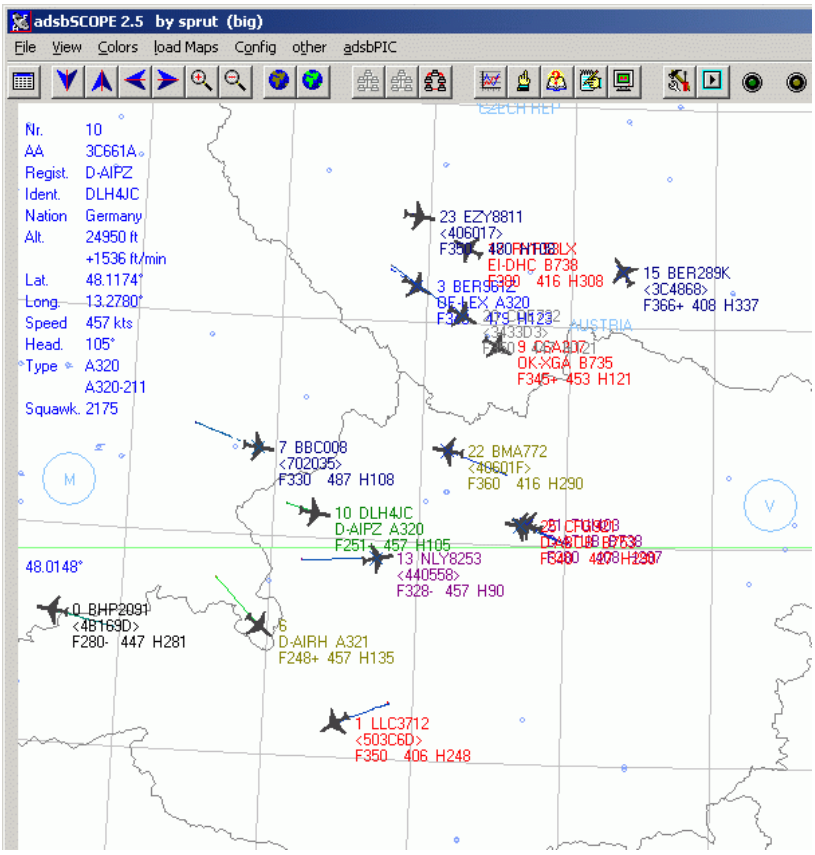
Quickstart-Manual for the adsbScope Software V2.7



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Date: 18.04.2014

Download

Download the file **adsb_all.zip** from my homepage (http://www.sprut.de/electronic/pic/projekte/adsb/adsb_all.zip)

Hardware

Beside your PC (with MS-Windows) you need antenna, receiver and decoder. If your decoder doesn't has firmware installed, then look into the regular handbook how to install the firmware.

Interconnect antenna, receiver and decoder. If you have a Beast, GNS5890 or microADSB then connect it with the antenna.

Installation

Driver for adsbPIC, microADSB, GNS5890

From the file **adsb_all.zip** extract the subfolder **adsb_all/driver/for_adsbScope/cdc** into a folder of your PC. Install the CDC-driver.
If you are planning to upgrade the firmware, then you will have to install the libusb- or MCD-driver too. In this case please read the handbook.

