FS Instructor V4.10

2020 February

FS Instructor is a tool suite used for plane preparation, monitoring and interaction between pilots and the instructor.

Dan Guimbert – contact@fsinstructor.com

Contents

1 What's new?

Version	Date	Modification
V4.10	February 2020	**Beware: add-ons Simconnect like DoDOSIM have to be redeployed in V4.10 version due to a SimConnect upgrade** **New** - Add P3D V4.5 support - FMS PAGE supports PROSIM A320 - Add a feature to find Radio Com frequencies - New FSUIPC dll - COMPUTER page is accessible without Sim Connection allowing to stop the entire cockpit when Prepar3D is stopped **Fix** - you can't set FREEZE and EXIT features to be open in a dedicated window (SETTINGS> MENU PAGE) - If you kill P3D/FSX, you could have a FSUIPC ERROR - During Soft Launcher validation test, an error "Hello" appeared
V4.09	August 2018	**New** - POSITION PAGE - Change the speed selection look - Add ILS interception - MAP PAGE - PLOT is reset after an aircraft Move - Add BEARING/DISTANCE of Point on the map - APPROACH GRAPH REPORT - PDF creation shows a progress bar during build - After a MOVE, change the window "UNFREZZE" - PROSIM: change the trim calculation **Fix** - APPROACH GRAPH REPORT - FIX: Error in the report name
V4.08	May 2018	**New** - New refuel engine - RFID badge integration - aircraft page shows now the current available engines only **Fix** - Temperature could be stuck to 40°C - On EHAM TAMPA and KAIH add-on sceneries (bad runways) – please rebuild your database - Approach graph supports negative ground altitude - If mode FORCE FULLSCREEN/ON TOP, when clicking on METAR, you don't see the window and it stuck the interface - When you created a new situation, if the name contained forbidden characters (as "/", "*"), P3D didn't record this situation
V4.07	February 2018	**New** - Add your own elements on the map (vectors, texts…) - PROSIM 737 V2 support - Google Earth Pro support **Fix**

		- Google earth tracking issue - Reports are now stored in OUTPUT directory - Virtual keyboard is not visible by default - REPORT: spoilers appear only for JET aircraft
V4.06	December 2017	**New** - Several WideClient connections shared on different FS Instructor instances (for PRO version only) on the same Windows session. **Fix** - Generated files are no longer stored in My Documents. Now they are created in your FS Instructor/OUPUT directory - Your own failures.txt has to be stored in the CUSTOM directory
V4.05	October 2017	**New** - Add a virtual keyboard for tablet users - DME navaids appear on the map **Fix** - POSITION > Runway buttons size fixed - SELECT A PAGE: this menu appears only when we are connected - Database generation: better add-ons management
V4.04	June 2017	**New** - Prepar3D V4.x support - Soft launcher V4 implementation - Password protection to open the settings dialog - Dodosim PRO support – dedicated Add-on - New Prosim implementation (B737/A320) - Full adaptation for light, jet or helicopter - Open Architecture with our SDK: Developers can create FS Instructor add-ons (ask us our SDK).

2 Install and start

2.1 Requirements

HARDWARE

- CPU: At least Intel Core i5 1,40 Ghz (poor performance expected in the MAP page)

SYSTEM

- PC or Tablet PC (running Windows OS)
- *Windows Vista to* Win 10 - 32 or 64 bits
  Screen resolution higher than 800 x 600
- *.NET Framework 4.5 (*https://www.microsoft.com/fr-fr/download/details.aspx?id=49981)
- *Peter Dowson's FSUIPC* registered version 4.9 and 5.x.
  For a remote use:
  - *WideFS* (6.9 and higher) http://www.schiratti.com/dowson.html set and tested
  - A good network (avoid Wi-Fi) - 100MB or Higher recommended)

SIMULATORS

- Lockheed Martin Prepa3D® V1.x to V4.x
- Microsoft Flight Simulator FSX™, ESP™, STEAM edition (FSX se)

Add-On supported

- PROSIM737 and PROSIMA320
- Ifly thru *iFly to FSUIPC V2.x module.*
- *Project Magenta*
- *Jeehell A320 (as standard)*
- *AST 320 (as standard)*
- *All standard aircraft*
- Dodosim (dedicated plugin for the DODOSIM PRO users)

➔ X-PLANE is not supported, even though XUIPC gateway.

2.2 Support

Support is exclusively done via email: contact@fsinstructor.com

We don't support issues between WideFS and FSUIPC. Try to read chapter 2.3 (To check if the connection between WideFS and FSUIPC works) or contact the program's author.

2.3 To check if the connection between WideFS and FSUIPC works

If you launch FS Instructor on a remote computer, you have to use WideFS. It manages a communication with FSUIPC. It's a gateway between the instructor station and the remote Flight Simulator

You have to use the **last FSUIPC AND WIDEFS** release. (http://www.schiratti.com/dowson.html).

Read the WideFS handbook to install, set WideServer.ini file (On the Flight Simulator side) and WideClient.ini (On the FS Instructor side).

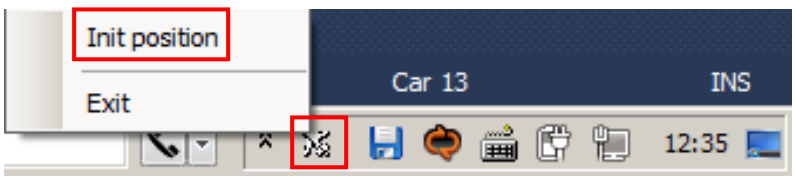
To check that it works, you have to read on the Flight Simulator window title « one client connected ».

2.4 Installation

- Install .NET Framework 4.5:
- Run FS Instructor V4.exe **as an administrator**

Note: At the first launch, a « FS_Instructor » folder is created in "my Documents". It stores necessary files. If this folder is deleted, it will be automatically created again but you will lose your license file.

- In certain cases, the application could appear outside of your screen. To reinit his position you will find an icon on the right of the task



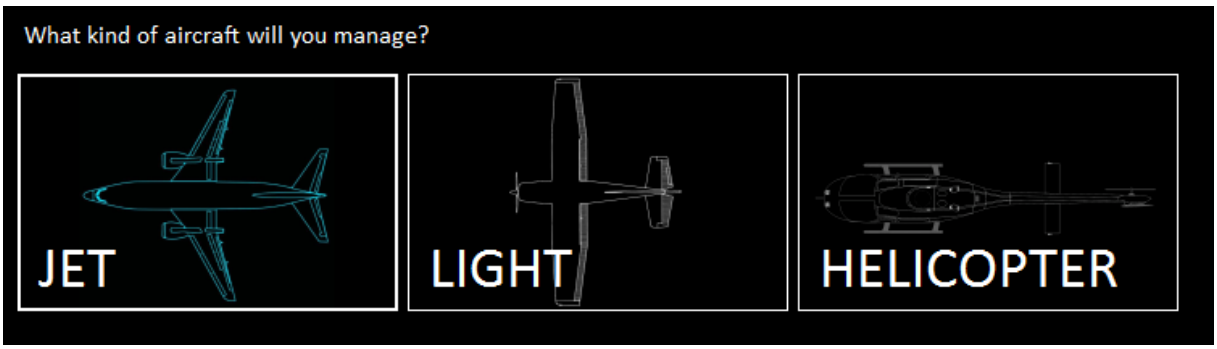
bar. This icon changes according to the launched application.

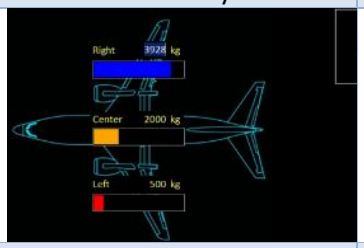
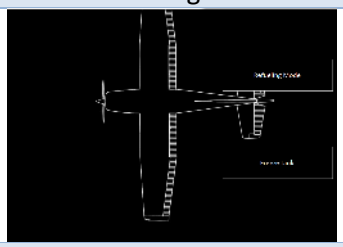
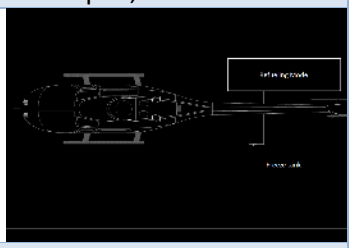
2.5 QUICK START

- Install .NET 4.5
- Check that Wideclient is well configured and communicates with Flight Simulator
- Start FS instructor as an administrator

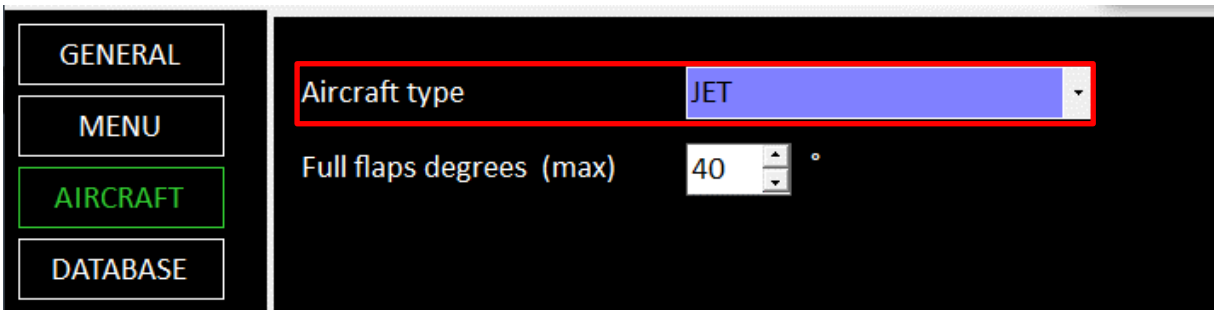
2.5.1 Aircraft type selection

During the first execution, a screen asks you which kind of aircraft you will use. Just click on one type.



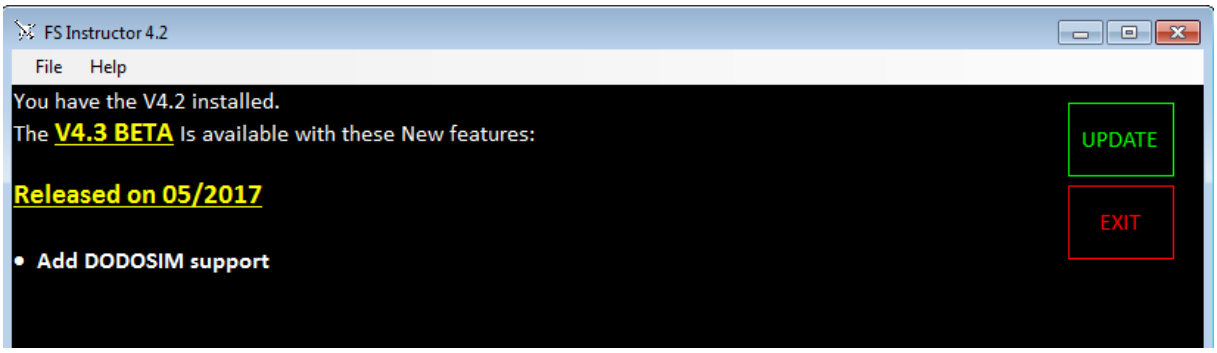
	JET	LIGHT	HELICOPTER
Circuit Pattern	IFR	VFR	VFR
Type of Gate	Medium and large	Small	-
Surface to land	Hard only	Hard & grass	Helipad, Grass & Hard
Background			
Menu	Pushback page FMS page	Pushback = deactivated FMS = deactivated	Pushback = deactivated FMS = deactivated
AIRCRAFT PAGE	Show FLAPS Show SPOILERS	Show FLAPS -	- -

You kind change this configuration later from the Settings Windows> AIRCRAFT



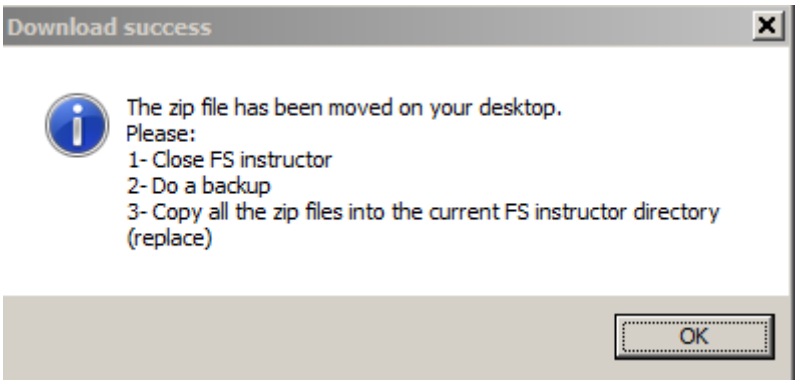
2.6 Update FS Instructor

To update your current release, use the “Check Update Online” feature (menu > File). It requires to be connected on Internet.



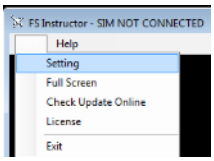
If a new version is available, you can use the “UPDATE” button. It downloads the new release.

If the download is successful a window appears with the procedure to install the new release.



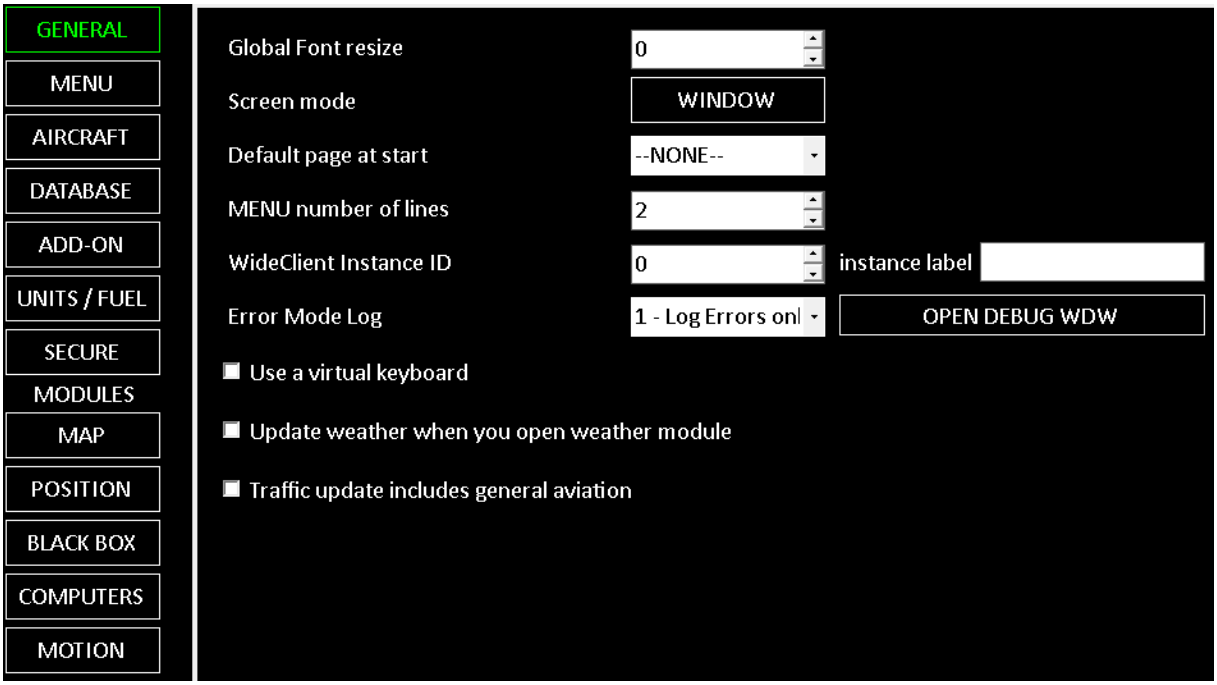
Note, when you update FS Instructor, it keeps your settings.

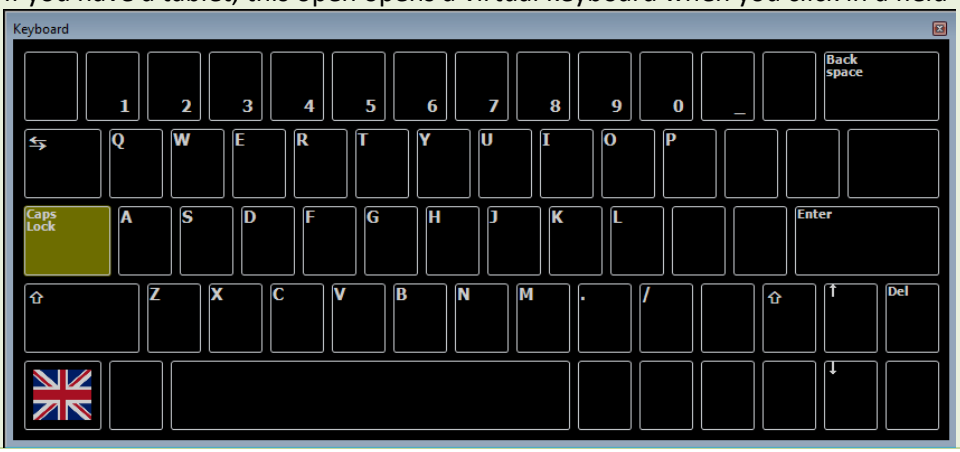
3 SETTINGS



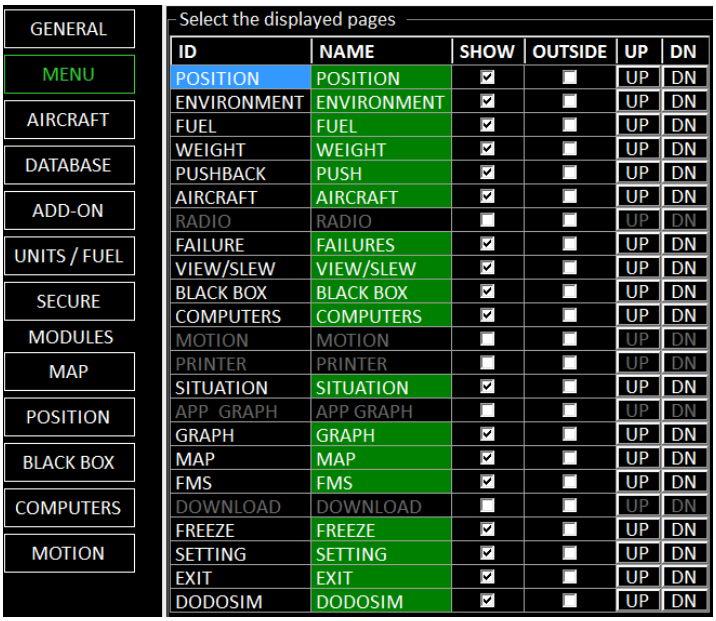
It is important to tune FS Instructor at the first start. Open the configuration windows from MENU > File > SETTING

3.1 General settings



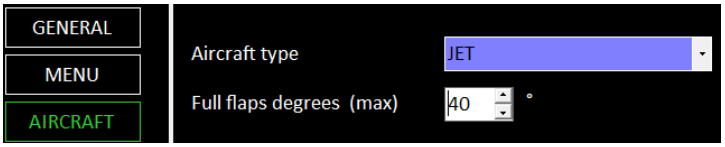
Global Font resize	It adapts the font size of the application
Screen mode	Switch from FULL SCREEN or WINDOWED
Default page at start	Choose if one page has to be opened when you start FS instructor
Menu number of lines	How the MENU buttons are distributed
Error Mode log	Use it only if you have troubles and you need to send traces to our support
DEBUG	It opens a new window to follow log traces
Use a virtual Keyboard	If you have a tablet, this open opens a virtual keyboard when you click in a field 
Update weather when you open Weather module	If you are using an external weather engine, you have to deactivate the automatic FS Instructor weather.
Traffic update includes General aviation	Traffic feature impacts Airlines density. By default, general aviation is OFF (0%). If you want to keep general aviation, you have to enable this feature

3.2 Menu Settings

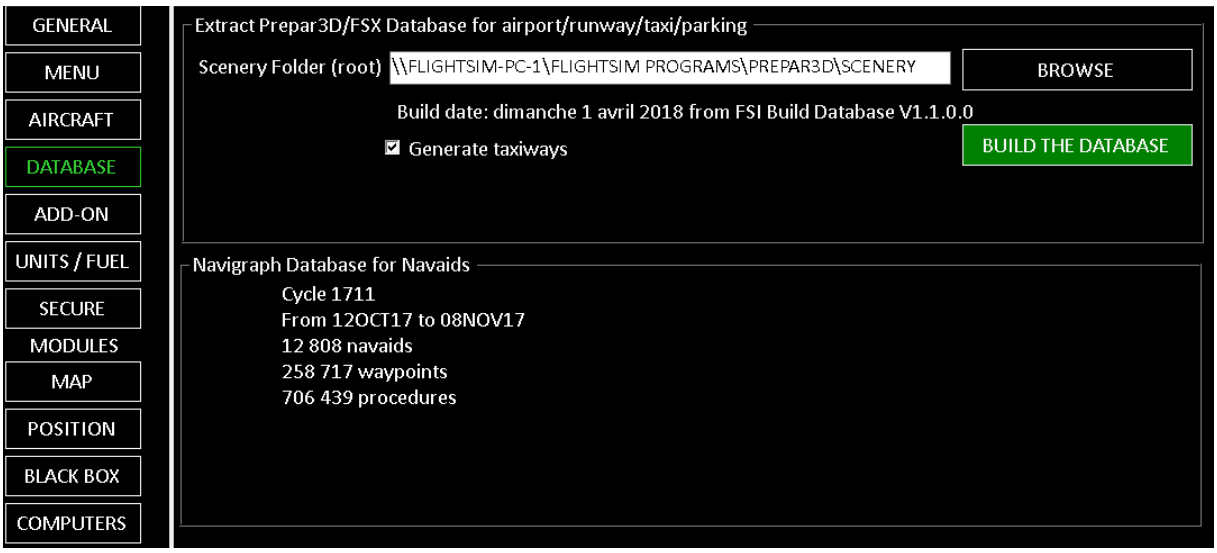


ID	NAME	SHOW	OUTSIDE	UP	DN
POSITION	POSITION	☑	☐	UP	DN
ENVIRONMENT	ENVIRONMENT	☑	☐	UP	DN
FUEL	FUEL	☑	☐	UP	DN
WEIGHT	WEIGHT	☑	☐	UP	DN
PUSHBACK	PUSH	☑	☐	UP	DN
AIRCRAFT	AIRCRAFT	☑	☐	UP	DN
RADIO	RADIO	☐	☐	UP	DN
FAILURE	FAILURES	☑	☐	UP	DN
VIEW/SLEW	VIEW/SLEW	☑	☐	UP	DN
BLACK BOX	BLACK BOX	☑	☐	UP	DN
COMPUTERS	COMPUTERS	☑	☐	UP	DN
MOTION	MOTION	☐	☐	UP	DN
PRINTER	PRINTER	☐	☐	UP	DN
SITUATION	SITUATION	☑	☐	UP	DN
APP_GRAPH	APP GRAPH	☐	☐	UP	DN
GRAPH	GRAPH	☑	☐	UP	DN
MAP	MAP	☑	☐	UP	DN
FMS	FMS	☑	☐	UP	DN
DOWNLOAD	DOWNLOAD	☐	☐	UP	DN
FREEZE	FREEZE	☑	☐	UP	DN
SETTING	SETTING	☑	☐	UP	DN
EXIT	EXIT	☑	☐	UP	DN
DODOSIM	DODOSIM	☑	☐	UP	DN

3.3 Aircraft settings



3.4 DATABASE SETTINGS

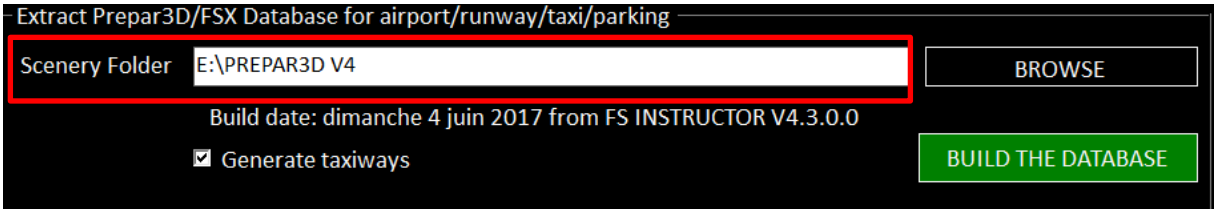


3.4.1 Update the airport/runway/parking/taxiway database

Runways, Airports, Taxiways, parking are extracted from your own sceneries.

Build your database according your installed sceneries. Do it each time you install or update a scenery. This step is needed to have an up-to-date moving map and Position modules.

1 – Browse to your sceneries directory. You can use a network/remote directory.



GENERATE TAXIWAYS - The taxiway paths create a big database file. It takes time to load and could decrease performance.
Uncheck this feature, rebuild the database.

2 - Build the database. It takes a while to scan all your directories and to generate the new database.

If you have errors during database generation:

- Check you have enough rights on the files/directories (at least read rights)
- If data are stored on a remote computer, try to copy Scenery path on the local machine.

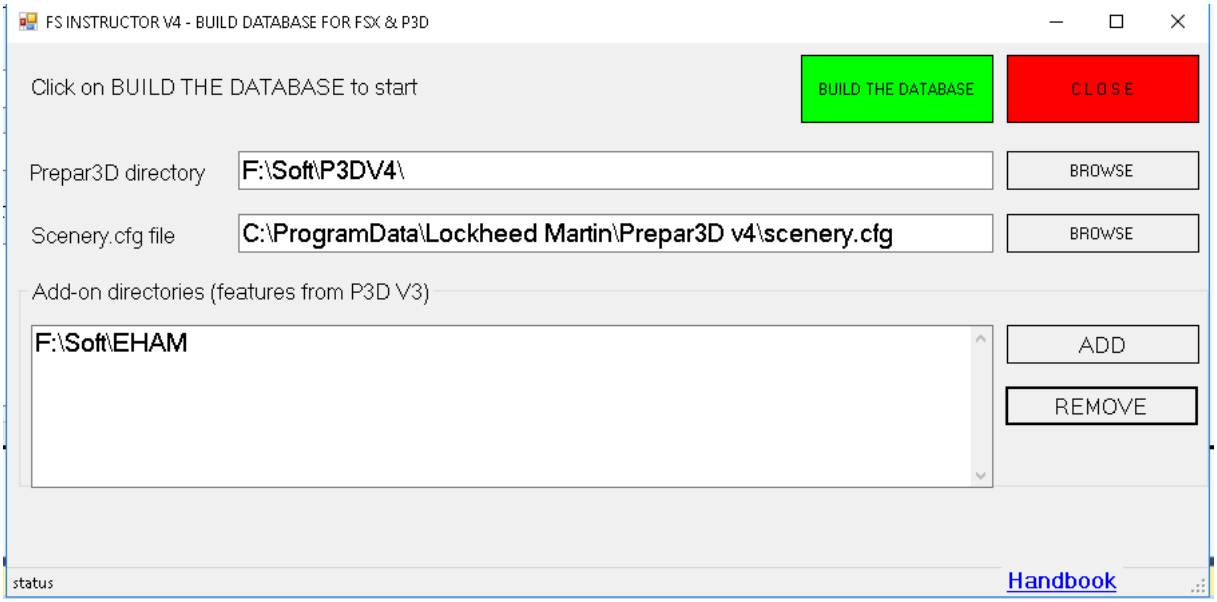
This action doesn't update the navaids (VOR/ADF…). This kind of data is extracted from AIRAC.

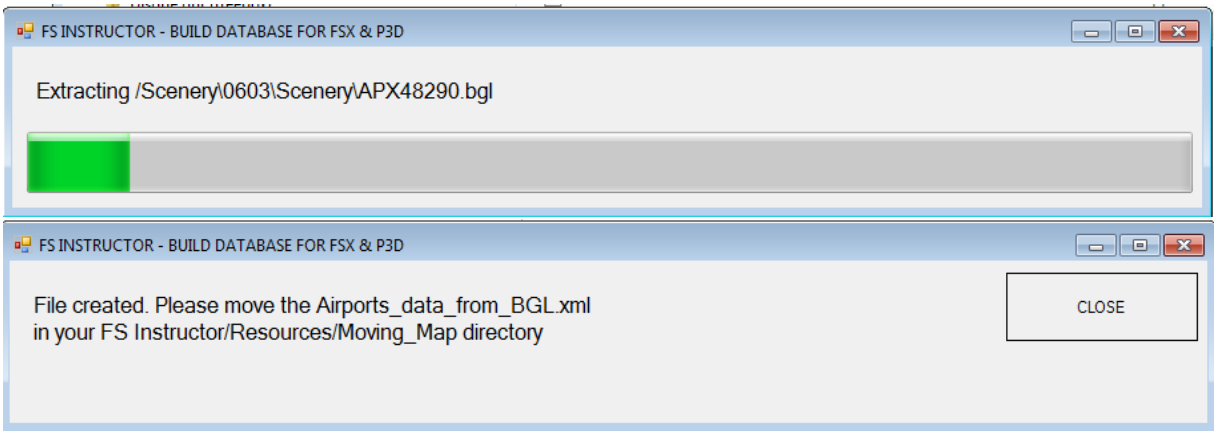
3.4.2 Create the airports/runways database from your FSX/P3D installation

If you don't have a network access to your P3D or if sceneries are shared on several drives, you can't use the FS Instructor database generator.

