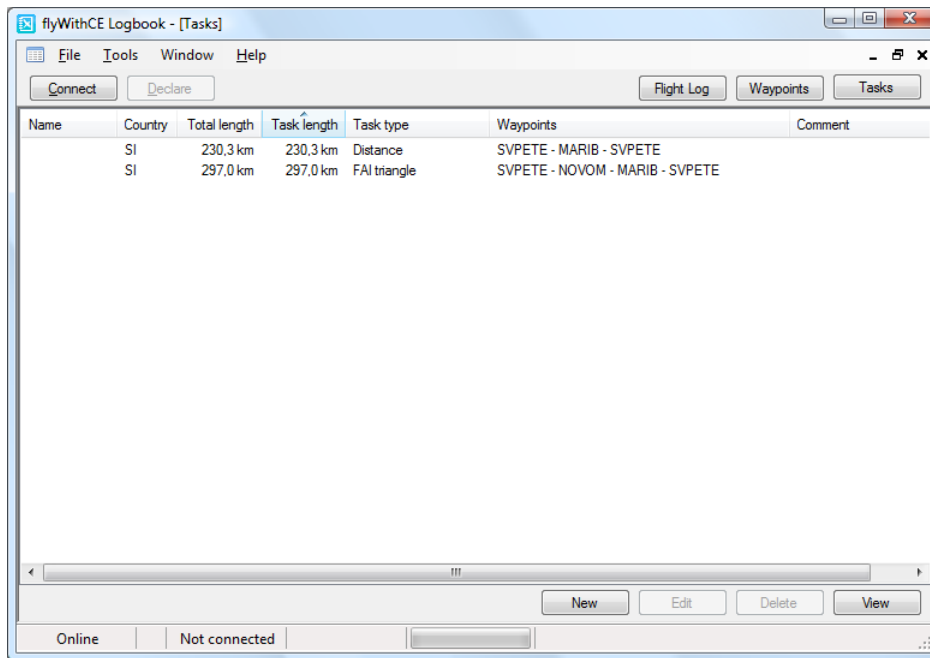


If there are no waypoint selected when you press **View** button, all waypoints will be displayed in Google Earth.

6.5. Tasks window

On the bottom of the Tasks window there are four buttons:

- **New** – add new task
- **Edit** – edit selected task
- **Delete** – delete selected task
- **View** – view selected task in Google Earth



If there are no tasks selected when you press **View** button, all tasks will be displayed in Google Earth.

In the task details two task lengths are displayed:

- Total length: this is total length of the task
- Task length: only the scoring length of the task

Length is calculated with official FAI distance formula.

6.6. Download flights

6.6.1. Automatic flight download

To download flights from the Flight Recorder:

1. Connect the Flight Recorder to a personal computer with a USB cable.
2. Turn the Flight Recorder ON.
3. Run the Logbook application.
4. Press the **Connect** button in the Logbook application.

The program will download all new flights to the personal computer. The status is displayed in the bottom frame of the window. If you are connected to the Internet, the Logbook program will also sign downloaded flights (covered in one of the next sections).

Important: After completing the actions, you should disconnect the Flight Recorder by pressing the *Disconnect* button.

6.6.2. Manual file download

While the Flight Recorder is connected to the Logbook application (described in the previous section), it is possible to reload one of the older flights. Of course the flight should still exist in the Flight Recorder. To download, simply select the flight from the flight list and press the **Download** button. If the button is not enabled after you select a flight, one of the following applies:

- The Flight Recorder is not connected
- The flight is no longer complete (was overwritten by newer flights)

6.6.3. File location

The files will be stored in two folders:

- **Flights\Signed Flights** – IGC signed flights
- **Flights\Unsigned Flights** – unsigned IGC files

The easiest way to gain access to the files is by pressing the **Files** button and Windows Explorer (or File Explorer) will open. It is recommended that you do not move these files, because they are also used by other features in the Logbook program.

6.7. Change flight declaration

Flight declaration is information about the pilot, copilot, official observer, glider type, glider registration and airport. To change this information, you should connect the Flight Recorder with Logbook and then press the **Declare** button. A dialog window will open, allowing you to enter information about the pilot, copilot and official observer on the first tab, as well as plane type, plane registration, and airport information on the second tab.

IGC Header information

Pilot and crew | Plane and airport | Declared task

Pilot

Name: Uros
 Last name: Podlogar
 Date of birth: 6. september 1968

Select pilot from list: Uros Podlogar

Copilot

Copilot present:
 Name:
 Last name:
 Date of birth: 18. november 2010

Select copilot from list: <custom>

Official observer

Observer present:
 Name:
 Last name:
 Observer identification:

Select observer from list: <custom>

Declare Cancel

On the right side, Logbook will offer previously entered values which may help you quickly enter the values (and not type everything each time).

IGC Header information

Pilot and crew | Plane and airport | Declared task

Declared task

Selected task: No task is selected

Name: Total length:
 Type: Task length:
 Waypoints:
 Comment:

Database tasks

Name	Country	Total length	Task length	Task type	Waypoints
	SI	230,3 km	230,3 km	Out and return	SVPETE - MARIB - SVPETE
	SI	297,0 km	297,0 km	FAI triangle	SVPETE - NOVOM - MARIB - S

Select

Declare Cancel

To select task first select **Task selected** option in drop down list. Then select task and press **Select** button.

6.8. Organize flights (group, sort, and sum flights)

In the middle of the Logbook window you will find a flight list, which can be sorted with a click on the column. A second click on the column will change the sorting type from ascending to descending.

Grouping is a handy feature allowing you to group similar flights, for instance flights that were flown in the same year and in the same month.

To change the list of displayed columns, press the **Columns** button and select or deselect new columns. It is also possible to reorder them or change column size by dragging the column header.

The total sum of all flights is always displayed on the blue ribbon in the bottom of the Logbook window. If you select one or more flights, another sum will be displayed next to the total sum. More than one flight can be selected by pressing the **Ctrl** button, and then selecting the flights. The whole group can be selected with a click on the group header.