Driver for Beast

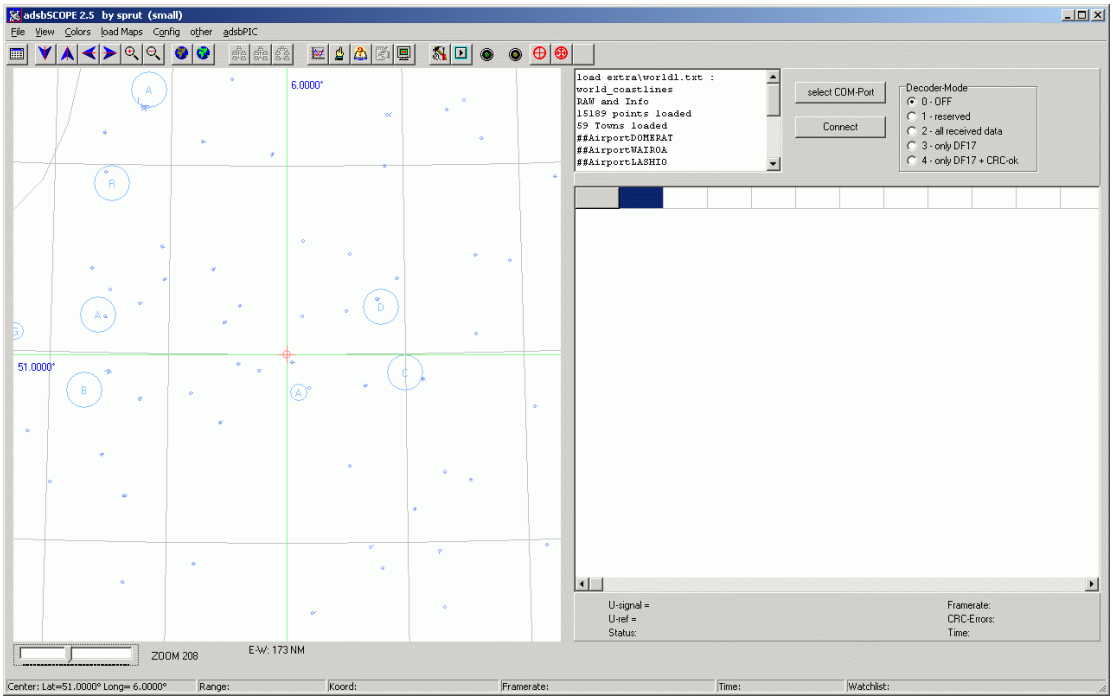
Install the FTDI-driver from http://www.ftdichip.com/Drivers/VCP.htm

Now connect the decoder via USB with your PC. It will be detected as additional COM-port of your PC.

From the file **adsb_all.zip** extract the subfolder **adsb_all\pc_software\adsbscope\27** with all its subfolders into a folder of your PC. This is now the program folder.

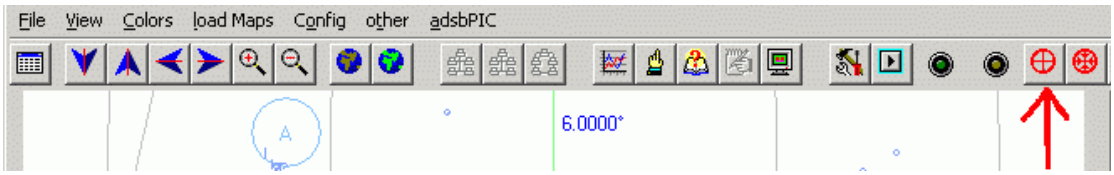
Start

Start the executable file **adsbscope27_16384.exe** or **adsbscope27_256.exe**. (program folder) After some seconds you will see the primary program window.

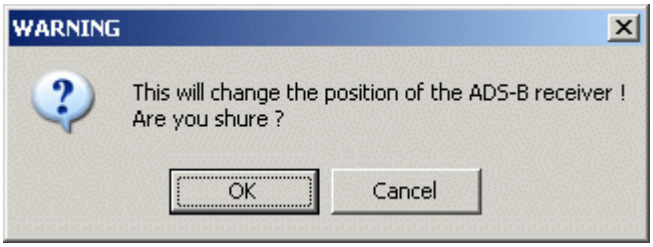


Your Geographic Location

In the left part of the program window you can see the graphic display.
Use the mouse inside this graphic display to change the zoom level (right mouse button pressed) and the location of the center of the graphic display (left mouse button pressed) until the center of this display is (more or less) identical with your geographic location.
The zoom level should be large enough, thus the display covers the area of interest. Below the graphic display is a label **E-W xxx NM** that shown the span of the area in nautical miles. A value between 150 NM and 250 NM should be ok for first tests.
Click on the **set receiver location** button (red circle with red crosshair).



You will see a warning dialog, click on the **OK** button.

