



AirScout

Quick Start Guide

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1. Minimum Hardware and Software Requirements

The use of AirScout requires sufficient hardware resources; therefore an up-to-date hardware is strongly recommended. The following configuration is considered as the minimum:

- Dual core processor 1.2GHz
- 2GB RAM
- 20GB hard disk space
- Screen resolution 1024 x 786 (1280 x 1024 recommended)
- Microsoft Windows XP(*), Vista(*), Win7, Win8, Win10
- Microsoft .NET 4.0 (usually already installed on systems > = Vista)
- Microsoft C++ 2010 Redistributable
- Internet connection

(*) reduced functionality

If you need to install the Microsoft .NET4.0 runtime you can download it from here:

<https://www.microsoft.com/en-US/download/details.aspx?id=17718>

If you need to download the Microsoft C++ 2010 Redistributable you can download it from here:

<https://www.microsoft.com/en-us/download/details.aspx?id=5555>

2. Directory structure

After the installation is completed the resulting directory structure in the user's Application Data Directory is created automatically.

<Program directory> Contains all main components (incl. AirScout.exe)

<C:\Users\<User name>\AppData\Local\DL2ALF\AirScout\

Database: Contains the AirScout database

ElevationData: Contains all elevation data

GLOBE: Contains GLOBE elevation data

SRTM1: Contains SRTM1 elevation data

SRTM3: Contains SRTM3 elevation data

Log: Contains the log file

Icons: Contains all calculated icons

Tmp: Contains all temporary files, hardcopies, exports

3. Installation procedure

AirScout installation comes without an installer in a single ZIP – file. In order to get the software running please do the following:

- 1) Download the ZIP file from the website
- 2) Unzip the file to a directory of your choice
- 3) Check that your PC clock is running synchronized and in the right time zone
- 4) Run AirScout.exe
- 5) A wizard will guide you through basic settings
- 6) After finishing the Wizard the program will start immediately
- 7) Press "Run/Pause" button to see path on map and planes moving
- 8) Click on "Options" button for further options when on "Pause"

If you are experiencing problems especially with further BETA versions of AirScout you can run the program with an cleanup routine at start up. This will wipe your settings, data base and other temp files.

Use "AirScout.exe /clean" to activate the clean start and choose cleanup functions in the dialog box.

4. First Run

Starting with V1.2 a database structure must be created on first run. An internet connection is necessary to download data files from web resource. While this will take some time you will see the splash screen with status messages.



Figure 4-1 Splash window while initializing database on first run

When the database setup is finished successfully, a wizard will guide you through the basic settings on first run. This will ensure that all precautions were made before running AirScout for the first time. The navigation is simple: just use "Back" and "Next" to navigate through the tabs. The "Finish" button only shows up on the last page. Pressing "Cancel" will cancel the wizard and close the program. The procedure will start again from the beginning next time.

4.1. Tab "Terms and Conditions"

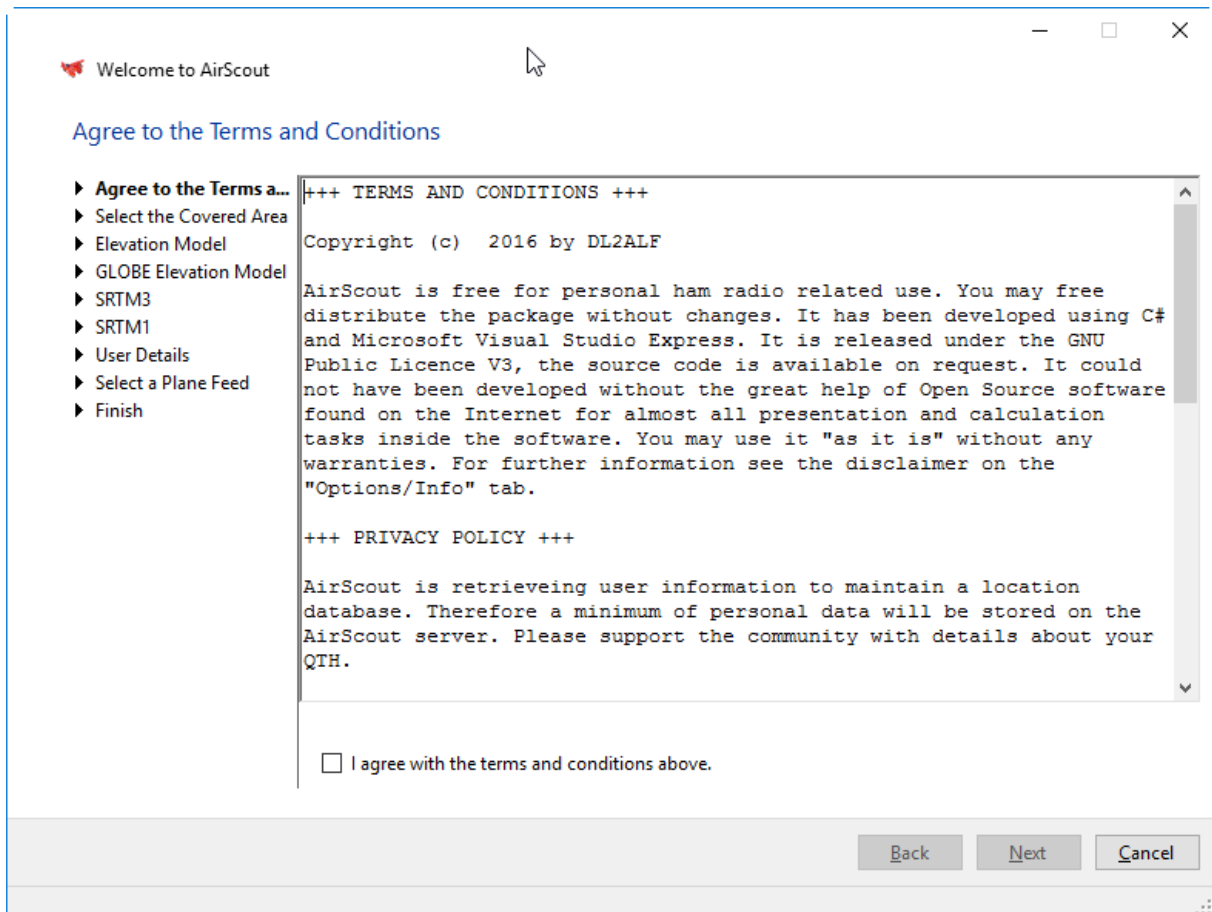


Figure 4-2 Terms and Conditions

You will see the terms and conditions of AirScout here. Please read it carefully. You must agree with the terms and conditions to continue.

4.2. Tab "Select the covered area"

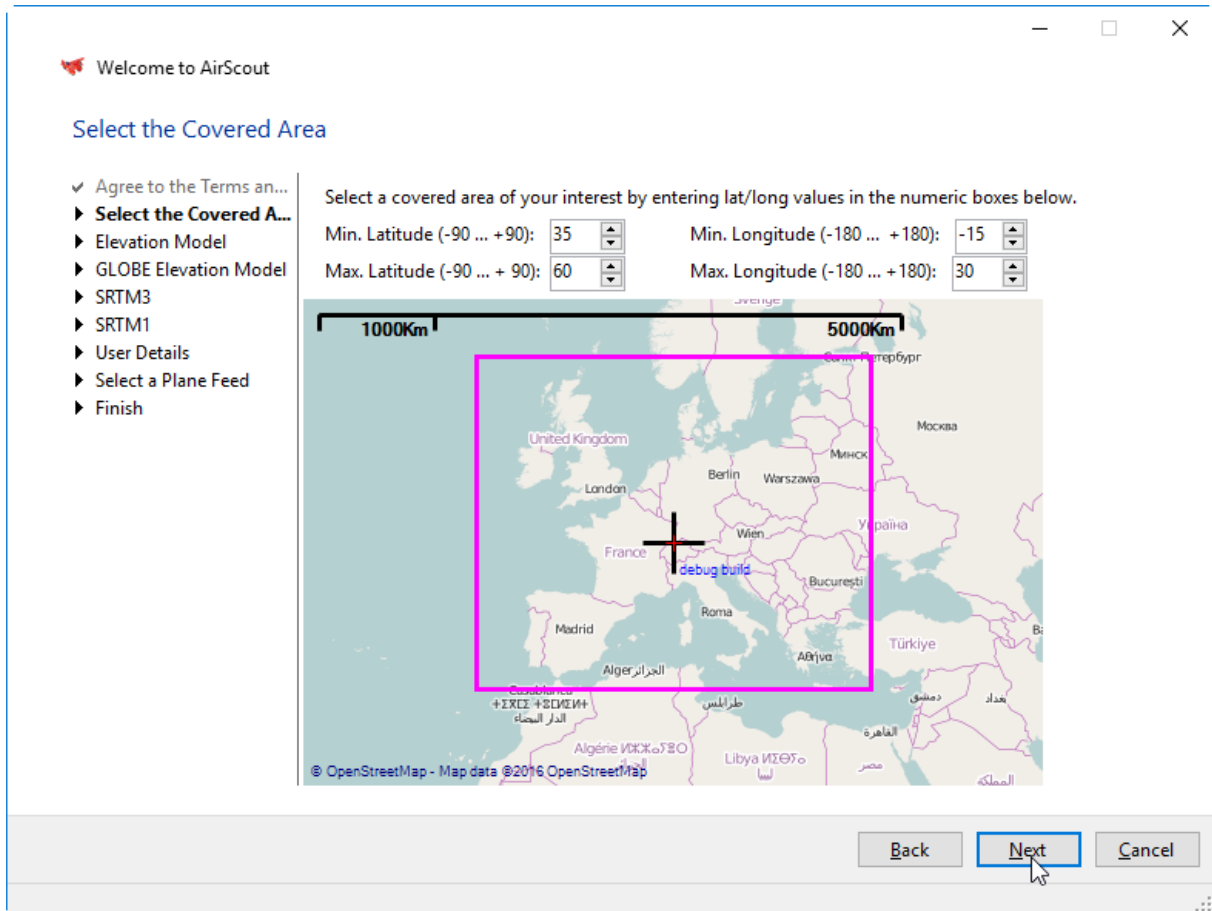


Figure 4-3 Covered area

The covered area is representing the “basic scope” of AirScout.

- Flight traffic is only recorded inside this area. The covered area is acting as a basic filter already when fetching data from web server.
- AirScout determines the elevation tiles needed for this area and tries to download them automatically.

You can adjust the area by entering numeric values in the boxes or by clicking on the up/down buttons next to the values. The frame on the map will be updated immediately.

4.3. Tab "Select the elevation model"

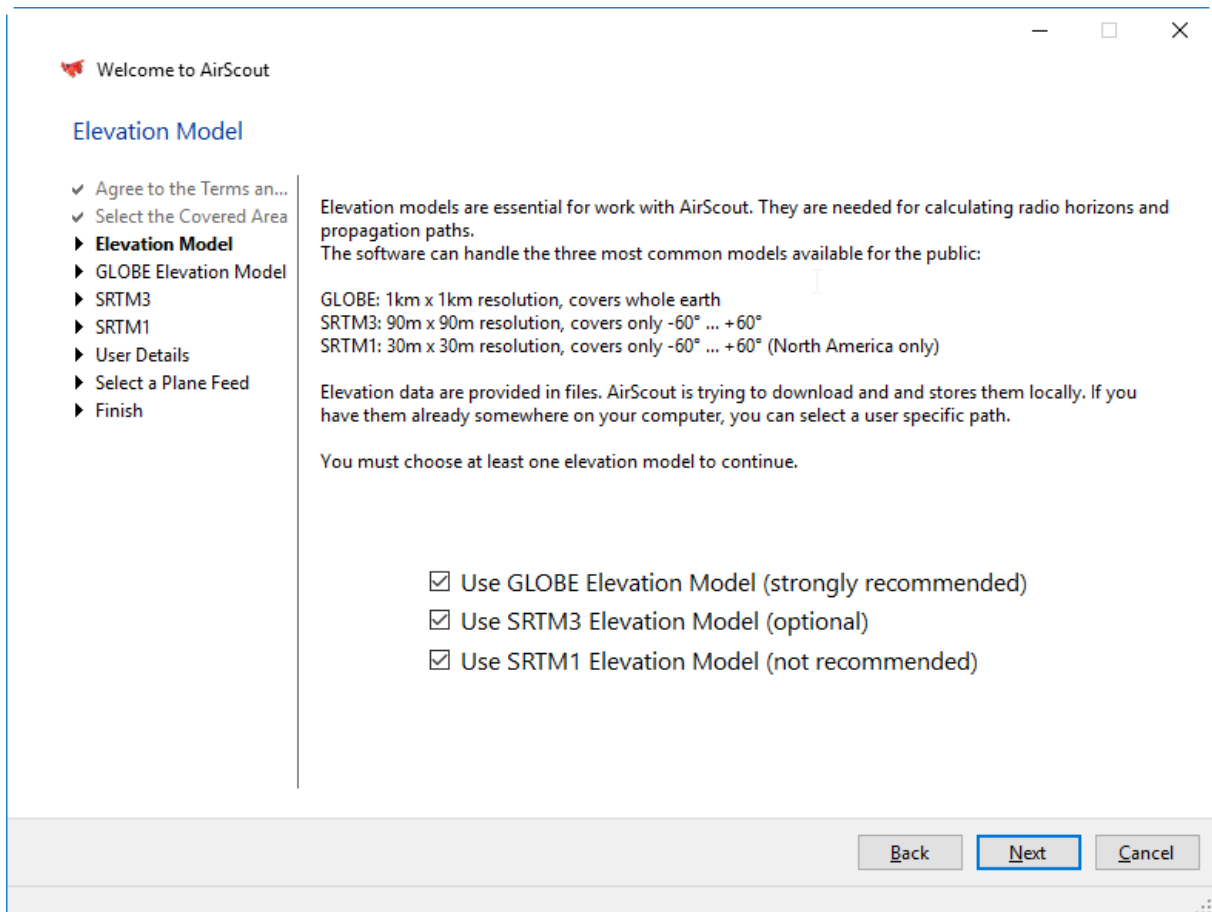


Figure 4-4 Elevation model

Elevation models are essential for work with AirScout. They are needed for calculating radio horizons and propagation paths. The software can handle the three most common models available for the public:

GLOBE: 1km x 1km resolution, covers whole earth

SRTM3: 90m x 90m resolution, covers only -60° ... +60°

SRTM1: 30m x 30m resolution, covers only -60° ... +60° (North America only)

Elevation data are provided in files. AirScout is trying to download and stores them locally. If you have them already somewhere on your computer, you can select a user specific path.