You have to use "FSI BUILD DATABASE STANDALONE version"
http://www.fsinstructor.com/download/FS_Instructor_4/FSI_Build_Database_STANDALONE.zip

This software is deployed in your FSX/P3D directory and can read the scenery.cfg file and manage specific path for add-ons.
It creates an extraction file to move in your FS Instructor path. Check the embedded manual.





3.4.3 Update the Navigraph database

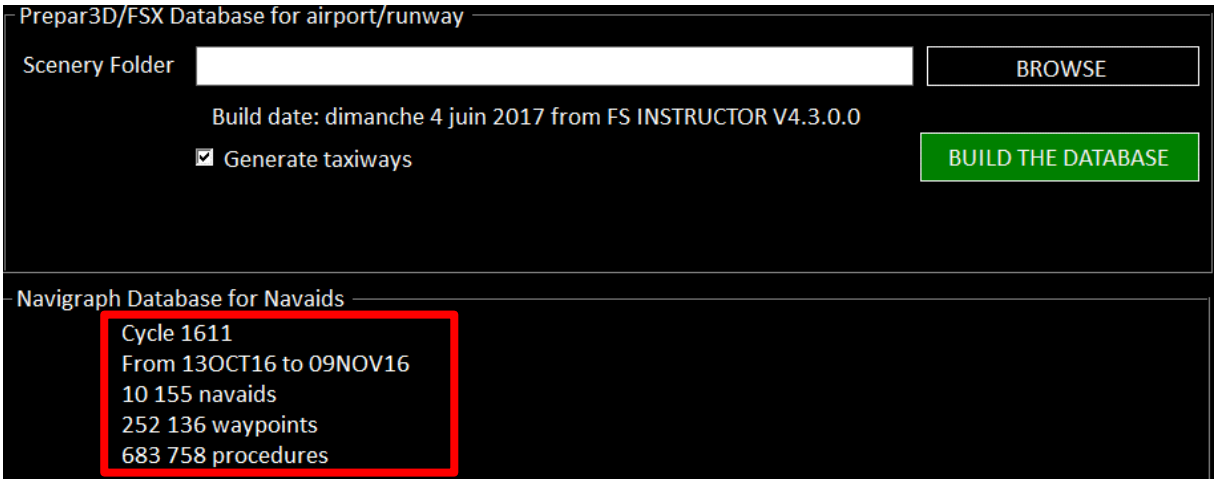
3.4.4 Check the installed database

FS Instructor loads navaids (VOR / NDB), Waypoints and Procedures (SID / STAR / APP) from a Navigraph database.

You can buy the latest Navigraph packages on www.navigraph.com

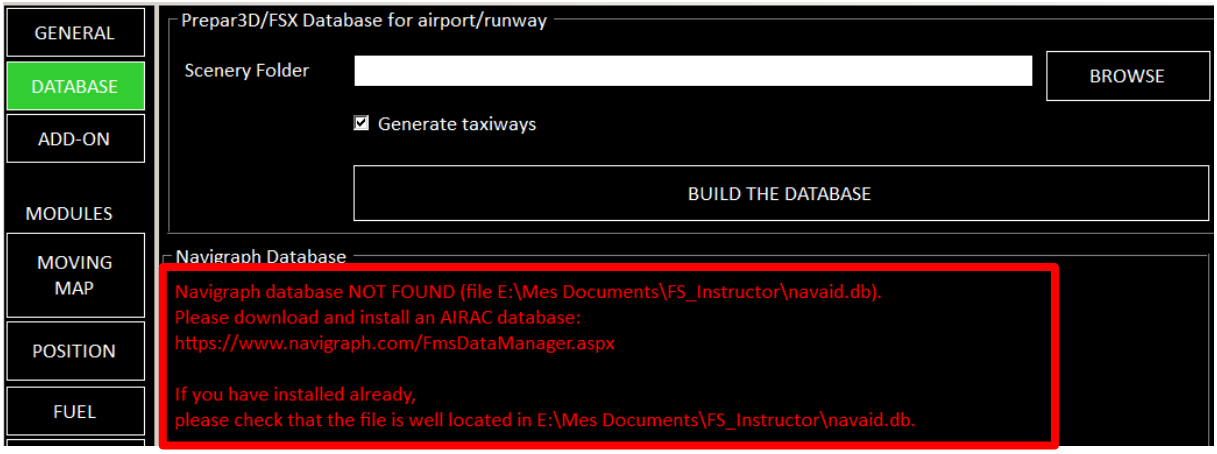
After the Navigraph database installation check that you have a file “navaid.db” in <Your document>\FS_Instructor directory (see the procedure below)

To be sure that FS Instructor uses this database, open FS Instructor > Setting > DATABASE



You can see Navigraph information.

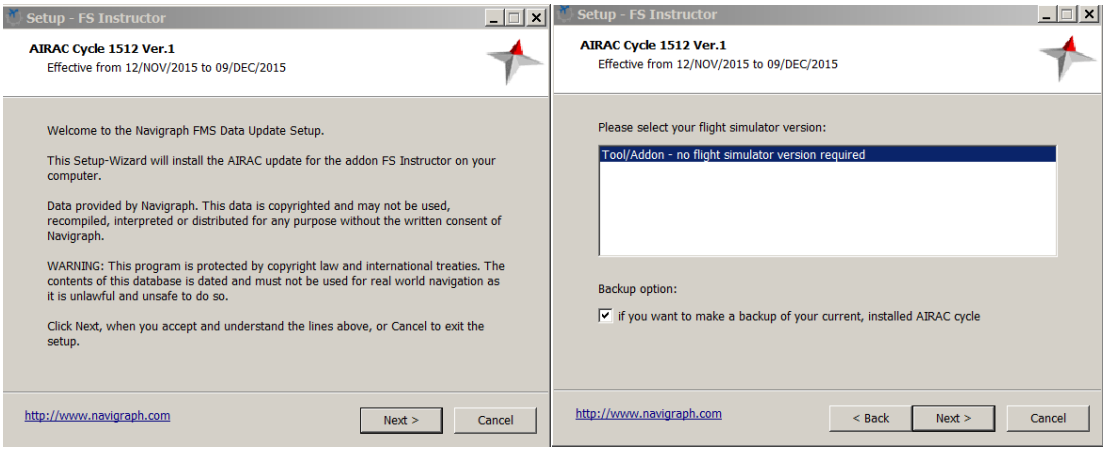
If FS Instructor can't find the database, you have this message.



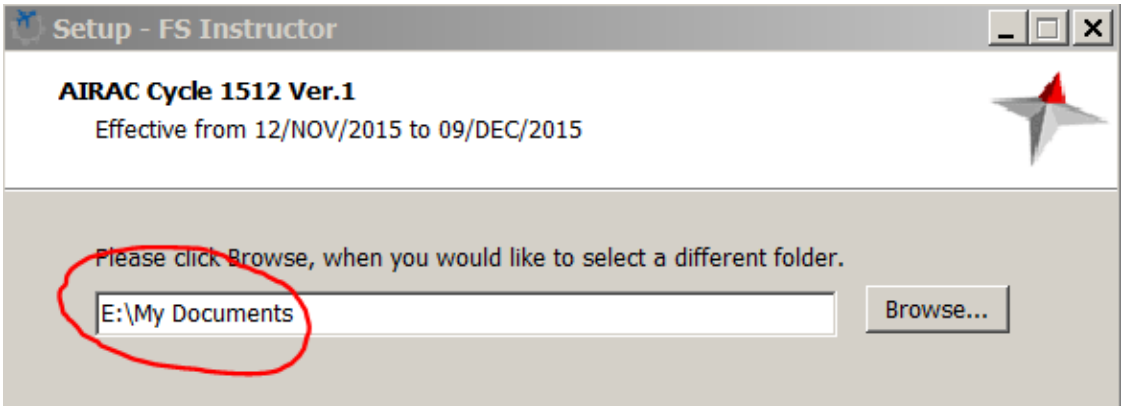
3.4.5 Install a Navigraph AIRAC database

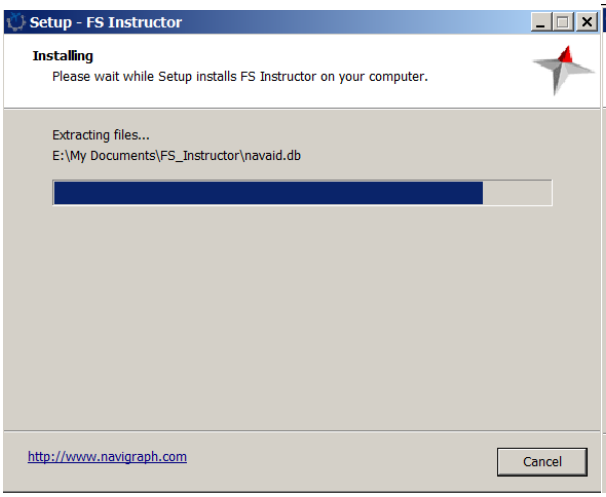
Buy the latest Navigraph packages on [www.navigraph.com.](http://www.navigraph.com)

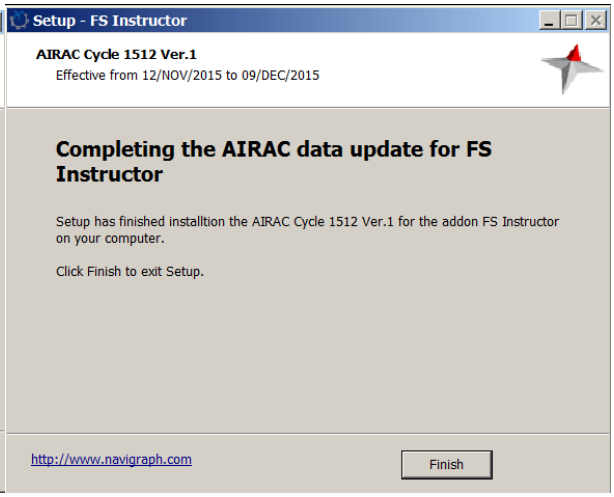
Install the exe file



Select “My documents” directory

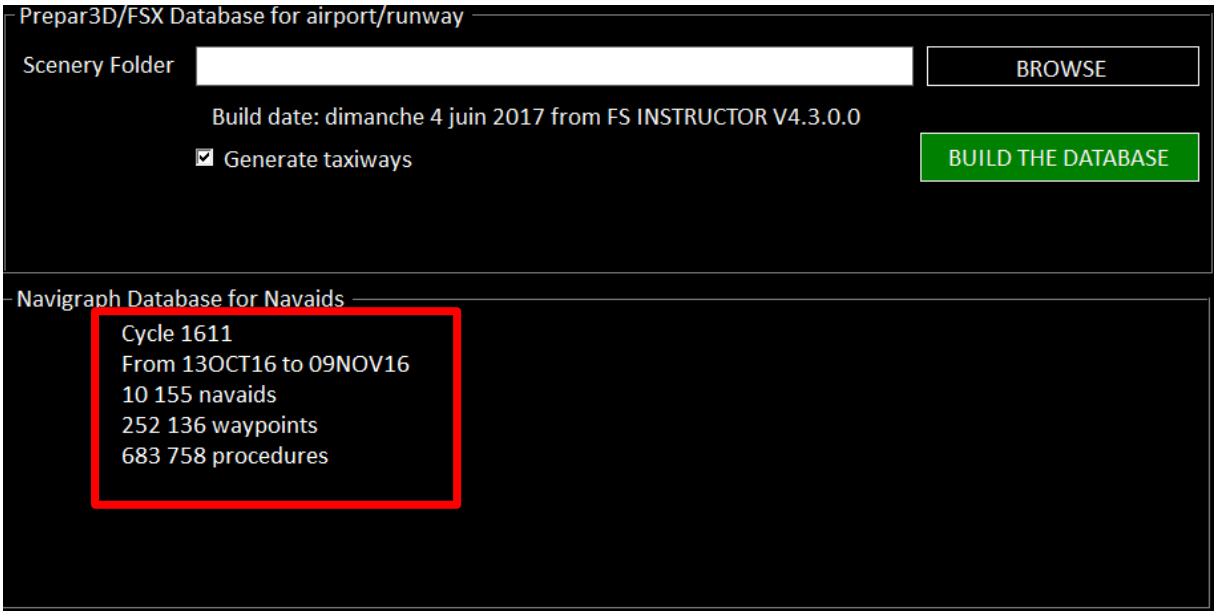




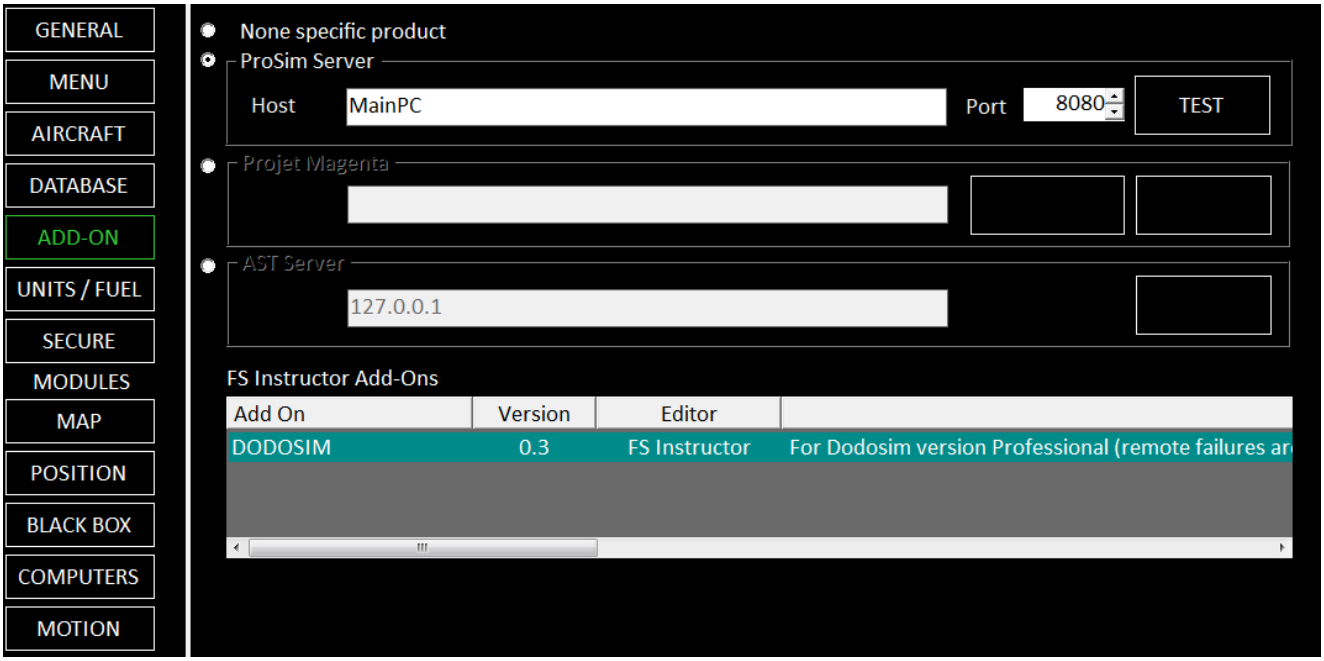


Restart FS Instructor to load this new database.

Check that FS Instructor found the database (MENU > SETINGS > DATABASE)



3.5 Add-Ons settings



3.5.1 Set editor Product (Prosim, Project Magenta)

By declaring a specific product, you take the advantage of specific features:

- Dedicated failures system
- Dedicated FMS support

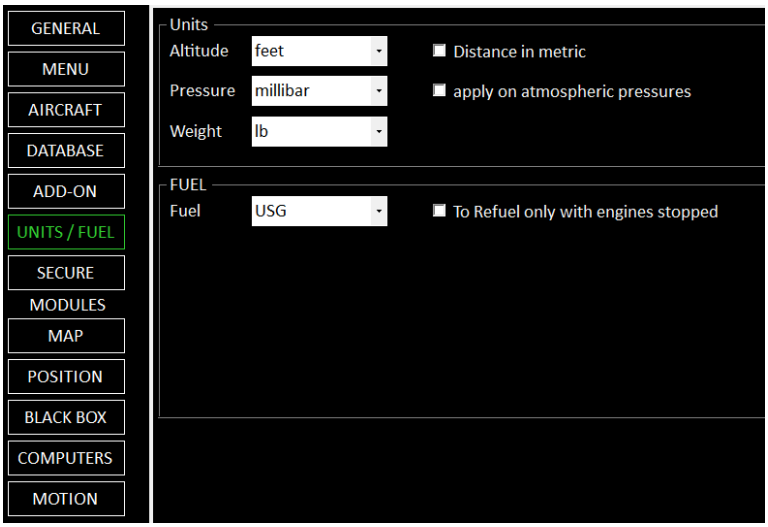
3.5.2 Add-Ons

FS Instructor is an open architecture. It means you can add new plugins and new features.

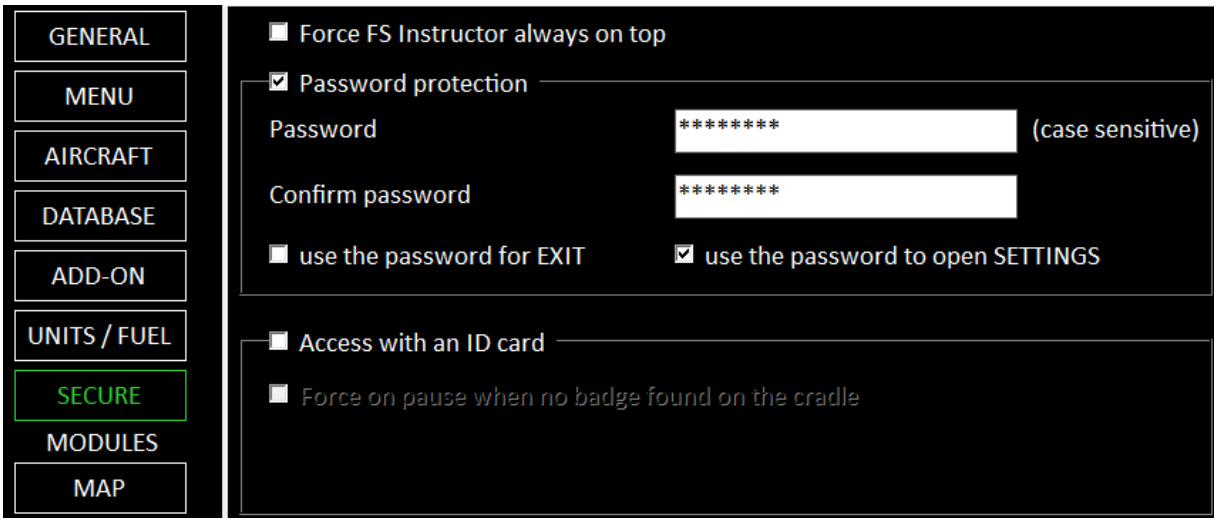
.NET Developers can ask an SDK to create their own FS Instructor add-ons.

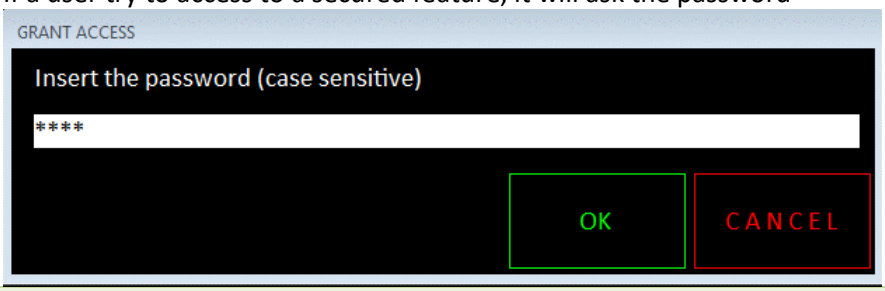
The available add-on list can be found in our shop: http://fsinstructor.com/

3.6 Units / Fuel Settings



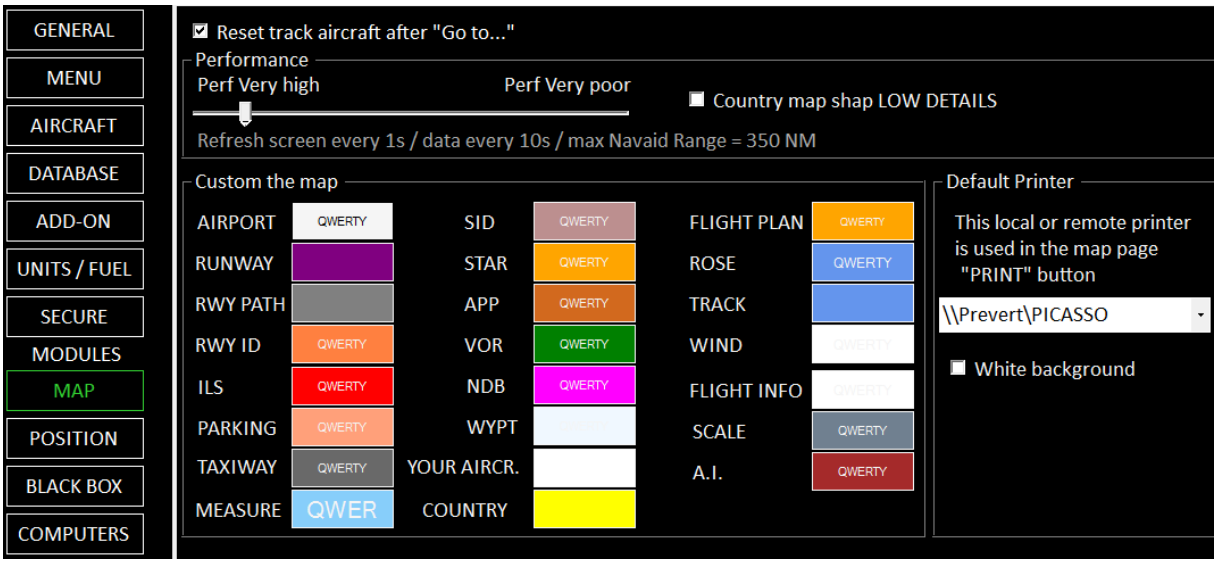
3.7 SECURE settings



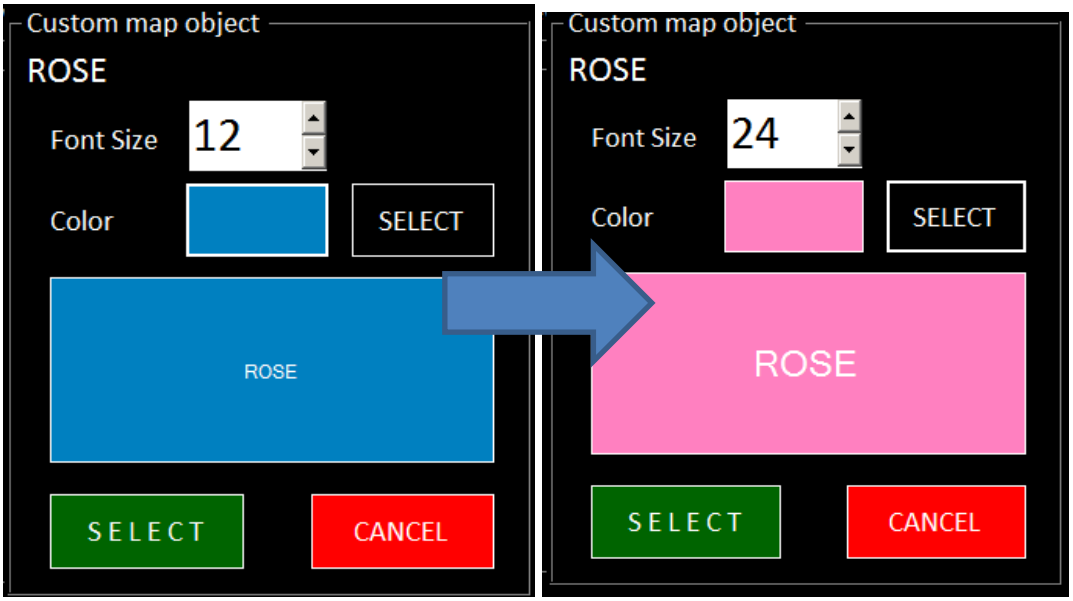
Feature	**Description**
Force FS Instr. Always on top	FS Instructor can't be on the background. It prevents users to open another windows program.
Password protection	This password protects the access of the Settings window and prevent to EXIT without Authorization. The password is encoding and linked to the current user. You can't unlock the feature by using this password from another Windows account. If a user try to access to a secured feature, it will ask the password 
Access with an ID card	[Hardware and specific plugin required to work] Contact us to manage cockpit access with ID badge 

3.8 Map settings

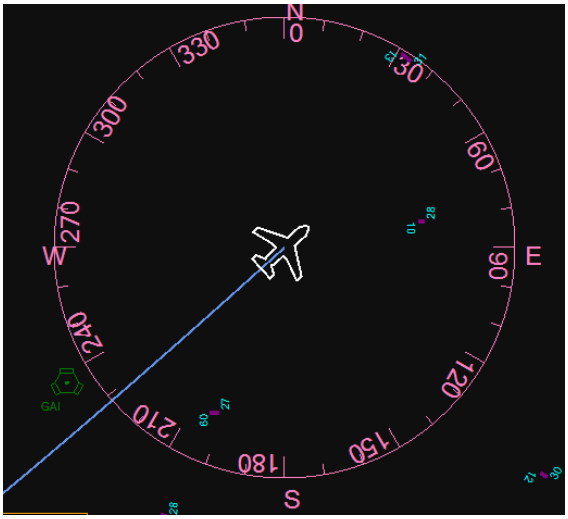
Each map element can be customized



For example - to have a pink rose with a taller font, click on rose “QUERTY” button



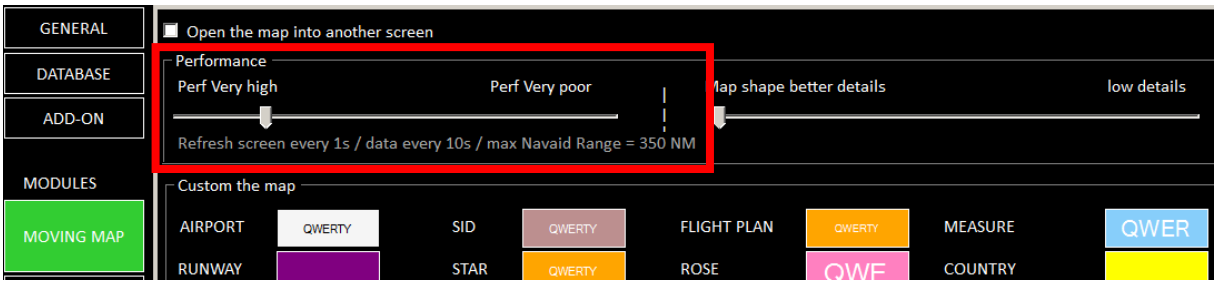
It gives



3.8.1 Improve map performance

When you try to display too much element, the map could stop to move. Decrease the number of display elements or limit the performance (slide):