6.8.1. Edit or view flight properties

Check the flight properties by selecting the flight and pressing the **Edit/Info** button. The Flight Information dialog window will open and you will be able to change the following information:

- General flight information
 - o flight type
 - o distance flown
 - o comment
- Flight declaration parameters
 - o pilot, copilot and official observer
 - o plane type and registration
 - o airport
 - o task
- Declared task
- Optimized task with task optimization feature
- Barogram with altitude and speed
- Flight track displayed on the map

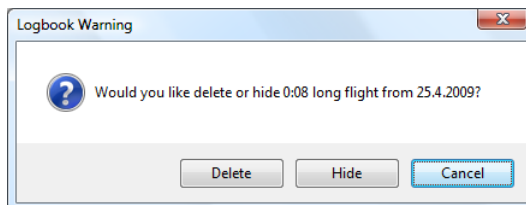
By changing the general flight information, you are not changing the vital flight declaration, and the IGC file will stay unchanged. Another flight type should be pointed out – Not flight. If you unintentionally leave the flight recorder on or you record a short track before or after a download, you can choose this flight type. There is also a setting in Logbook called **Show flight only**, which will hide recordings that are labeled as “not flights”.

To change the flight declaration parameters, switch to the other tabs and click the **Change** button in the bottom right corner. You will then be able to change the predefined flight declaration parameters. By doing that, you will also void the secure signature at the end of the IGC flight (the rule is that all flight declarations will have to be made before the flight). In this case, pressing the **OK** button will update the flight and transfer it from the Signed flights folder to the Unsigned flights folder.

If you would like to revert the flight information back to the original flight declaration, click the **Original** button.

6.8.2. Delete or hide flight

You have two choices how you can hide the flight from the flight list. First select the flight from the list and then press the **Delete/Hide** button:



Dialog window will ask you if you would like to delete or hide the flight. If you will press **Delete** button, then IGC file will be deleted and flight will be removed from the list.

When you will press **Hide** button, then flight type **Not flight** will be assigned to this flight and IGC file will stay unchanged. To hide flights marked as **Not flight** make sure that option **Show flights only** in **Settings** dialog is selected.

By selecting more than one flight you can delete or hide multiple flights at once. You can do this by:

- pressing and hold **CTRL** button and selecting flights
- select first flight and then press and hold **SHIFT** and select last flight

Caution: Be careful when using this feature, because you can delete several flights and they cannot be easily restored (you can find files in Recycle Bin).

6.9. View flights

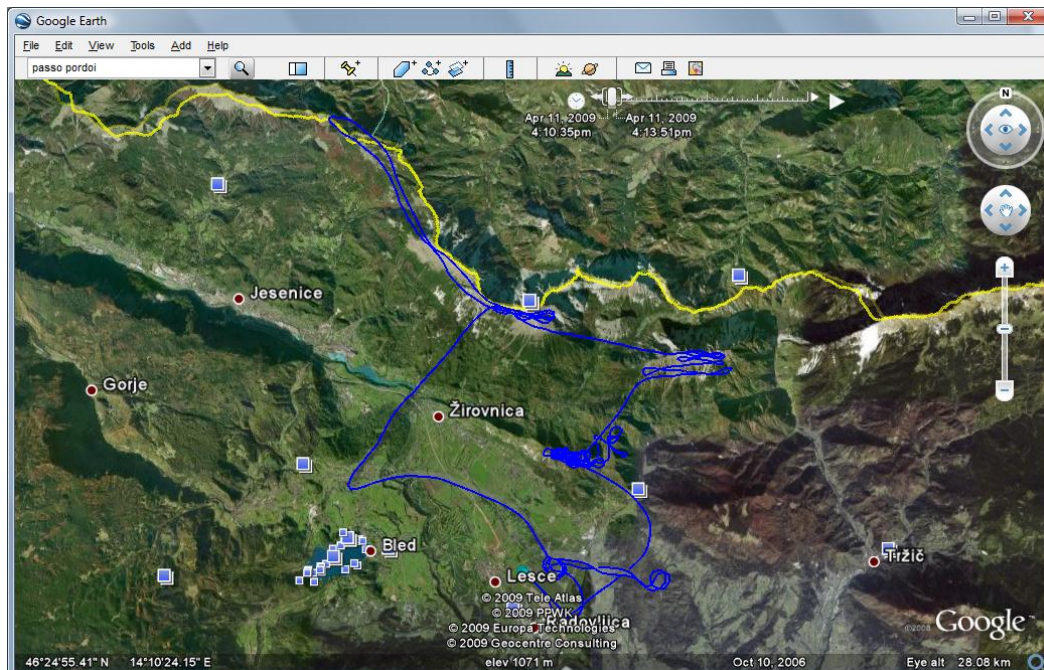
6.9.1. View flights in IGC viewer

Most glider pilots are using one of the IGC file viewers to analyze their flights (SeeYou, Strepla, WinPilot 3D...). You can open flight in registered IGC file viewer by selecting the flight and pressing **Open** button.

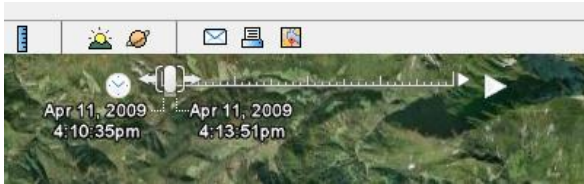
6.9.2. View flights in Google Earth

If you do not have Google Earth installed, you can find and install it at <http://earth.google.com/>.

To view the flight, select the flight and click the **View** button. The application will generate a KML file which will be saved to the Flights folder (you can send this flight to anyone with Google Earth). The Logbook program will then open Google Earth and display this file.