You must choose at least one elevation model to continue.

4.4. Tab "GLOBE elevation model"

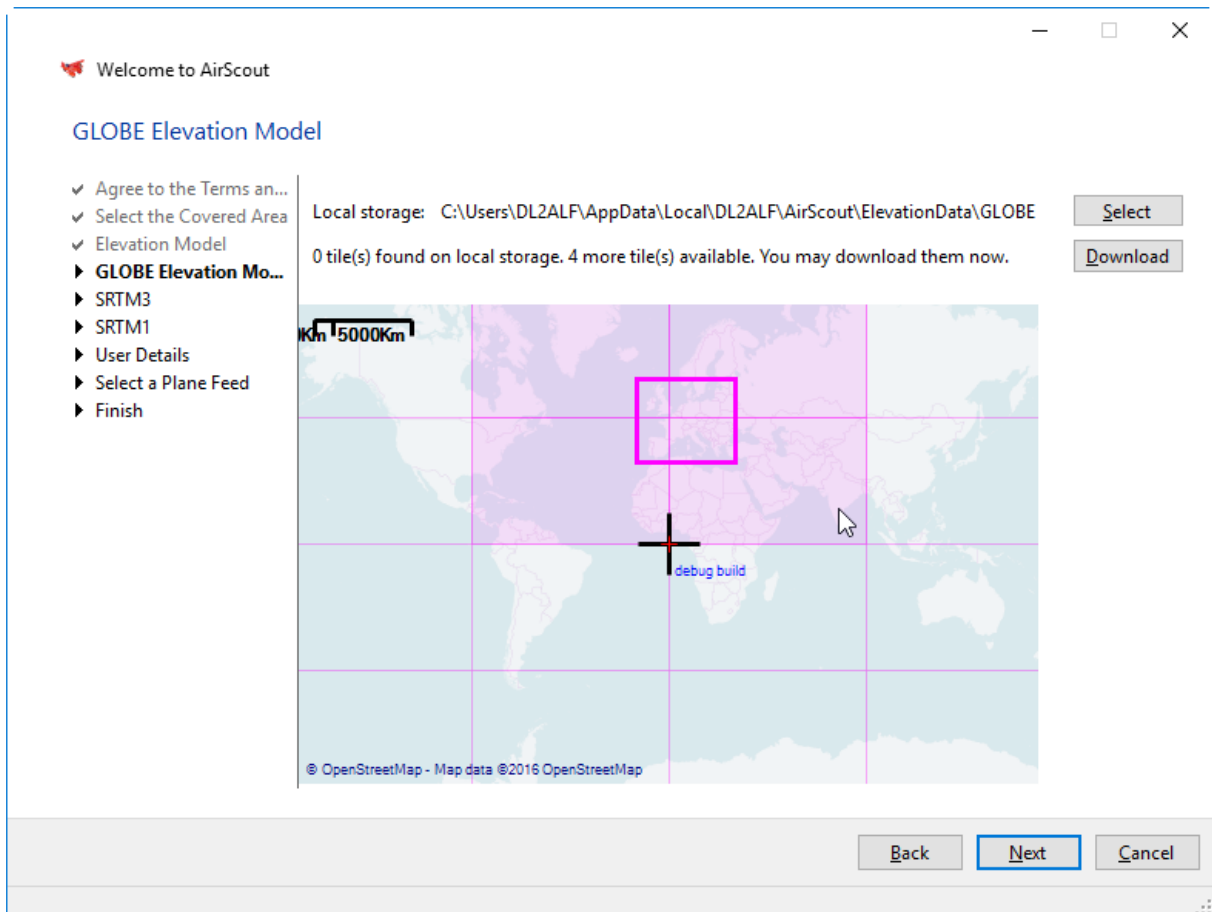


Figure 4-5 GLOBE elevation model

Select the local storage here for saving the GLOBE elevation tiles. AirScout is scanning your local storage and is trying to find elevation tiles on web. After the process is finished the tiles are shown on the map using the following colour code:

- Tiles found on web are shown in very light magenta.
- Tiles needed to cover your area are shown in light magenta.
- Tiles found on local storage are shown in magenta

You will get a status message about the scan results. If there are tiles needed to cover your area and if they are available on the web the "Download" button is activated. You can start download procedure by clicking on it. The download will start in the background, you can continue with the wizard. As the files may be large in size the download will take a reasonable amount of time.

4.5. Tab "SRTM3 elevation model"

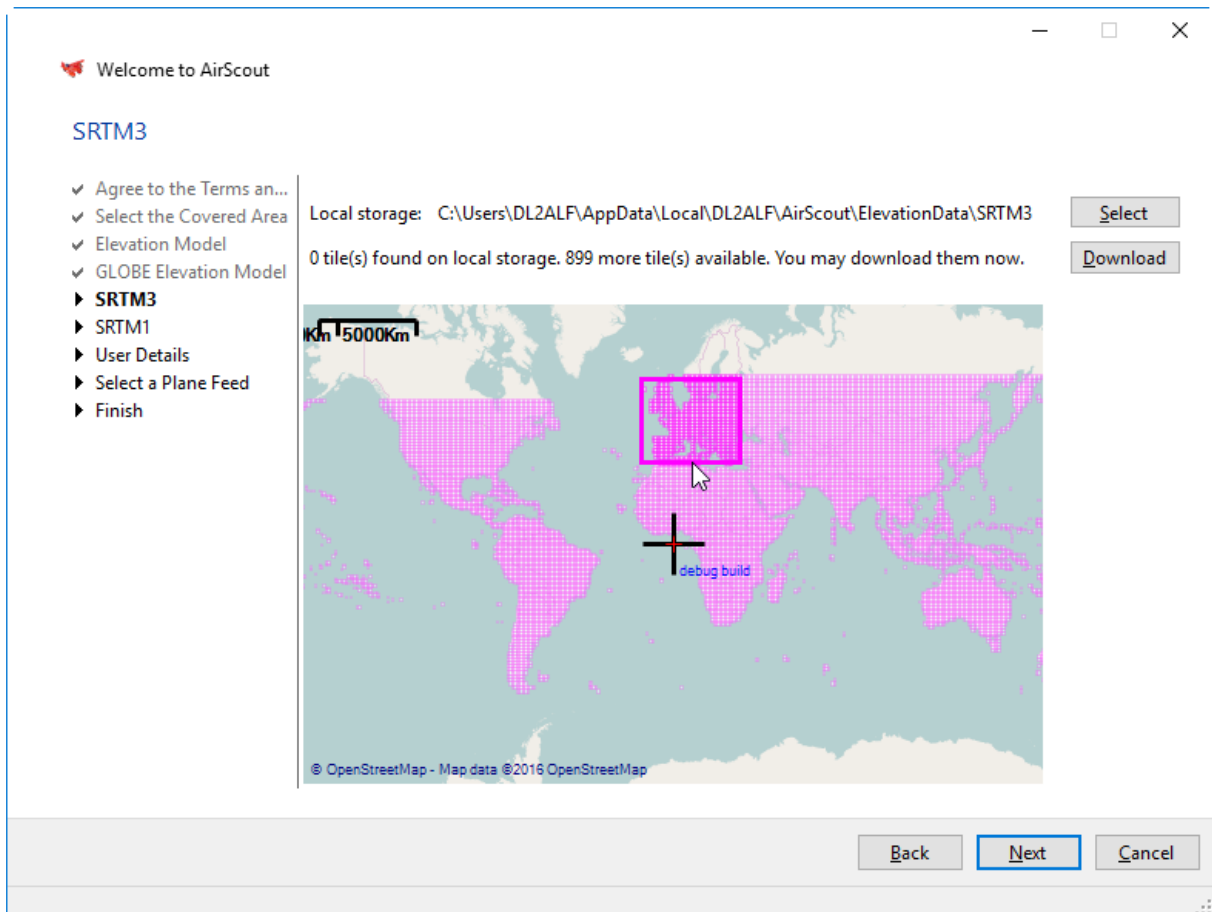


Figure 4-6 SRTM3 elevation model

Select the local storage here for saving the SRTM3 elevation tiles. AirScout is scanning your local storage and is trying to find elevation tiles on web. After the process is finished the tiles are shown on the map using the following colour code:

- Tiles found on web are shown in very light magenta.
- Tiles needed to cover your area are shown in light magenta.
- Tiles found on local storage are shown in magenta

You will get a status message about the scan results. If there are tiles needed to cover your area and if they are available on the web the "Download" button is activated. You can start download procedure by clicking on it. The download will start in the background, you can continue with the wizard. As the files may be large in size the download will take a reasonable amount of time.

4.6. Tab "SRTM1 elevation model"

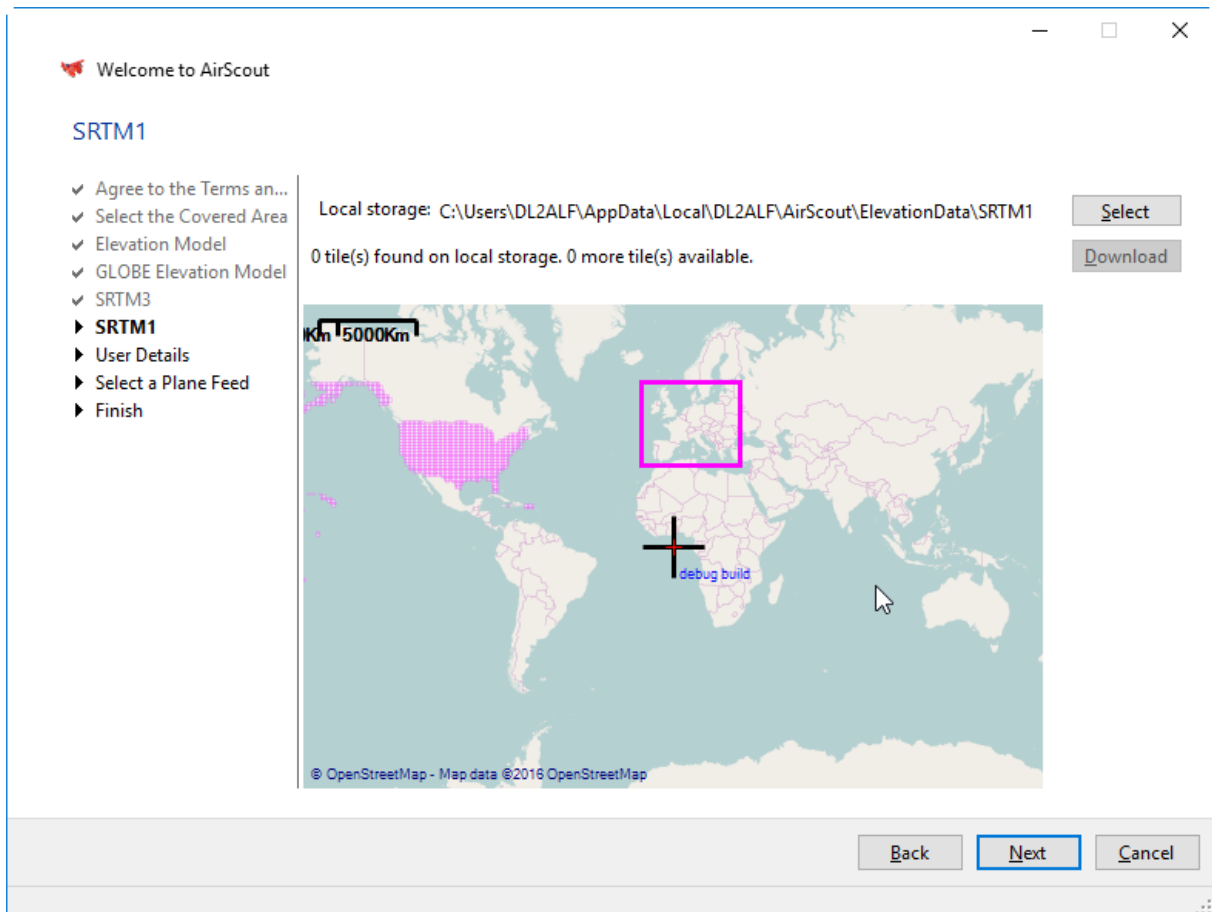


Figure 4-7 SRTM1 elevation model

Select the local storage here for saving the SRTM1 elevation tiles. AirScout is scanning your local storage and is trying to find elevation tiles on web. After the process is finished the tiles are shown on the map using the following colour code:

- Tiles found on web are shown in very light magenta.
- Tiles needed to cover your area are shown in light magenta.
- Tiles found on local storage are shown in magenta

You will get a status message about the scan results. If there are tiles needed to cover your area and if they are available on the web the "Download" button is activated. You can start download procedure by clicking on it. The download will start in the background, you can continue with the wizard. As the files may be large in size the download will take a reasonable amount of time.