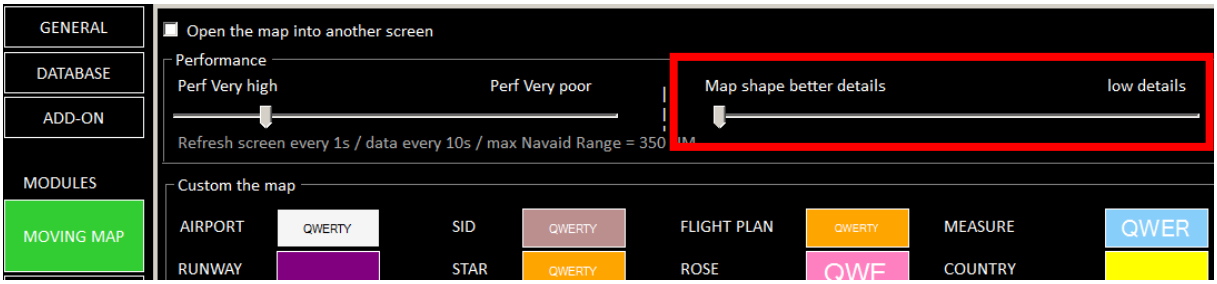
A - Slide Perf Very high/very poor

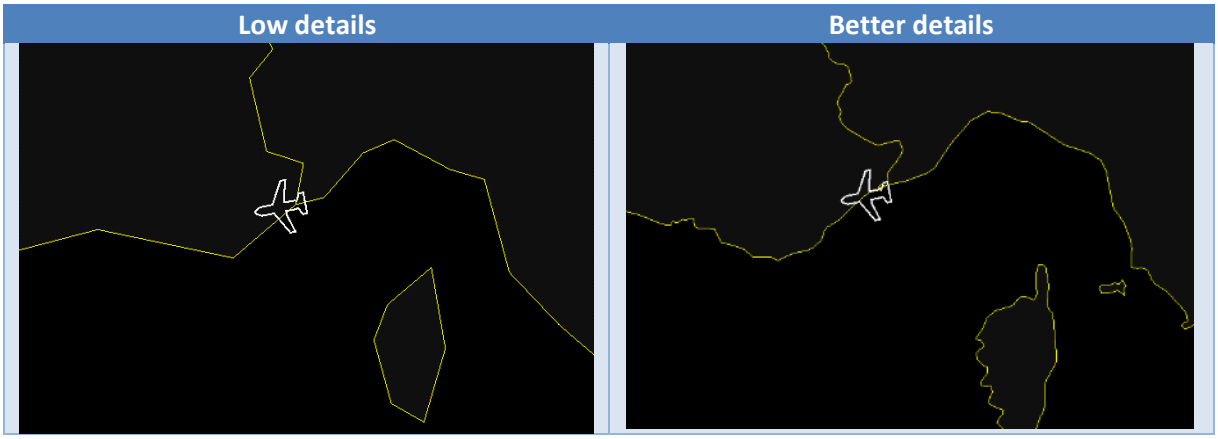


This option has impacts on:

- Screen refresh time
- Data loading
- Navaids range

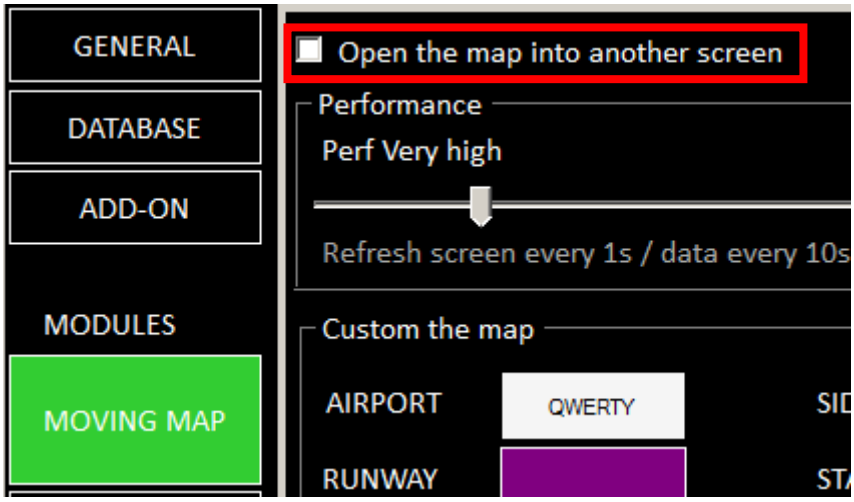
B – Limit details for the countries shape





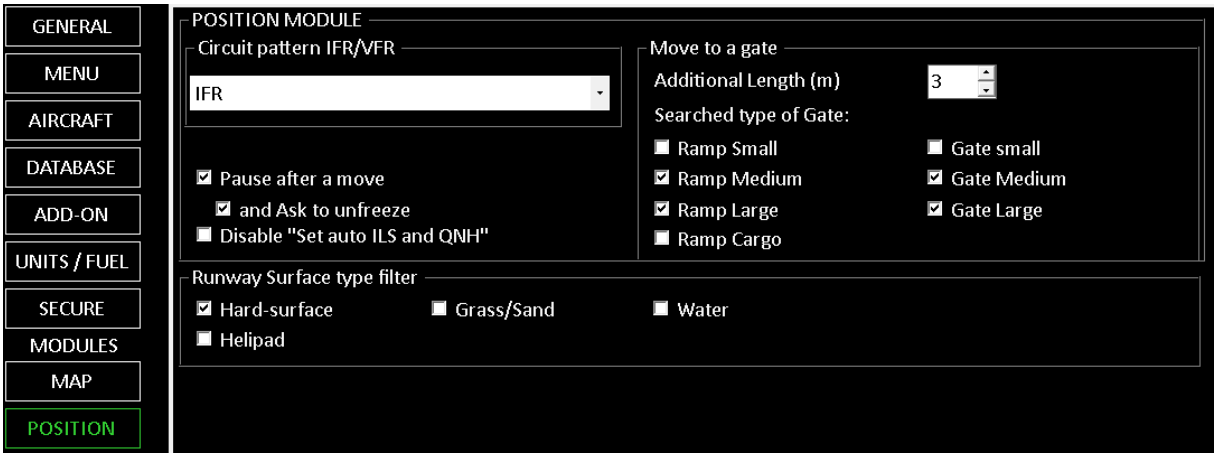
3.8.2 Open the moving map in another screen

You can open the moving map in a second monitor



The moving map window position will be stored. This module will open each time at the previous location and size.

3.9 Position settings



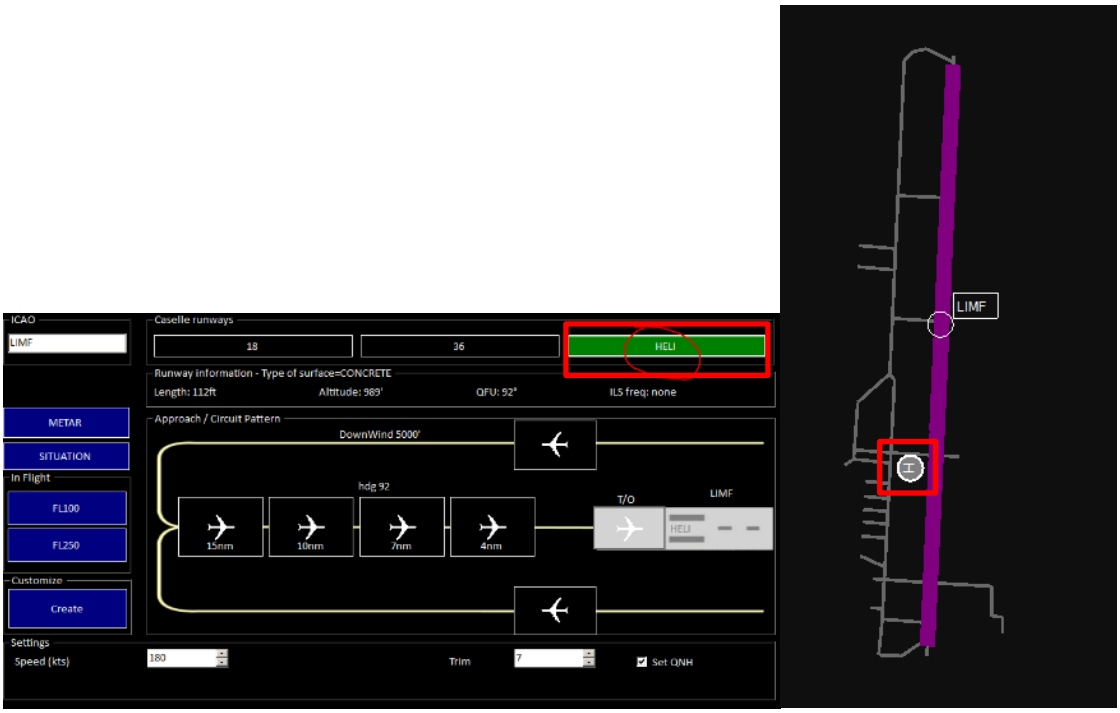
After any modification, you need to restart the application

IFR/VFR Mode	Choose between VFR or IFR patterm. It modifies the altitude and distance for downing legs (5000'' for IFR / 1000'' for VFR)
Additional length	Depending on the used aircraft, you can be too close or far from the gate. Set this value.
Searched type of gate	Restricts the parking list according to your aircraft category. i.e. for a B737, keep only Ramp & Gate medium.
Pause after a move / and ask to unfreeze	When you click on "Pause after a move", a checkbox appears "and ask to unfreeze". It displays an explicit "UNFREEZE" message after moving the aircraft.
Disable Set auto ILS & QNH	Uncheck = Position Module allows you setting auto ILS frequency and QNH 

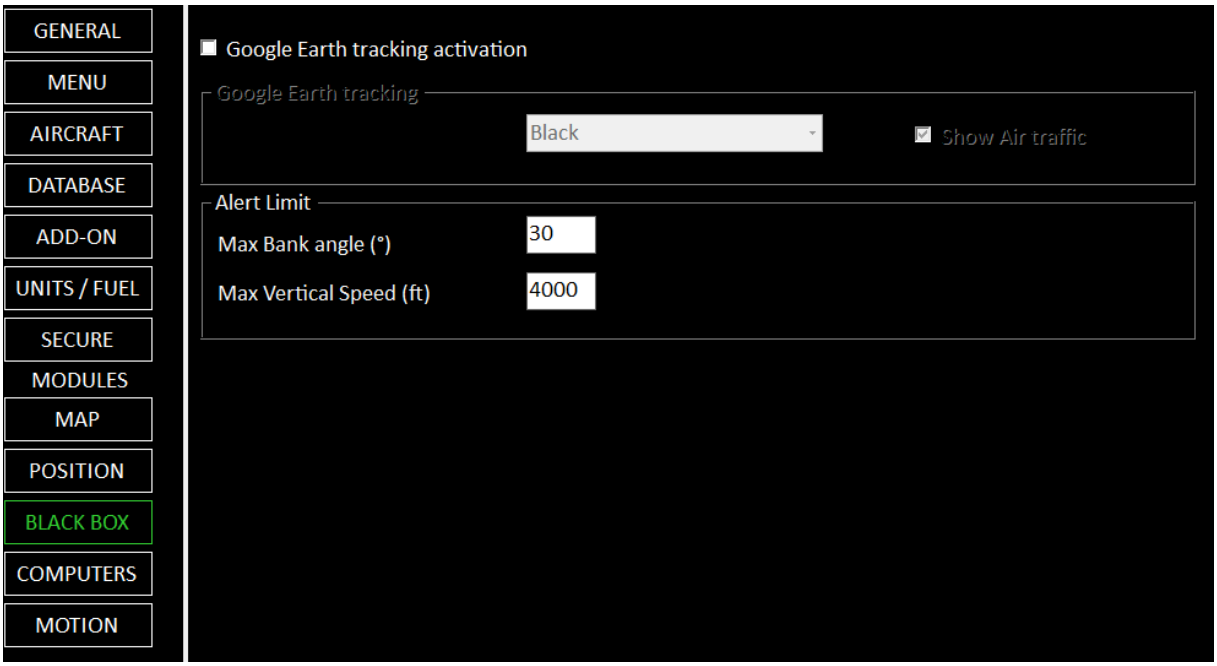
3.9.1 Helipad Support

To use helipad, Activate this feature from the configuration menu > Position

The helipad will appear on the Position and Map pages.



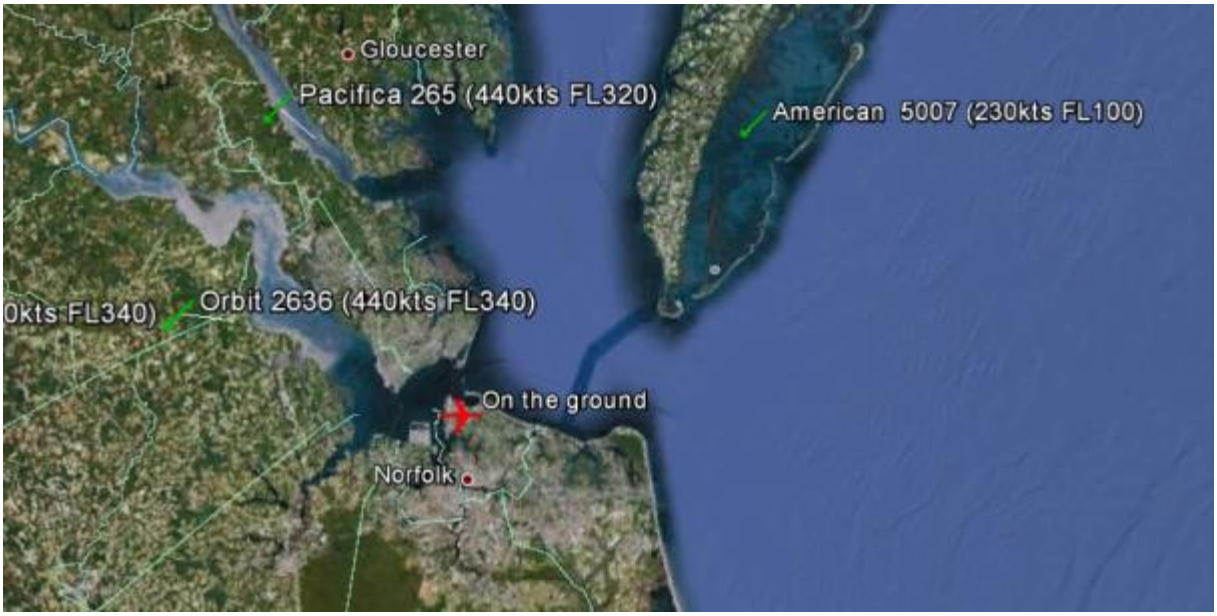
3.10 Black Box settings



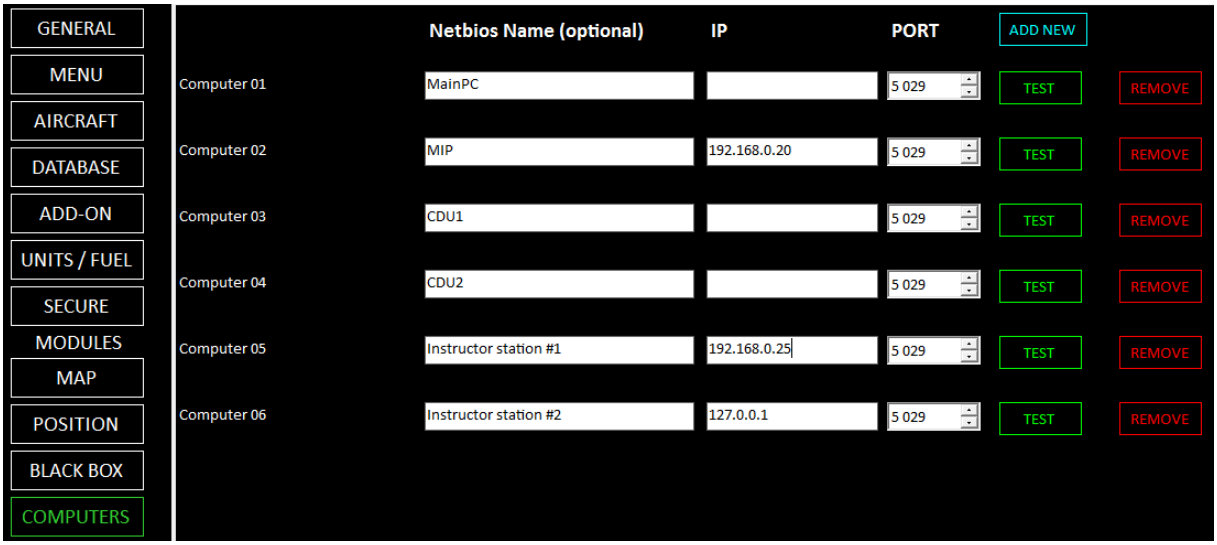
By clicking on “Google Earth tracking activation” you allow following the aircraft in real time in Google Earth.

You can change the plane color from black to red

You can add the Air Traffic (AI) (green arrows)



3.11 Remote Computers settings



3.12 Motion settings

4 Licenses

4.1.1 Two different licenses: Commercial/integrators and Home user releases

FS Instructor is a payware application. It's a one-time deal. You pay only once (no annual fees).

When you start the software, you need a key code. Without this code, the program runs in demo mode and stops automatically (from 5min for the first utilizations to 30 sec after a while). You have time to discover the different features before to decide to buy, or not, a license.

Who can buy a Home User License?

Only people who builds a simulator at home for their own use and not make money. Pilots who access to this simulator doesn't' have to pay for it.
In all other cases, you need a professional license:
If you are an association, a flight school, a company, a simulator renter or if you sell something linked to the instructor station, so we consider you to be a professional user.

The commercial license is distributed from http://fsinstructor.com site

The key code is unique to your computer. It means that if you want to install the application on another computer, or if you modify your computer, you will need a new license code.

Here, the installation ID is «DA8B-C713-79D4». It can be sent by pressing the « **2 – PURCHASED PRODUCT REQUEST MY KEY** » button. It must be accompanied of:

- The order's date
- Your name

You will receive your key by e-mail in the next hours.

Copy the license key in the "Insert your key" filed.

4.1.2 What are the different licenses

The commercial/integrator license has the same features as Home user version excepted:

- Home has no screen customization (to show another aircraft in the module background)
- Home has no Splash screen customization with your own logo
- Home has a plash screen during 7 sec that you can't by-pass.
- Multiple FS Instructor instances or screens is able only in the commercial version

Commercial license allows some specific services like an extended support. See chapter **25 Additional service for professional**

4.2 Prepar3D / Flight Simulator connection

FS Instructor communicates with FS through *FSUIPC*. If *Flight Simulator* and *FS Instructor* are installed on different computers, you must use *WideFS*.

The connection begins as soon as the program is launched. So, you have to start *Flight Simulator and WideFS (if you need it)* **prior** FS Instructor

The reconnection is automatic as soon as FS Instructor find Flight Simulator.

Note : the rest of the application is disable when the connection fails or if you load, slew or pause FS.

5 Multi-screens

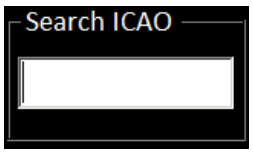
You have two ways to manage multi-screen. It requires a commercial license

If you want to keep the tab menu on each screen:

- Duplicate your FS Instructor directory for each instance. Each one records his own pages list and own windows location
- From the setting page, set Pages to be open in an external view. Such as

6 POSITION PAGE

It moves your aircraft to your own location, on a pattern, in flight, on approach or on the runway.



Insert an ICAO code into the search box.

If the ICAO code is known, the runway and parking part are displayed.

You have three areas:

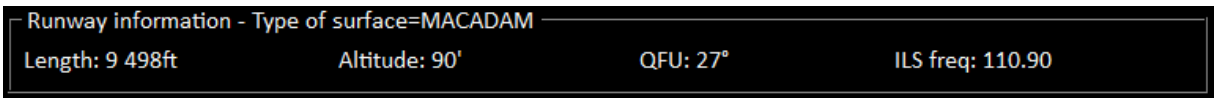
- Position regarding a runway
- Choose a parking stand
- Create/load a preset situation

6.1 Choose a runway

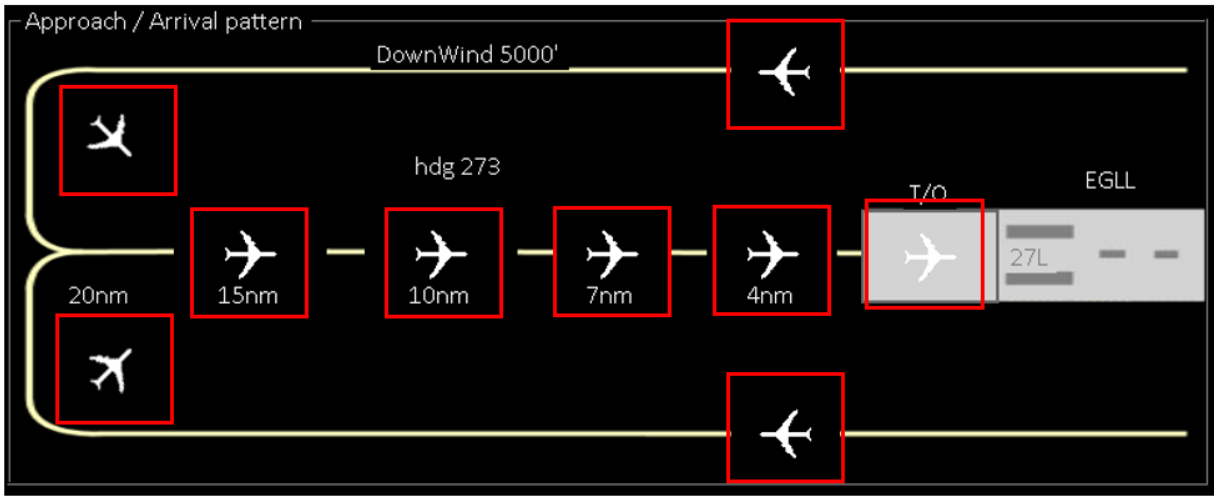
Here , we choose the 09 runway (green)

So, the available runways list opens automatically. As soon as you select one runway, the *Runway information* block is updated. It shows you:

- The runway length (feet)
- The Altitude (feet)
- The QFU (runway heading)
- An ILS frequency (if available)
- The type of surface (water, macadam…)



6.2 Choose a position (middle part)

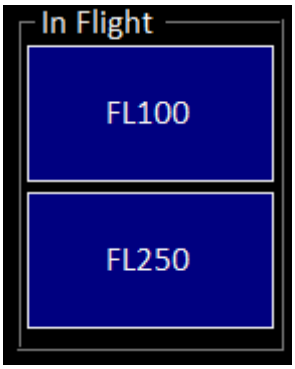


When you've selected a runway, you access to 9 preset positions :

- One on the runway, ready to take-off (T/O)
- Approach locations :
  - Short Final (4NM / 150kts)
  - Final (7NM / 170 kts)
  - Approache (10NM / 200 kts)

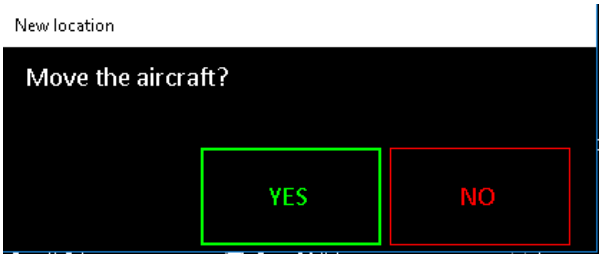
- Before the descent (15NM / 220 kts)
- Interception left and right (20NM)

- 2 Tailwinds position (5000''/240 kts)

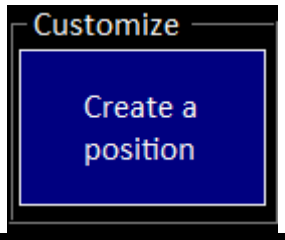


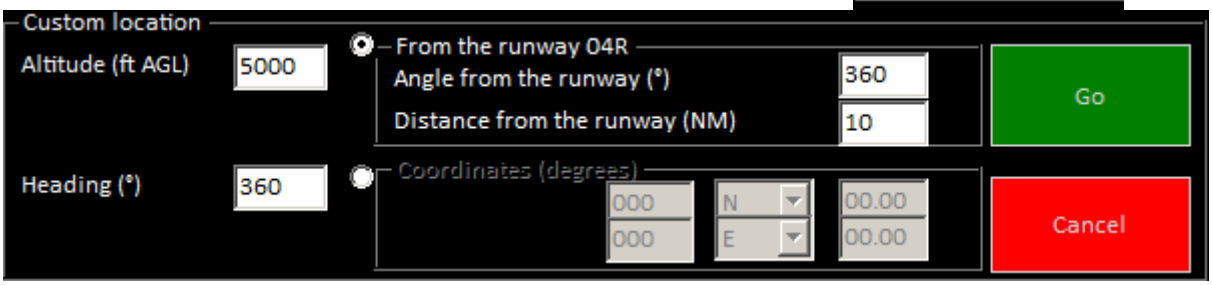
On the left, two cruising situations in “In Flight” block : for the flight level 100 (FL100) and 250 (FL250).

When you select a position, you have to confirm it :



Create your own position (only pro license):
If the seven preset positions are not enough your you, you can use the "**Create a position”** button :





So, you have the possibility to choose your:

Altitude: compared with the runway altitude (AGL)

Heading: aircraft heading

Speed: desired **GROUND** speed (kts)

From the runway

Position in relation to the choosed runway (angle and distance with the runway)

Coordinates

Move the aircraft to coordinates.

Pratical to move the aircart on an IAF.

In this mode, the entered altitude is AMSL (Above Mean Sea Level).

3 – Settings (bottom part)

In the "**Settings**" block:

- **Set ILS frequency** is shown only when the runway owns ILS. It tunes ILS frequency as soon as you load a position.
- **Set QNH** set altimeter to the local pressure.
- **IAS** allows starting position with the desire speed (optional).
- **Trim** is very important. It forces a trim position. The value (from -7 to 12) depends on your aircraft. We advise to try the value « 2 ». Fine tune this value.

Advices

When you move to approach, check :

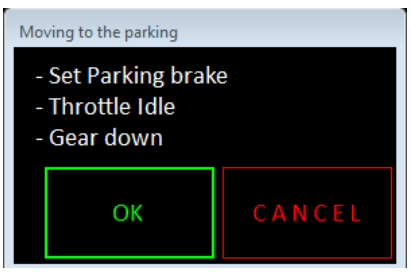
- The wind
- The gear, airbrakes & flaps
- The parking brake
- The throttles position
- The engines started
- A/P OFF

6.3 Parking place

It moves the plane on a specific place on an airport.

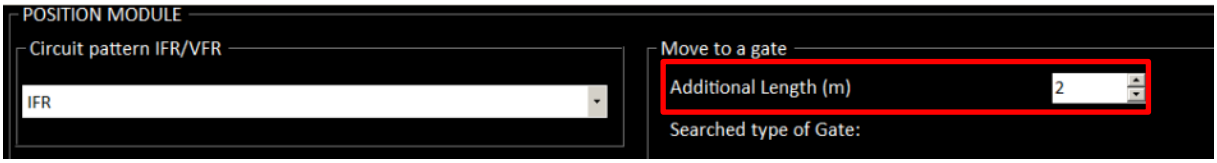
The stand list appears automatically when you insert an ICAO code and parking exists.