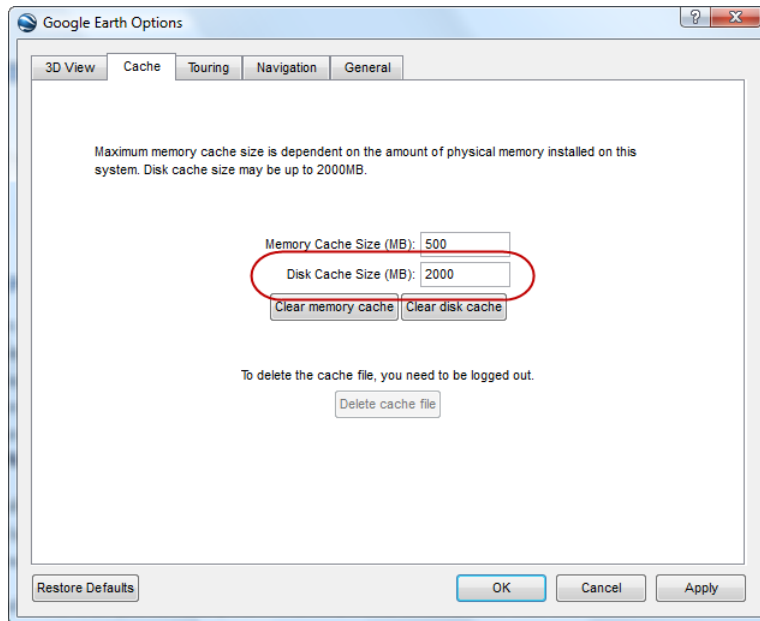


There are several useful features in Google Earth. The first one is the flight animation. On the top right corner of the Google Map, there is a slider with which you can animate your flight.



Another interesting feature is the availability of several 2D and 3D views. The program downloads maps from the Internet, but there is a trick to store the maps so that you will be able to view flights offline.

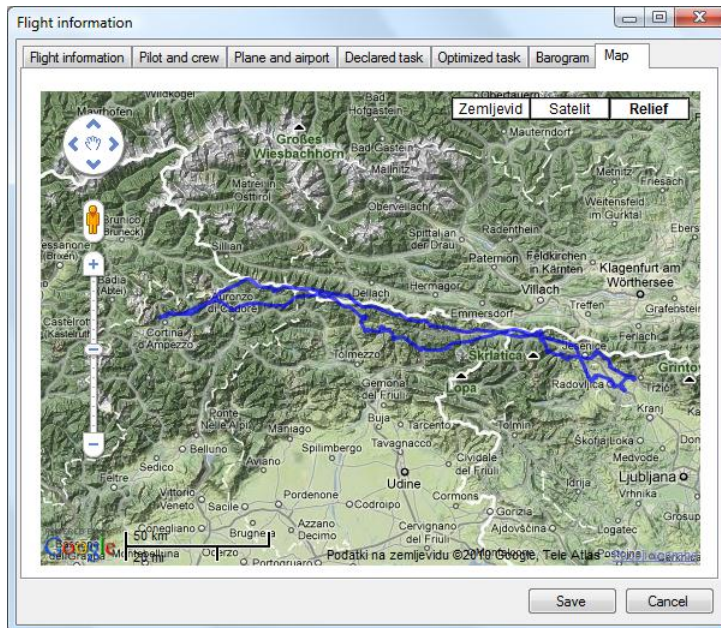
Open the **Tools – Options** dialog. Increase the disk cache size on the second **Cache** tab. The next time when you view flights offline, you will be able to see those maps.



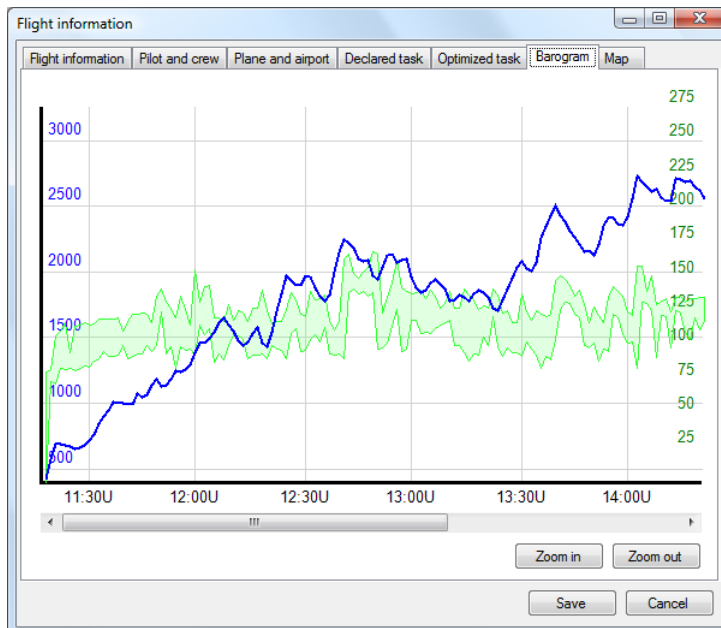
If you are going on a trip where you will not have Internet access I would recommend that you view (and with this store) maps before you leave.

6.9.3. View flights in Google Maps

When you are connected to the Internet you can view flights in the Flight information dialog window (you can open this Window by selecting the flight and pressing the **Edit/Info** button). Flight is displayed on the Map tab.

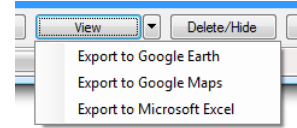


On Barogram map tab altitude and speed graph is displayed. Blue line shows maximum altitude and green area shows maximum and minimum speed in that section.



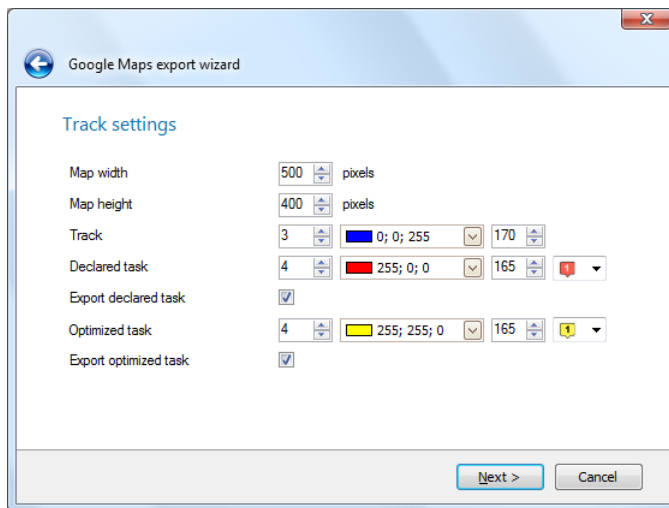
6.10. Export flights

This option was prepared so that you can show flights to your friends that do not have IGC viewer installed. You can do that by selecting Export option which you can access by pressing arrow key next to **View** button.