4.7. Tab "User details"

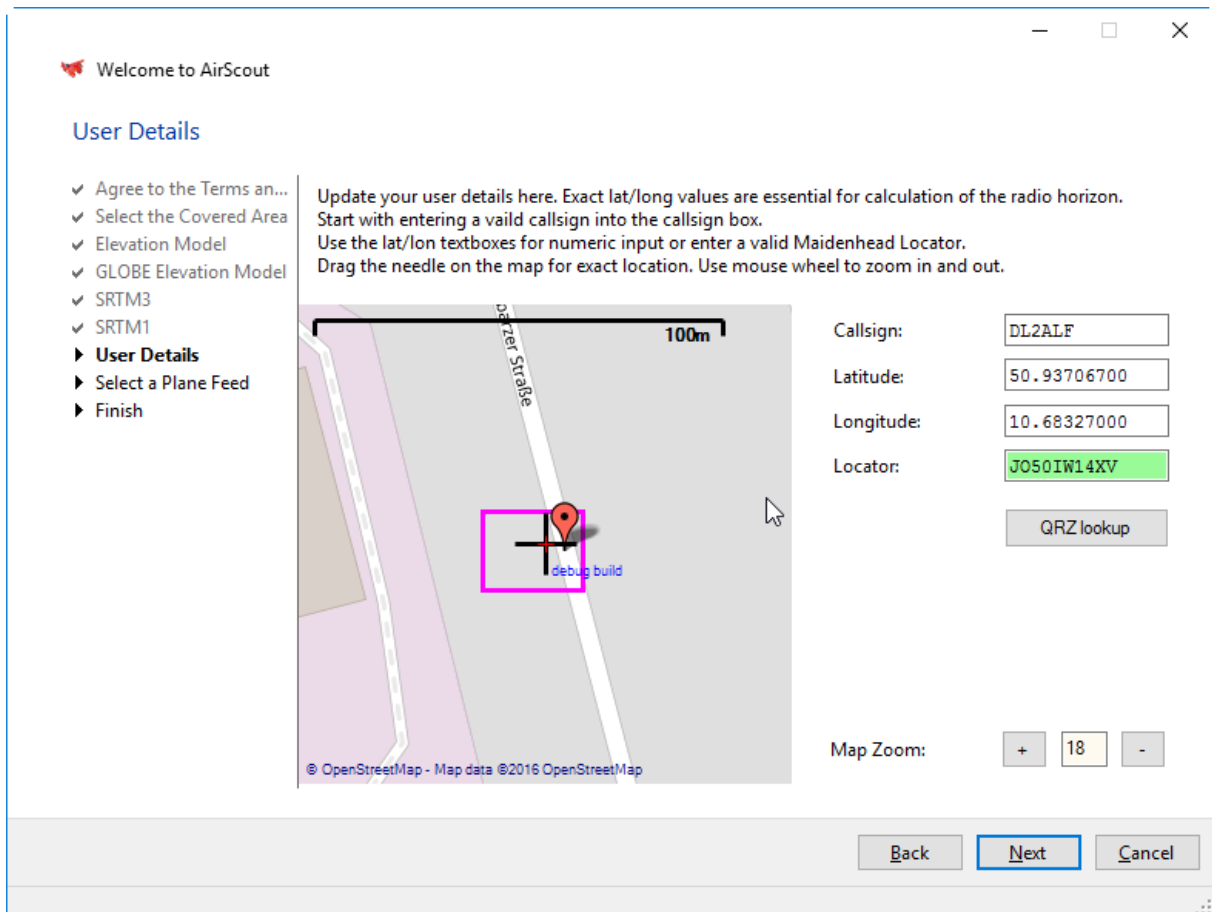


Figure 4-8 User details

You must update your user details here. Exact lat/long values are essential for calculation of the radio horizon. To complete the information do the following.

1. Always start with entering a valid call sign into the call sign box. If found in the call sign database the location is updated automatically.
2. Update the lat/lon information by one of the following methods:
 - enter numeric values into the lat/lon textboxes (English notation)
 - enter a valid Maidenhead Locator (6..14 digits, default = 10)
 - Click and hold mouse left to drag the needle on the map for exact location. Use mouse wheel or +/- buttons to zoom in and out.

If your user details are listed in the QRZ.com database you can fetch them also by clicking on "QRZ lookup" button. The exact position is then taken from their database in the case the 6digit Maidenhead locators are matching.

It is strongly recommended that you have a QRZ.com account and maintain your exact location there. It is the most common database for amateur radio call signs and location details on the Internet. As long as there is no distinct AirScout web database is available, QRZ.com is the only way to publish your exact location to other AirScout users!

4.8. Tab "Select a plane feed"

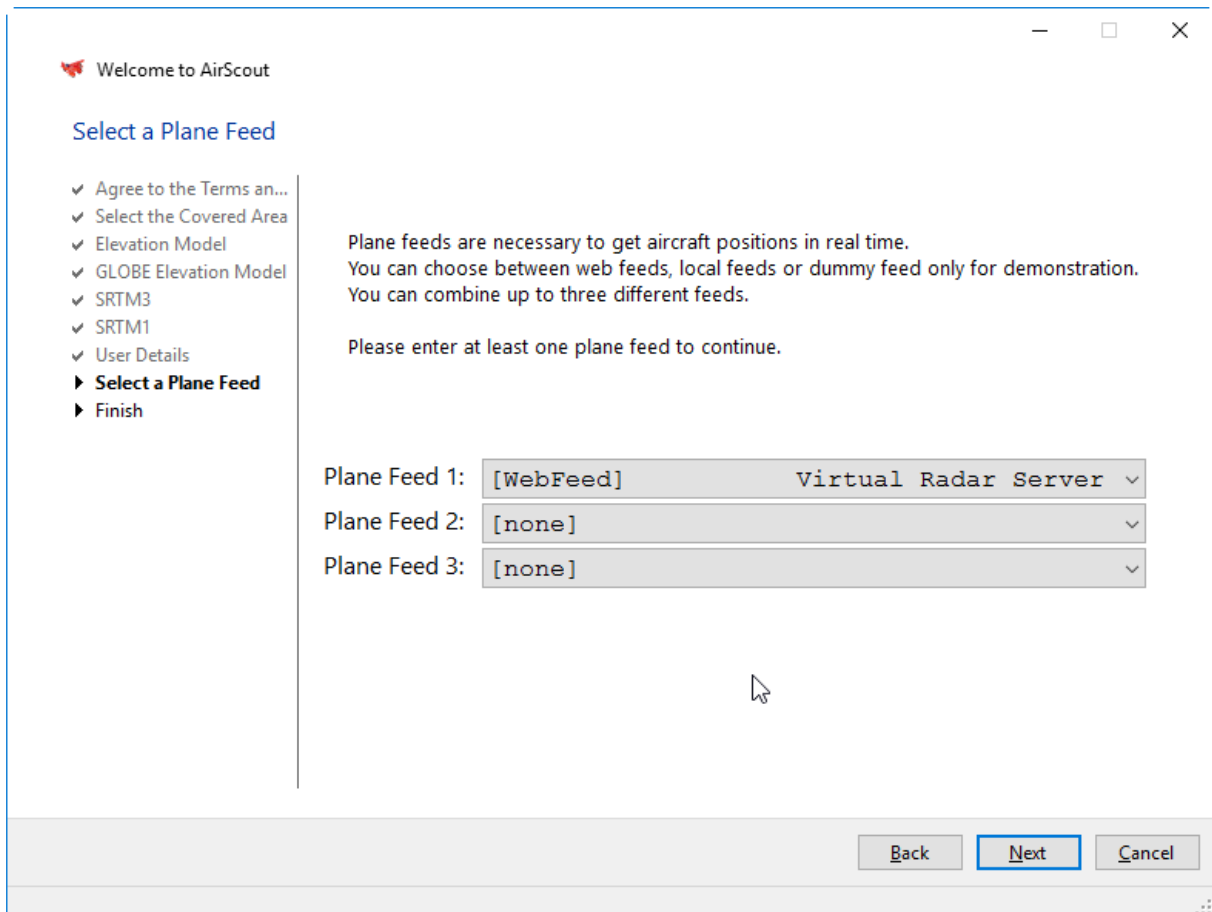


Figure 4-9 Plane feeds

Plane feeds are necessary to get aircraft positions in real time. You can choose between:

- web feeds from several servers
- local feeds with your own ADS-B receiver
- dummy feed only for demonstration

You can combine up to three different feeds here. The feeds are running with default settings guaranteed to be working. You can change settings later via "Options/Planes". Normally the simultaneous use of more than one web stream is producing best results. Anyway, sometimes inconsistencies between two feed may occur and you will see doubled plane icons with slightly different positions or call signs. In this case or to reduce network traffic it is recommended to disable multiple feeds. One single feed will produce a traffic of about 2MB/min.

Please enter at least one plane feed to continue.

4.9. Tab "Finish"

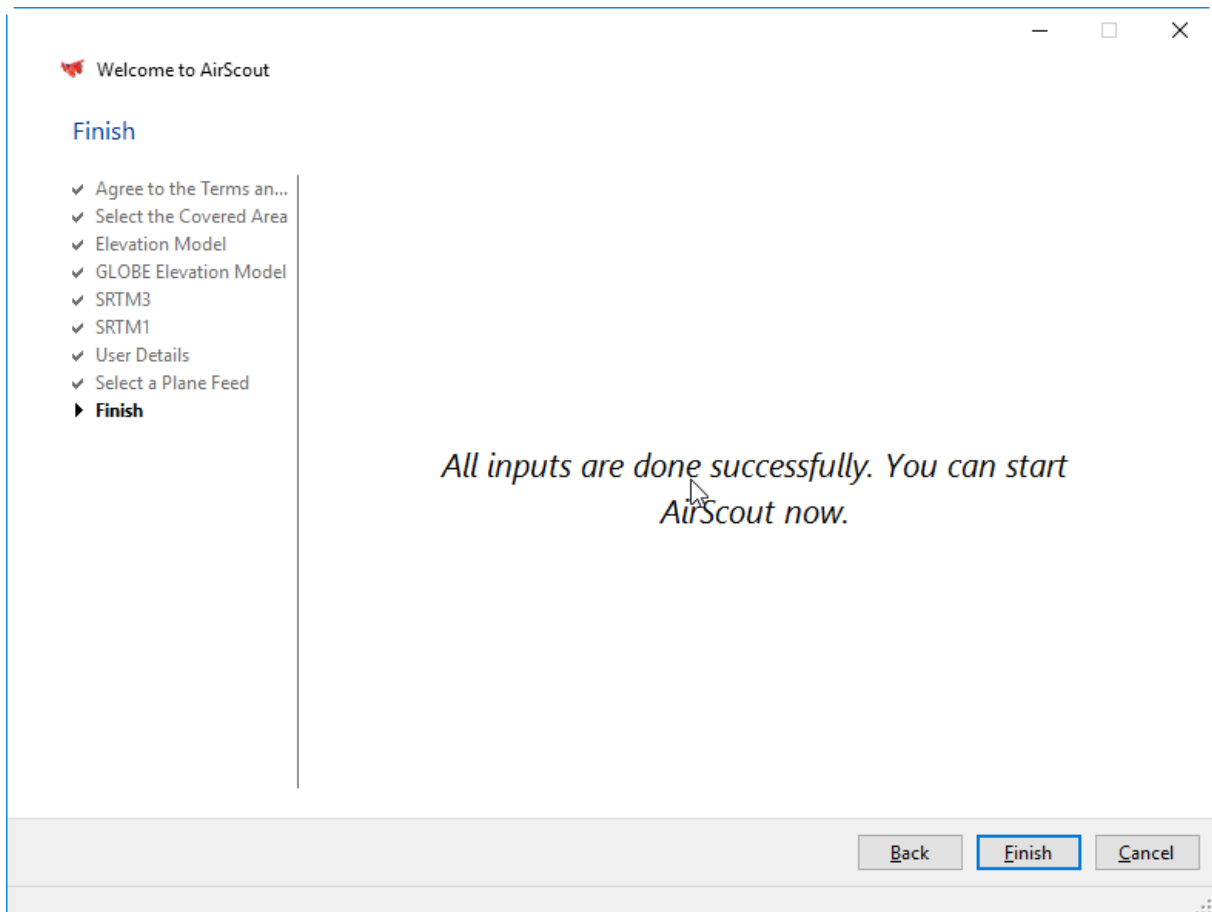


Figure 4-10 Finish

Congratulations! You are finished with all precautions and can start AirScout now by clicking on the "Finish" button.

If there are still ongoing elevation tile download processes you will get a hint. The wizard is closing after the downloading the next tile is finished. This may take a while.