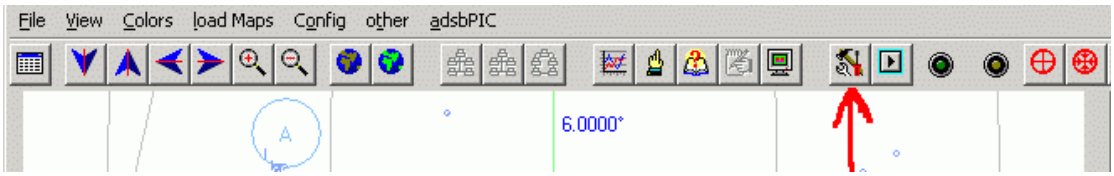


Select Your Decoder

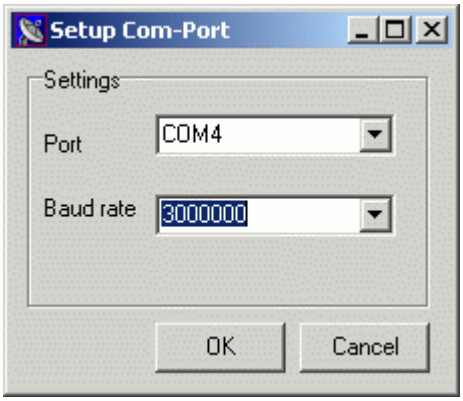
Click the **Decoder** Menu point and select the type of your decoder.

Connect

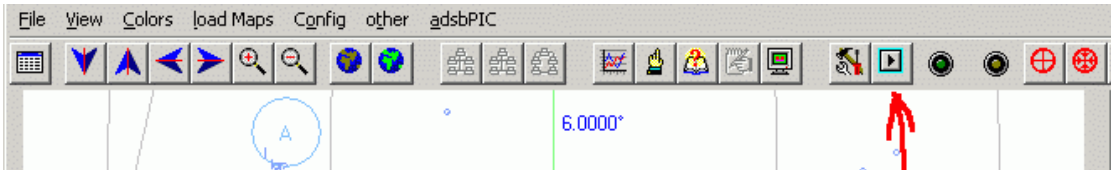
Click on the **select decoder-COM-port** button (toolbox-symbol).



A little setup-window opens. Here you choose the correct com-port number for the attached decoder.
If you have a Beast, then select the correct baud rate for your Beast. The Beasts factory preset is 3.000.000.
Then click **OK** to close this window.



Click on the **connect to decoder** button (play symbol).



The upper right text box will list some information about the decoder. Then it will list the received RAW data.

The table at the right side will list the detected aircraft.

The graphic picture will show the position of aircraft with known location.

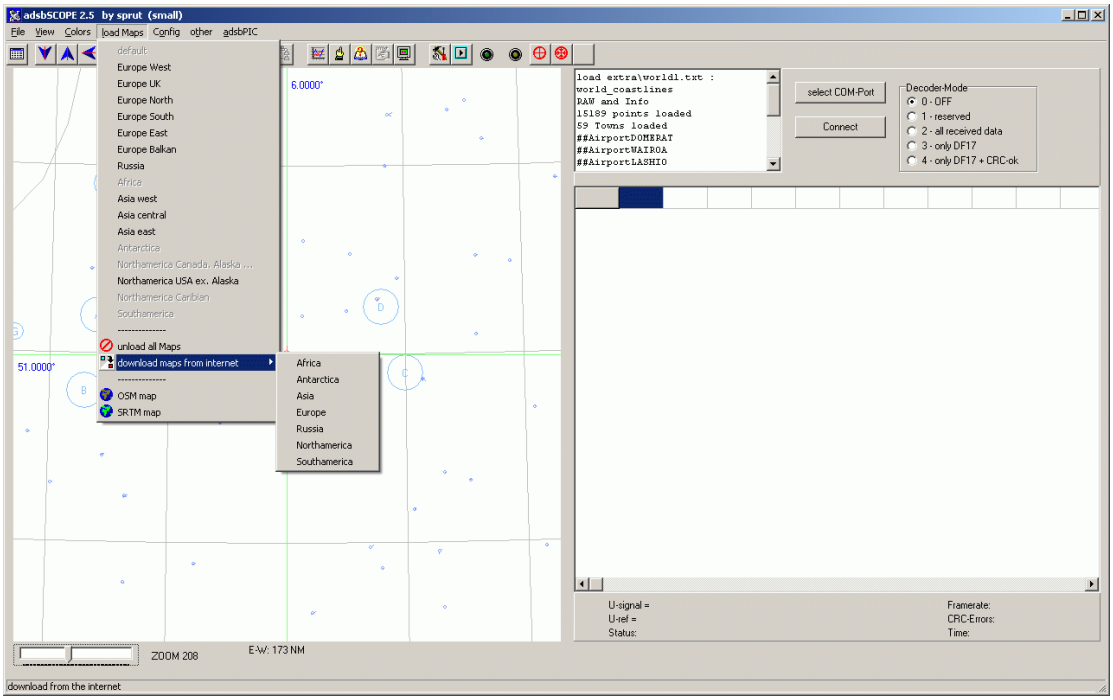
***You just entered the world of ADS-B*.**