Just click on one of them



When you click on the button to move the aircraft. Safely, pilots must set parking brakes and to idle throttle.
During the procedure, you can see the status bar progresses (bottom of the screen)

Depending on the used aircraft, you can be too close or far from the gate. Set this distance in the setting menu > POSITION > move to a gate

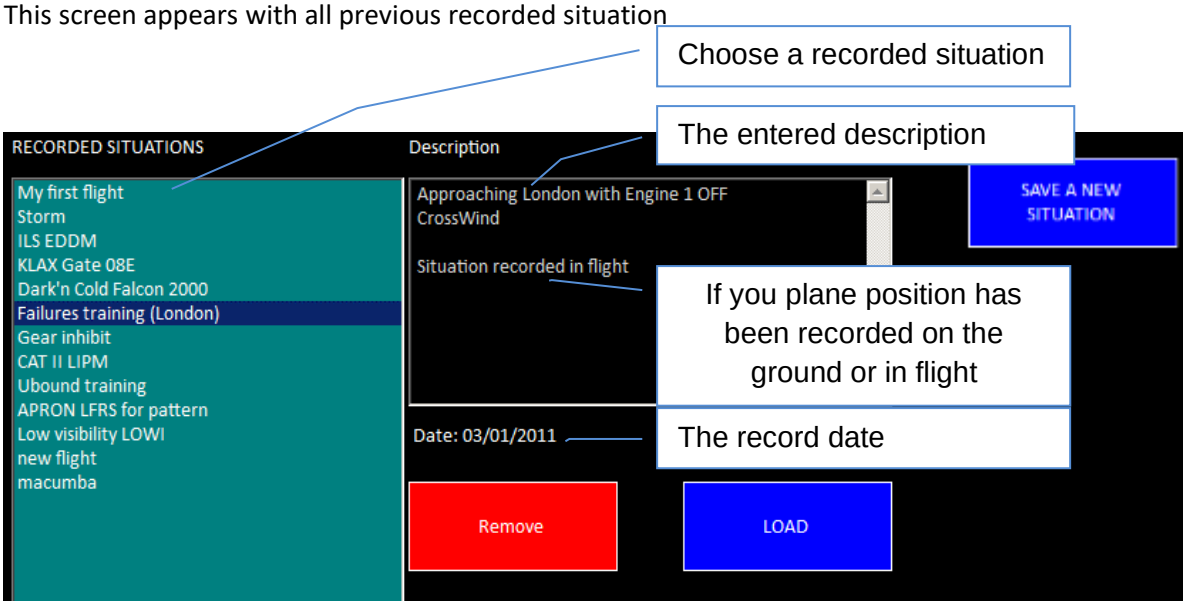


6.4 Save and load situations

6.4.1 To load a situation

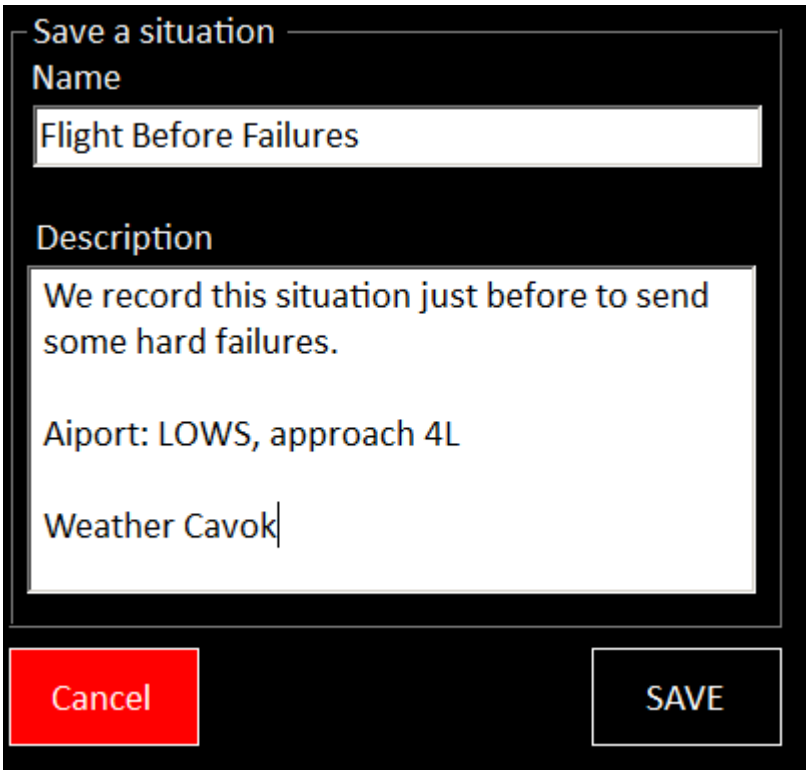
On the left, you have a “Situation” button 

This screen appears with all previous recorded situation



Note: When you save a situation, it’s stored on the local HD. It means that if you use several FS Instructor, each one sees only the situations created on their machine.

6.4.2 To save a situation



It is interesting to record a situation. Such as to practice procedures and to be able to retry many times easily.

To save a new situation. Click on "Save a new situation".

This action is invisible for pilots

It's mandatory to insert a situation name. We advise to add a description. It permits to remember the plane location, which aircraft was using…

You can enter several lines.

The **SAVE** button is enabled only when you have entered a situation name.

Beware of not using an existing name situation.

If you recorded it with FS Instructor, a warning appears and asks you to change this name.
If you didn't record it with FS Instructor the situation will be erased without control.

It saves:

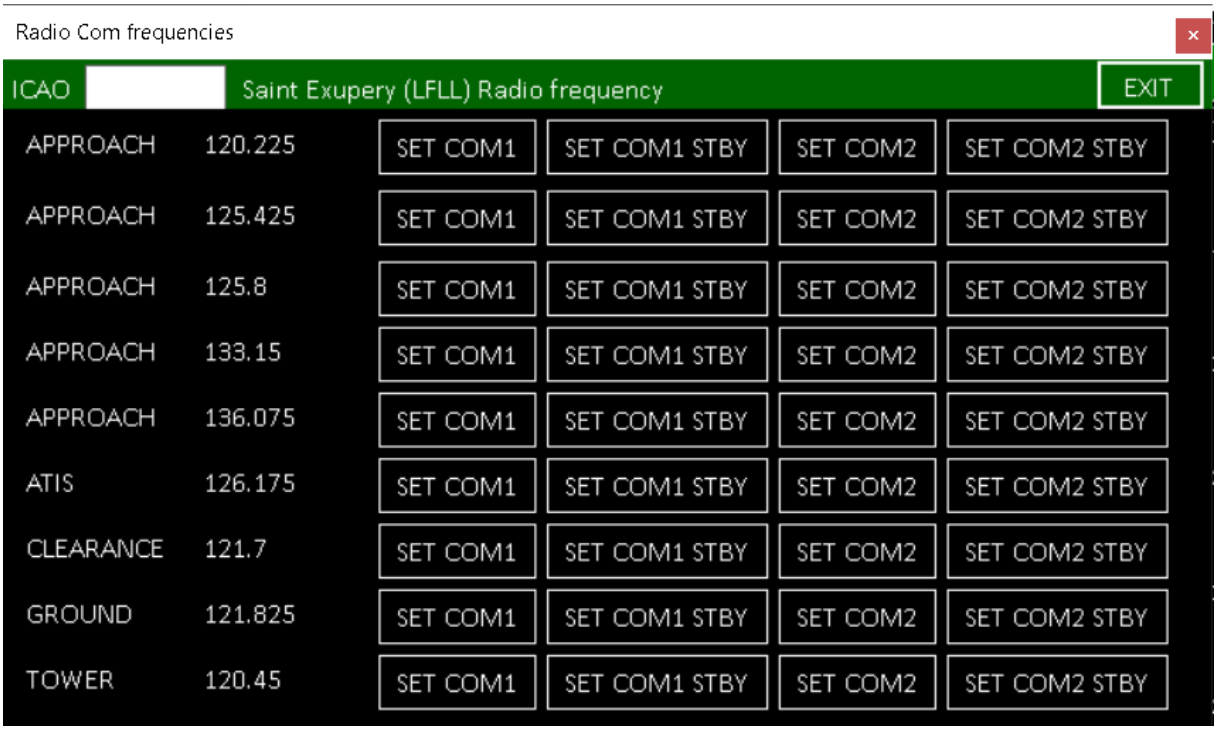
- The plane used and his location
- Fuel state
- Weather
- Radio/Com settings
- Engines states

IMPORTANT NOTE: Flight Simulator saves the situation when you close Prepar3D/FS. If you kill Flight Simulator, the current situations are lost. So, close it properly.

6.5 RADIO COM

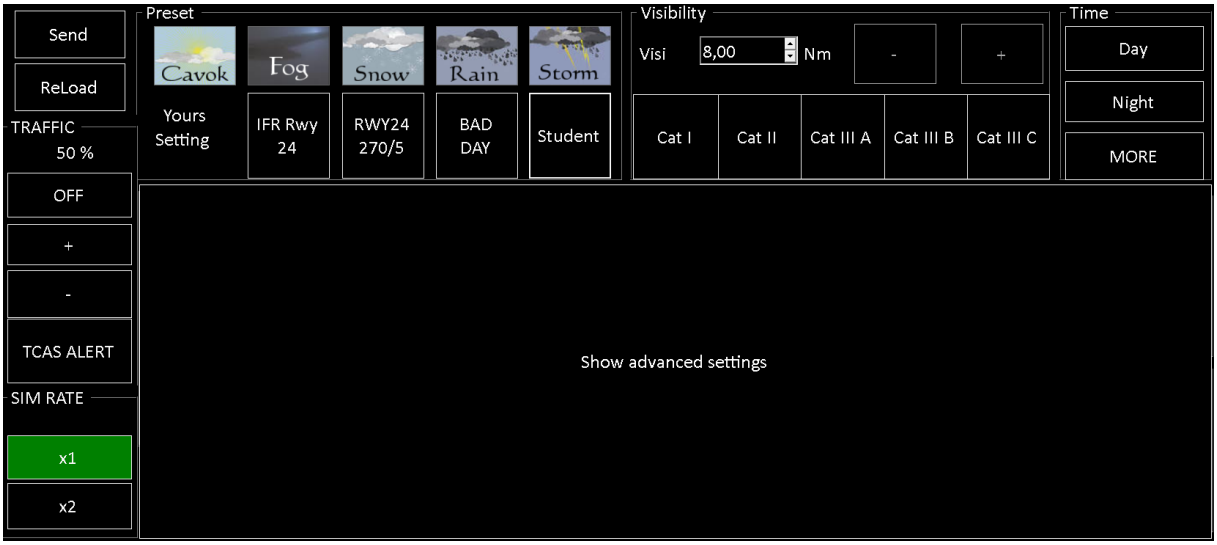
The radio com button is accessible from the POSITION and RADIO pages.

You can find a Radio frequency from an ICAO code. Buttons send the desire frequency on COM1, COM1 Standby, COM2 or COM2 standby.

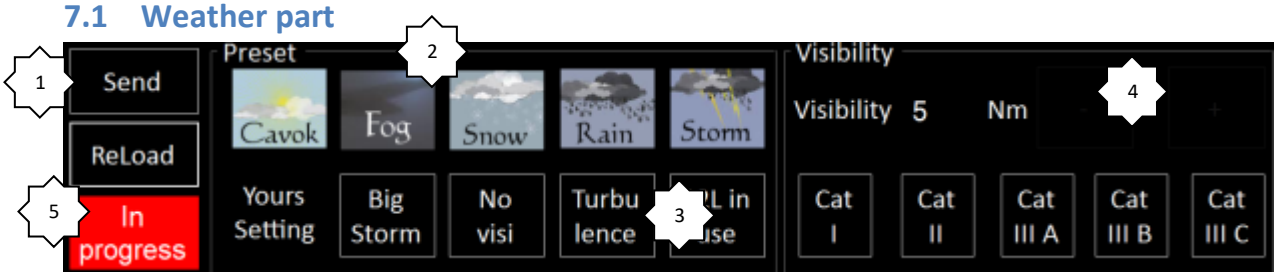


7 ENVIRONMENT PAGE

This page manages weather condition, Time and Traffic.



7.1 Weather part



1 – Control buttons

- **SEND** to send the selected weather modification to the simulator
- **RELOAD** to reload the weather (to be sure to have the latest values)

2 - Direct Weather Preset

- Note: Apart Cavok (Ceiling And Visibility OK) the other presets own random settings. If you choose twice a storm. You will not have the same ceiling, wind and turbulence.

3 - Your Preset.

You can record your own Weather situation. Click on one of the four buttons.

SELECT: Loads only
SELECT AND SEND: Select and Send the weather preset
Save: Save the current weather settings. A name will be asked.

4 - **Visibility**: Visibility part

You can insert a value for the visibility or use the + / - buttons.

Note, you have to click on Send button to validate.

For training, a rapid access is given to the different minima, by category.

From Wikipedia:

- ***Category I (CAT I)*** *– A precision instrument approach and landing with a decision height not lower than 200 feet (61 m) above touchdown zone elevation and with either a visibility not less than 800 meters or 2400ft or a runway visual range not less than 550 meters (1,800 ft) on a runway with touchdown zone and runway centerline lighting .*
- ***Category II (CAT II)*** *– A precision instrument approach and landing with a decision height lower than 200 feet (61 m) above touchdown zone elevation but not lower than 100 feet (30 m), and a runway visual range not less than 300 meters (980 ft) for aircraft approach category A, B, C and not less than 350 meters (1,150 ft) for aircraft approach category D.*
- ***Category III (CAT III)*** *is subdivided into three sections:*
  - ***Category III A*** *– A precision instrument approach and landing with:*
    - *a) a decision height lower than 100 feet (30 m) above touchdown zone elevation, or no decision height (alert height); and*
    - *b) a runway visual range not less than 200 meters (660 ft).*
  - ***Category III B*** *– A precision instrument approach and landing with:*
    - *a) a decision height lower than 50 feet (15 m) above touchdown zone elevation, or no decision height (alert height); and*
    - *b) a runway visual range less than 200 meters (660 ft) but not less than 75 meters (246 ft). Autopilot is used until taxi-speed. In the United States, FAA criteria for CAT III B runway visual range allows readings as low as 150 ft (46 m).*
  - ***Category III C*** *– A precision instrument approach and landing with no decision height and no runway visual range limitations. This category is not yet in operation anywhere in the world, as it requires guidance to taxi in zero visibility as well. "Category III C" is not mentioned in EU-OPS. Category III B is currently the best available system.*

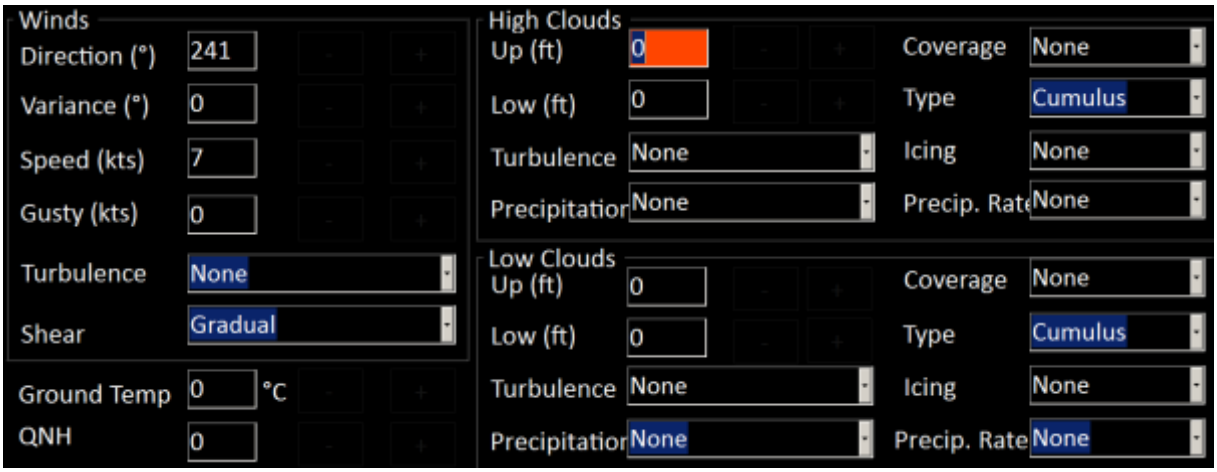
Select the required approach type and click the Send button. The visibility will be change according your choice.

5 – Current status:

- In progress: data sending
- Checking: data checking

7.2 Weather Advanced settings

If you click on “Show Advanced settings” part, it shows you the complete weather set.



Here, you can set precisely:

- 2 ceilings (type of clouds, turbulence, precipitation, icing, coverage…)
- One wind layer (from ground to FL360)
- Ground Temperature
- Local QNH

Note:

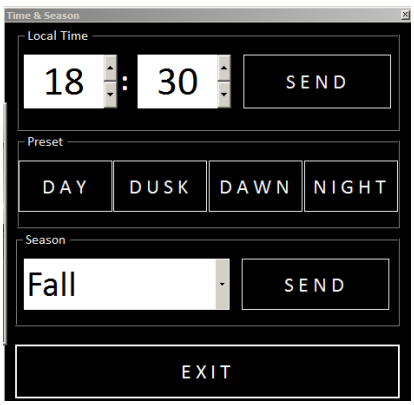
- When you sent a weather setting, I could take few seconds to take into account (sometime 20 sec). It’s due to a Flight Simulator limitation.
- This is a global setting. That means that there is one weather configuration to all the FS scenery.

7.3 Change Time

DAY / NIGHT : as soon as you click on these buttons it changes Simulator time

MORE open a widow to choose the time and the season

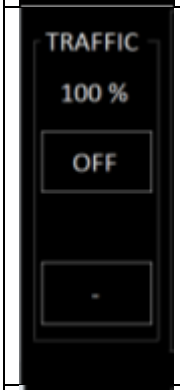
Beware of using this panel airborne: the scenery will be refreshing during several seconds.



7.4 Traffic

7.4.1 Generic IA

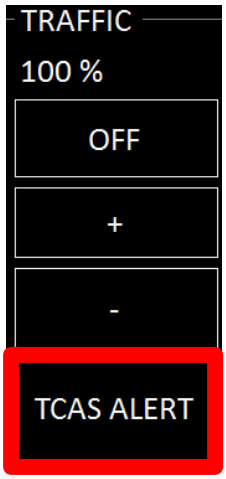
You can control if you want traffic (IA).

	Here, none traffic. Click on “ON” to activate traffic
	Here, you have the traffic maximum (100%). You can reduce it (minus button) or stop it (OFF button)
	Here, you have 40% of traffic. You can reduce it (minus button) or increase it (plus button)

When you start or increase the traffic, it reloads the scenery. It could disturb the pilots.

By default, general aviation is OFF (0%). If you want to keep GA you have to activate this option in the Settings window

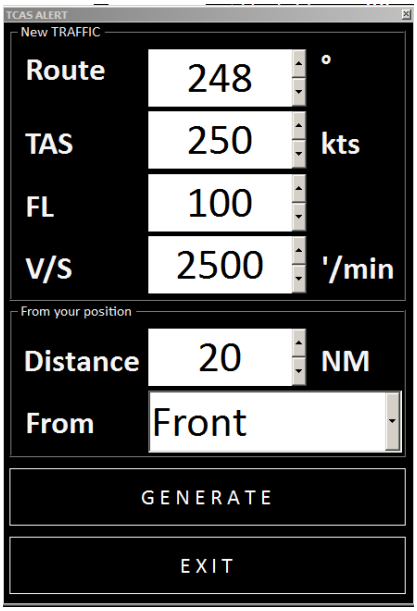
7.4.2 TCAS ALERT



The button TCAS ALERT opens a window.

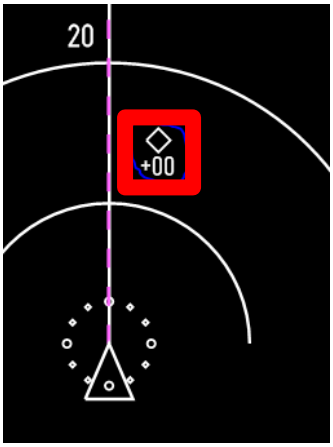
Insert the detail of the new plane that you want to create.

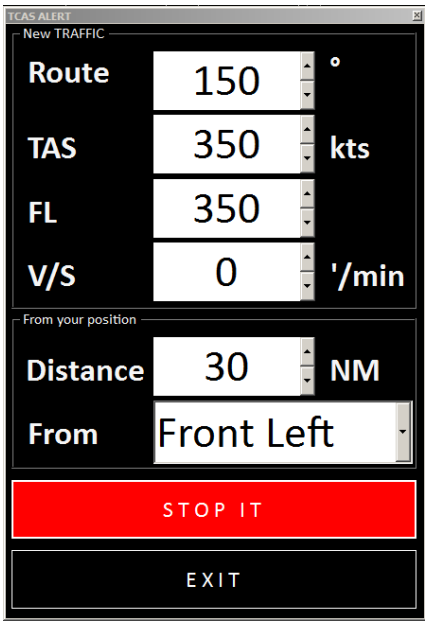
When you are ready, click “GENERATE” button and a new TCAS aircraft is created.



This TCAS Alert generates a traffic into the TCAS screen.

Note: **you don’t see the plane in the Flight Simulator view**. It appears only on your TCAS





To remove this aircraft, click on « STOP IT ». The TCAS aircraft disapears after some seconds.

7.5 Simulation rate time

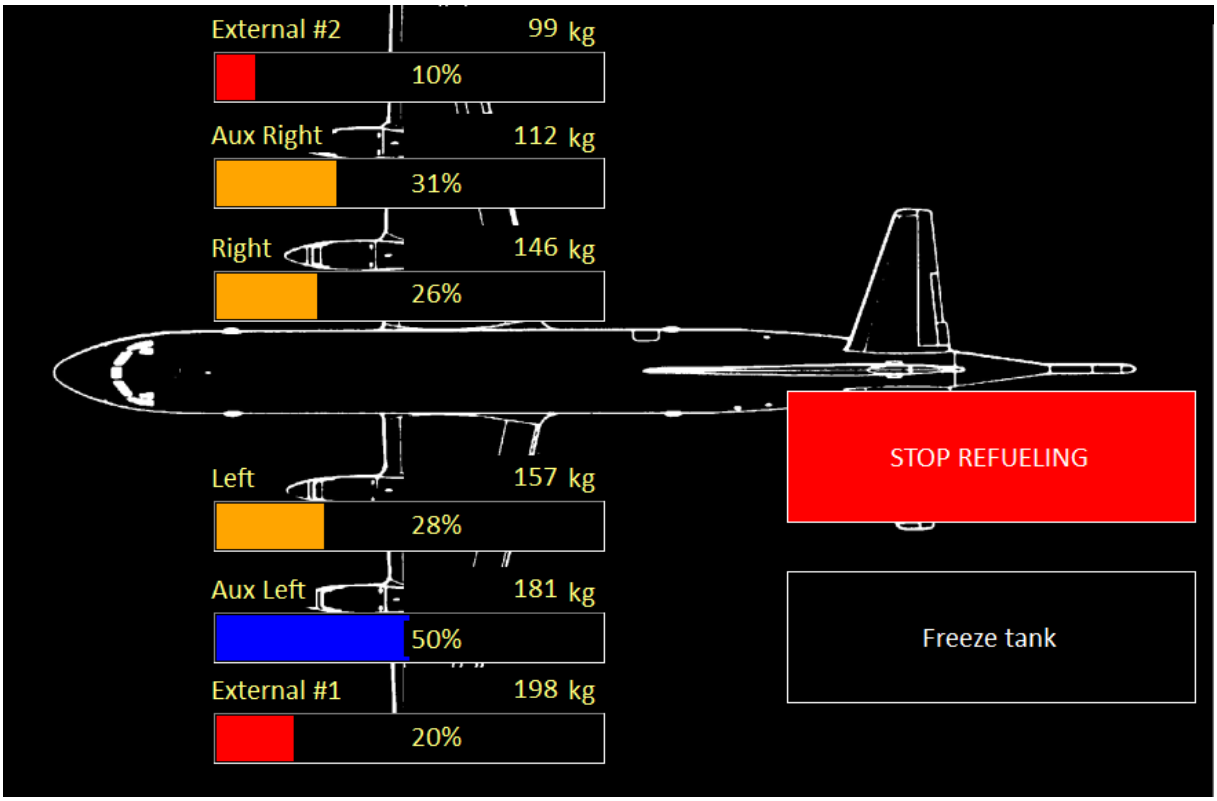
You can speed up the simulator X2. You can come back to a real time flight (X1).

The mode in progress is on green.

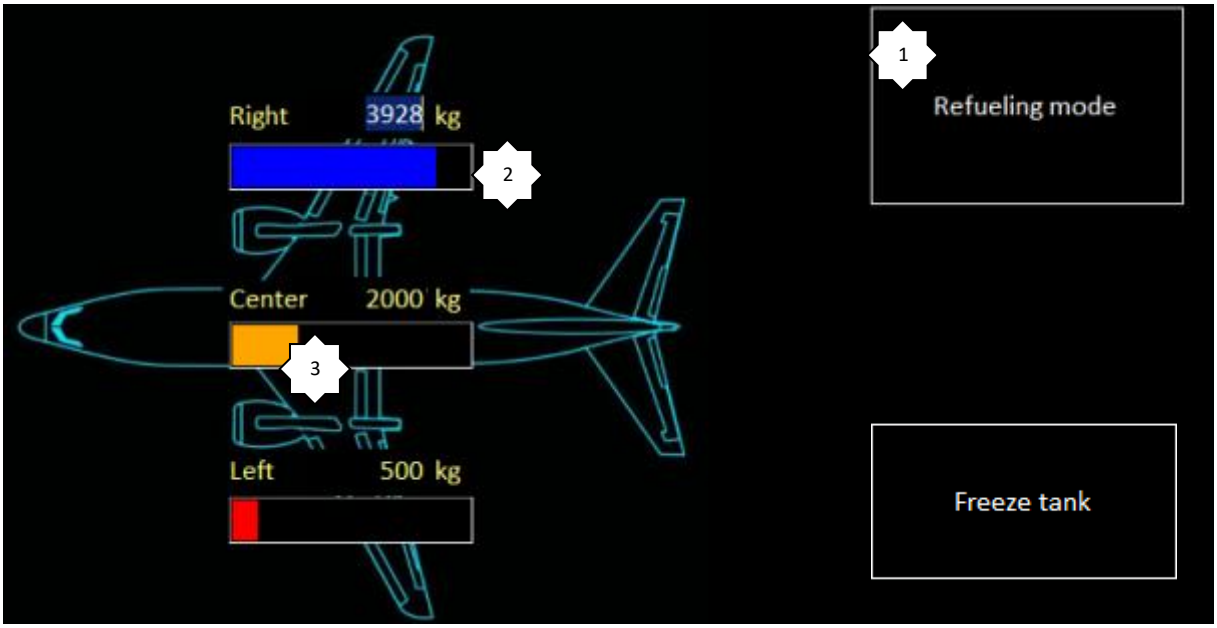
8 FUEL PAGE

This screen manages the fuel into the different tanks.

FS Instructor supports RIGHT, CENTER, LEFT, AUX LEFT, AUX RIGHT, EXTERNAL 1 and EXTERNAL 2 tanks.



The number of shown tanks depends on the current aircraft. If you load another aircraft, it is automatically updated.