5. Program's Main Window and its Elements

See the programs main window and its elements below:

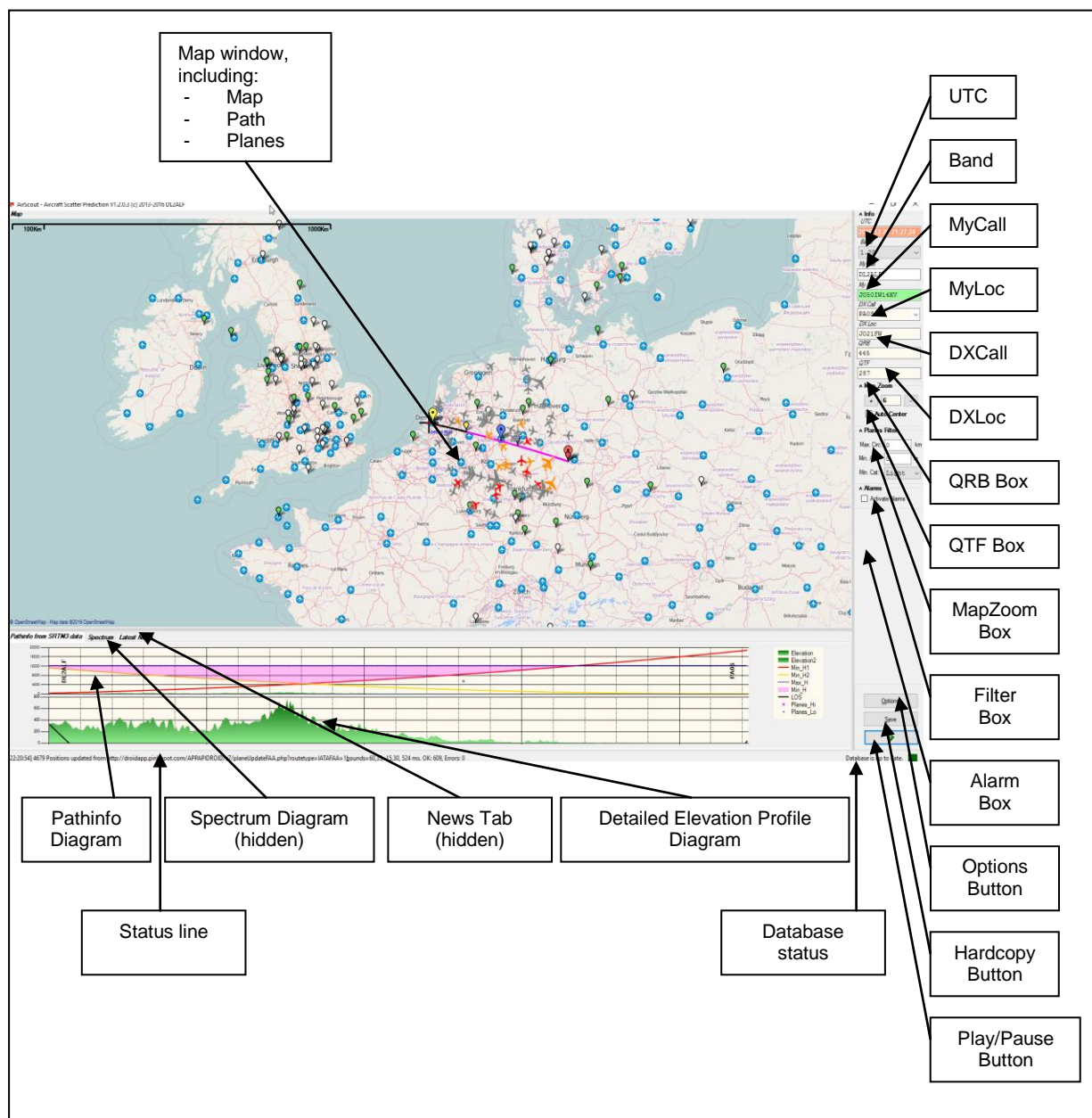


Figure 5-1 Program's main window

Map Window

Is showing:

- the map (Open Street Map by default)
- the calculated path (in black)
- the "hot path" (in magenta)
- big red marker for MyLoc
- big yellow marker for DXLoc
- big blue marker for midpoint between

- small red marker for begin of “hot path”
- small yellow marker for end of “hot path”
- small blue marker for midpoint of “hot path”
- coloured planes with real time positions
- location of potential QSO partners from watchlist

Path Info Diagram

Is showing:

- red line for minimum aircraft altitude seen from MyLoc
- yellow line for minimum aircraft altitude seen from DXLoc
- blue line for maximum aircraft altitude (12200m by default)
- magenta triangle for “hot area”
- gray points for aircrafts on or near path with not suitable altitude
- magenta points for aircrafts on or near path with suitable altitude
- green area with elevation profile (mostly not seen because of scaling)
- MyCall
- DXCall

Detailed Elevation Profile Diagram

Is showing:

- green area for elevation profile with auto scaling

Spectrum Diagram (hidden)

Is showing a 10 mins history of the NF – spectrum when running Spectrum Lab by DL4YHF as a server. Can be used to detect signal enhancements when aircrafts are passing.

News tab (hidden)

Is showing news from the AirScout website. Users will be informed once about any changes.

UTC

Is showing UTC and is updated only when in “Play” mode.

Band

Is showing the currently selected band. You can change it using the drop down list box but only when in “Pause” mode.

MyCall

Is showing MyCall. You can enter a new call only when in “Pause” mode.

MyLoc

Is showing MyLoc as a 6 digits Maidenhead locator. You can enter a new locator only when in “Pause” mode. Green background indicates that the position used is more precise than the midpoint of the 6 digit locator.

DXCall

Is showing the DXCall. You can enter a new call or quick choose a previous on via drop down but only when in “Pause” mode. If the new call is found in database, the according position is loaded and shown in the DXLoc box below.

DXLoc

Is showing the DXLoc as a 6 digit Maidenhead locator. You can enter a new locator only when in “Pause” mode. Green background indicates that the position used is more precise than the midpoint of the 6 digit locator.

ORB Box

Is showing the distance between MyLoc and DXLoc and is updated when in “Play” mode. You cannot enter anything here.

QTF Box

Is showing the direction from MyLoc to DXLoc and is updated when in “Play” mode. You cannot enter anything here.

Map Zoom Box

Is showing the current map zoom level. You can change it either with the “+” or “-“ buttons or using the mouse scroll bar when over the map area. When checking the “Auto Center” option the map is centered to the midpoint between MyLoc and DXLoc when in “Play” mode.

Filter Box

Is showing the current aircraft display filter status. You can enter a minimum altitude and a minimum category an aircraft must have to be shown on the map but only when in “Pause” mode. If a filter other than default is selected the box appears in plume colour.

Alarm Box

Is showing the alarm status. When checked an alarm is generated when an aircraft is reaching the alarm conditions set in “Options/Alarms”.

6. Program’s Options window and its tabs

All options and settings are shown in the “Options” Dialog box.

6.1. Tab "General"

The “General” tab contains information about general settings.

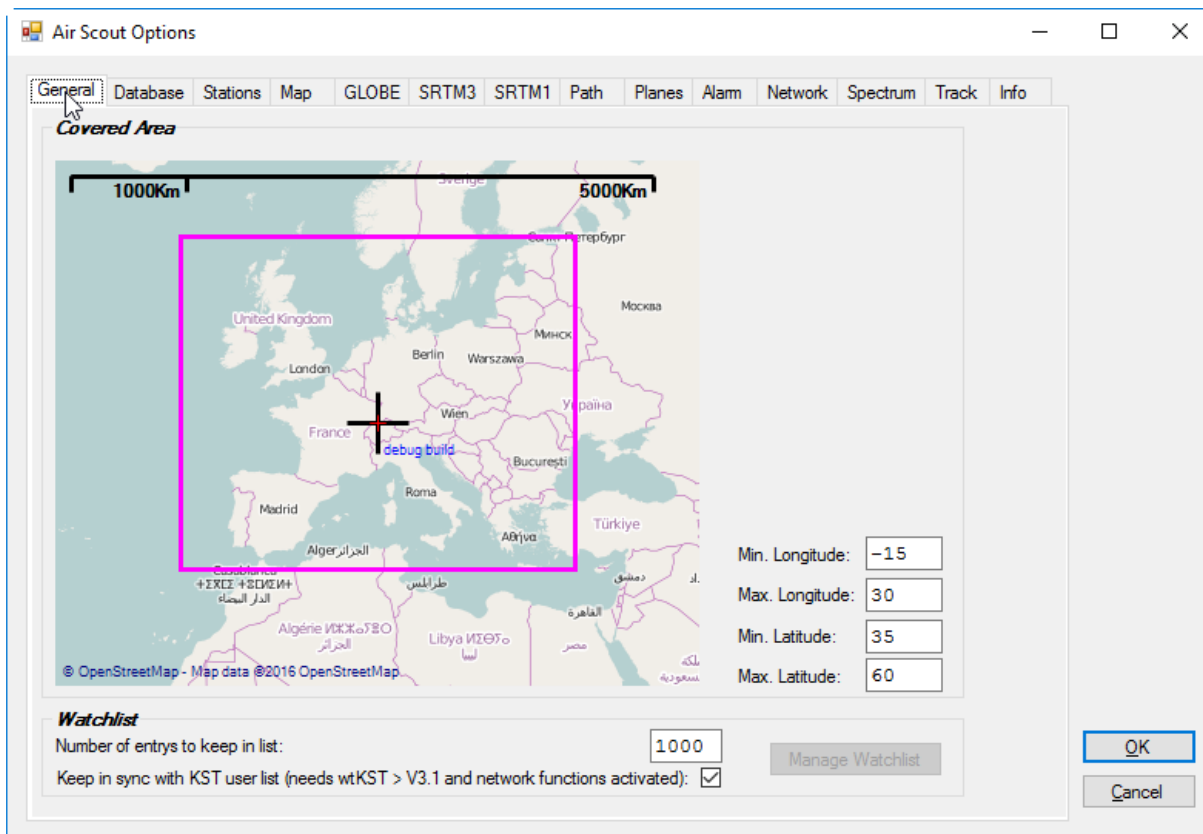


Figure 6-1 General tab

Covered Area

The covered area is representing the “basic scope” of AirScout. Flight traffic is only recorded inside this area. Furthermore the area is used for automatic download of elevation data files. You can adjust the area by entering numeric values in the boxes on the right.

Watch list

The call watch list keeps the call signs recently entered in the DXCall boxes or of your special interest. You can set the maximum number of entries (default = 1000) and you can manage the list by pressing the "Manage Watchlist" button. Starting with AirScout V1.2 and wtKST V3.1 you can synchronize the watch list with the list of ON4KST users (the chat you are currently logged in). Network functions must be activated to use this feature. Watch list calls are shown on the map, clicking on it changes the path to this call sign.

6.2. Tab "Database"

The database tab is showing basic information of the SQLite databases used since AirScout V1.2.

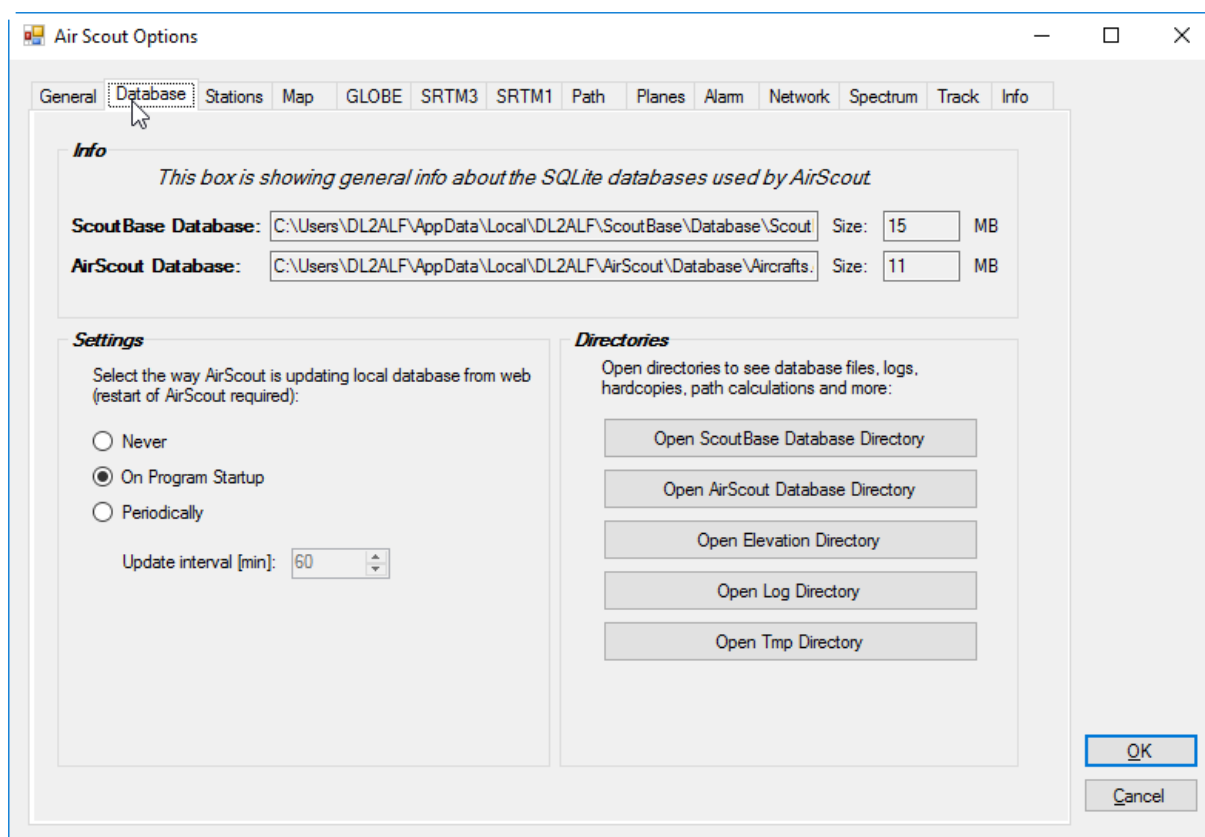


Figure 6-2 Database tab

Settings

Maintain your database update procedure here. Database update is performed in the background with loading data files from web resource. If new information was found the internal database is updated.

You can choose between this options:

- Never perform update
- Start update once at program start up
- Run update periodically and choose update interval

Directories

You can open the most interesting directories in an Explorer window for quick access by clicking on the according button.

6.3. Tab "Stations"

The "Stations" tab contains information about the two QSO – partners. Normally, it is sufficient to fill in a call sign here. If the call sign is found in database, all other information is updated automatically. Green background indicates that a precise location is available. If the call sign is unknown, the update strategy depends on which field is filled (see below). The description of the fields and buttons is valid for both "My Station" and "DX Station".