6.10.1. Export to Google Earth or Google Maps

After button is pressed then wizard will open where you will be able to select how flight should be displayed.



Follow instructions where you will be able to select:

- which part of the flight should be exported
- how flight track and task should be displayed
- which maps should be used

Important: Logbook will save settings and will use those settings next time when you open flight from Logbook program (when you press **View** button or when you check your flight in **Flight information** dialog window).

6.10.1.1. Export to Google Earth

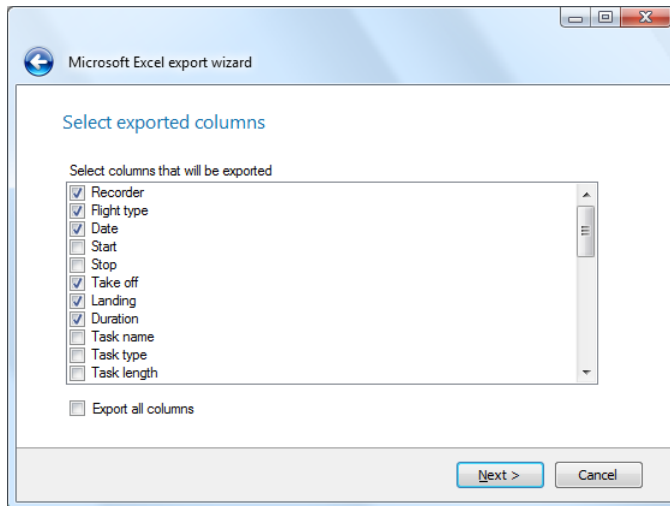
The result of the exported file is KML. Person who would like to view this flight will have to install the Google Earth program and have Internet connection. The advantage is that he will be able to check flight in 3D and see flight animation.

6.10.1.2. Export to Google Earth

The result of the export is standard HTML file which can be viewed in any Internet browser (Internet Explorer, Google Chrome...). You can also embed the flight on your web page. To do so you will have to copy part of the contents from the HTML file to your web page.

6.10.2. Export to Microsoft Excel

With export to Microsoft Excel you are able to export flyWithCE Logbook database to Microsoft Excel file. On first page of the wizard you are able to select which flights will be exported. On the second step you select which information will be included in exported file.



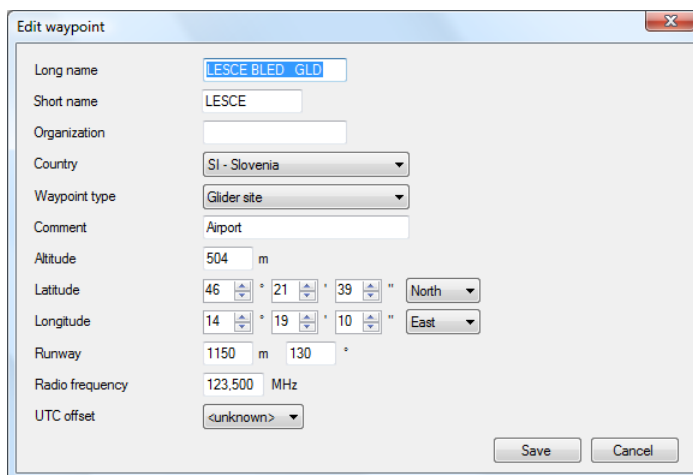
6.11. Waypoints and tasks

6.11.1. Import waypoint and tasks

To import waypoint and tasks select **Tools – Import Waypoints and Tasks** menu option.

6.11.2. Edit waypoints

Select waypoint that you would like to edit and press **Edit** button. **Edit waypoint** dialog window will open where you will be able to change dialog properties.



Some options (like runway and radio frequency) are only available for certain waypoint types.

Waypoints without coordinate (all latitude and longitude values are 0) could be used in flight declaration, but could not be used inside tasks. In flight declaration window only airports and glider sites are displayed.

Note: Valid waypoint should contain at least long waypoint name.

6.11.3. Edit tasks

Select task that you would like to edit and press **Edit** button. **Edit task** dialog window will open where you will be able to change dialog properties.

	Waypoint	Country	Distance	Heading
Takeoff				
Start	SV PETER CERKEV	SI	95,5 km	131°
Waypoint 1.	NOVO MESTO LETAL	SI	86,4 km	30°
Waypoint 2.	MARIBOR	SI	115,1 km	265°
Finish	SV PETER CERKEV	SI		
Landing				

To enter waypoint select one of the waypoints in the task and then select waypoint in the dropdown control that is located on the left side of the **Add** button. After appropriate waypoint is selected press **Add** button.

There is also much quicker way how you can add new waypoint. Select dropdown control (where you can select waypoints) and just start typing long waypoint name. Press **Add** button or **Enter** keyboard button when correct waypoint name is displayed.

There are three additional buttons:

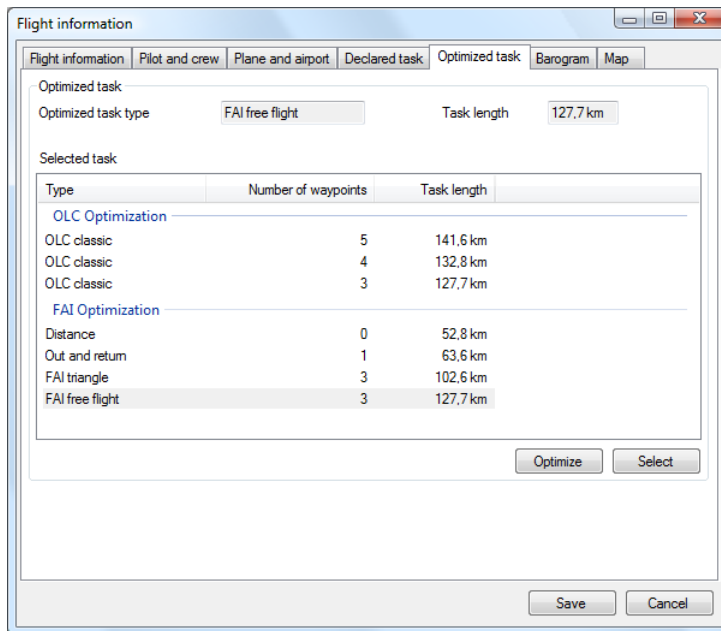
- **Up**: move selected waypoint up
- **Down**: move selected waypoint down
- **Delete**: delete selected waypoint form task

Note: Valid task should contain at least start and finish waypoint.