If everything works fine, then you should save the setup with the menu point **File - save default**.

Maps

Now you should make visible the borders and precise coastlines of your living area. Check the menu point **Load Maps**. There are several sub-menu-points for different areas of the world from **Europe West** to **Southamerica**. Some points are printed black, others are printed in gray.

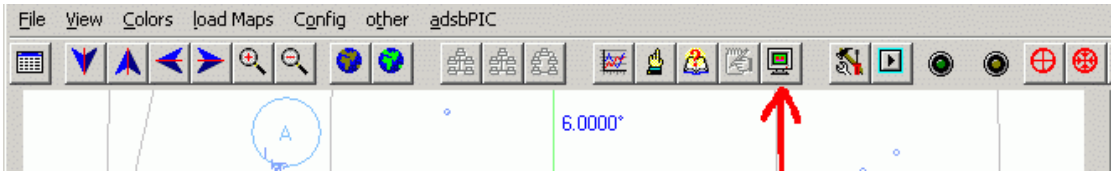
If your area is gray, then you have to download the necessary maps from the internet. Use the submenu-point **download maps from the internet**, and click there on the correct continent-name. Some seconds later the name of your area should be printed in black color.



Click on the name of your area to load the maps. (Now it becomes gray again, but this is OK. A little check-symbol left of the name marks the loaded map)
The outlines of the states in your area are now visible.