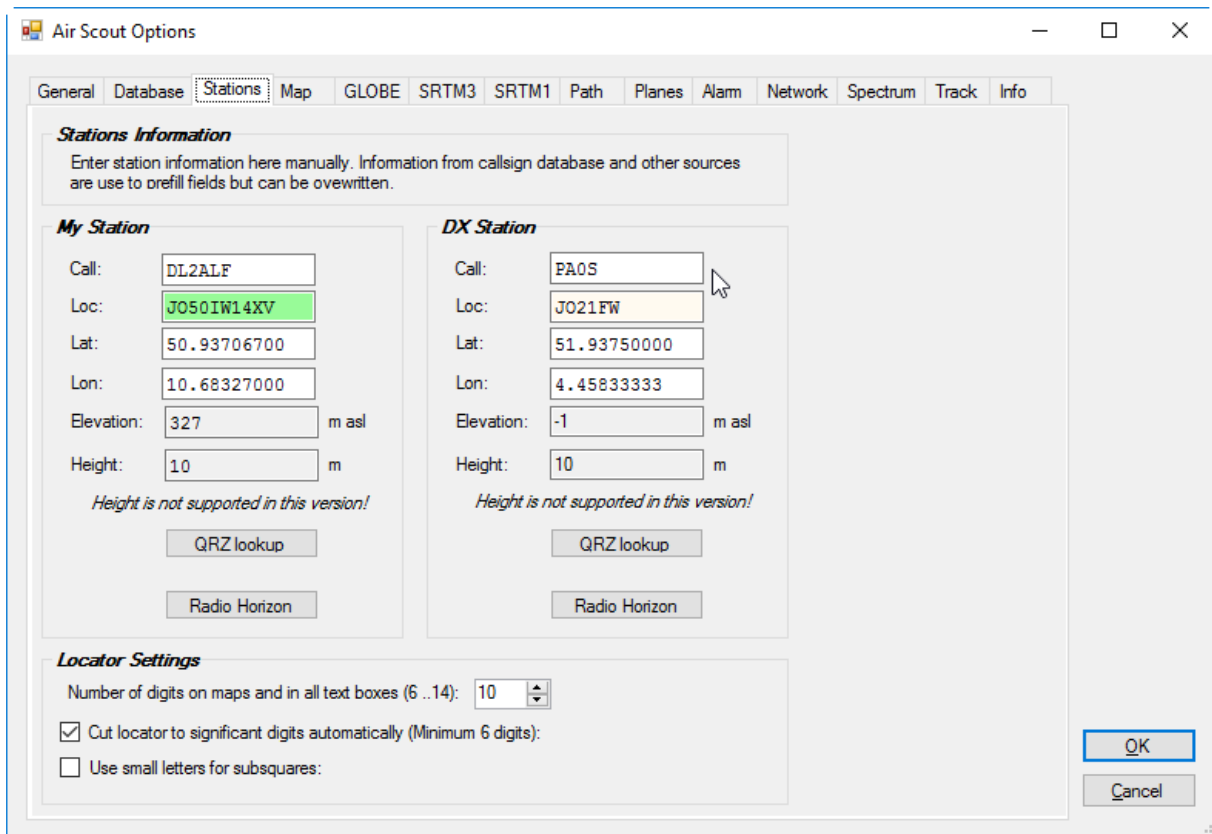


Figure 6-3 Stations tab

Call

Enter a valid call sign here. If the call sign is found in database, the lat/lon and locator information is updated automatically. If not, the lat/lon and locator boxes are cleared.

Loc

Please enter at least a valid 6digit Maidenhead locator here. The lat/lon boxes are updated with the co-ordinates of the locator midpoint. The background is set to white, which indicates that no precise location is available. An 8 or 10digit locator handling is not yet implemented.

Lat

Enter valid Latitudes here (manually, do not use Cut & Paste). The range is:

Format:	floating point, English notation	
Minimum:	-90 deg	= 90°S
Maximum:	+90 deg	= 90°N
Example:	10.6458333	

A green background indicates that this is a precise location.

Lon

Enter valid Longitudes here (manually, do not use Cut & Paste). The range is:

Format:	floating point, English notation
---------	----------------------------------

Minimum: -180 deg = 180°W
Maximum: +180 deg = 180°E
Example: 10.97166667

A green background indicates that this is a precise location.

Elevation

It is showing the elevation of the station in meters above sea level. You cannot enter an elevation here. The value is updated according to the current elevation model whenever the location is changing.

Height

Enter the antenna height of the station in meters here. A default value of 10m is used when the exact height is unknown. Do not correct any elevation incorrectness with the antenna height as the resulting elevation + antenna height does not fit the path calculation.

QRZ lookup

The QRZ.com lookup is an easy way to get exact location if there is an entry in their database. To make sure that the location is correct, you must enter a valid locator in the loc box. When the button is pressed AirScout is trying to get the information from the QRZ.com website. If found and the location does fit into the locator in the locator box, the location information is updated. In all other cases an error message will occur.

Radio Horizon

The radio horizon is calculated from the current elevation model in 1° steps around the station. The calculation is strongly influenced by the selected elevation model and the precise location. Therefore it does not make sense to use it with the locator midpoint only. To get the diagrams filled, choose the type of diagram (Cartesian/Polar) and press the calculate button.

The **Minimum Elevation Angle** is showing the minimum usable elevation in each direction around the station. The value should be 0 for an unobstructed view and >0 if any obstruction is in sight.

The **Horizon Distance** is showing the distance to the according obstruction. For an unobstructed view the distance should be equivalent to the radio horizon as a theoretical maximum and should be nearer if any obstruction is in sight.

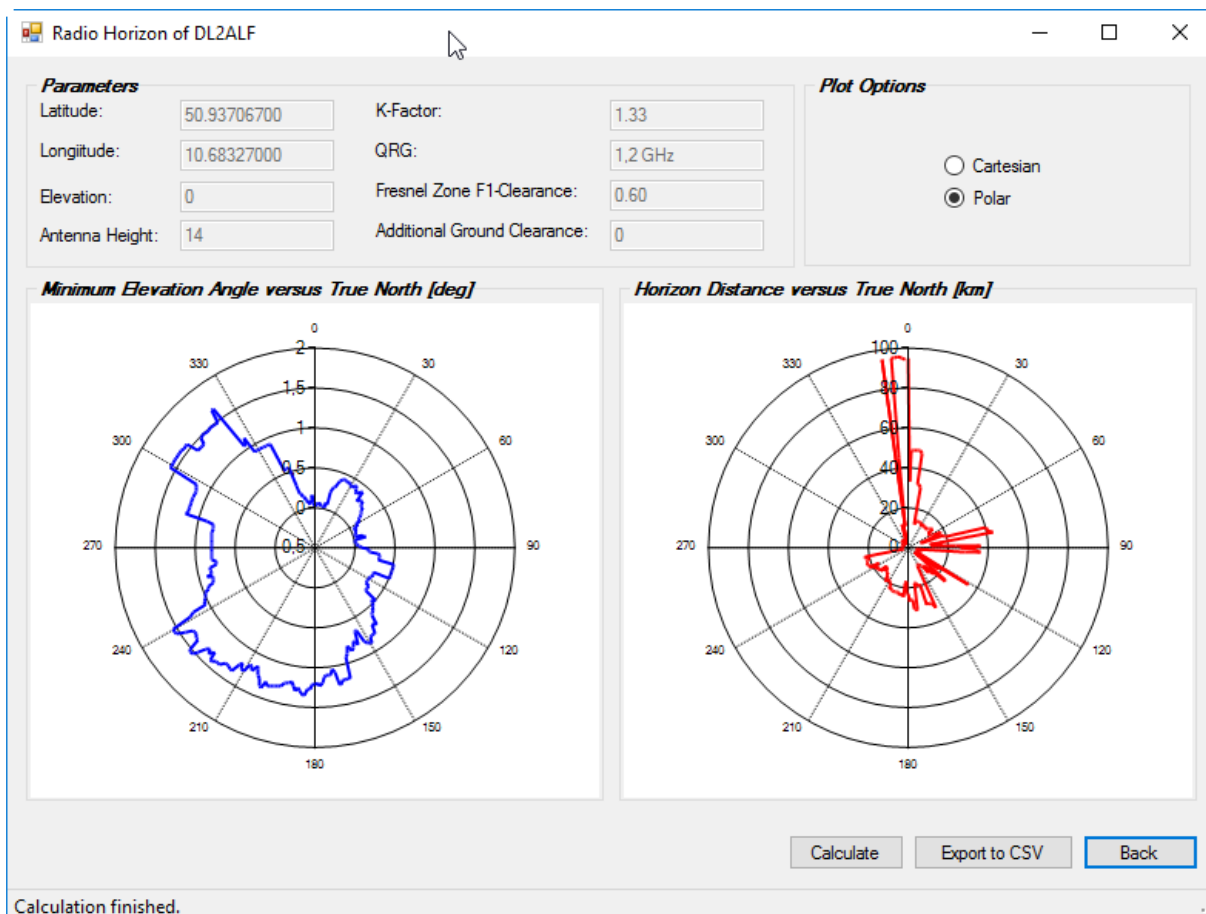


Figure 6-4 Station's radio horizon

Once calculated you can export the calculation to a CSV file by pressing the “Export to CSV” button.

Locator Settings

You can maintain some general Maidenhead Locator settings here.

1. The number of digits shown on the map, textboxes etc. and allowed for input.
Possible values: 6digits ... 14digits, default = 10digits
2. Cut locator automatically to the number of relevant digits by checking the midpoint of a given locator accuracy.
Example: if a location is only known by a 6digit Maidenhead locator, lat/lon values are set to the midpoint when created. AirScout is detecting this and will show only 6digits even if > 6digits are chosen in the settings.
3. Use small letters for subsquares will result in showing "JO50iw14xv" instead of "JO50IW14XV".

6.4. Tab "Map"

The “Map” tab contains basic settings for map source and map information showing on the main window.

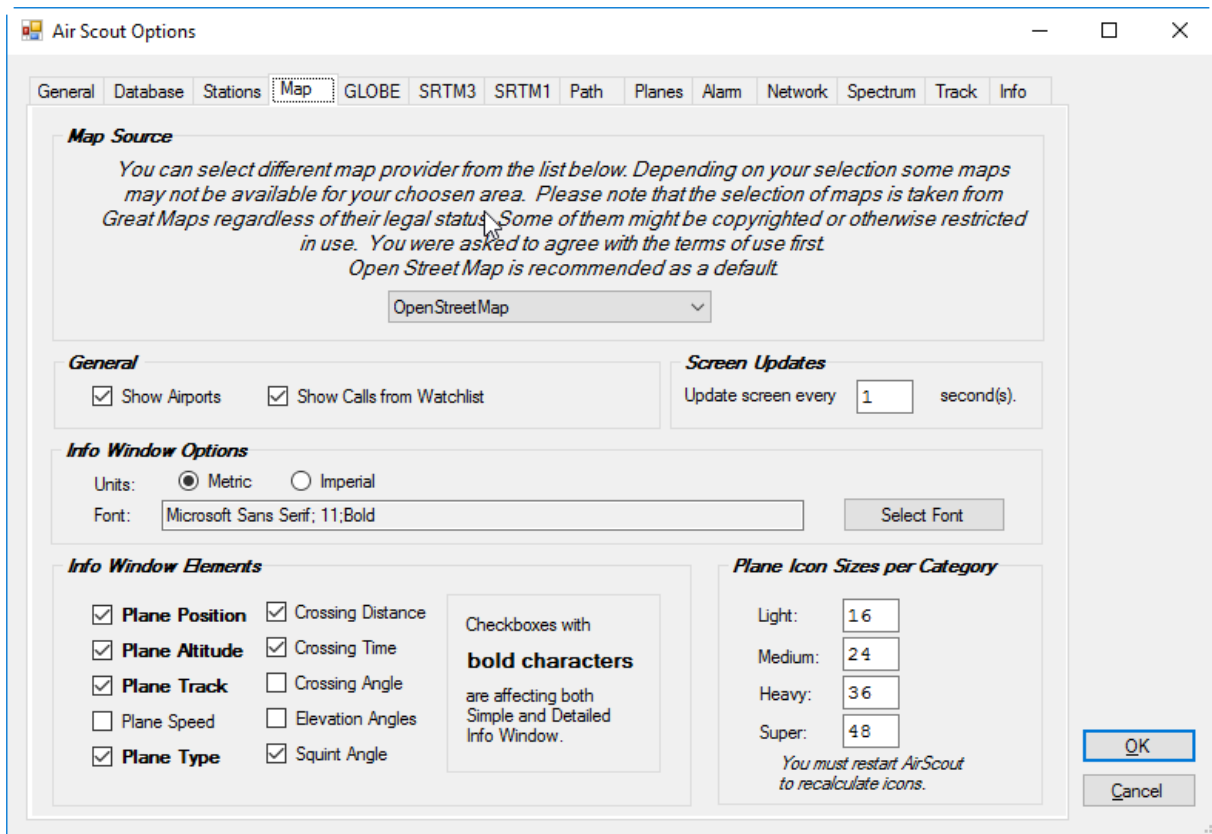


Figure 6-5 Map options tab

Map Source

You can select different map sources here. This is a functionality of Great Maps library and not a part of AirScout itself. The default map source is OpenStreetMap. Some of the map sources may not be available for your area. Some of the map sources may be copyrighted or otherwise restricted in use. If you are choosing another map source than OpenStreetMap you were asked to agree with the terms of use first.

CAUTION: The use of all map sources is on your own risk. The author will not be responsible for any copyright violation in any case.

General Options

You can select the display of airports and call signs from the watch list here.

Screen Updates

You can select the screen update interval. Default is 1sec.

Info Window Options

You can select the font family and size for the Info Window. Furthermore, you can toggle between metric or imperial units.

Info Window Elements

You can choose the basic elements shown in the Info Window. This will only affect the Detailed Info Window; the Basic Info Window shown for not interesting aircrafts is fixed in layout.

Plane Icon Sizes per Category

You can choose the icon sizes per plane category here. As the icons were calculated only at program start up a restart of AirScout is necessary.

6.5. Tab "GLOBE"

The “GLOBE” tab is showing the current GLOBE elevation model for information. Activate the use of GLOBE elevation data by checking the appropriate checkbox. You can choose a path to the local storage here and reset it to its default value. A map is showing you the general coverage, tiles available on the web, tiles needed for coverage of your area and tiles found on your local store. If it is incomplete a download process is trying to download the missing tiles automatically.