1 – **Refueling mode**: switches to the edition mode (to field tanks)

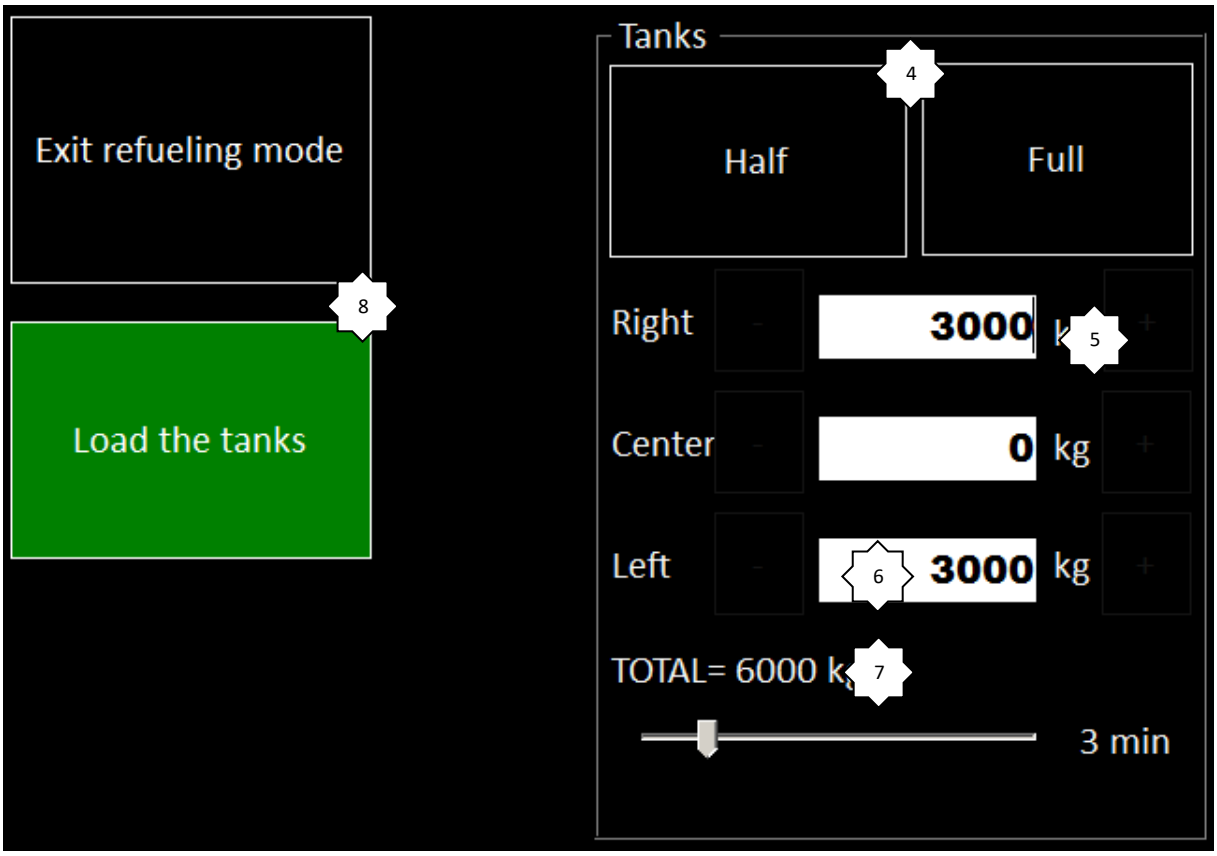
2 – Actual fuel quantity in the tank (here 3,928 kg in the right tank)

3 – Fuel level. There are three color codes:

- Blue over 40%
- Orange between 20 and 40%
- Red below 20%

8.1 Refueling mode

By clicking on « refueling Mode», you access to the fuel loading window:



4 – Two quick presets: Half and Full tanks

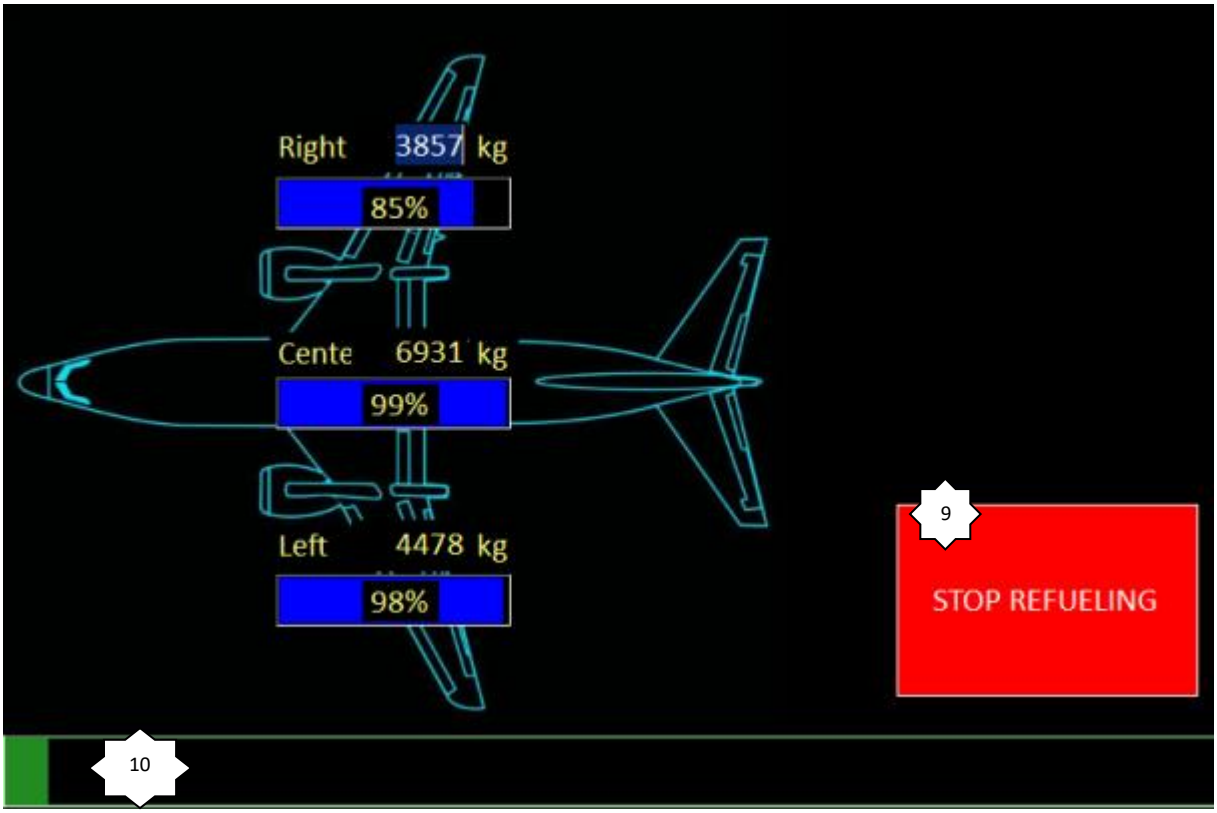
5 – Desired fuel quantity.

You can choose an inferior value of the fuel quantity. Tank will be emptied. If you ask more than the tank capacity, the extra will be ignored. Plus and minus button allow you to you a tactile screen.

6 – The total asked is shown here

7 – Choose the desired time to refuel (from 0 to 20min). Tanks will be progressively filled during indicated time (0=immediately).

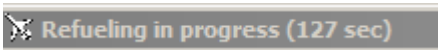
8 – **Load the tanks** appears only when you change a value tank.



9 – **STOP REFUELING button**

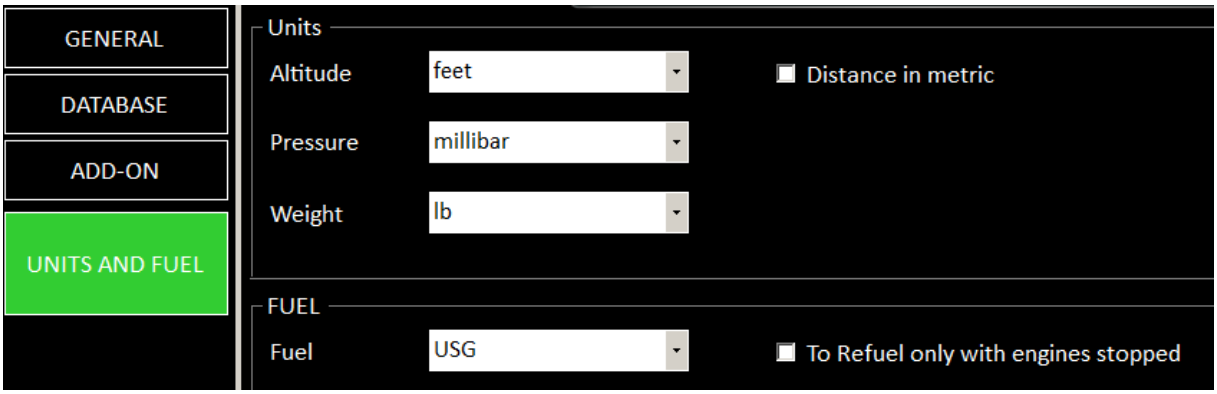
10 –refueling progression bar.

To know

- During the procedure, the FSUIPC 66C0 variable is set to 1. Cockpit builders can read this offset to create a « Fueling door open » alarm.
- During the filling, the window can be closed. You can monitoring the refueling procedure in the title bar. 

8.2 Refueling Preference

Menu > File > Settings > UNITS & FUEL



8.2.1 Refuel only with engines stopped

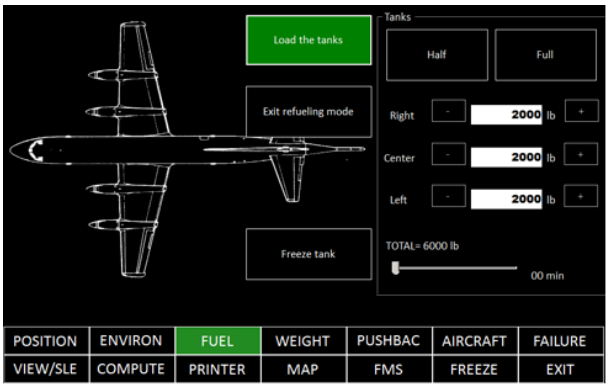
To improve realism, this option prevents refueling before engines stopped.

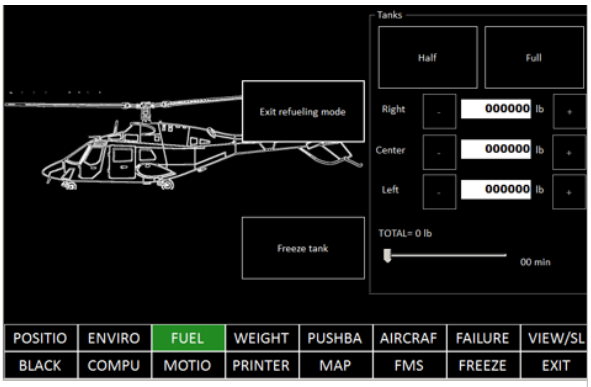
8.2.2 Use kg/lb

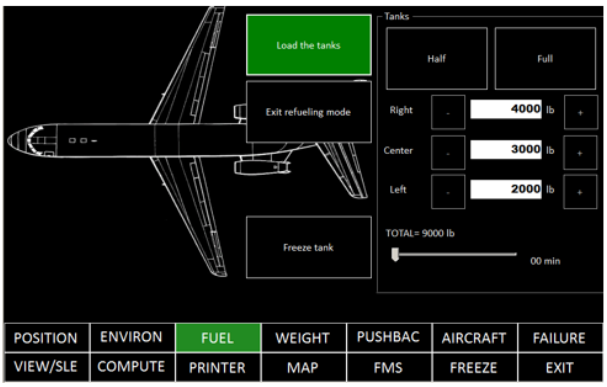
According your need, you can use kg instead of lb.

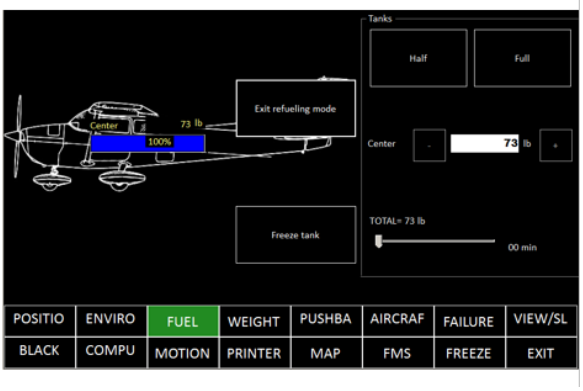
8.2.3 Customize this screen

Professional users can change the background to display their own aircraft.



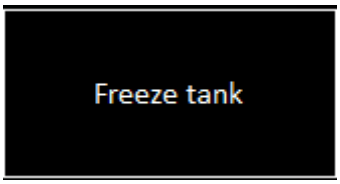






8.3 Frozen tank feature

For procedure training you can freeze the aircraft weight during the flight.

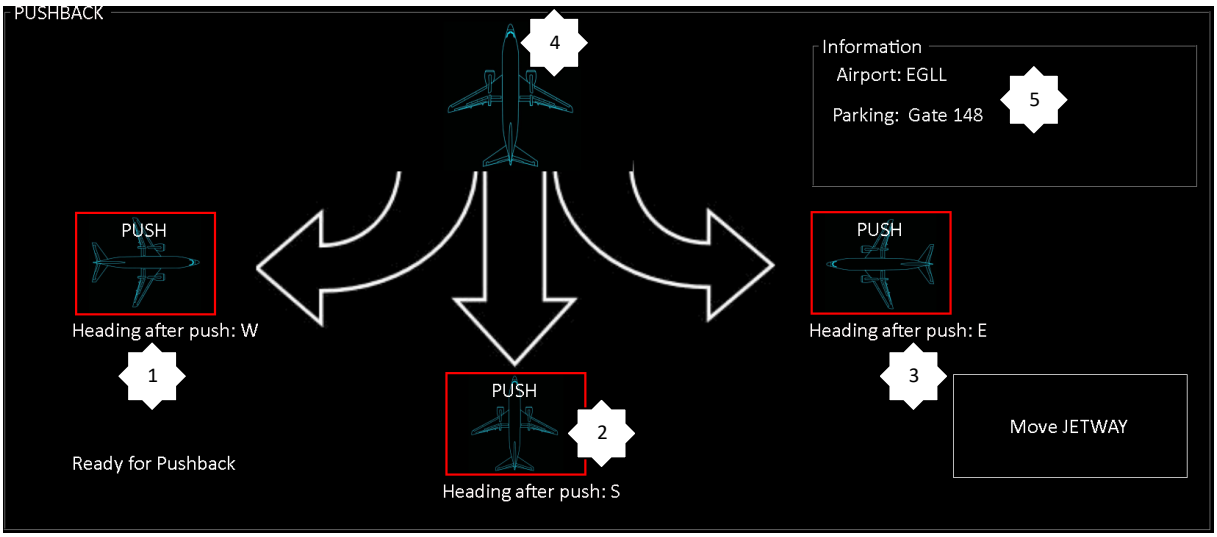


If you press the “Freeze tank” button, it locks the fuel consumption until you press again.

Note: you can still use refueling feature to add or remove fuel.

9 PUSHBACK PAGE

With this page, you manage pushback. It tows the aircraft to move it ready to taxi.



9.1 Procedure

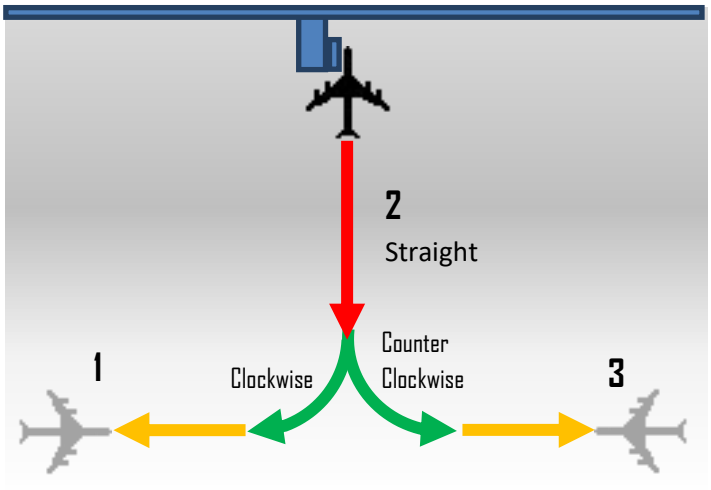
You have three different pushbacks.

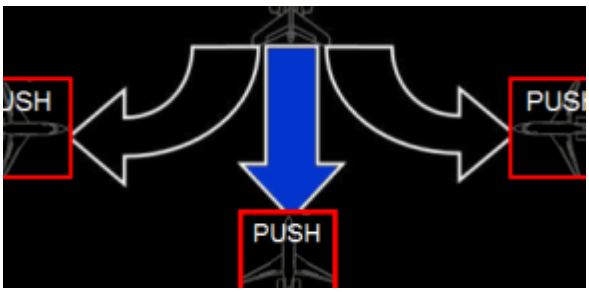
1 – Nose to the Right. Here you can note that it turns the plane to the South-East ("Heading: SE")

2 – Straight away

3 – Nose to the left

You can begin by a direct push (2) and chose during taxi to turn with the button left (1) or right (2)





When a pushback is in progress the arrow corresponding to the choose direction blinks (in blue).

The status (4) comes to "Pushback in progress"

You have to release the parking brake. If not, this message appears: " Please release parking brakes "

5 – If you have previously chosen an airport and a gate, this information is displayed into an "information" part.

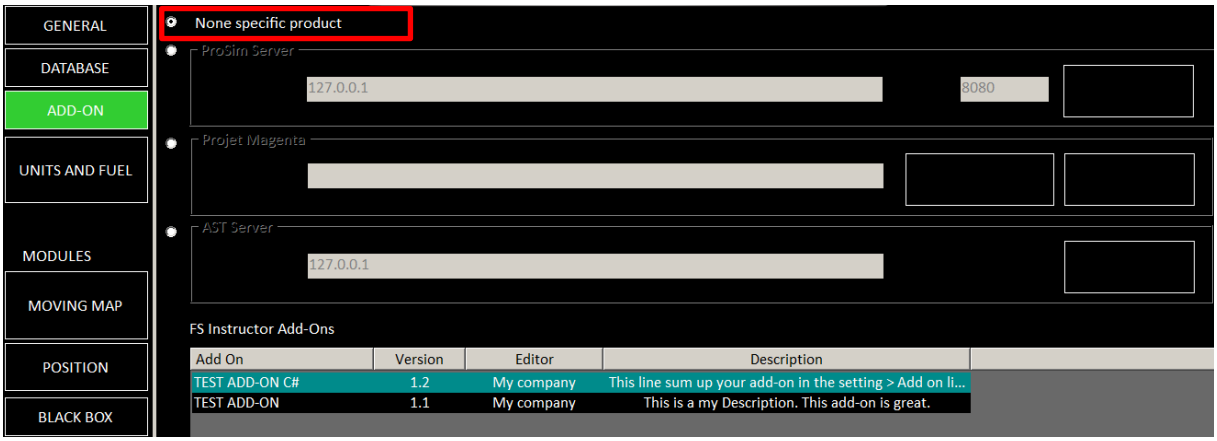
Note: the pushback page is not accessible during airborne.

9.2 Customize this screen

Commercial users can change the background to display their own aircraft. Please contact us to receive the procedure.

10 STANDARD FAILURES

By default, FS Instructor uses the FS/Prepar3D standard failures.
You can change these settings to have supports Project Magenta or PROSIM. They have their own failures module.



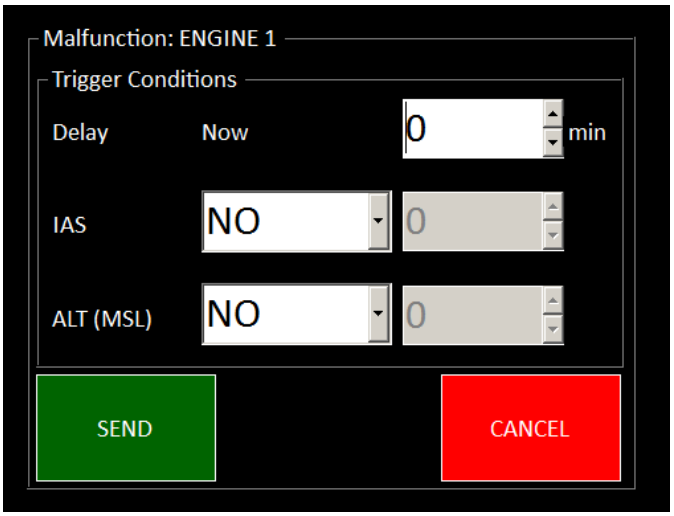
CUSTOM FAILURES

In RED: the current sent failure

In Orange: Trigger malfunctions. They aren't yet applied. You can click on the orange button to know the trigger condition.

10.1.1 Send or arm a failure

Click on a page button and on a failure button.

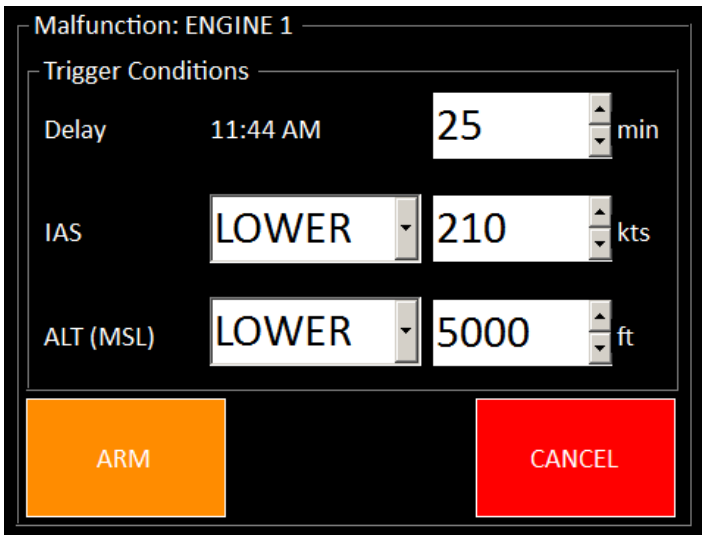


This screen allows to send a direct failure (button green SEND) or field trigger conditions. You can cumulate the three following settings:

- Delay to postpone the failure effect. 0=now. When you change this value, it shows you the time (according the instructor station clock) when the failure will be sent:

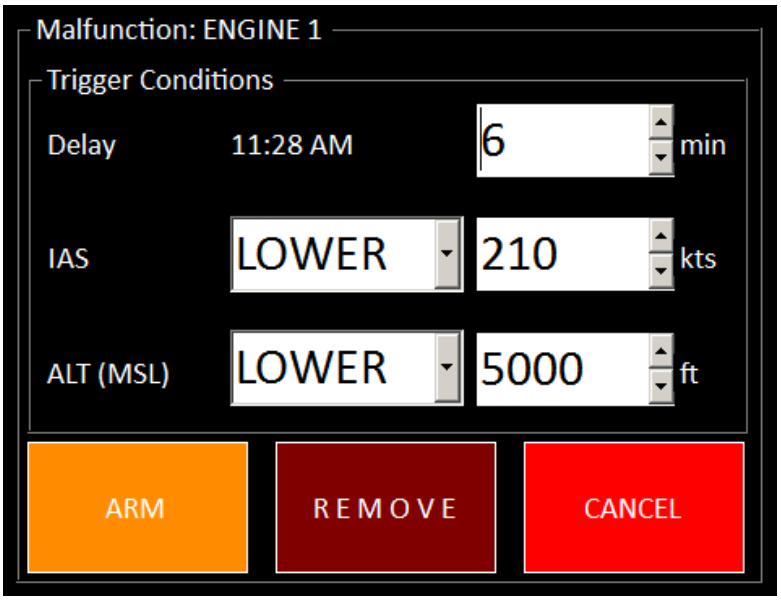
- Indicateed Air Speed - Above (+)/Lower (-) knots
- Altitude of the aircraft - Above (+)/Lower (-) feet

In the following example, we want to create a failure in 25 min when IAS will be < 210 kts and ALT < 5000.



The green button “SEND” becomes orange and indicates now “ARM”. It means the failure will be armed and not sent now. Click on this button.

The failure becomes orange (ARMED status). If you click again on this button, you can see the current conditions:



Now there are 6 minutes remaining. You can Remove these armed failures with the “REMOVE” button or change conditions.

When all conditions are true, the armed failure is sent and becomes RED.

To remove the failure, click again on this red button.

Note: PITOT and VACUUM failures worked only with FS2004.

10.1.2 Available standard P3D failures list

FAILURES	
	HYDRAULIC
	BRAKES L
	BRAKES R
	ADF
	IAS
	ALTIMETER
	ALTITUDE INDICATOR
	COMPASS
	ELECTRICS
	ENGINE L
	ENGINE R
	HEADING INDICATOR
	VSI
	TRANSPONDER
	PITOT
	HYDRAULIC SYSTEM INTEGRITY 50%
INHIBIT	
	FLAPS
	SPOILER
	GEAR
	REVERSER ENG 1
	REVERSER ENG 2
	LEFT BRAKE
	RIGHT BRAKE
FAILED	
	ENGINE 1
	ENGINE 2
	FIRE ENGINE 1
	FIRE ENGINE 2
	AP
	HYDRAULIC
	GEN 1
	GEN 2
	AVIONIC
	STATIC PORT
	VACUUM
	PITOT (IAS)
	ELECTRICITY

Useful

- If you use some add-ons or FSUIPC special functionalities, it could happen that some failures don't work.
- At the end of the flight, the Logbook gives a list of used failures (comment part)

10.1.3 RANDOM failures

It allows creating random failures with 5 reliable levels:

LEVEL	RELIABILITY
Never	None failure
Reliable	About one for 50 hours of flight
Sometimes	About one for 20 hours of flight
Often	About one every 3h of flight
Garbage	One problem or more for 1h

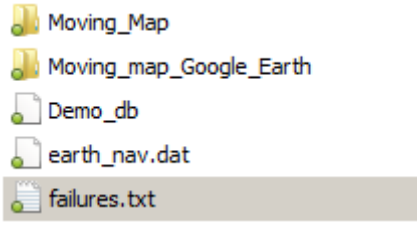
Useful

- The random failures are only generated airborne. Newer on ground.
- The reliability level is recorded. It's reused for the next FS instructor start

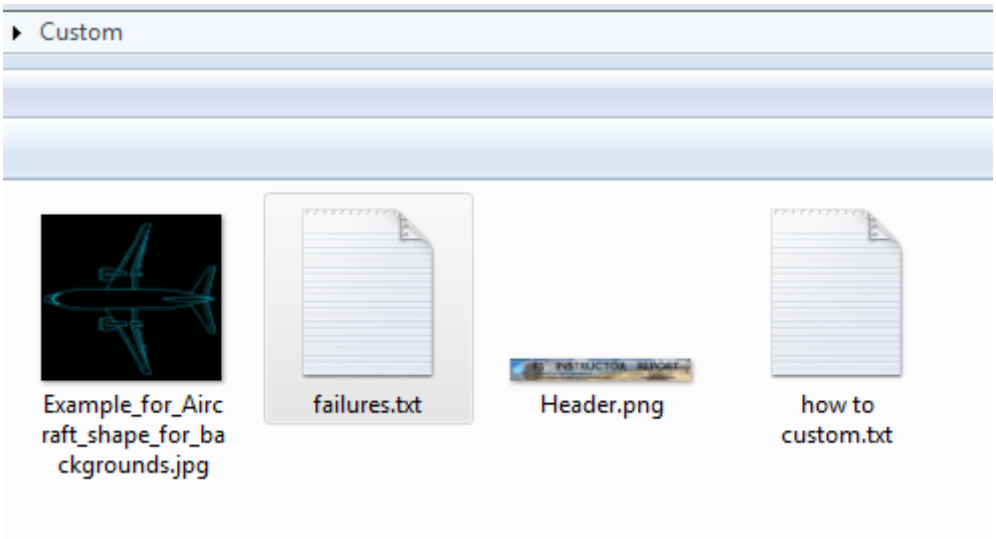
10.1.4 Customize these failures

You can create your own failures to manage Project Magenta Offset or all specific features from FSUIPC.

Copy the file failure.txt from the FS instructor installation folder, resource directory



and MOVE IT in your FS Instructor/CUSTOM directory:



Structure of this file:

- All comment have to begin by a quote “ ’ ”. Such as:

```
ENGINE 1,        3590, 4, 0, 1              ' Engine 1 Fuel Valve, 1 = open, 0 = closed
```

- You create PAGE with the sign [and]. Such as: [PM BLEED]
- You declare two kinds of FSUIPC variables:
    - Simple offset
      You give a failure title, FSUIPC offset, variable length or bit, value when fail, value when normal and say if the failure value is repeated every second
    - TOGGLE. It’s a ON/OFF mode. They are documented into the FSUIPC SDK (List of Controls.pdf, such as http://fsuipc.simflight.com/beta/Revised_List_of_FSX_Controls.pdf)
- Each field has to be separated with a **coma**

To know which FSUIPC offset you have to use, please check FSUIPC SDK documentation or your plane system suit like Project Magenta. http://www.projectmagenta.com/all-fsuipc-offsets/

When you close FS Instructor, the failures are reset.

Beware:

- If you forgot one coma into your offset declaration, the variable will not appear
- The failures are only known during your FS instructor session. It means that if you use a second Instructor session, it can’t see the current failures. Furthermore, if you restart Fs Instructor you no more know which failures are in progress
- Newer used reserved keywords (TOGGLE/REPEAT) in the offset description

10.1.4.1 How to switch off the avionics

The FSUIPC documentation shows the offset 2E80, size=4

2E80	4	Master avionics switch (0=Off, 1=On)

You have to declare:
AVIONIC, 2E80, 4, 0, 1, REPEAT

We add REPEAT mode to send AVIONIC OFF every second.

