CodaBot

official dESPair Flightdata compressor, analyzer and transmitter

v1.2

User Manual

CodaBot is the official dESPair flightdata data transmitter, used in our various missions and certification trips.

CodaBot reads the X-Plane.out data file, parsed the lines, let you choose the compression rate, plot the data, save the compressed (downsampled) data for later use, or send the compressed data directly to the dESPair headquarter.

This manual describes step by step how to use the CodaBot 1.2 tool.

DISCLAIMER - LEGAL MUMBO JUMBO

CodaBot 1.2 is freeware. This means, you can use it for your private enjoyment without having to pay a dime.

However, you are not allowed to redistribute CodaBot under any circumstances, and no commercial use or redistribution is allowed without written permission of the author.

CodaBot is provided as is. No support is given outside the dESPair realms. No claims has been made that this software will be updated or bug fixed.

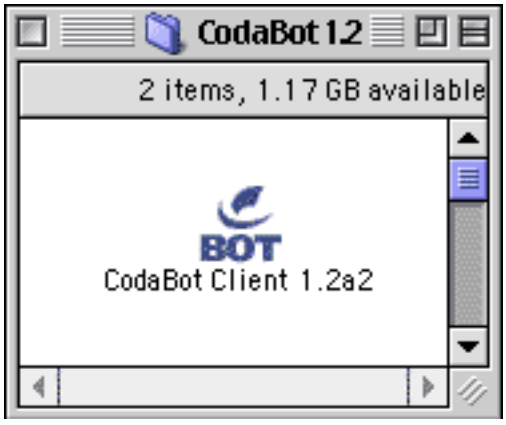
You use this software at your own risk. We are not responsible to anything this application does to your computer, software, data, sozial and economic aspects of your life.

Using the software is an agreement to this terms. If you sidlike this, then simply delete the software and don't bother me.

Our lawyers are happy... now, have fun!
Roland

aka. Capt. Habakuk the Seagul
CEO dESPair

Installation of CodaBot



Unpack (decompress) the downloaded archive. (Mac: StuffitExpander, PC, Winzip).

You're done with installation.

Read the docs of the mission dESPair packages to learn how to output the proper data from X-Plane.

Step 1 - Startup CodaBot

Doubleclick CodaBot application to start it up. You will see the splash screen.

Clicking on the splash screen brings up the main window of CodaBot.

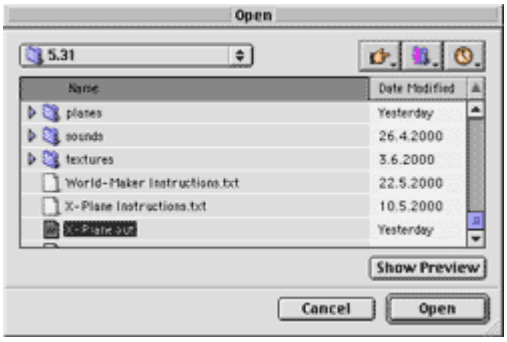
Step 2 - Loading flight data

As you can see, there are just two buttons enabled at the moment.

You can either load new flight data from the x-plane.out file, or quit the application.

To load new flight data, click the "Load source file" button.

Step 2 ff



Locate the X-Plane.out file, residing in the root folder of your running X-Plane system.

Again, read the mission docs to learn how you make XP writing the data to the output file.

CodaBot now begins to read the file, and in a next step, it parses the data. If you have selected many output parameters, and/or you have recorded a long flight, this might take some time.

Once this process has finished, the "Load source file button" is disabled, and the next button - "Downsample data" is enabled.

Step 3 - Downsample data

XP outputs 10 data points per second. This is way more than we need for flight analysis. Thus, you downsample the data by selecting the downsampling rate.

1:2 means each second data point is used, 1:100 means each 100th data point is used.

A 2 MB .out file downsampled with 1:25 will result in approx. 60kB data.