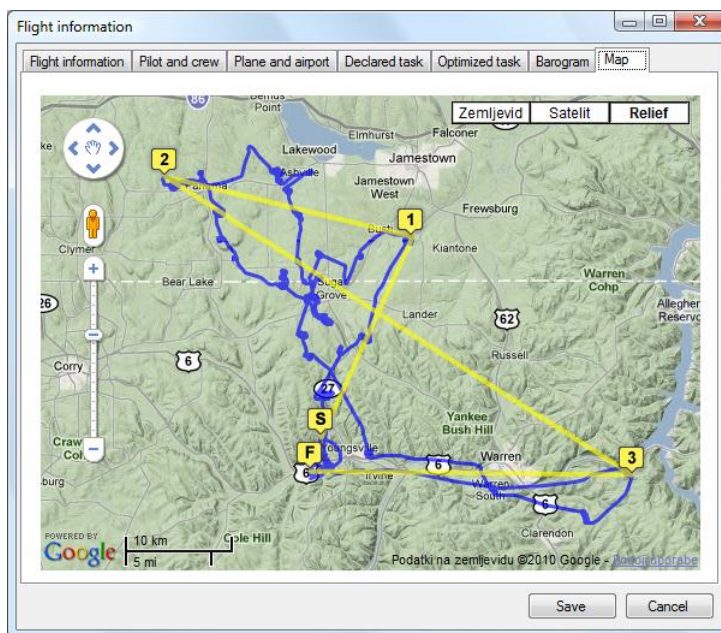
6.12. Task optimization

Logbook application can find optimal tasks for selected task. Optimization feature can be found on Optimize task tab of the Flight information dialog window. Press **Optimize** button to start optimization. Once optimization finishes you can select task from the list and press **Select** button. With this

information about the optimized task type and task length will be copied to flight information. This information can be later seen in flight log.



Waypoints are shown on the barogram and task is displayed also on map:



Note: There are several things that you have to be aware of:

- In current version optimization is focused on flyWithCE Flight Recorder and because of that engine noise level (ENL) recording is not used during optimization.
- On-line competition sites and other programs have their own optimization algorithms and because of that optimization results could vary from one found in Logbook program.

6.13. Online operation (Internet connection)

For some features you will need Internet connection so that they can work properly. This is because for some tasks Logbook program will need to connect with flyWithCE web server. You can check current status in the Logbook status line where following statuses can be displayed:

- **Online:** program is connected with flyWithCE web server
- **Offline:** program is not connected with flyWithCE web server
- **Work Offline:** you have decided that you will not use the online web services

In online mode following services are available:

- flight declarations are sent to the server
- newly downloaded flights are signed

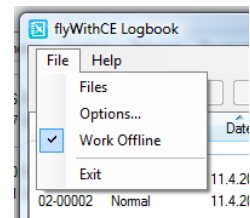
If you do not need these, then you can easily work in offline mode which is described later.

Several times you will connect with the Flight Recorder when you will not have Internet connection. In these cases all the information will be stored only locally on your personal computer. When next time Internet connection becomes available Logbook program will synchronize new information with web server.

Note: If this seems too complicated, please note that all these operations are performed automatically. Logbook application will make sure that the information is correctly exchanged with flyWithCE web server. It's generally recommended to be connected to the Internet when editing flight declarations or when downloading flights.

6.13.1. Work in offline mode – Work Offline

If you do not need signed flights then you can select the **Work Offline** menu option if **Files** menu. Data will not be synchronized with flyWithCE web server and flights will not be signed (you will not be able to use them for online championships).



6.13.2. Editing flight declaration

When you change the flight declaration, a copy of the declaration will be sent to the flyWithCE web server. This information will be later used when signing flights. Because of that it is important that you change the flight declaration in **online** mode. If you change the flight declaration in **offline** mode then correct flight declaration, but flights will not be signed.

6.13.3. Signing flights

Signed flights are the same as normal flights with one addition – there is a security “G” record at the end of the IGC file. This is proof of authenticity and with *vali-fwc.exe*, allowing you to verify that the file was not changed.

Flight Recorder uses flyWithCE web server to sign flights, for which you will have to be in **online** mode. Appropriate flight declaration will be used for IGC file header. If you are in **offline** mode, a local flight declaration will be used and the flight will not be signed.

If you previously downloaded flights in offline mode, you can use flight reload feature by selecting the flight and pressing the **Download** button. The flight will be reloaded from the device and signed.

6.13.4. Synchronization services

After every connection to Flight Recorder, Logbook will first attempt to send the information entered in **offline** mode to the flyWithCE web server. This information is:

- flight declarations
- downloaded flights

Flight synchronization can take some time on slow Internet connections, so this feature is not enabled by default. To enable this feature enable the **Synchronize flights read when not connected** feature in the **Option** settings.

6.14. Import IGC files

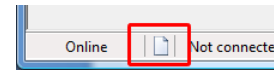
You can import existing IGC files in Logbook program.