10.1.4.2 How to inhibit spoiler

The FSUIPC documentation shows the offset 32F8 and the bit 1

32F8	1	This provides options to inhibit certain aircraft operations, for use in breakdown or precise control implementations. Set individual bits for individual subsystems. Currently the following are available, all related to hydraulic power: 2^0 Set to inhibit flap operation 2^1 Set to inhibit spoiler operation 2^2 Set to inhibit gear operation 2^3 *reserved* 2^4 Set to inhibit Engine #1 reverser 2^5 Set to inhibit Engine #2 reverser 2^6 Set to inhibit Engine #3 reverser 2^7 Set to inhibit Engine #4 reverser

You have to declare:

SPOILER, 32F8, .1, 1, 0

10.1.4.3 How to stick brakes

The FSUIPC controls shows the toggle 66310

TOGGLE TOTAL BRAKE FAILURE 66310

You declare

STUCK BRAKE, TOGGLE, 66310

Note: for toggle mode, you can't specify a fail and normal value. It's like a switch. It sends ON for the first use and OFF the second time.

```
'       CUSTOM FAILURES for FS Instructor
'       [a name] => page
'       failure_title,  FSUIPC offset, length, value_fail, value_normal
'       Options:
'       - TOGGLE ==> ON/OFF
'       - REPEAT : repeat the command every second

 [INHIBIT]
        FLAPS,          32F8, .0, 1, 0
        SPOILER,        32F8, .1, 1, 0
        GEAR,           32F8, .2, 1, 0
        REVERSER ENG 1, 32F8, .4, 1, 0
        REVERSER ENG 2, 32F8, .5, 1, 0
        LEFT BRAKE,     TOGGLE, 66311           ' TOGGLE_LEFT_BRAKE_FAILURE
        RIGHT BRAKE,    TOGGLE, 66312           ' TOGGLE_RIGHT_BRAKE_FAILURE

[FAILED]
        ENGINE 1,       3590, 4, 0, 1           ' Engine 1 Fuel Valve, 1 = open, 0 = closed
        ENGINE 2,       3594, 4, 0, 1           ' Engine 2 Fuel Valve, 1 = open, 0 = closed
        AP,             07BC, 4, 0, 1,  REPEAT  ' Autopilot Master switch 1=ON / 0=OFF  511,.3,1,0 for PM
        HYDRAULIC,      TOGGLE, 66309           ' TOGGLE_HYDRAULIC_FAILURE
        GEN 1,          3B78, 4, 0, 1,  REPEAT  ' GEN1 switch, (0 = off, 1= on)
        GEN 2,          3AB8, 4, 0, 1,  REPEAT  ' GEN2 switch
        AVIONIC,        2E80, 4, 0, 1,  REPEAT
        STATIC_PORT,    TOGGLE, 66308           ' TOGGLE_STATIC_PORT_BLOCKAGE
        VACUUM,         TOGGLE, 66305           ' TOGGLE_VACUUM_FAILURE
        PITOT (IAS),    TOGGLE, 66307           ' TOGGLE_PITOT_BLOCKAGE - B71, 1, 1,0 for PM
        ELECTRICITY,    TOGGLE, 66306           ' TOGGLE_ELECTRICAL_FAILURE

[PM BLEED]
        BLEED1/FAULT, 5679, .0, 1, 0
        BLEED2/FAULT, 5679, .1, 1, 0
        BLEED3/FAULT, 5679, .2, 1, 0
        BLEED4/FAULT, 5679, .3, 1, 0
```

11 PROSIM support

If you set PROSIM, you have access to specific features:

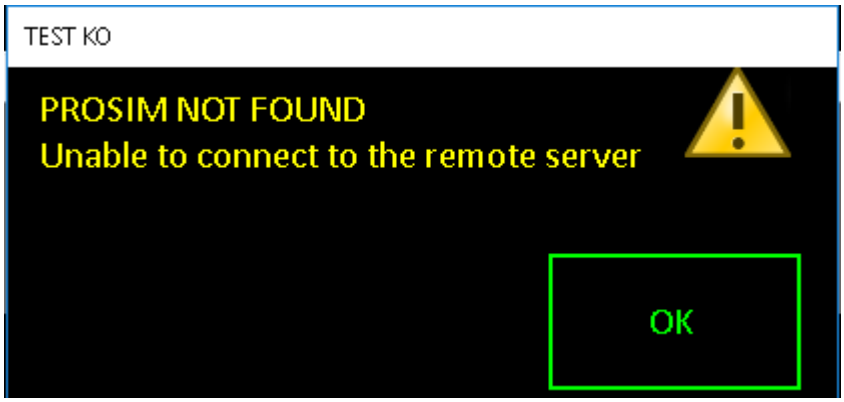
- PROSIM Failures
- FMS
- Flight Plan on the MAP
- GPU control on Aircraft page

11.1.1 Prosim Setting

FS Instructor needs to know where is located PROSIM737. You have to set it into the preference window (PROSIM, PM tab) and check “Use PROSIM”.

You have to insert Host name/IP Address and the default com Port (8080 by default)

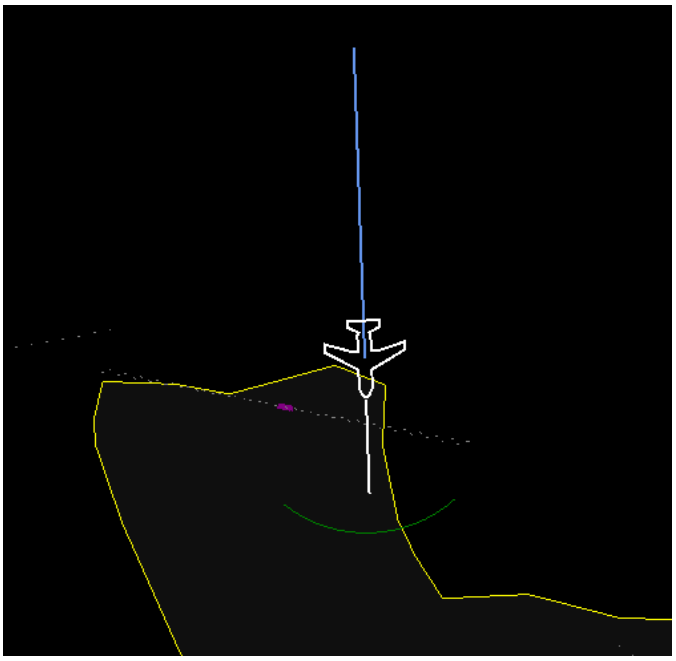
The Test button tries a connection to PROSIM

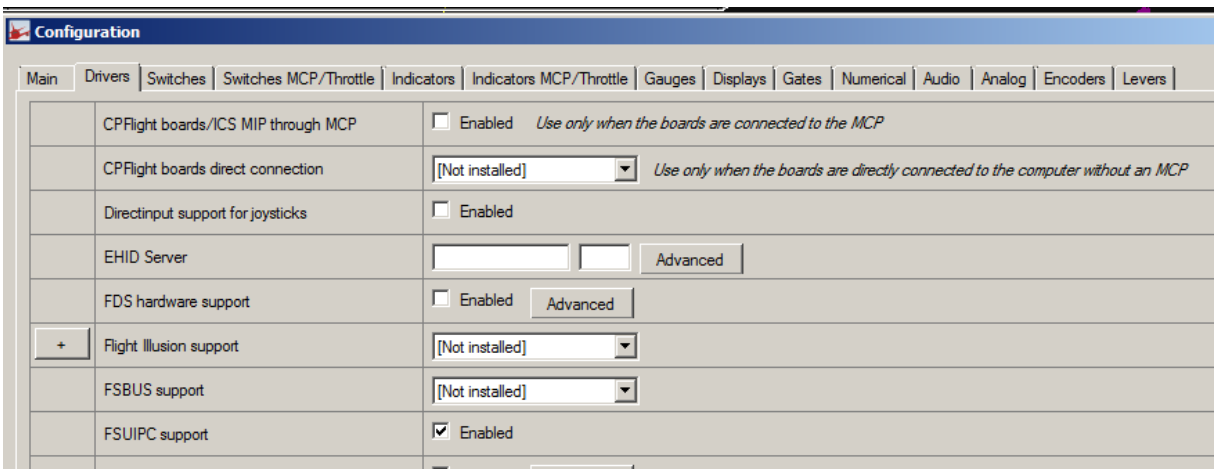


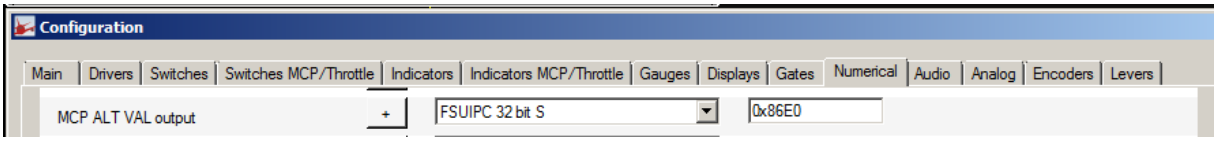
If after a while PROSIM is not found, you have to check that your settings are correct and PROSIM is started.

In Prosim setting, you have to declare

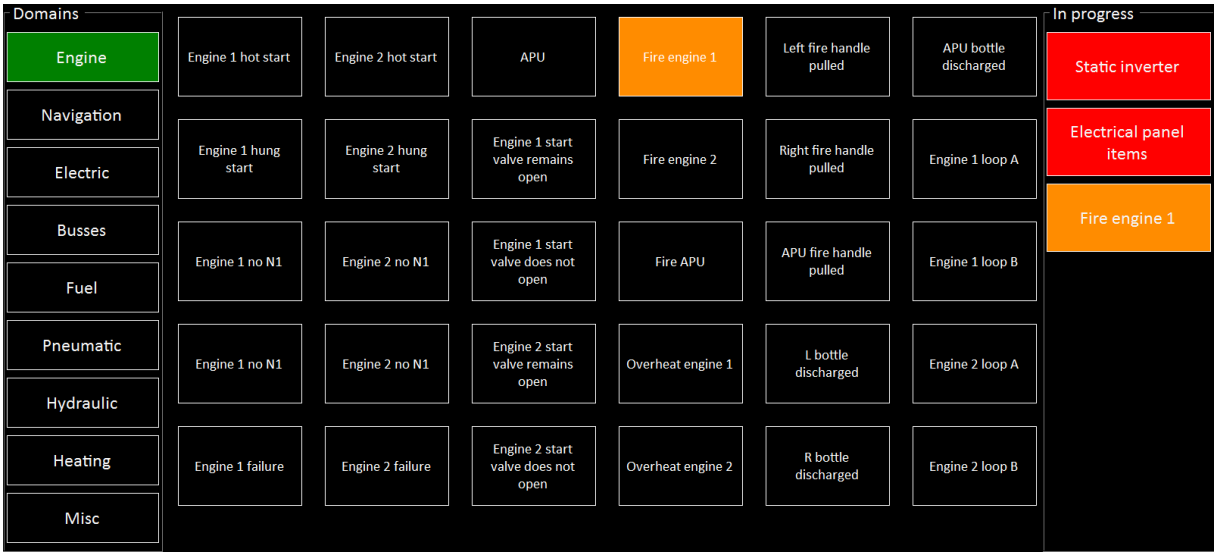
To have the green arc of the altitude selected on MCP







11.1.2 PROSIM FAILURES PAGE

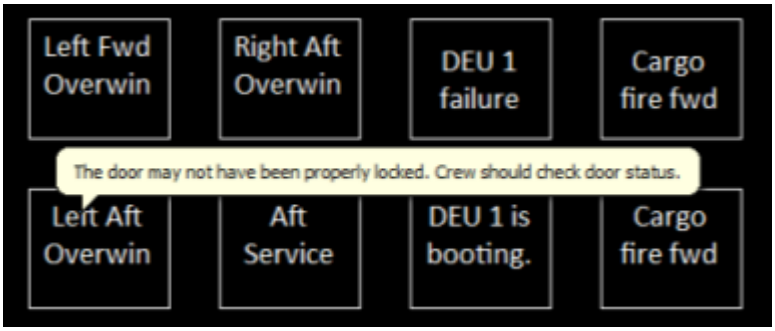


If you own PROSIM737, FS Instructor can manage the failures panel.

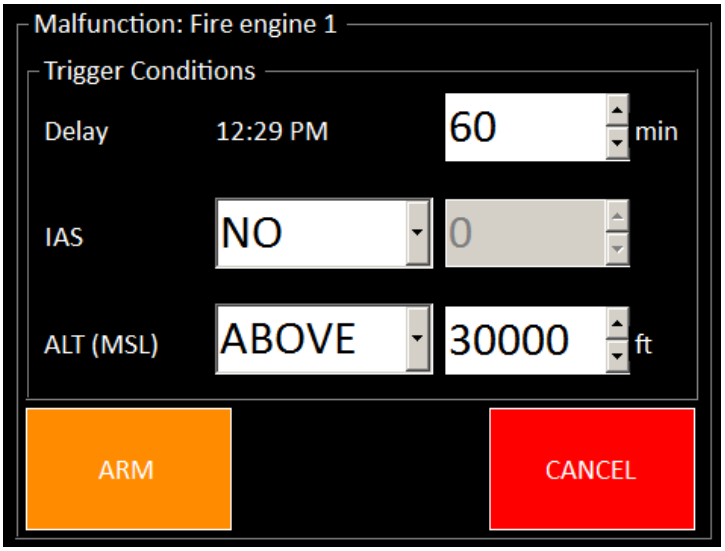
This page sends or stops failures.

The screen is divided in 3 parts:

- On the left, you have the 9 domains. If you click on one of them, the corresponding failures appears on the center part
- The center part displays the failures list of the current domain (in green).
  If you move the mouse on a failure, it shows details

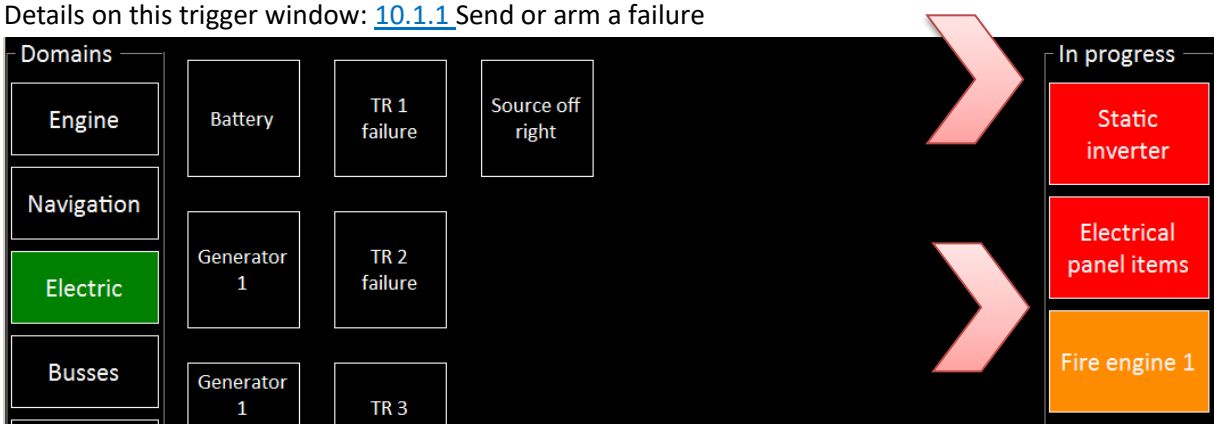


When you click on a failure, a window allows to send now the malfunction or to arm it with conditions:



Here we arm a Fire Engine in 1 hour above FL300

Details on this trigger window: 10.1.1 Send or arm a failure



On the right

- In red, the current failures. Just click on it to remove it.

Beware: when you stop a failure, such as Engine failure, it stops the reason why the failure appears. Pilots have to restart the engine.

- In orange, the armed failure. Click on it to show the current trigger conditions.

11.1.3 List of the Prosim failures (for ProSim737 V1.x)

Battery
- Generator 1
- Generator 1 disconnect
- Generator 2
- Generator 2 disconnect
- TR 1 failure
- TR 2 failure
- TR 3 failure
- Static inverter

Navigation
- IRS left
- IRS left alignment
- IRS right
- IRS right alignment
- GPS

Pneumatic
- Trim air valve

Source off left
Source off right

Busses
- TransBus1
- TransBus2
- MainBus1
- MainBus2
- GalleyBusLeft
- GalleyBusRight
- ACStandbyBus
- DCBus1
- DCBus2
- DCStandbyBus
- BattBus
- HotBattBus
- SwitchedHotBattBus
- GroundServicesBus
- switchedground
- Aux Battery

Fuel
- Fuel Left Aft pump
- Fuel Left Fwd pump
- Fuel Center Aft pump
- Fuel Center Fwd pump
- Fuel Right Aft pump
- Fuel Right Fwd pump
- Crossfeed valve
- ENG fuel valve left
- ENG fuel valve right
- Spar valve left
- Spar valve right
- Filter bypass left
- Filter bypass right

Heating
- Capt Pitot Heat
- Alpha Vane Heat L
- Elev pitot Heat L
- tempProbe Heat
- Copilot Pitot Heat
- Alpha Vane Heat R
- Elev pitot Heat R
- auxPitot Heat

- L Bleed trip
- L High stage locked close
- L Bleed Stage shift
- R Bleed trip
- R High stage locked close
- R Bleed Stage shift
- Bleed air valve left
- Bleed air valve right
- Bleed air valve APU
- Pack L
- Pack R
- Pressure loss high
- Pressure loss low
- Pressuration controller 1
- Pressuration controller 2
- Passenger oxygen
- Pneumatic isolation valve
- Duct leak L
- Duct leak R
- Cowl overpressure L
- Cowl overpressure R

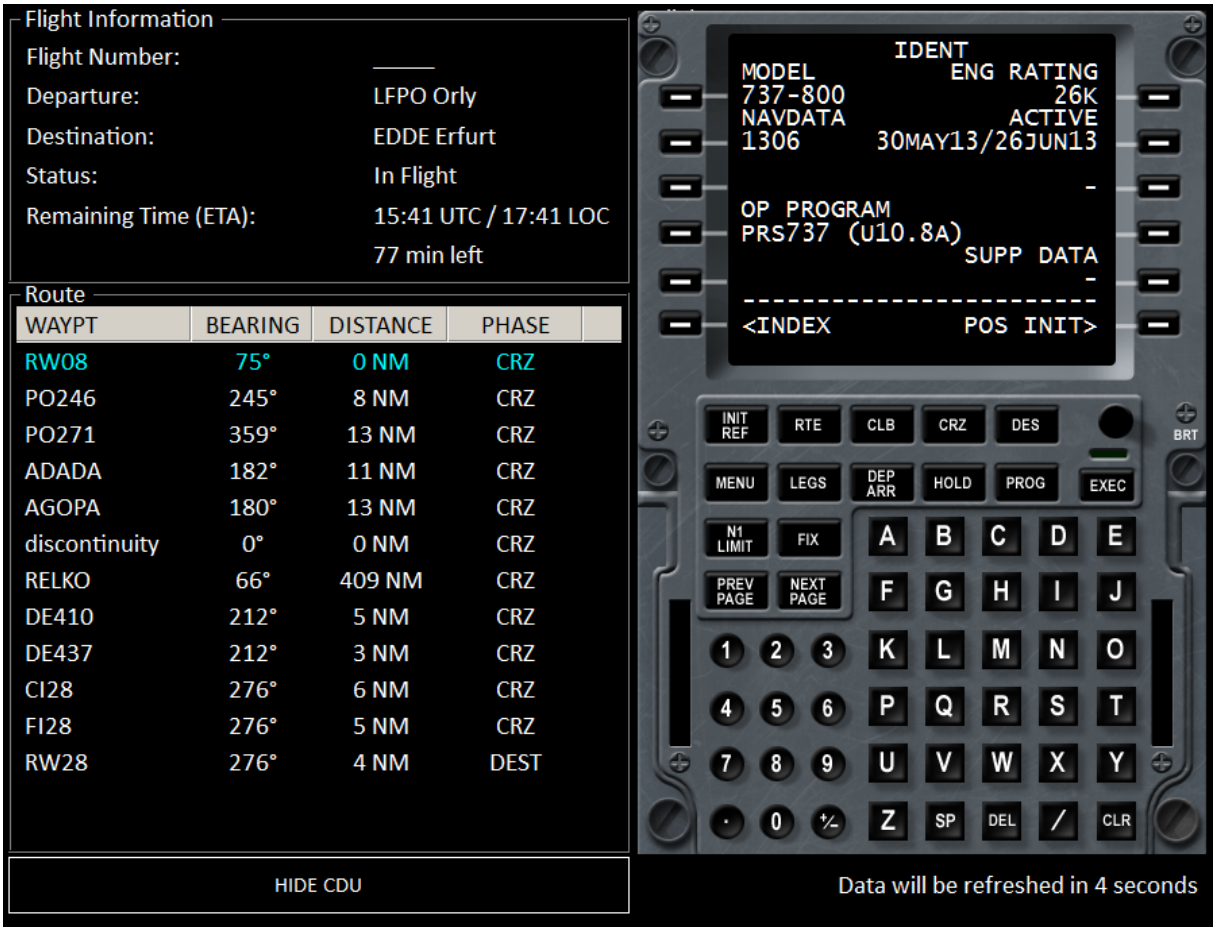
Hydraulic
- Hyd ENG1
- Hyd ENG2
- Hyd ELEC2 overheat
- Hyd ELEC1 overheat
- Hyd Standby pump
- Standby hyd low quantity

Engine
- APU
- Engine 1 failure
- Engine 2 failure
- Fire engine 1
- Fire engine 2
- Fire APU
- Overheat engine 1
- Overheat engine 2
- L bottle discharged
- R bottle discharged
- APU bottle discharged
- Engine 1 loop A
- Engine 1 loop B
- Engine 2 loop A

Window heat Side L element	Engine 2 loop B
Window heat FWD L element	APU loop
Window heat Side R element	
Window heat FWD R element	
Cowl valve L	
Cowl valve R	
WAI valve L	
WAI valve R	

Misc	
Speed trim fail	Fwd Cargo door
Mach trim fail	Aft Cargo door
Auto slat fail	DEU 1 failure
Equip door	DEU 2 failure
Fwd entry door	Lavatory smoke
Left Fwd Overwing door	Cargo fire fwd
Left Aft Overwing door	Cargo fire fwd detection loop A
Aft Entry door	Cargo fire fwd detection loop B
Fwd Service door	Cargo fire aft
Right Fwd Overwing door	Cargo fire aft detection loop A
Right Aft Overwing door	Cargo fire aft detection loop B
Aft Service door	

11.1.4 PROSIM FMS

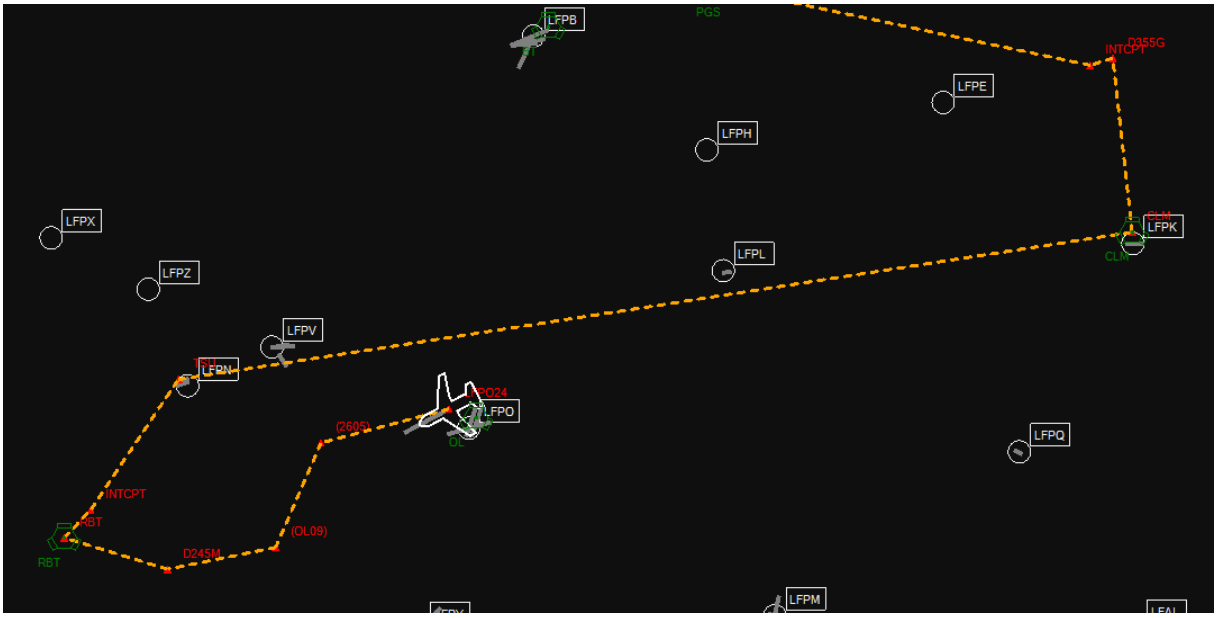


This module is accessible if you have set a connection to PROSIM from the Preference menu.

It extracts information from the route inserted in the CDU.

To be able to display an embedded CDU (SHOW/HIDE CDU button) you need at least one ProSimCDU program running.
FS Instructor opens a web window to the PROSIM CDU.

11.2 PROSIM FLIGHT PLAN



12 PROJECT MAGENTA support

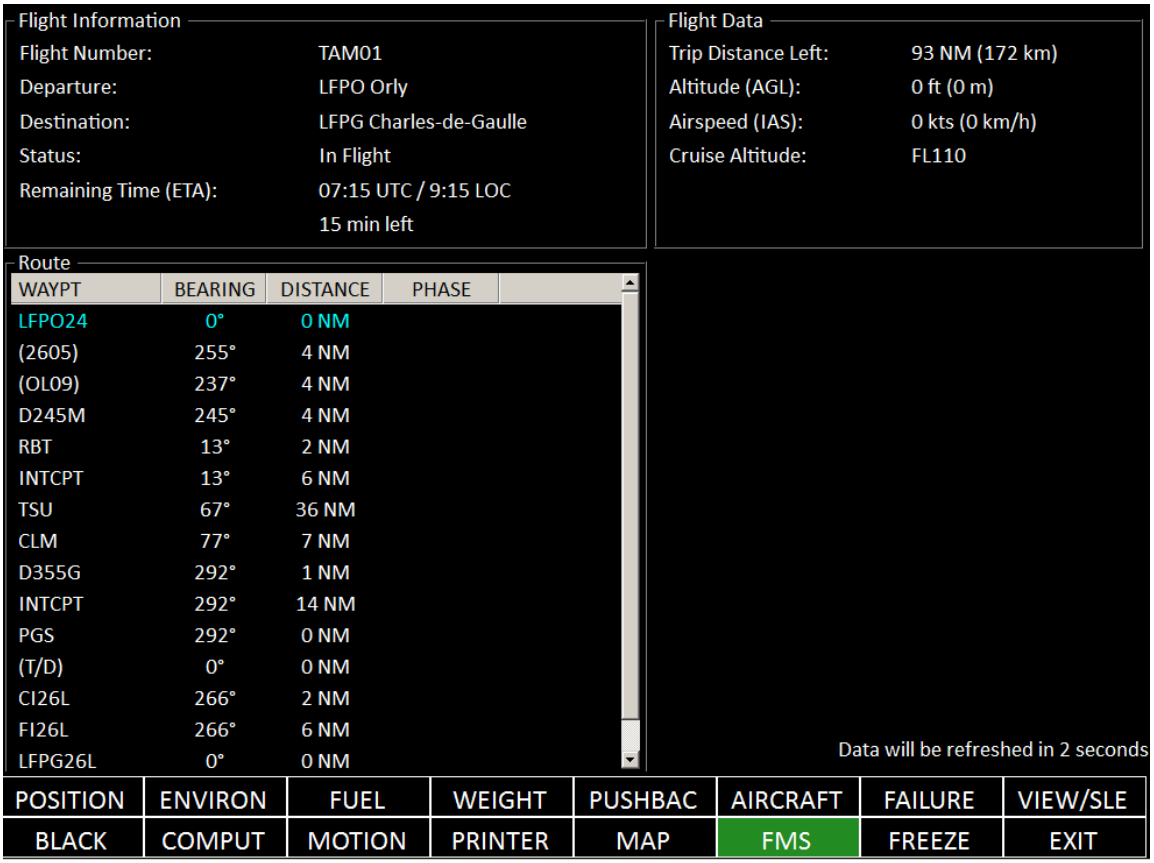
If you set PM, you have access to specific features:

- FMS
- Flight Plan on the MAP

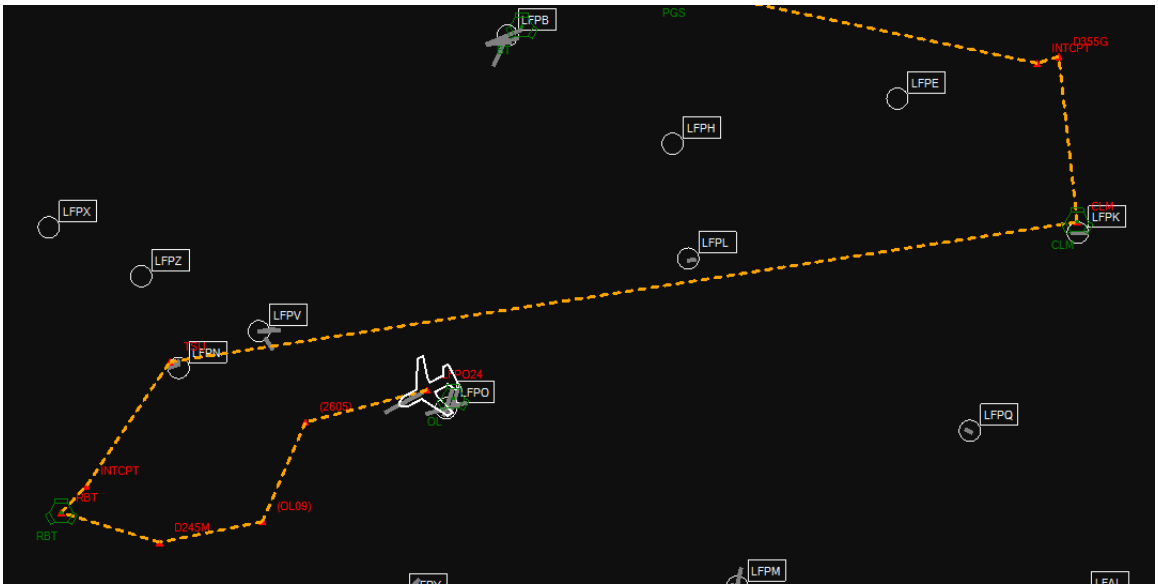
12.1.1 PM Setting

FS Instructor needs to know where is located the NetDir directory. This folder shares all Project Magenta information in real time. Check your PM setting to know where it is.