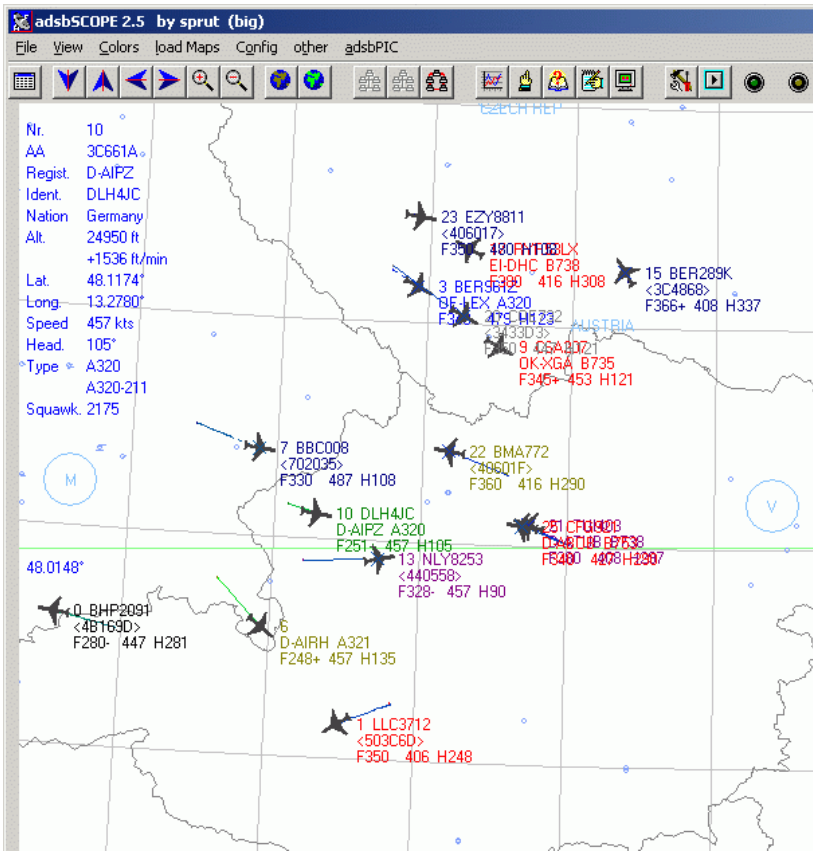
Size of graphic Display and Table

The width of the table at the right side of the program window is constant. If you change the size of the program window, then only the height of the table is changed.
The rest of the program window is occupied by the graphic display. To maximize the size of the graphic you can maximize the program window. If you like to have a much bigger graphic, then double-click into the graphic picture. As an alternative you can click on the **maximize/normalize graphic display** button.

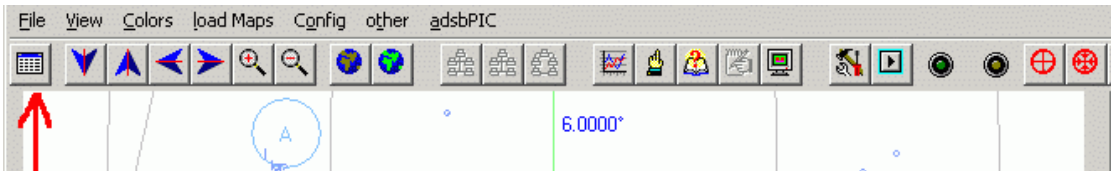


Now the graphic occupies nearly the whole program window.

The table is now eclipsed. To get information about a single aircraft, simply click on the aircraft-symbol in the graphic picture. Then the upper left corner of the graphic shows detailed aircraft information as a data overlay.



If you now like to look at the table, then you can double-click again. But maybe it is easier to click on the most left button (big table). It opens a second program window, which contains only a bigger version of the table (with more information). Let us call it the big-table-window.

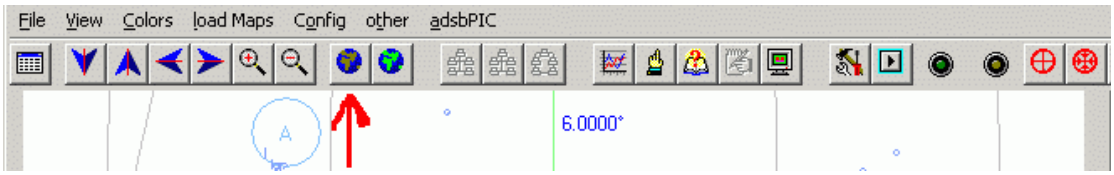


This big-table-window contains a little button to switch back to the primary program window. It is now very easy to swap between these both windows.

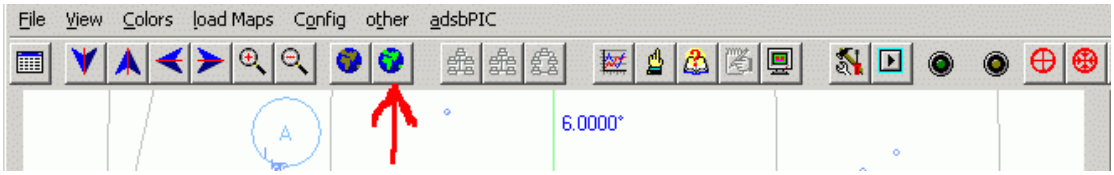
If you have a PC with two monitors, then you can shift the big-table-window to the second monitor and look at the big graphic and the big table at the same time.

Background

By a click on the globe-symbols **generate osm map**



or **generate srtm map** you can activate a background image for the graphic display.



This needs some seconds and requires an internet connection to generate such a background picture.

The OSM-picture comes from the open-street-map project and looks like a regular street map. You can use it to check your receiver position (if you zoomed in) or to see details of airports. But often it contains too much information without direct use for you.

The SRTM-picture comes from my homepage and is based on NASA-radar-data from the year 2000. It shows the topographic structure (height profile, coastlines).