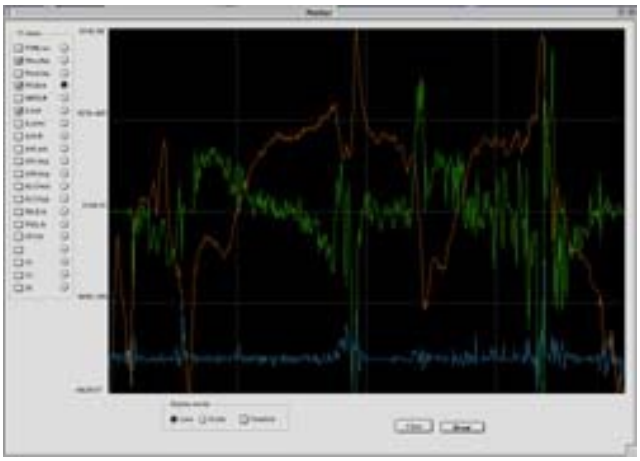
Once the downsampling is done, the button isa disabled and the next button "Plot data" is enabled.

Step 4 - Verifying/analyzing the data

You can skip this step, if you are about to send the data to HQ for further analysis. But it can be educative if you look at the data.

For in-depht analysis, the data can be saved in tab delimited format, for use in any spreadsheet. See step 6.

Clicking the trinagle will bring up a table showing the data. This may take pretty long time AND requires huge amounts of RAM (32Megs and up). This feature was introduced for debugging, and isn't very usefull.



Clicking on the "Plot Data" button brings up the Data Plotter window.

Select any checkbox to get that data plotted in the window.

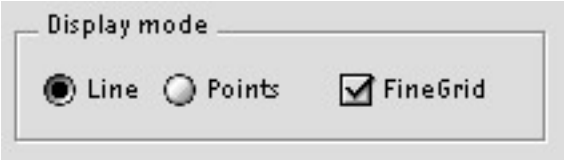
Select any radio button to have the respective scale (y values) being active and displayed.

Click on the canvas to have a vertical line being drawn.

Command-Click to have a vertical line being displayed, together with the respective y-value.

Step 4 ff

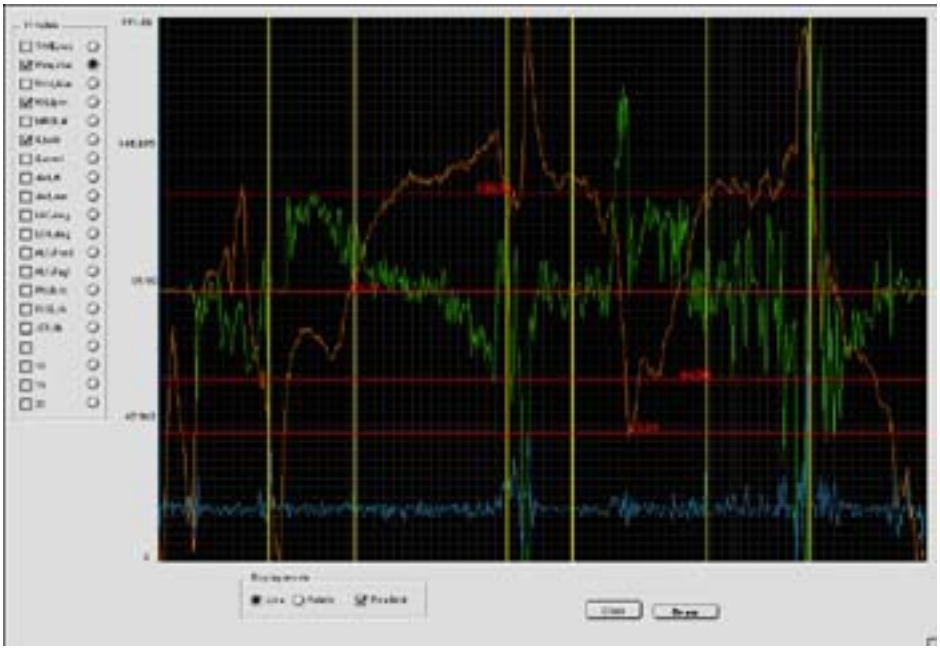
You can have the datapoints being plotted as points, or as lines. If you have downsampled the data 1:100, you may be better off with lines. Drawing points is a bit faster if you display multiple categories at once.