12.2 Project Magenta FMS



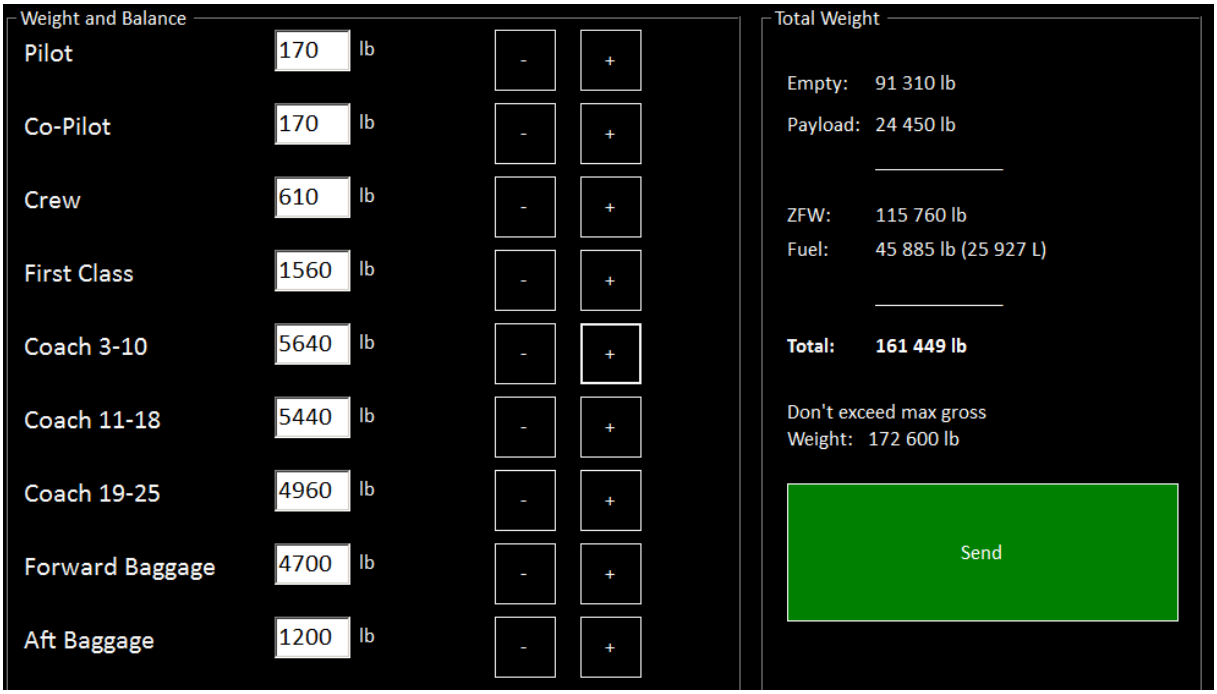
12.3 Project Magenta Flight Plan



13 WEIGHT/PAYLOAD PAGE

This module shows you the current aircraft weight. It controls the payload elements (pilot, first class, baggage…).

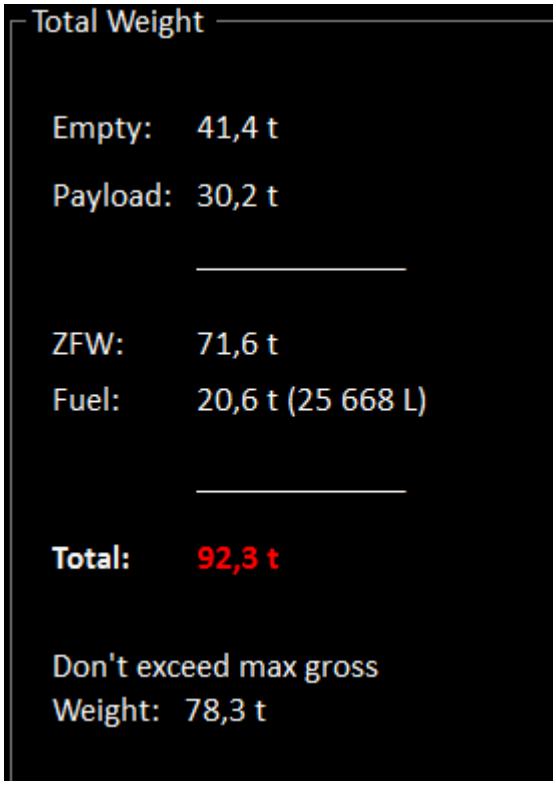
This station list depends on the current aircraft used.



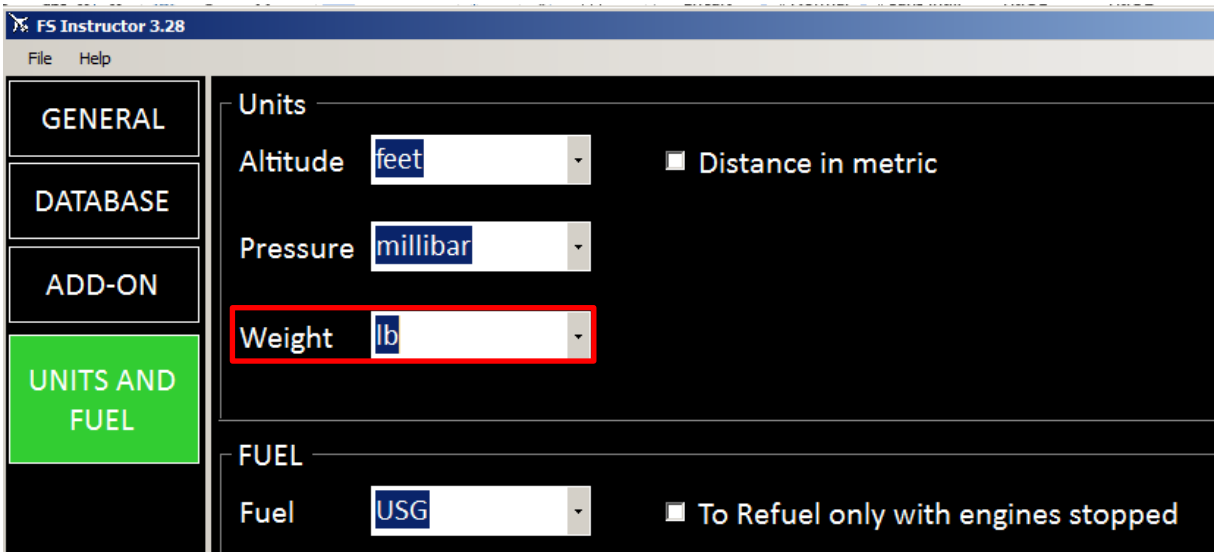
The values are only sent when you click on “Send” button.
During the flight, the plane could have an abrupt behavior if you change the mass a lot.

Note:

- You can insert aberrant value. For example, 2t for the pilot weight. It should have a very strong impact on the aircraft. It could be unflyable.
- Max Gross Weight: if you exceed this value, the aircraft weight appears in red. You can ignore this warning and send excessive values. However, the flight envelope will change and the plane could be unstable.
- After a crash or situation loading, these weights could be come back to the default values.
- If you try to update weight station during a flight (engine started), you will have to confirm it (a message box appears)



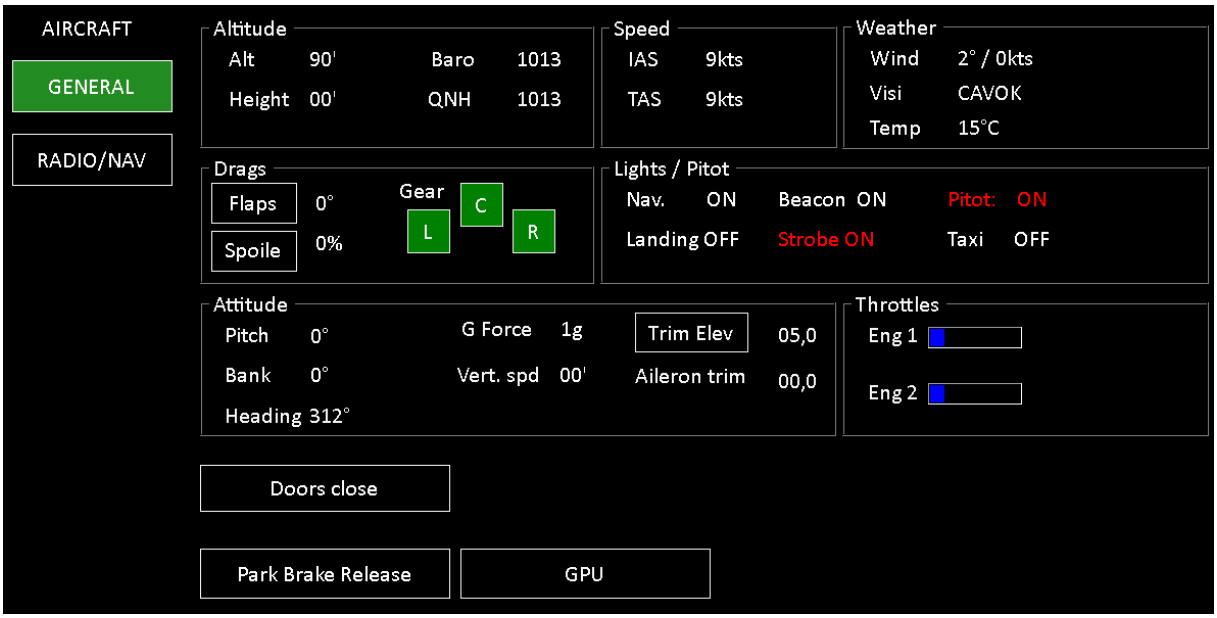
- You can use lb or kg. Select the unit it into setting menu (UNITS Part).



14 Aircraft

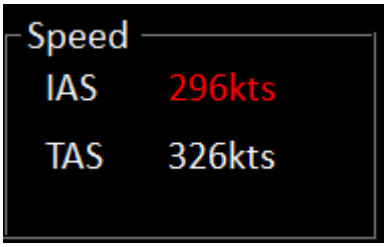
14.1 General Page

This page can change regarding your current aircraft and add-on used.



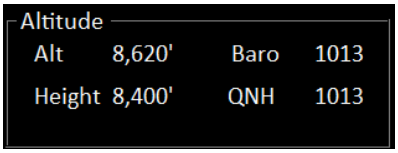
This page monitors the aircraft status.

You detect quickly pilot errors via color codes (orange: potential error, red: danger)



IAS (Indicated Air Speed):
The value becomes red if the plane exceeds 250Kt limitation under 10 000' or if the plane exceeds 30kts during taxi.

TAS (True Air Speed)



Alt: True Altitude (Ft., at sea level)

Height: Ground height

Baro: atmospheric pressure setting

- Above 7000', if QNH is not set to 1013 (standard pressure), the value appears in red

Local QNH: atmospheric pressure

Flaps: indicates the current flaps position (degrees)
If you click on "Flaps" button you can choose to up or down flaps.
Note: according your aircraft, you have to specify the full flaps degrees value to have. Such as 40° for B737. Go to preference menu, aircraft tab to change this value.

Spoilers: indicates in % speed brakes position

- 0% = up / 100% = fully extended
- When spoilers are armed, ARMED text appears.
- When speed brakes are fully extended, the value appears in red.
- If you click on Spoilers. You release or extend the spoilers.

Gear: indicates the landing gear position.

- Black: Gear up,
- Red: In transition, gear unsafe.
- Green: Gear down and locked

These buttons can be activated to move the landing gear.

Actual **Weather** around the aircraft:

- Wind direction
- Wind speed
- External temperature (Celsius)

Pitch.

- /\ indicates a climb pitch
- \/ indicates a descent pitch

Bank: Bank angle:

- <-- to the left
- --> to the right
- Becomes orange when reaching 30°
- Becomes red when reaching 50°

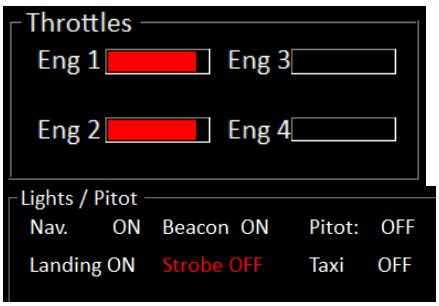
Heading compass.

G Force: Gravitational Force

- Becomes red after 2g

Vertical speed

- appears in orange after 3000''/min
- Appears in red after 4000''/min

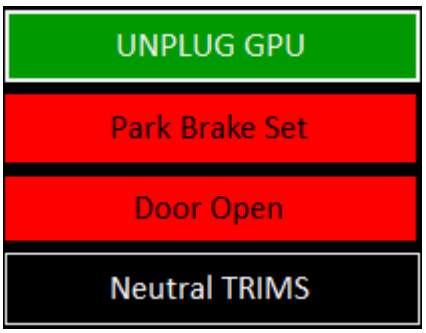


Shown engines N1 in %

- Becomes red under 20% and over 90%

Lights / Pitot heat

- Nav Light should be ON during the flight
- Pitot Heat: Not mandatory but avoid using it on the ground
- Beacon should be ON when the engines are started
- Strobe should be ON when you line up and OFF runway vacated
- Landing: has to be ON when you line up and below the transition altitude (or FL100)
- Taxi



GPU / UNPLUG GPU appears only when Prosim is activated. It controls ground power.

Park Brake: Parking brakes status:

- Red, Parking brakes engaged/set
- Black, parking brakes released.

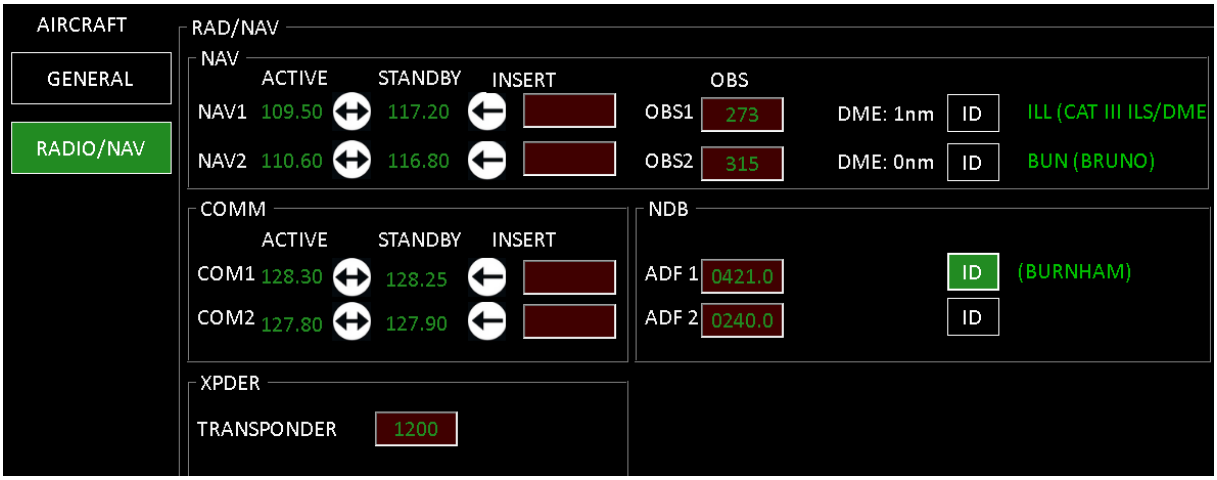
Door: Door status

- Black: Door locked,

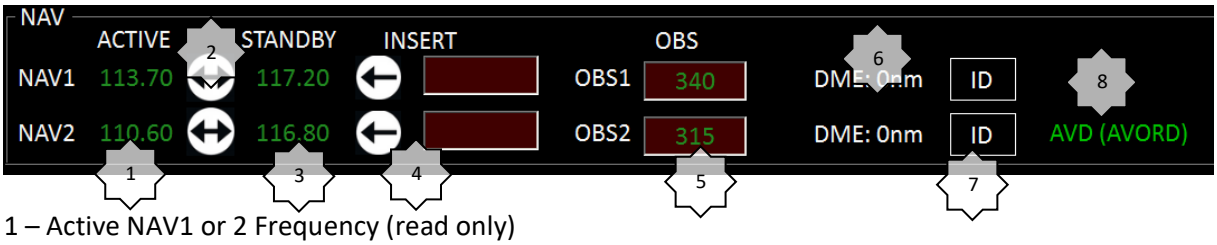
- Red: Door opened.

Pilotage errors appear in the logbook page. Only highest values will be written.

14.2 RAVIO/NAV page

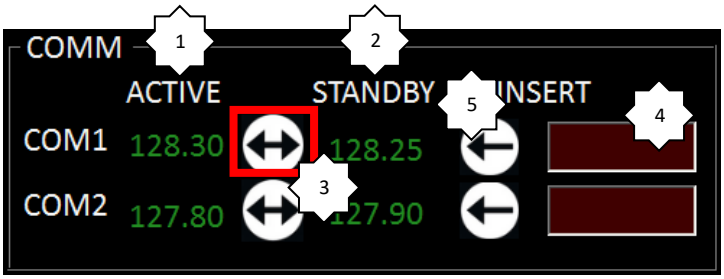


14.2.1 NAV 1, 2 tuning



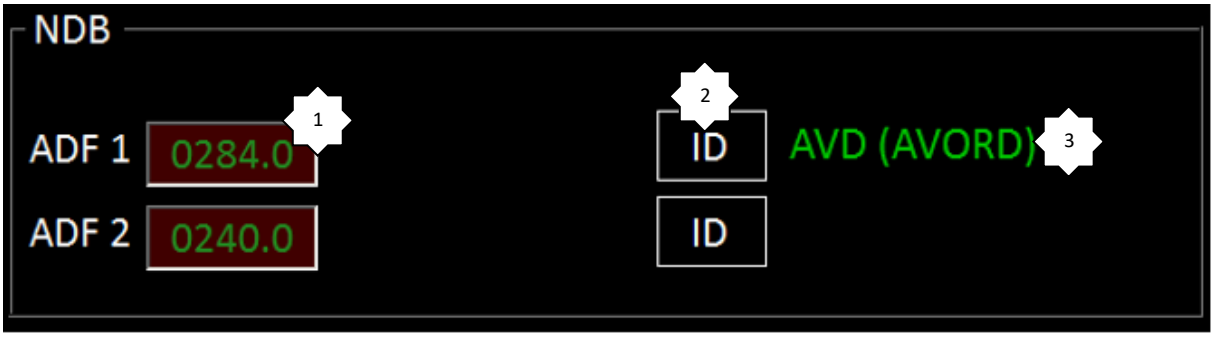
1 – Active NAV1 or 2 Frequency (read only)
2 – Swap frequency button
3 – STANDBY Frequency (read only)
4 - Standby Frequency writing box. Click on the left arrow to send it.
5 - Course setting (OBS) of each NAV. You can write a value.
6 - DME distance (0=not available)
7 – ID = IDENT. To listen to the Morse code. Green button=activated
8 – If you are receiving a VOR. It shows the code and navaids name.

14.2.2 COMM tuning



1 –Active Frequency (read only)
2 –Standby Frequency (read only)
3 –Frequency change button
4 –New Standby Frequency writing box
5 – Button to send this frequency

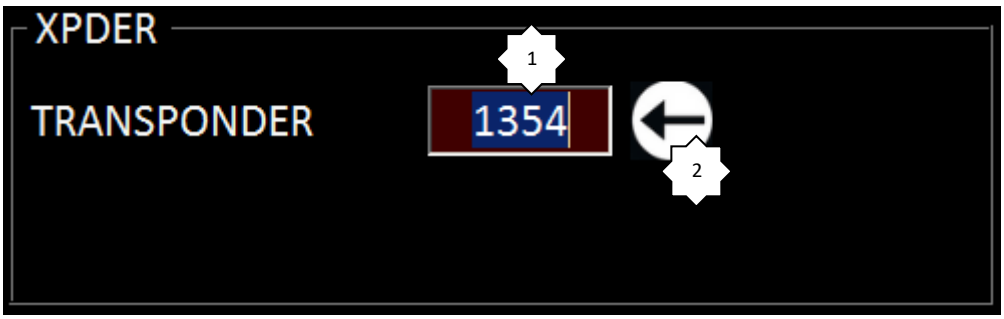
14.2.3 NDB



ADF 2 works only with aircraft supporting a second ADF.

1- ADF Frequency – you can write a new value
2 - ID = IDENT. To listen to the Morse code. Green button=activated 3 –Frequency change button
3 – If you are receiving an ADF. It shows the code and navaids name.

14.2.4 Transponder



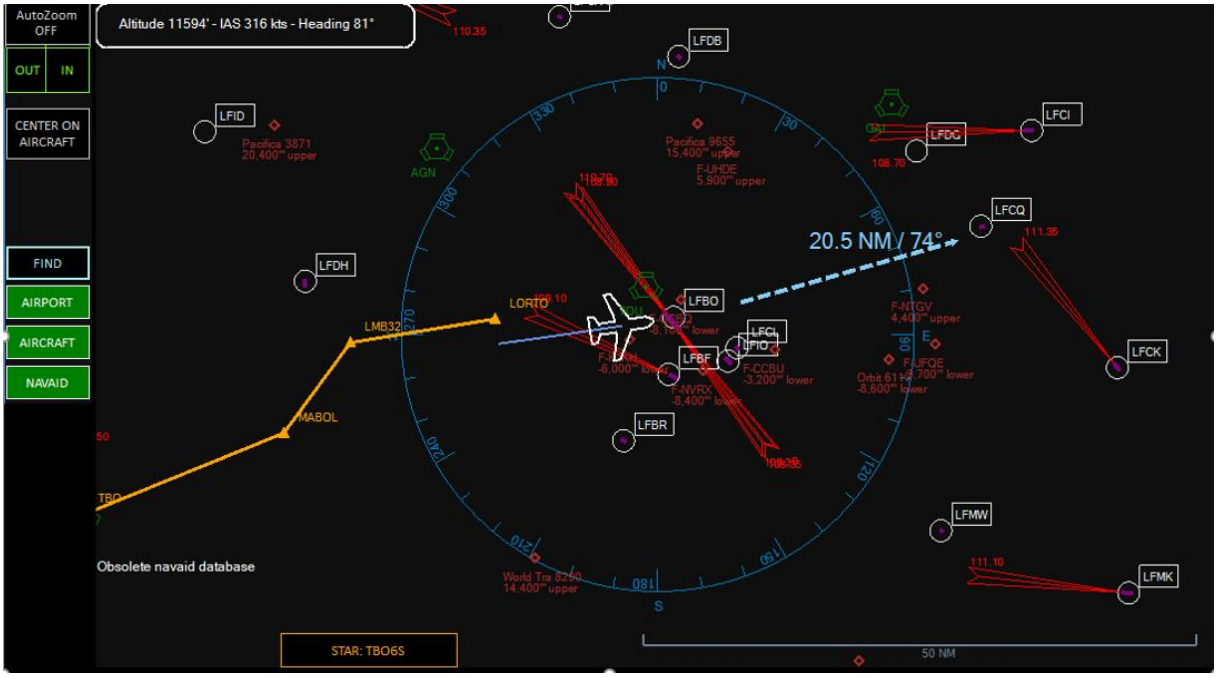
1 –XPDER Frequency – you can write a new value
2 – left arrow only appears in edit mode. Click on this button to send the actual XPDER value

14.3 Module settings

The flaps position is calculated regarding the max full flaps degrees. It depends on your current aircraft. You can manage it from the Menu Config > General

15 MOVING MAP

A moving map display is a type of navigation system that shows the aircraft current location at the center of a map. As the plane moves, the map moves to keep it at the center of the display.



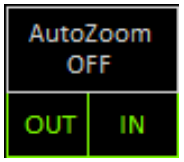
15.1 "Obsolete navaids database" message

If a message "Obsolete navaids database" appears on the map, it means that you are not using a Navigraph database.

Please follow this chapter to download and install the last Navigraph database:

15.2 Zoom

By default, auto zoom is activated. The scale depends on the plane altitude. On ground, the focus is on the airport. To bypass, click on the "AutoZoom ON" button.
Two new buttons appear. You can now manage manually the zoom.

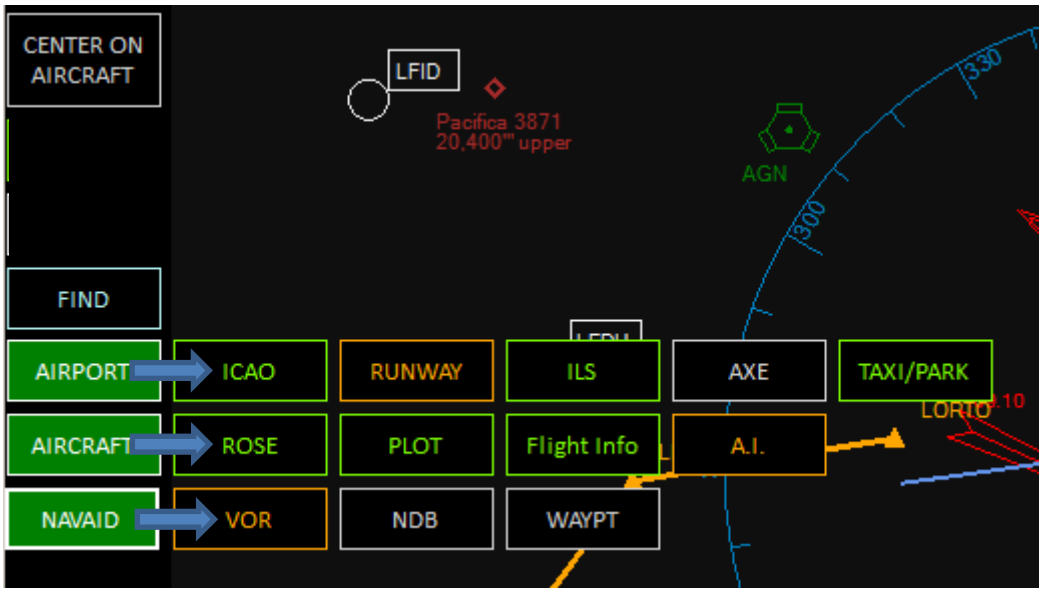


Two different ways to zoom:

- Use mouse wheel scroll (in/out)
- Use buttons

15.3 The controls

On the left, you find buttons.