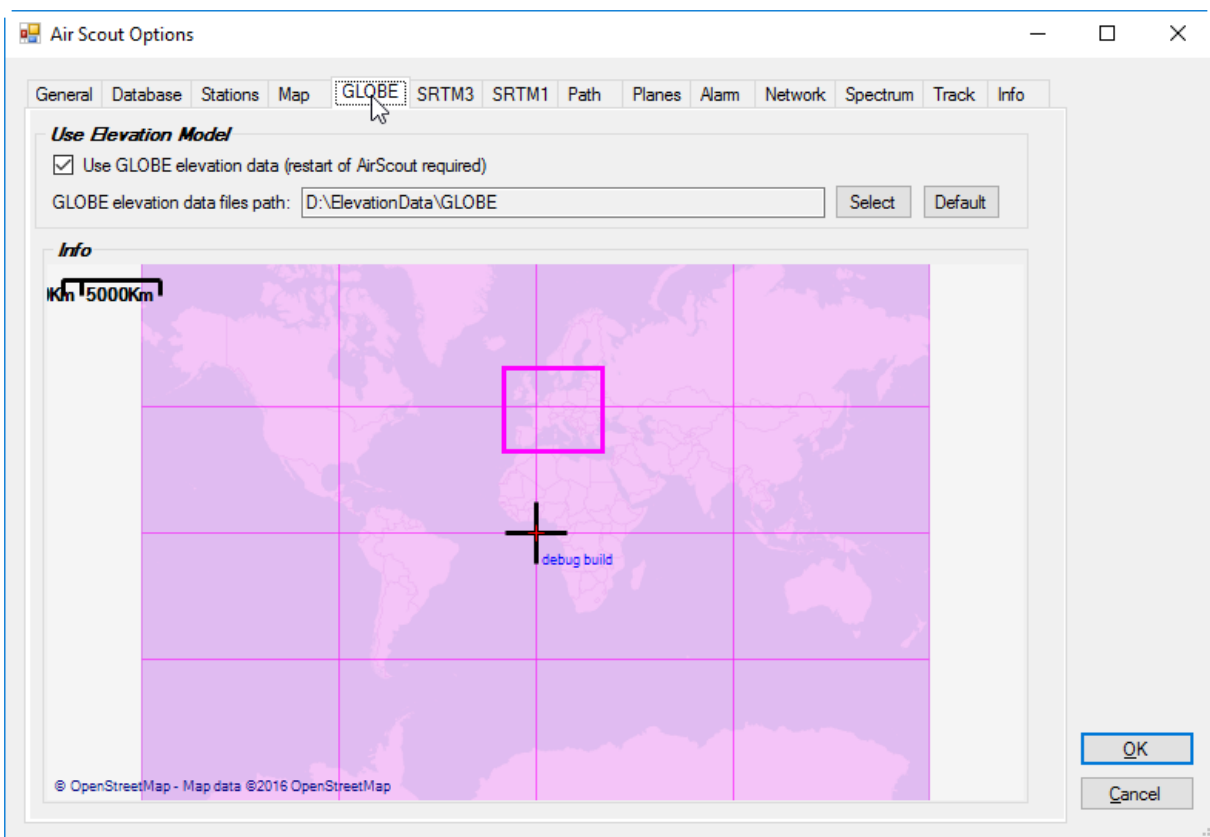


Figure 6-6 GLOBE tab

6.6. Tab "SRTM3"

The “SRTM3” tab is showing the current SRTM3 elevation model for information. Activate the use of SRTM3 elevation data by checking the appropriate checkbox. You can choose a path to the local storage here and reset it to its default value. A map is showing you the general coverage, tiles available on the web, tiles needed for coverage of your area and tiles found on your local store. If it is incomplete a download process is trying to download the missing tiles automatically (not for Windows XP & Vista).

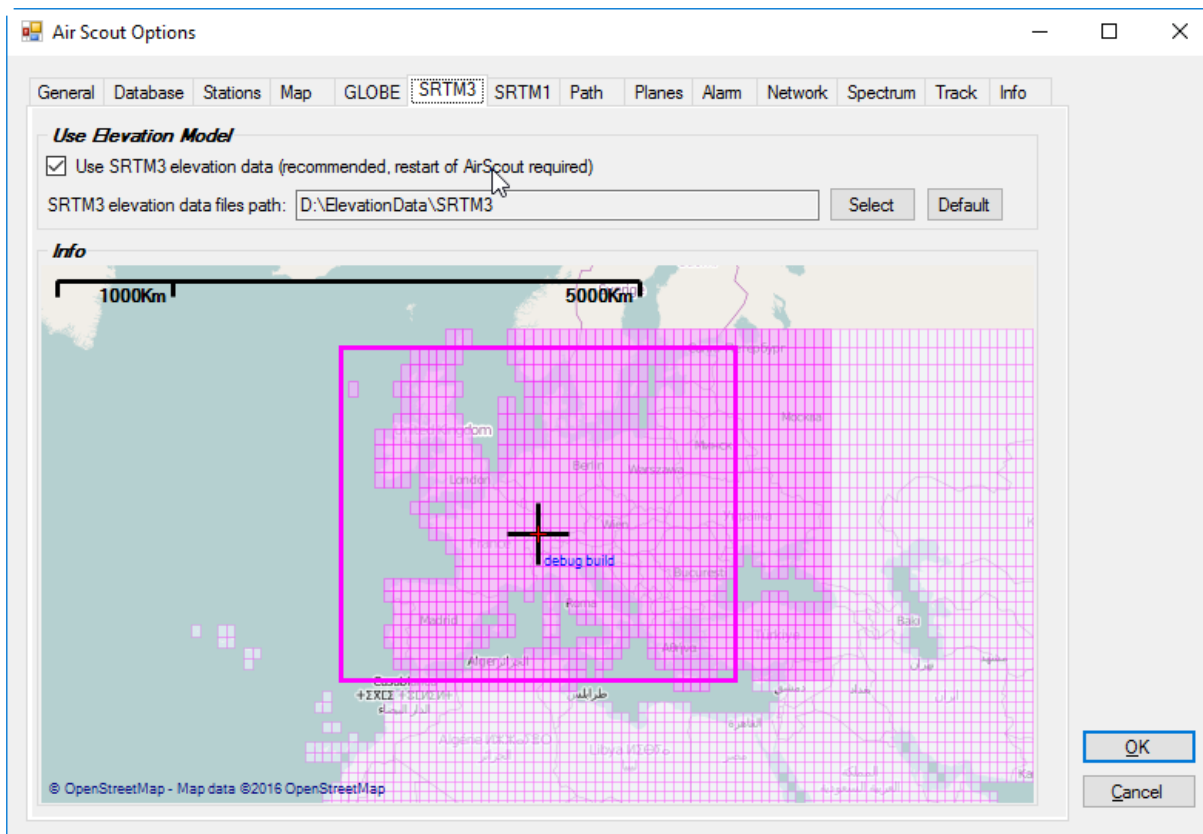


Figure 6-7 SRTM3 tab

6.7. Tab "SRTM1"

The “SRTM1” tab is showing the current SRTM1 elevation model for information. Activate the use of SRTM1 elevation data by checking the appropriate checkbox. You can choose a path to the local storage here and reset it to its default value. A map is showing you the general coverage, tiles available on the web, tiles needed for coverage of your area and tiles found on your local store. If it is incomplete a download process is trying to download the missing tiles automatically (not for Windows XP & Vista).

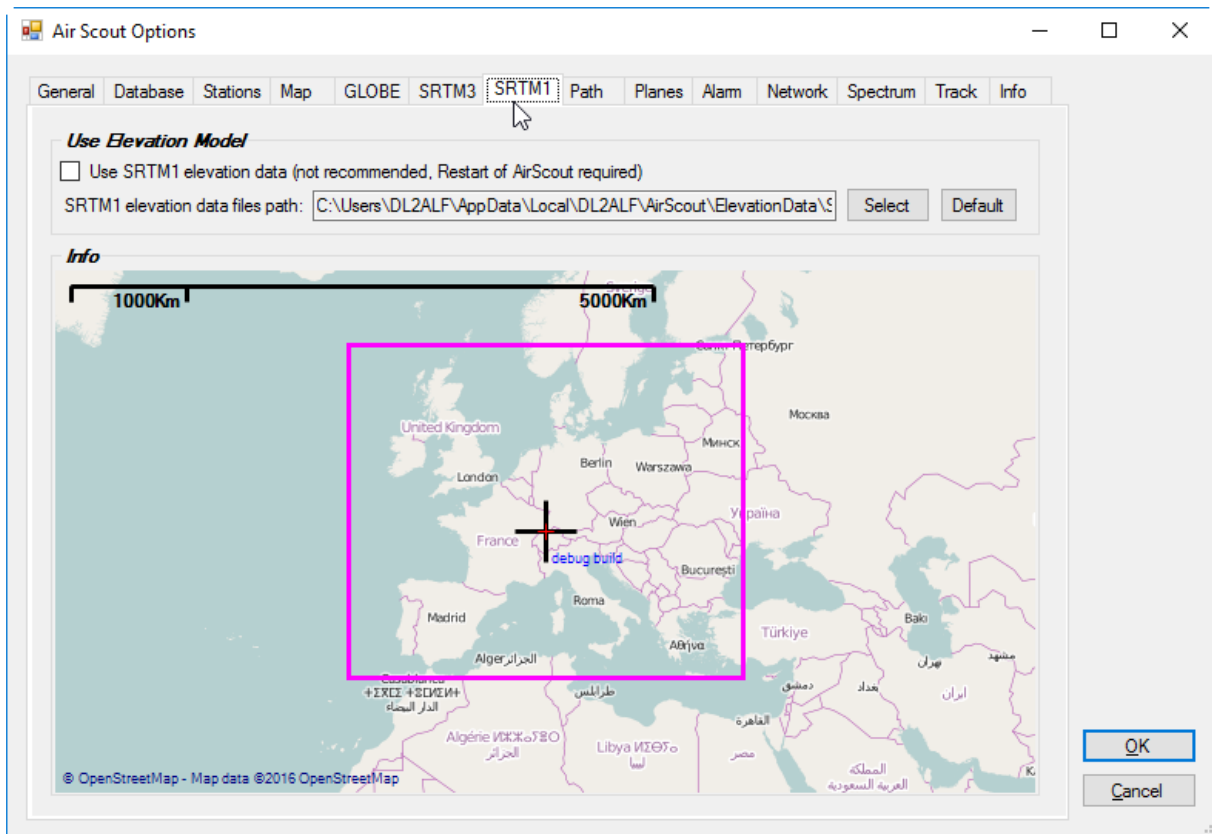


Figure 6-8 SRTM1 tab

6.8. Tab "Path"

The “Path” tab is showing currently selected path parameters. These can be set for each band separately. There are:

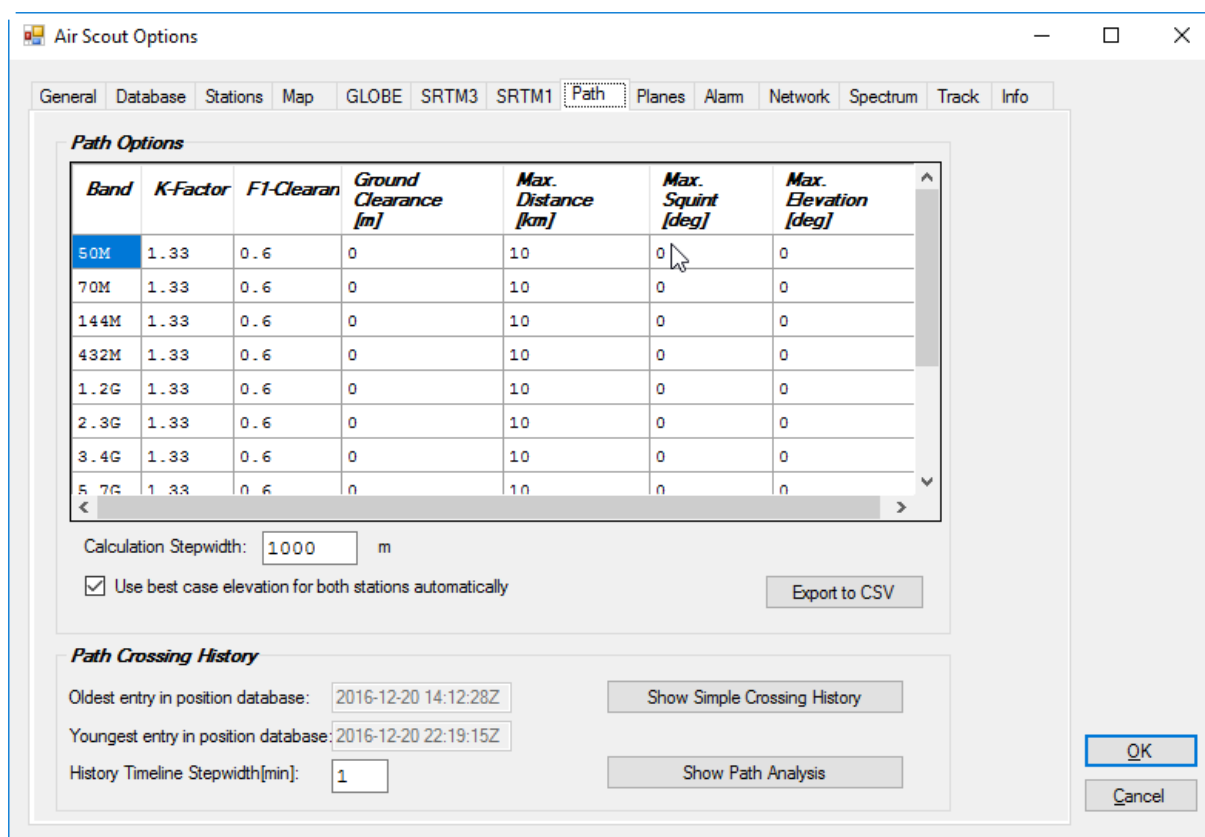


Figure 6-9 Path tab

Be careful! Use EN notation only. There is no plausibility check for all parameters right now.

Path Options

Per band available set of path parameters as described in chapter “Basic Parameters for Path Calculations”.

Calculation Step Width

You can set the calculation step width for the path calculation here. Smaller values will increase accuracy especially in case of near obstructions but will increase calculation time dramatically. The default of 1000m is a good compromise between accuracy and calculation time and will cover most cases.

Use Best Case Elevation

With SRTM3 or SRTM1 elevation data enabled the use of precise locations is strongly recommended. If only 6digit Maidenhead locators are available the software will set the location to the centre of that grid square automatically. The dynamic range of SRTM data is very high so that the calculated centred location can be very near to an obstruction, especially in a hilly environment. This will result in a completely wrong path calculation!