6.14.1. Setup IGC file import option

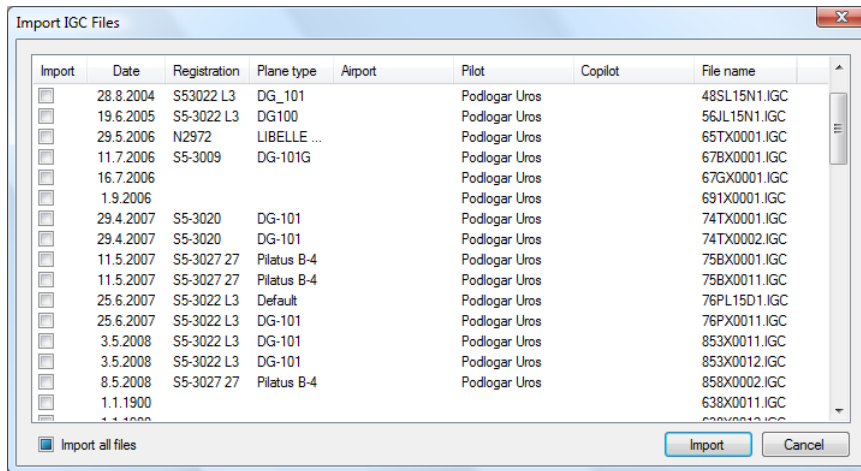
In the program **Options** dialog window enable **Import IGC files option** and select folder where you store IGC files downloaded from other flight recorders.

6.14.2. Import IGC files

Logbook program will monitor selected folder. When new IGC files will be detected icon will be displayed in the status bar. You can click this icon or select **Tools – Import IGC Files** menu option.



This will open new dialog window where files are listed together with short summary.



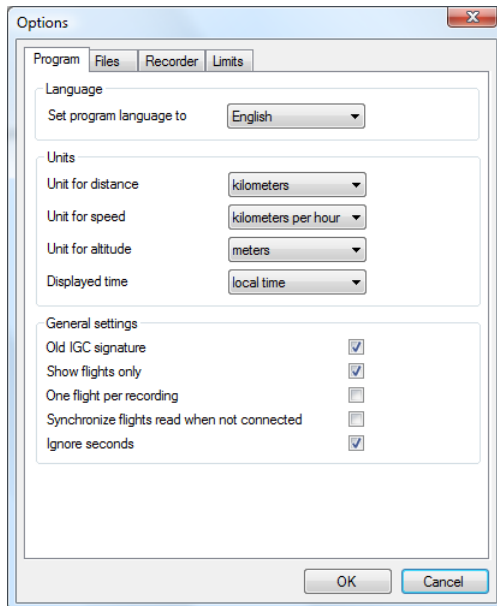
You select flights which should be imported by checking the check box. Then press Import button and selected IGC files will be imported in the Logbook database.

Important: Flights that were not selected will not be displayed next time and could not be imported at later time.

6.15. Options

6.15.1. Program options

To change the Logbook settings select the **File – Options** menu option.



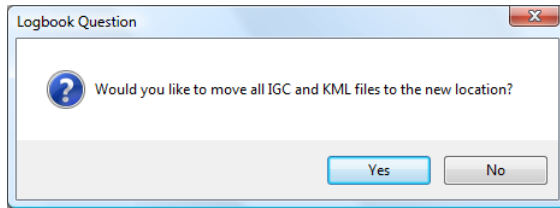
In Language section you can change program language. Change will take effect next time when you run program Logbook.

The following options are available:

- **Unit for distance:** select default units for distance
- **Unit for speed:** select default units for speed
- **Displayed time:** display local or UTC time (according to the airport UTC offset)
- **Old IGC signature:** uses old signature compatible with flyWithCE Navigator
- **Show flights only:** do not display flights with flight type – Not flight
- **One flight per recording:** program can detect several flights in one recording
- **Synchronize flights read when not connected:** send flights to server when connected
- **Ignore seconds:** do not display seconds

Old IGC signature setting was introduced to enable backward compatibility with old version of the validation program. OLC accepts flights signed with old signature and until they change the validation program you should enable this setting.

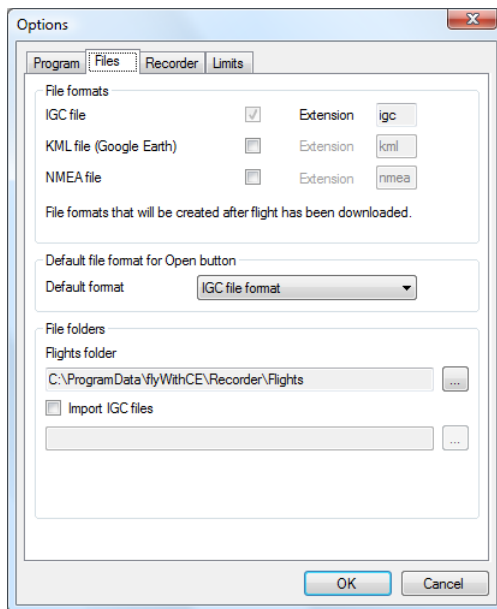
You can change the default folder where all flights are stored (IGC and KML files). Press the ... button and select other folder. When you will press the **OK** button following dialog will be displayed:



If you do not have other good reason you should press **Yes** button and move all files to new folder.

6.15.2. Files settings

Logbook can save flights in several file formats. All flights will be always saved in the IGC file format. You can also choose to save files in KML format (Google Earth) and/or NEMA format. In the last column you can change the default extension. This is advanced feature and it is not recommended that you change this setting.



With next option you can choose which file type will be used when you press the **Open** button. You can select between KML and NEMA file formats. File format also defines which application will be run (check one of the appendixes for more information). If file in that format does not already exist, then Logbook program will generate one.