To the right, you see a sample screen of the plotter.

I have clicked a couple of times and got the yellow vertical lines.

Command-clicking draws a horizontal line and displays the respective y-value (depending on the radio button you have selected).



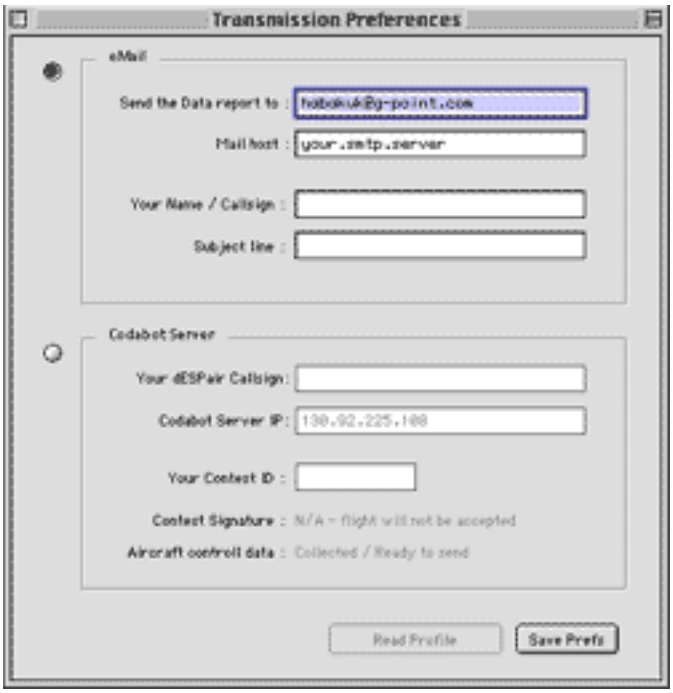
Ctrl-Clicking or changin any radiobut-ton or checkbox redraws the plots and erases all lines.

Step 5 - Data transmission

Now it's time to send the data to the dESPair HQ.

First time you run CodaBot, you need to click the triangle left of the "Configure Network" text, to set up the required network data.

CodaBot can send the data in two ways:



eMail
Select eMail radio button and fill in the form.

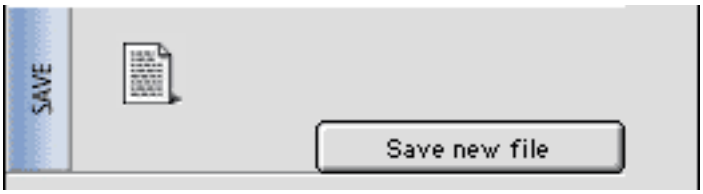
Read the mission docs to know where to send the report to.

Please supply your callsign and a descriptive subject line (as told in the mission docs).

Click "Save Prefs" to save the entered data. Next time you startup CodaBot, these values will be predefined and active.

Codabot Server
This feature is currently disabled as the Server is not yet running stable enough. later, CodaBot will be enabled to log directly into the CodaBot Server running in the dESPair HQ.

Step 6 - Saving the data



We recommend that you save the data no matter if the transmission was successfully or not.

If something fails on the recipient side, you might be happy to have the data still on your system.

So, after transmission, click the "Save Data" button and save the file anywhere you like.

CodaBot output is a tab delimited text file, so you can drop it on Excel or any other spreadsheet and analyze the data at your leisure.

Last notes

If you are going to process huge data files, give CodaBot as much RAM as you can.

CodaBot should be running on Win98 and maybe win2000.

I have tested it on my VirtualPC running Win98 - and it works nicely.

Clear sky!
Hak