The option “Use best case elevation” will use the highest elevation within the given grid square instead of the centre automatically if a precise location is not available. The path calculation is too optimistic then in most cases but it helps to avoid false results.

The use of the much smoother GLOBE elevation model does not cause such severe errors.

Export to CSV

You can export the calculated path to CSV for further considerations. The structure is described in the Appendix.

Show Simple Crossing History

The path crossing history allows you to iterate through the plane position history recorded in the database and sets the corresponding plane positions in relation to the calculated path. The default step width is 1 minute.

The simple crossing history is showing the amount of “good” planes (Count_Hi) and “bad” planes (Count_Lo) for each step in the given time span. This gives you an easy overview on which times AS is more likely than on others.

Show Path Analysis

The path analysis is showing a detailed path analysis in conjunction with an automated beacon monitoring system (e.g. PI4 with OZ7IGY). This function is still under construction and will be described later.

6.9. Tab "Planes"

The “Planes” tab is showing basic plane feeds and plane database options.

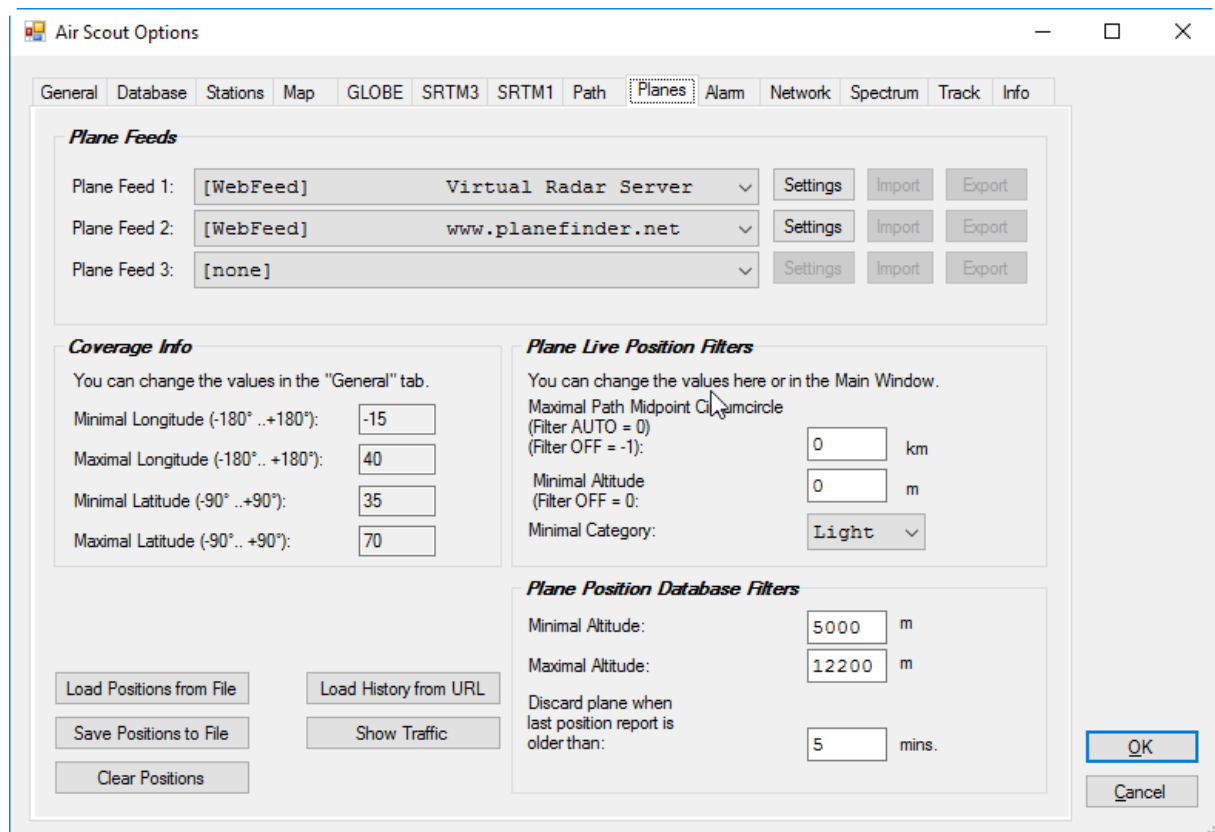


Figure 6-10 Planes tab

Plane Feeds

You can enable/disable plane feeds here. Furthermore, multiple Internet feeds from different URLs with different formats can be activated simultaneously. Some feeds have setting to change it to special needs. Do not change them unless you are exactly knowing, what you are doing. Special keywords are supported in the URLs to fit the request to the covered area. See appendix for details. Some feeds can export/import their settings. You can use this to interchange your settings with others.

Normally the simultaneous use of more than one stream is producing best results. Anyway, sometimes inconsistencies between two feed may occur and you will see doubled plane icons with slightly different positions or call signs. In this case or to reduce network traffic it is recommended to disable multiple feeds. One single feed will produce a traffic of about 2MB/min.

Plane Live Positions Filter

You can enter live filter options here for showing planes on the map. The filtering will apply after the database filter and is only for display. The settings are similar to these on the program's main page.

Maximum Path Midpoint Circumcircle

Is used to define the maximum distance away from the path a plane can have to show it on the map. The distance is calculated from the midpoint of the current path. Except entering a distinct value into the box you have two more options:

Value = 0 (Default): Planes are shown in a radius of half the distance between both QSO - partners around the midpoint

Value = -1: All planes inside the covered area are shown regardless of the radius

Minimal Altitude

Is used to define the minimum altitude plane must have to show it on the map. Except entering a distinct value into the box you have one more option:

Value = 0 (Default): All planes are shown regardless of their altitude

Minimal Category

Is used to define the minimum category plane must have to show it on the map. Default is "LOW" means all planes are shown on the map.

Plane Positions Database Filter

You can enter filter options here for position database. The filtering will apply before the plane positions are stored in the database. All planes sorted out by this filter are lost and cannot be restored later when changing the filter settings. Using this filters will keep the database small. Some web feeds allow to set the filter as parameters on the request.

Minimal Altitude

Is used to define the minimum altitude plane must have to store it in the database. Default is 5000m.

Maximal Altitude

Is used to define the maximum altitude plane can have to store it in the database. Default is 12200m.

Minimal Category

Is used to define the minimum category plane can have to show it on the map. Default is "LOW" means all planes are shown on the map.

Discard plane when last position report is older than

You can enter a plane positions "Time To Live" here. If the last position report is too old to estimate a current position the plane object is discarded and not used anymore. Set to 5 minutes by Default it is sometimes recommended to extend the time span. This will cause bigger estimation errors but is necessary when plane position reporting is delayed (e.g. by federal law in the U.S.).

6.10. Tab "Alarm"

The "Alarm" tab is showing basic alarm settings. To generate an alarm, the software must be in "Run" mode and at last one action must be defined in "Alarm Settings". It is not possible to watch multiple paths to different QSO partners in background.

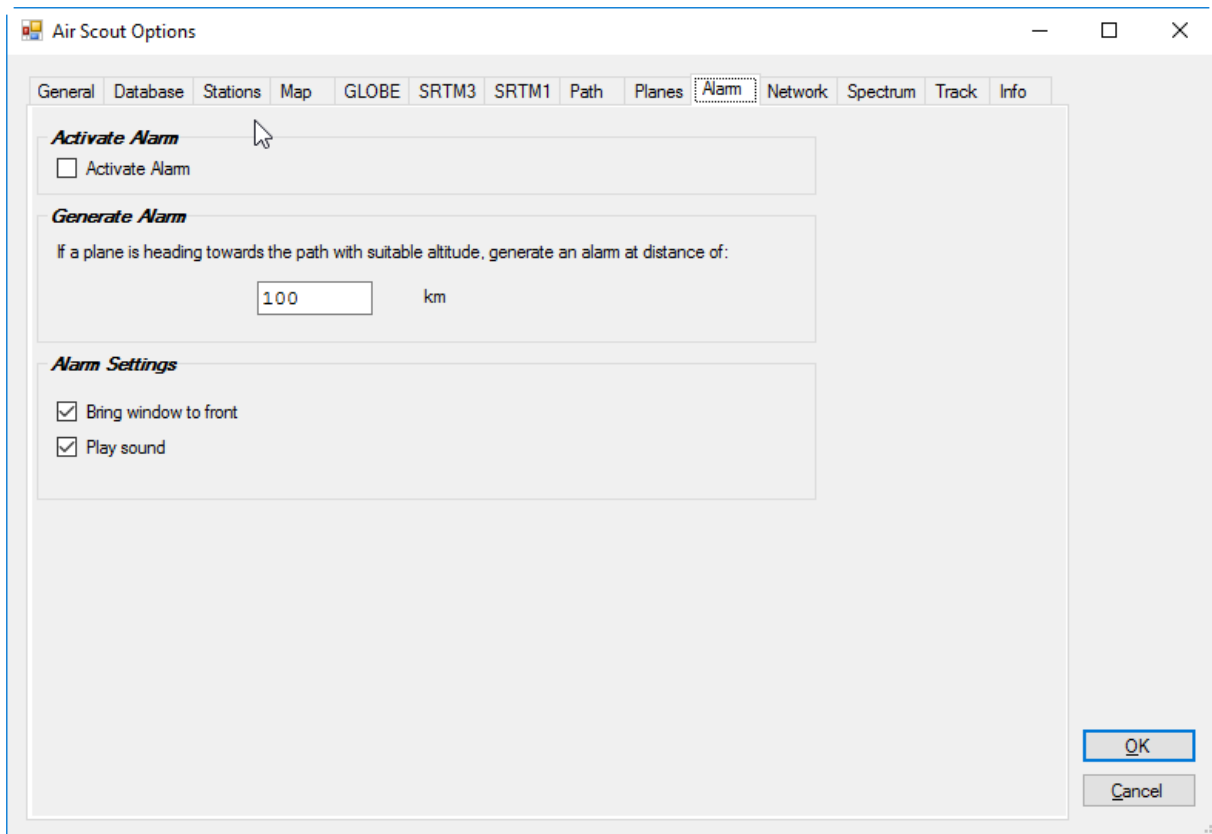


Figure 6-11 Alarm tab

Activate Alarm

You can enable/disable an alarm here. The same function is available on the main program window.

Generate Alarm

You can set a minimum distance an aircraft must have to generate an alarm. An alarm is generated if one aircraft is within the given range. There is no acknowledgement to the alarm; simply switch it off. AirScout cannot handle multiple alarms or alarm on a single aircraft so far.

Alarm Settings

You can set the behaviour of the software in case of an active alarm. You can bring the program's main window to front (may cause some issues under Windows XP) or play a system sound in an endless loop.

6.11. Tab “Network”

The “Network” is showing basic network settings for use with wtKST and other software.

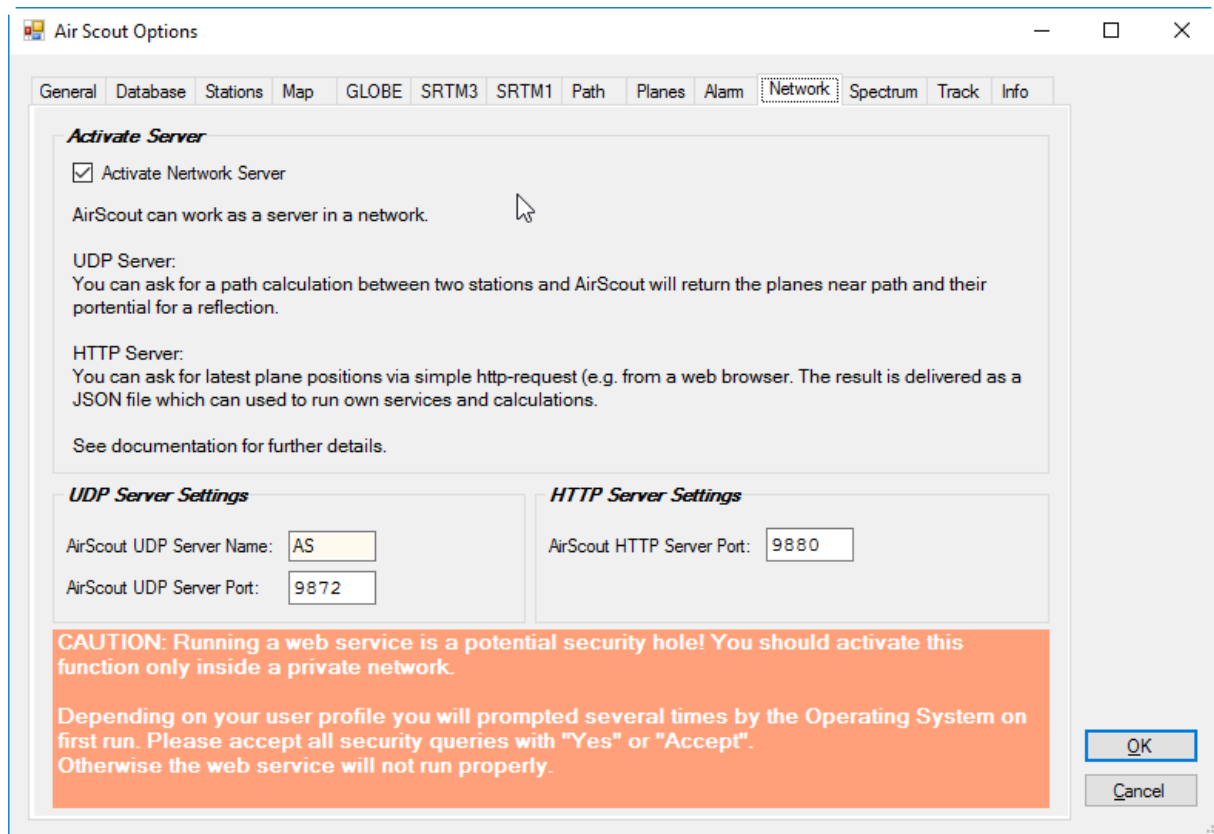


Figure 6-12 Network tab

Activate Server

This allows AirScout to act as a server in the network.