In the last section you can select:

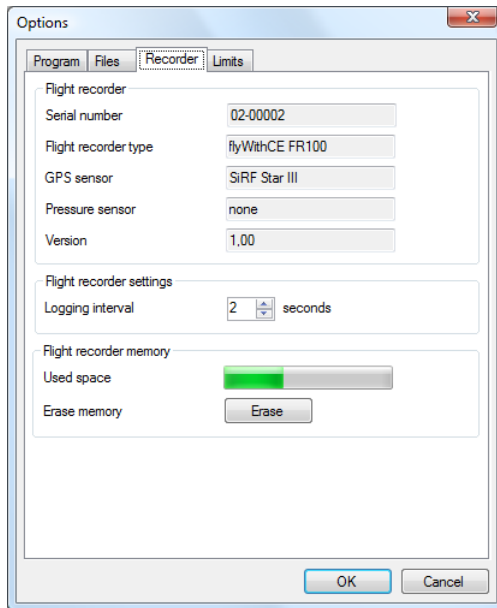
- **File folder:** path to folder where flights are stored
- **Import IGC files:** path to the directory from where IGC files will be imported

Last option enables you to import other IGC files not recorded by the flyWithCE Flight Recorder. Read more about this in separate section of this manual.

6.15.3. Flight Recorder settings

When the device is connected, you can change the logging interval on the **Recorder** tab in the **Options** dialog window. A longer time setting means that the IGC file will not be as precise. On the other hand, you will be able to record more flight time.

The general Flight Recorder specifications are visible on the top half of the screen.



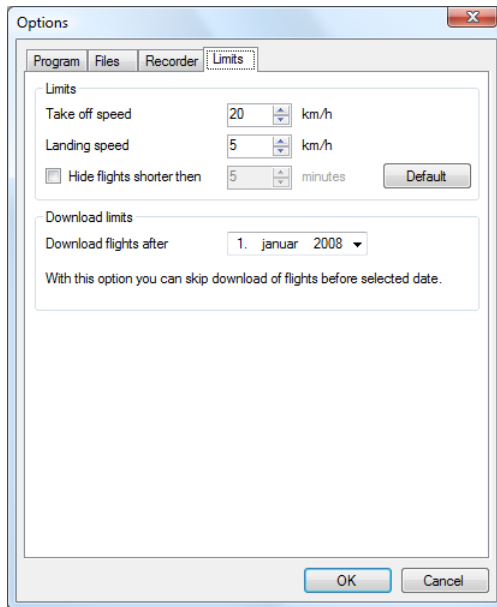
On the bottom half you can:

- change the interval setting
- Erase flight recorder's memory

Insert fresh set of batteries before you will erase memory.

6.15.4. Limits (advanced settings)

On this tab you can change the limits which define when flight starts and when stops. Make sure that take off speed is always (for a margin) higher than landing speed. These two settings are advanced and because of that it is recommended that you do not change them.



When you select the settings **Hide flights shorter than** Logbook program will declare all flights shorter than this value as Not Flights. This means that they will be hidden if you have selected **Show flights only** option.

Last option enables you to download only flights recorded after certain date. This enables you to skip all files that were recorded previously and quickly download only flights recorded after selected date. It is useful for competition scorers if they will download flights directly from flyWithCE Flight Recorders.

7. Frequently asked questions

What are signed IGC files?

Flights are stored in files with IGC extension. A part of this file is also signature (usually alphanumeric text which begins with G) which is usually located at the end of the IGC file. This signature ensures than file was not changed and can be tested with validation utility (vali-fwc.exe).

When do I need signed files?

For flight recorders which are not certified signed files will be useful if you would like to send flights to online championships. They usually not require that flights are recorded by IGC certified flight recorder. If you do not intend to compete in online championships, than you do not need to sign flights.

You can do this by selecting **Work Offline** mode in **Files** menu.

Flights are not recognized by OLC. What should I do?

OLC still uses the old validation program, which was prepared for flyWithCE Navigator. Because of that new flights are not recognized. Until they would not integrate the latest version 2.0 (or later) of the validation program you should select option **Old IGC signature** which you can find in **Options** dialog on **Program** tab.

I have installed IGC file viewer, but when I press Open button Logbook reports an error?

Logbook always opens flight with program who registered as default viewer for IGC extension. Some IFC viewers do not register as default viewers. To fix this and register the program as default viewer for files with IGC extension follow the instructions written in **Define default IGC viewer** section.

Amber (very close to red) LED is on?

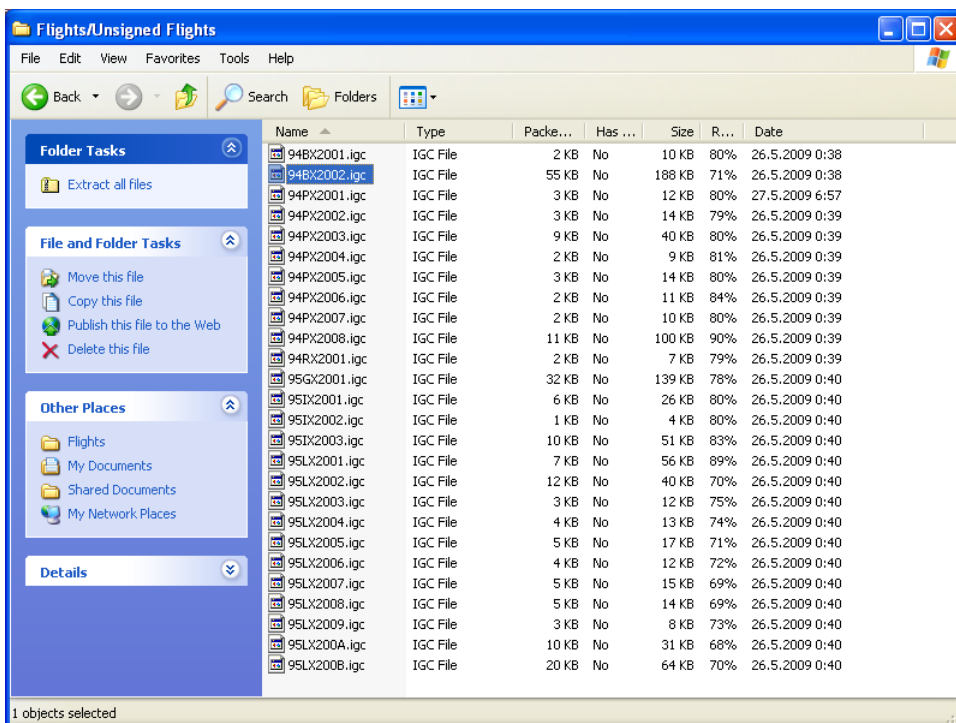
Memory is full. Please read the procedure described in the Using the Flight Recorder section.

8. Define default IGC file viewer

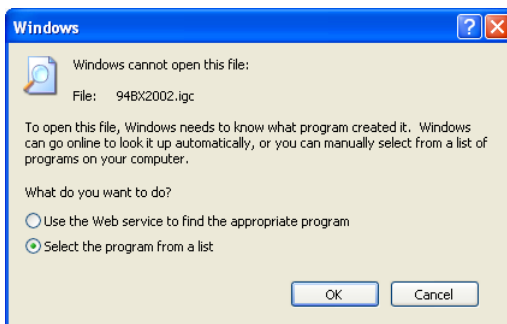
When you press Open in the Logbook, program will try to open the IGC file with default viewer. This is the same as if you would double click on IGC file in Windows Explorer. Some IGC viewers do not register as default IGC viewers and in this case Logbook program report an error (and not open the IGC file).

To fix this and register program as default IGC viewer please follow next steps. Sample is written for LXe program, but you can apply this procedure for any other program. The difference is that in the steps form 3 – 5 you will have to find and select another program.

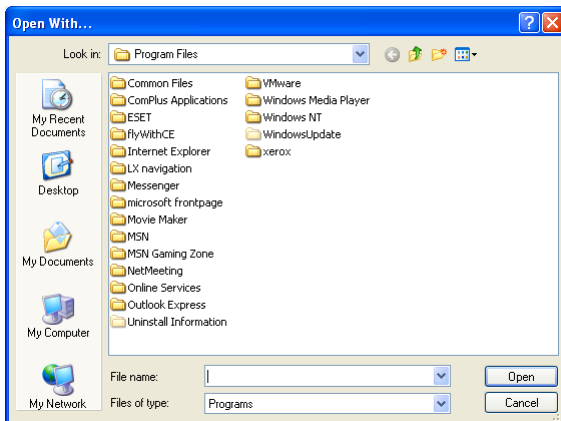
1. Open Windows explorer and find and double click one IGC file



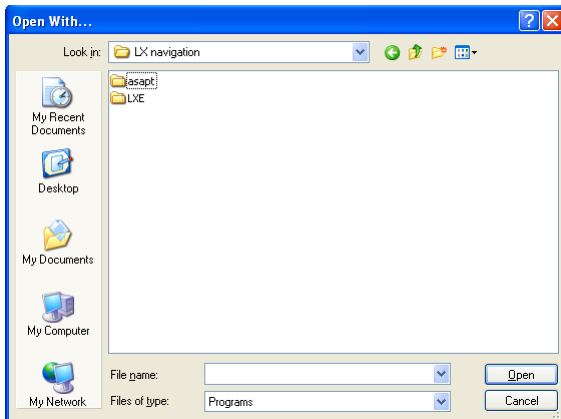
2. Select "Select the program from a list" and press OK button



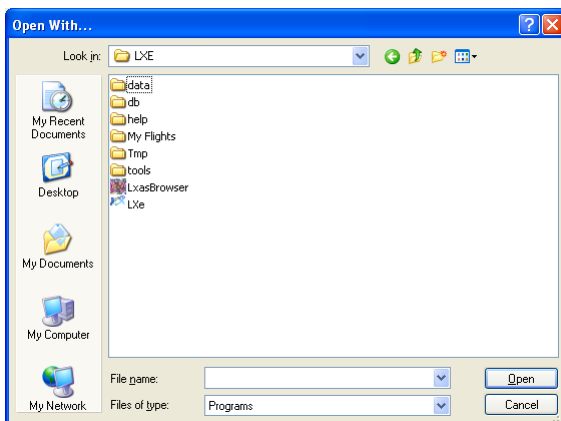
3. Double click LX navigation folder in Program Files folder



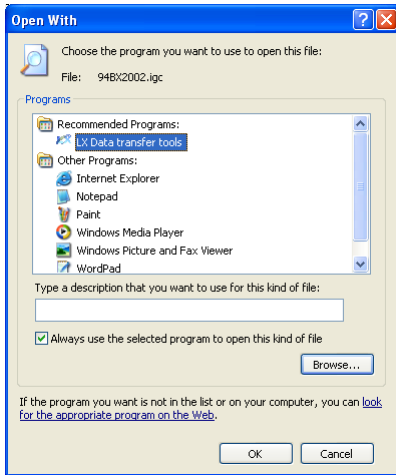
4. Double click LXE folder



5. Double click LXe program



6. Select the “LXe data transfer tools”, check “Always use the selected...” option and press OK



Program is now registered as default IGC file viewer. This means that when you will double click on IGC file in Windows Explorer or when you will press on Open in Logbook program flight will open with selected IGC viewer.

9. Logbook change list

Version 1.15

Program changes:

- **Feature:** now you can select and hide/delete more than one flight
- **Feature:** program can generate signature that is compatible with old validation program, which means that IGC files should be accepted by OLC competition (check **Old IGC signature** option)
- **Feature:** you can now change the location of the IGC and KML files
- **Bug:** ground speed is now correctly written in IGC file
- **Bug:** flight is not split at midnight UTC

Version 2.02

Program changes:

- **Feature:** task declaration
- **Feature:** view barogram with altitude and speed
- **Feature:** view flight in Google Maps
- **Feature:** export flights to Google Earth and Google Maps
- **Feature:** import IGC files
- **Feature:** download flights recorded after certain date
- **Feature:** erase flight recorder memory

Version 3.00

Program changes:

- **Feature:** program is translated to several languages
- **Feature:** send flights as Email attachment
- **Feature:** flight optimizations
- **Feature:** export flight information to Microsoft Excel
- **Feature:** improved task display
- **Feature:** improved takeoff and landing detection
- **Bug:** sometimes Logbook can switch Flight recorder to 0 s recording interval
- **Bug:** deleting flights was fixed

Version 3.40

Program changes:

- **Feature:** added support for flyWithCE Flight recorder FR300
- **Feature:** updated support for Google Earth