UDP Server Settings

The UDP communication is a broadcast similar to the Win-Test contest logger communication (see Appendix for protocol description). You can have more than one server/client active in the same network.

AirScout UDP Server Name

Set a unique server name here for your AirScout server. The name is used to identify different servers in the network. The name must match with all clients which want to communicate with a server.

AirScout UDP Server Port

You can set the UDP port for broadcasting here. The port number must match with all participants in the network and must not collide with any other network communication. Do not change it unless you exactly know what you are doing here.

HTTP Server Settings

The HTTP communication is used to provide aircraft positions via JSON file on request. This is similar to plane feeds on web. Use "http://<IP address of AirScout server>/planes.json" to get the JSON file.

6.12. Tab “Spectrum Lab”

The “Spectrum Lab” tab is showing basic settings to interact with [Spectrum Lab Software by DL4YHF](#). Starting from V1.0.0.0 AirScout can capture a NF spectrum from a receiver with the help of Spectrum Lab.

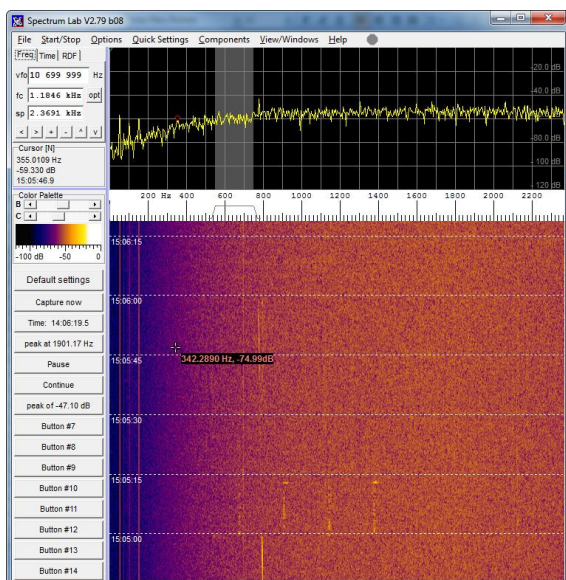


Figure 6-13 Spectrum Lab Screenshot

AirScout can get FFT data from Spectrum Lab via Network using basically the same technology as position data (JSON files). You must have Spectrum Lab software running using default settings. To communicate with AirScout you have to activate the http – server functionality in Spectrum Lab options. There is not much error checking right now, so don’t wonder if you get unexpected results.

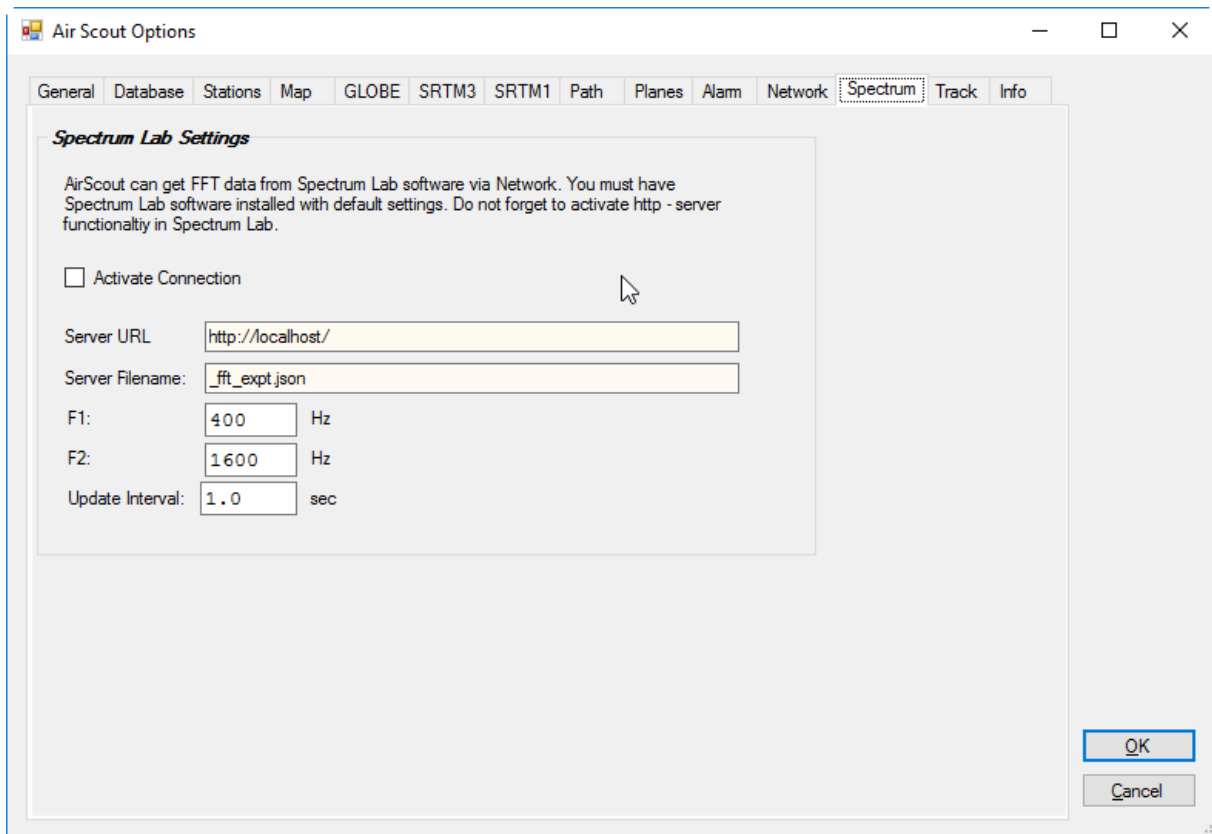


Figure 6-14 Spectrum Lab tab

Activate Connection

You can activate the connection with Spectrum Lab here.

Server URL

This is the Spectrum Lab server URL which is “localhost” by Default.

Server Filename

This is the FileName for the FFT data from Spectrum Lab. Do not change this unless you know what you are doing.

F1

This is the lower bound of the recorded frequency range

Minimum: 0 Hz
Maximum: 3000 Hz

F2

This is the upper bound of the recorded frequency range.

Minimum: 0 Hz
Maximum: 3000 Hz

Update Interval

This is the update interval AirScout is asking for new FFT data (Default = 1sec).

Minimum: 1 sec
Maximum: 60 sec

6.13. Tab "Track"

AirScout has an experimental antenna tracking function. When activated you can track a single plane which is selected by left clicking on it. Multiple selections are not allowed. AirScout is then showing two instruments on the lower right corner of the map with current azimuth/elevation values. There are several tracking outputs which can be used simultaneously.

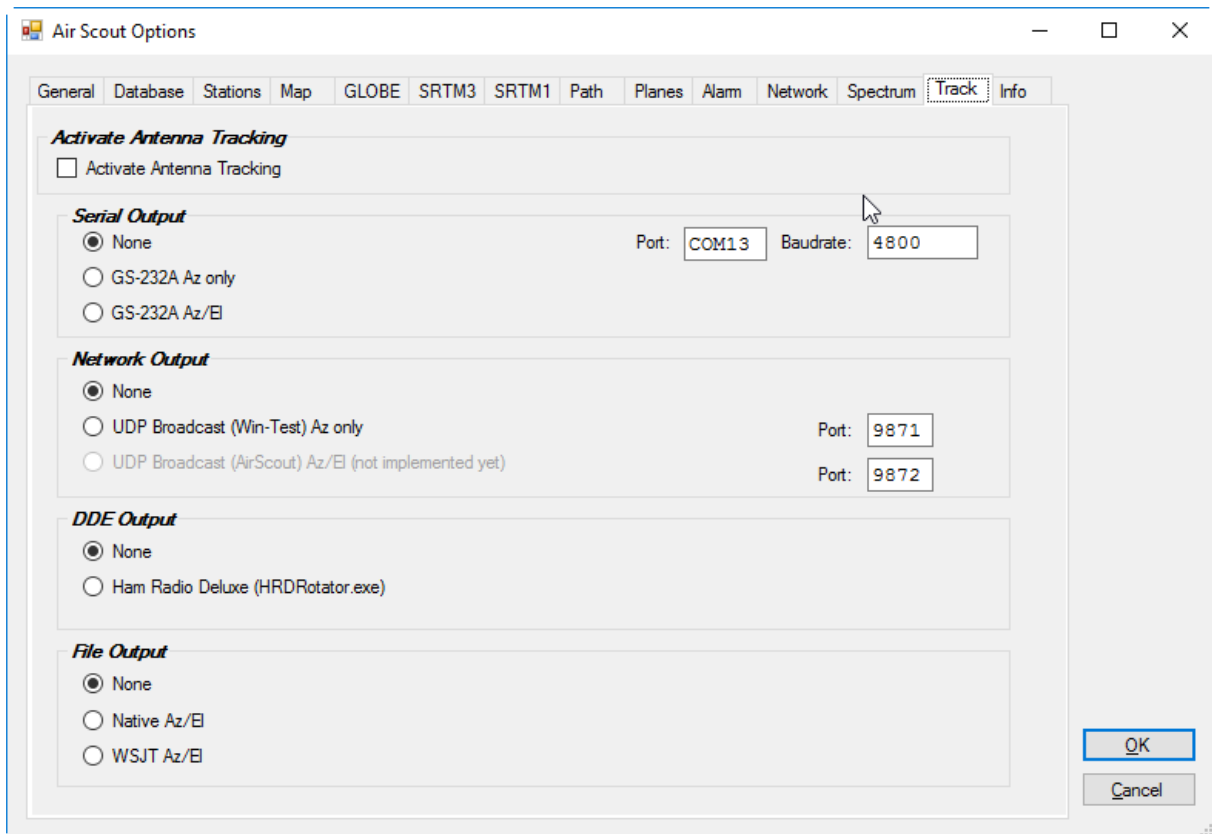


Figure 6-15 Track tab

Activate Antenna Tracking

Activates the antenna tracking. You can select only one plane on the map when activated.

Serial Output

Generates a serial output for direct control of a Yaesu/Kenpro rotator GS-232A. No other rotator type is supported so far.

Network Output

Generates a UDP output to interact with Win-Test wtRotator software (Az only).
Second option is a AirScout protocol with Az/EI values for special purpose.

DDE Output

Uses a DDE communication with Ham Radio Deluxe rotator control software (Az/EI possible).

File Output

Generates a simple file output periodically which can be read by any other program. Second option is file output in WSJT style which can be read by several rotator control software.

6.14. Tab “Info”

The “Info” tab is showing program and version information, copyrights and acknowledgements.

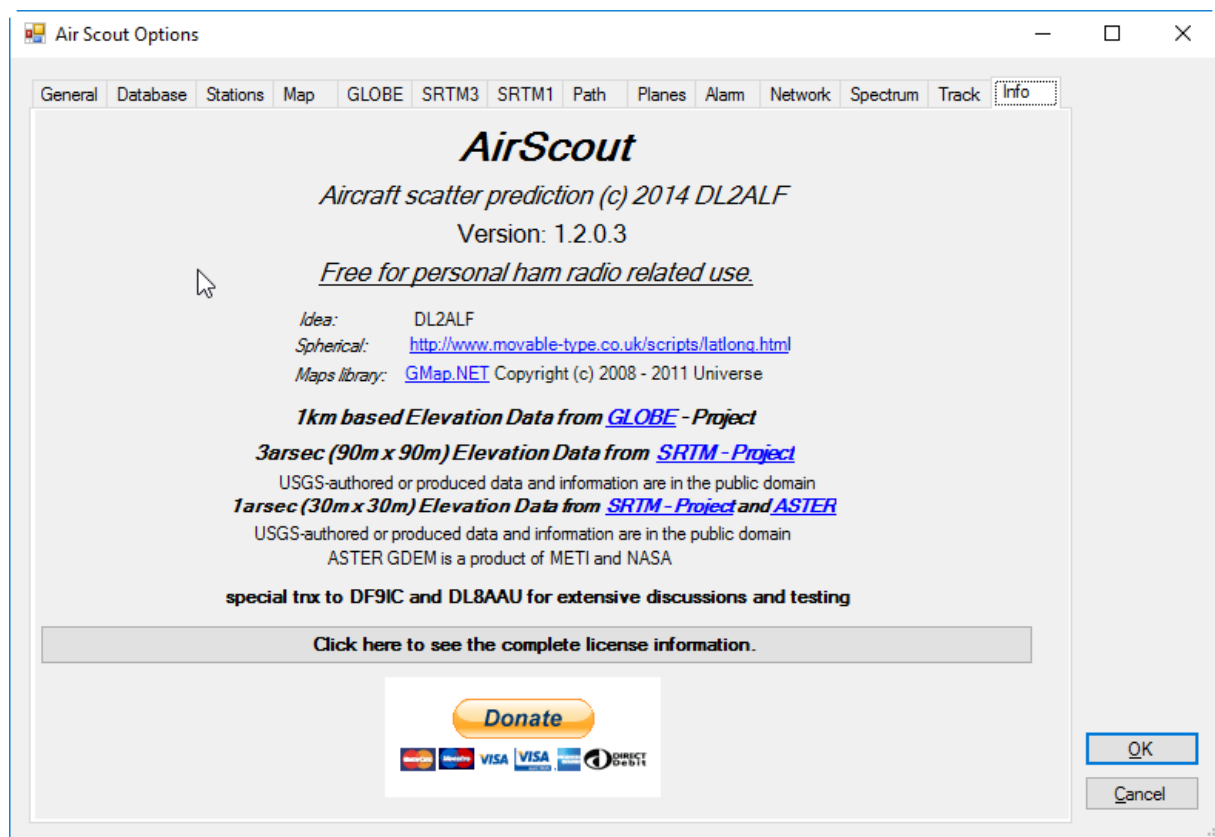


Figure 6-16 Info tab