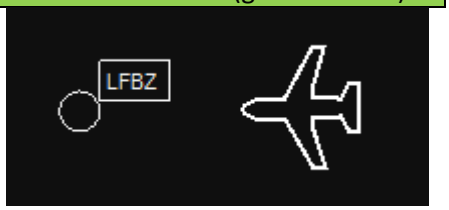
Gray button = inactive

Orange button = first notch

Green button = ON or second notch

15.3.1 ICAO

This button has three states:

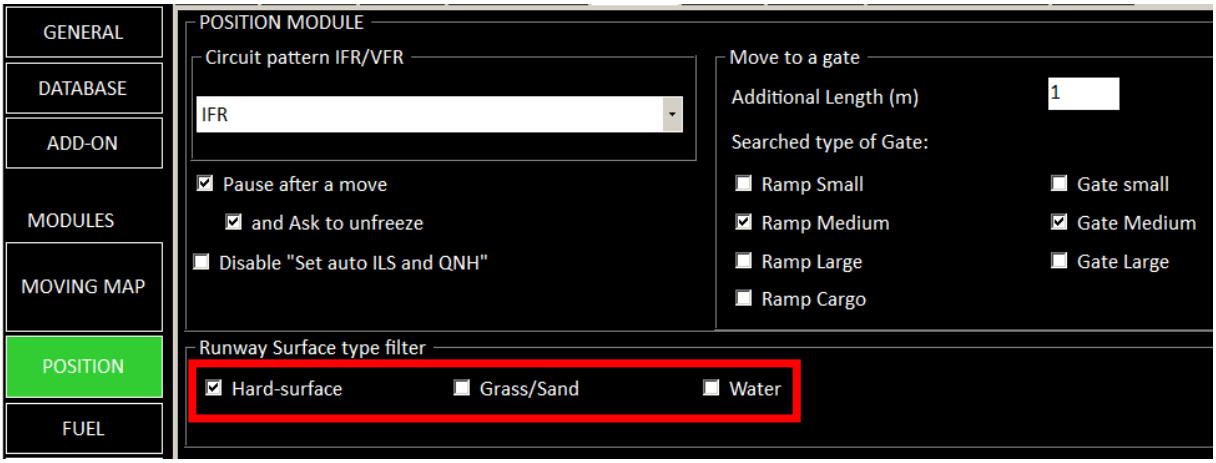
None (gray button)	Show airport circle (orange button)	Show ICAO code (green button)
		

15.3.2 RUNWAY

This button has three states:

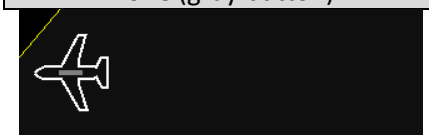
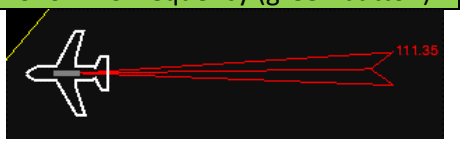
None (gray button)	Show runway (orange button)	Show runway identification (green button)
		

Note: you can filter the runways displayed according the surface (see Menu > Settings > POSITION)



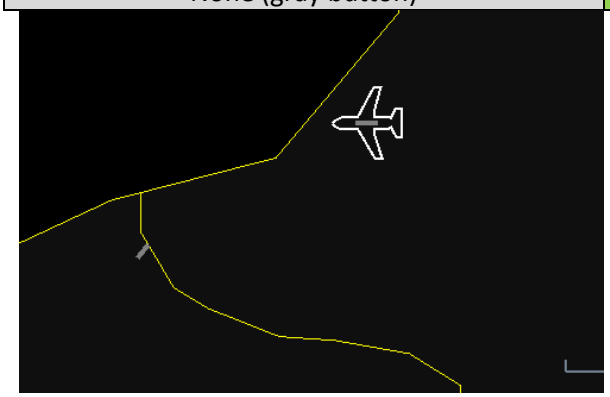
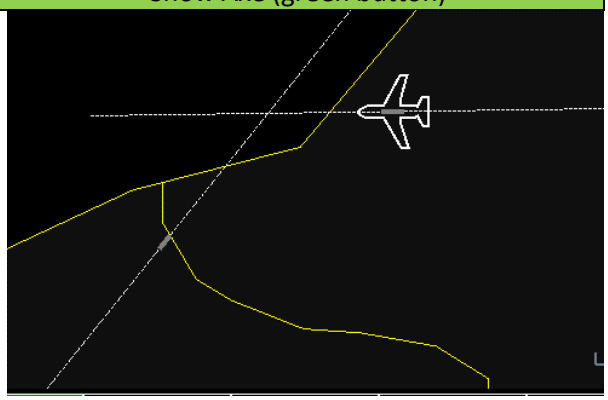
15.3.3 ILS

This feature works only if you display the runway. This button has three states:

None (gray button)	Show ILS track (orange button)	Show ILS frequency (green button)
		

15.3.4 AXE

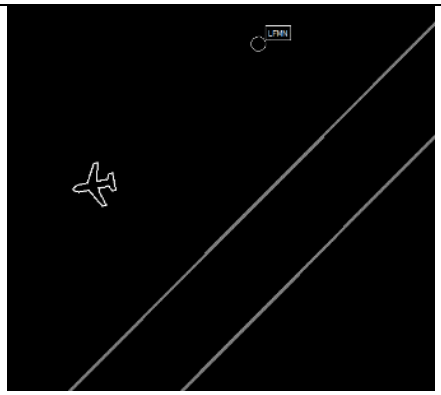
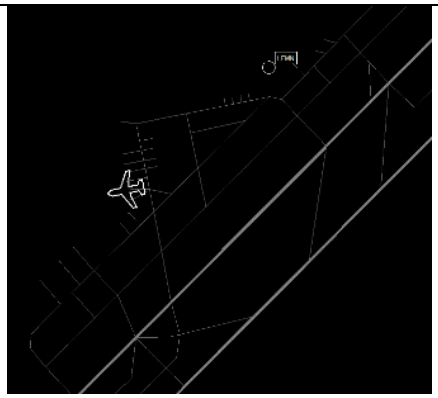
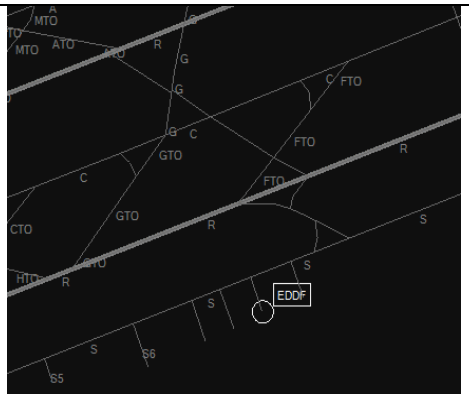
This feature works only if you display the runway. This button is ON/OFF:

None (gray button)	Show Axe (green button)
	

15.3.5 TAXI/PARK

This feature works only with a high zoom. This button has three states:

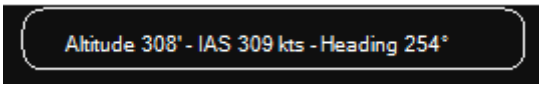
None (gray button)	Taxiways (orange button)	Taxiways designator and Parking (green button)

Note: to work, you have to build the sim database with the taxiway checkbox activated.

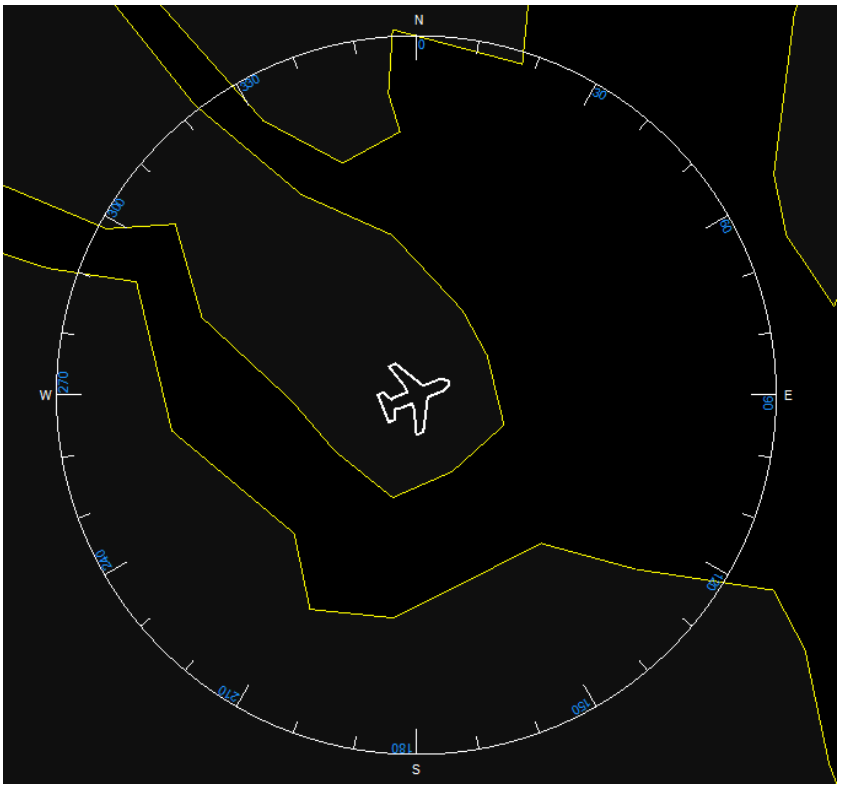
15.3.6 Flight Information

Switch to show aircraft information



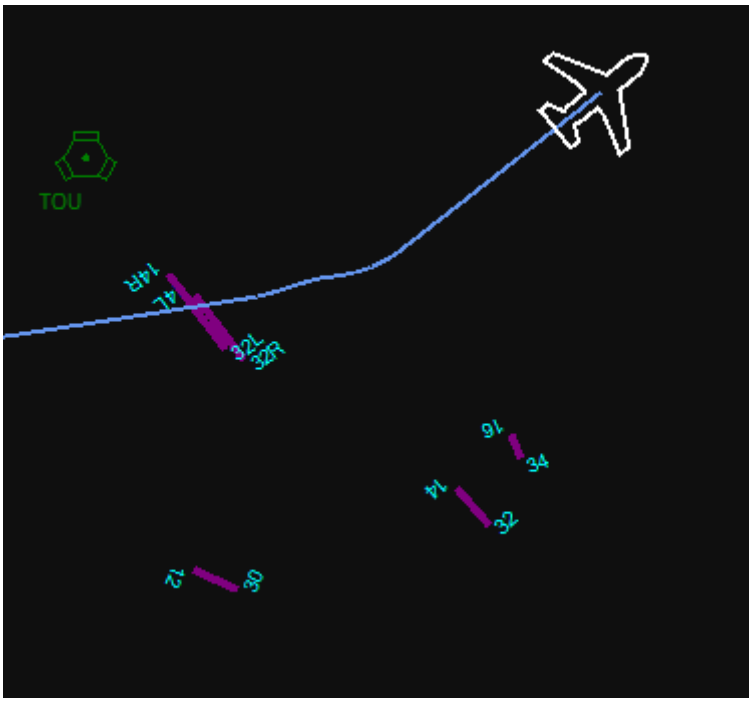
15.3.7 Rose

Show a heading rose



15.3.8 PLOT

Track the aircraft (blue line)



15.3.9 A.I.

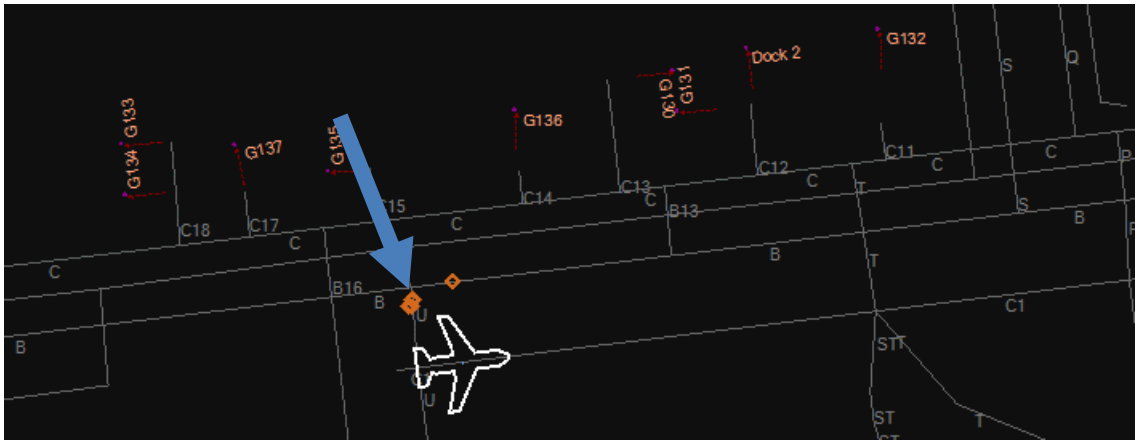
It displays the other aircrafts.

This button has three states:

- None (gray button)
- Airborne aircrafts (orange button)

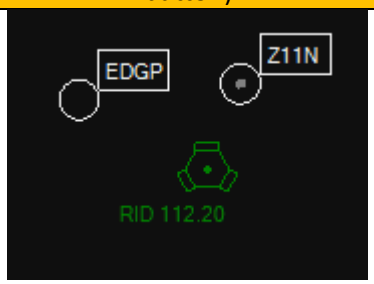
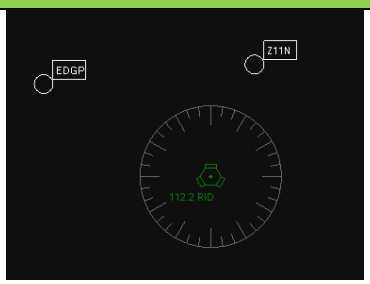
  - The yellow aircrafts fly at between 500 and 1 000'' of your current altitude.
  - The red aircraft fly nearly at the same altitude as your airplane

- Airborne and ground aircrafts (green button)



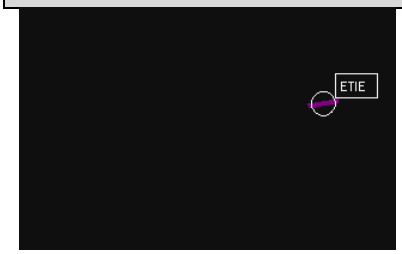
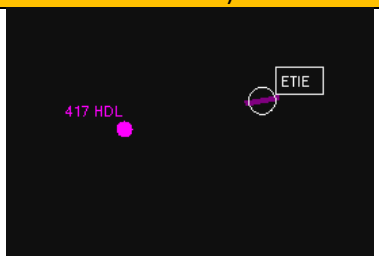
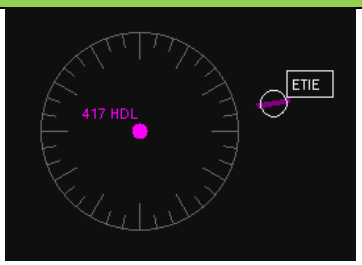
15.3.10 VOR

This button has three states:

None (gray button)	Show VOR position, ID and frequency in green (orange button)	Add a rose
		

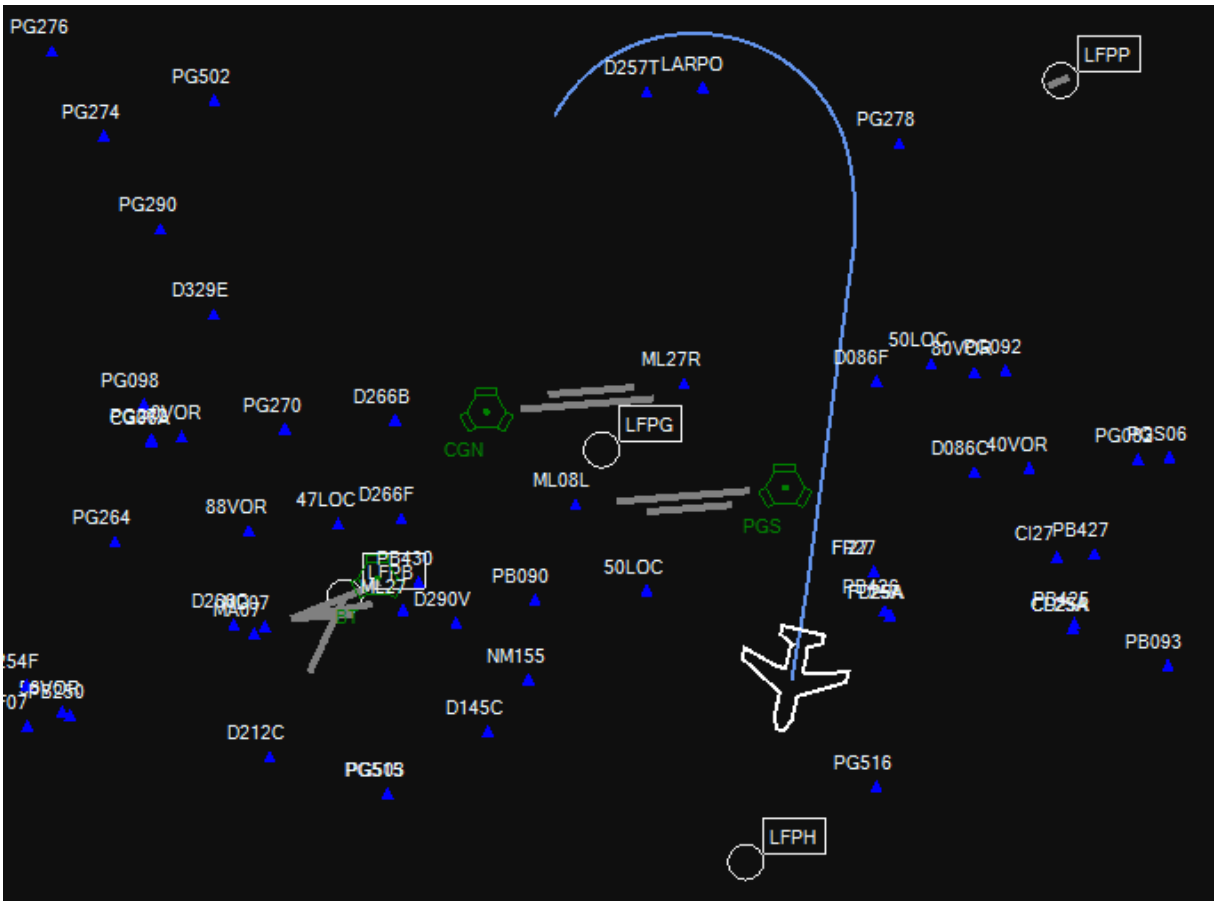
15.3.11 ADF

This button has three states:

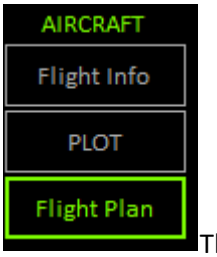
None (gray button)	Show ADF position, ID and frequency in magenta (orange button)	Ad a rose
		

15.3.12 WAYPOINTS

It an ON/OFF feature. Beware it has strong impact on performance.

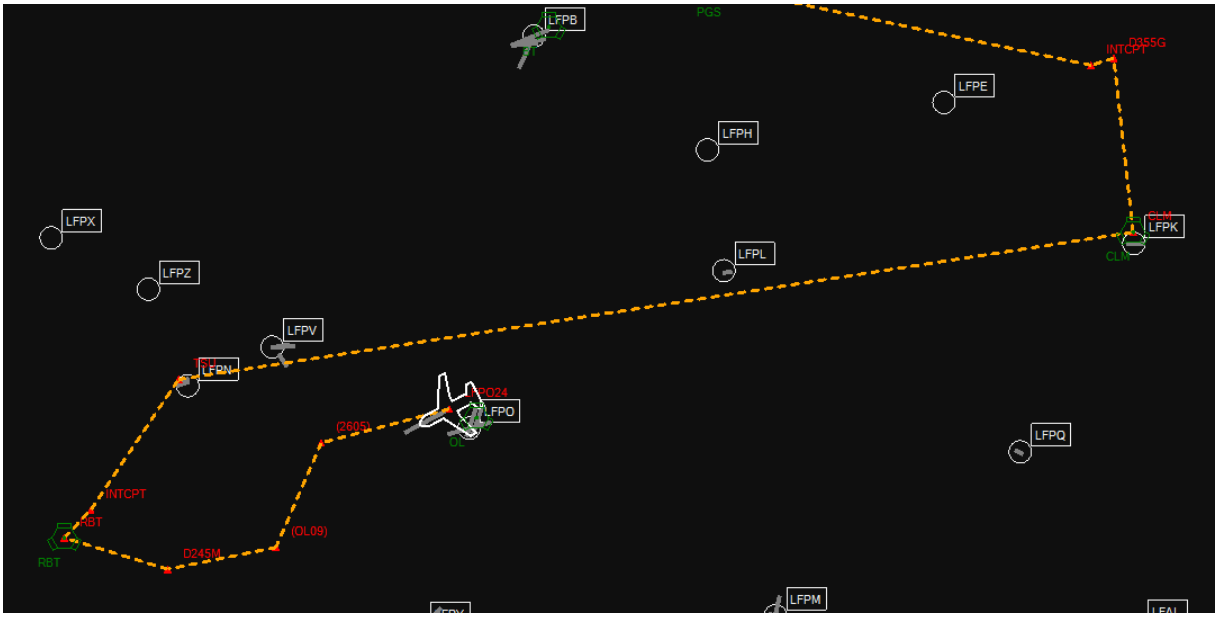


15.3.13 Flight Plan



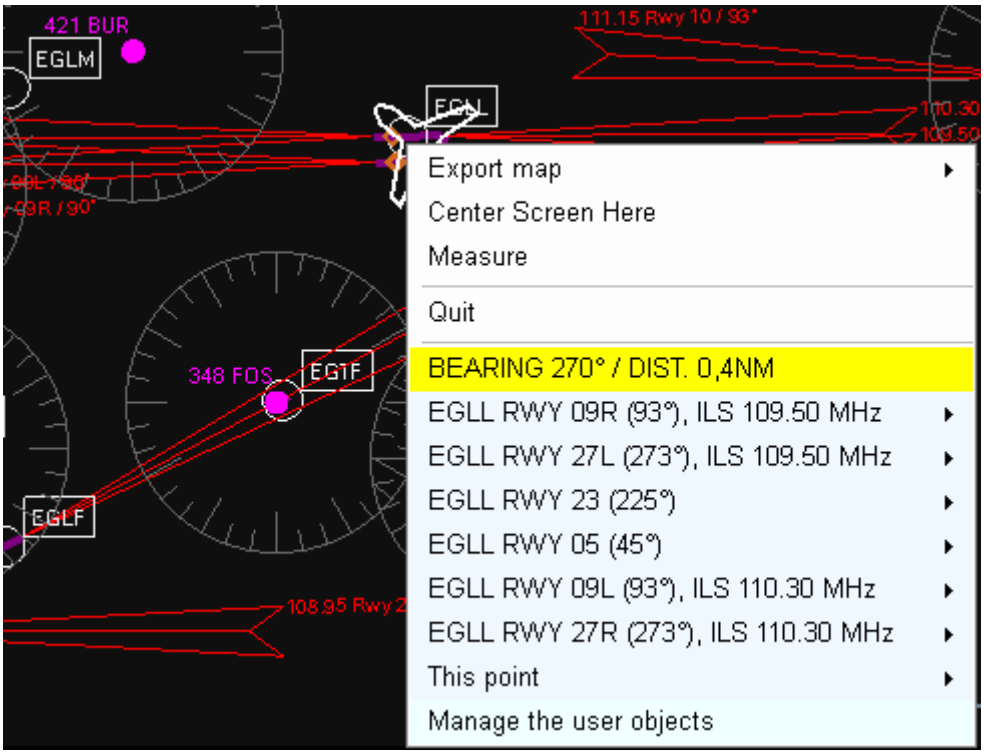
This button is only accessible if PROSIM or Project magenta is set and connected.

Orange button shows only Flight plan path.
Green button shows the Waypoint ID.

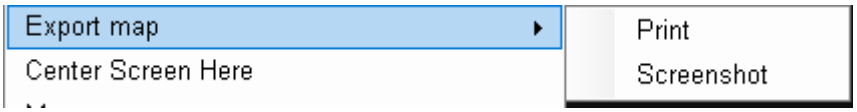


15.4 The contextual menu

By clicking on the map, you display a contextual menu



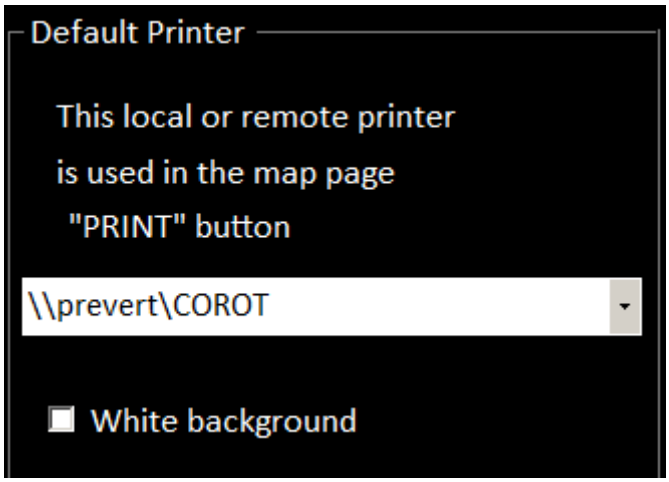
15.4.1 Export Map



Export map gives access to two features:

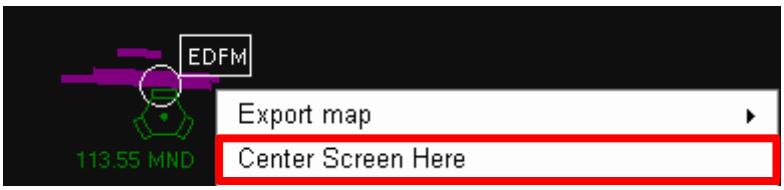
- Print the map

It prints the map on your printer. An option in the SETTINGS windows uses a white background instead of black.
You have set a printer from MENU > Settings > MOVING MAP.



Take a screenshot
It exports a png file in the OUPUT directory

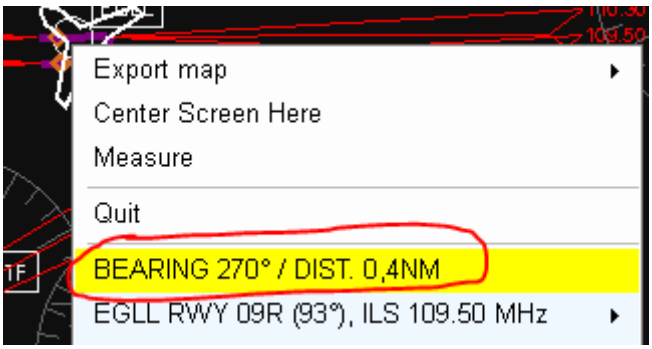
15.4.2 Center screen here



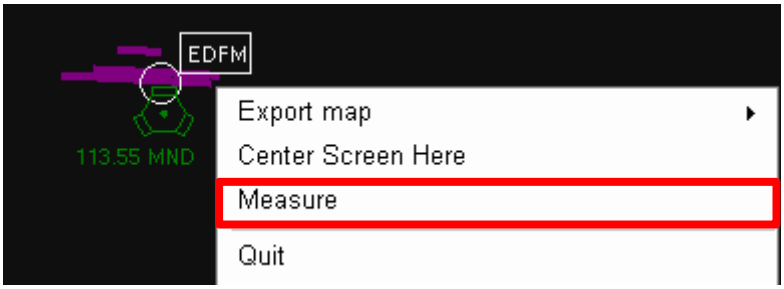
It centers the map on the clicked point.

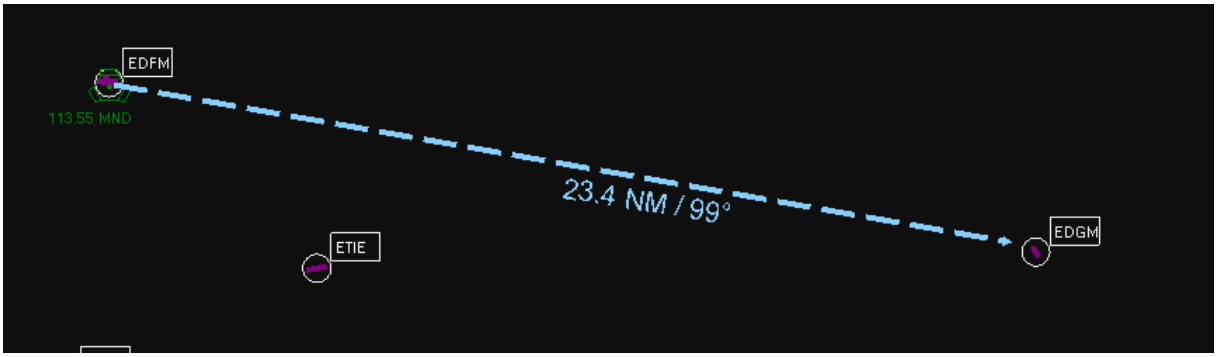
15.4.3 Distance and bearing of one point on the map

When you click on the map, the menu appears. In yellow, you find the bearing and distance of this point to the aircraft.



15.4.4 Measure

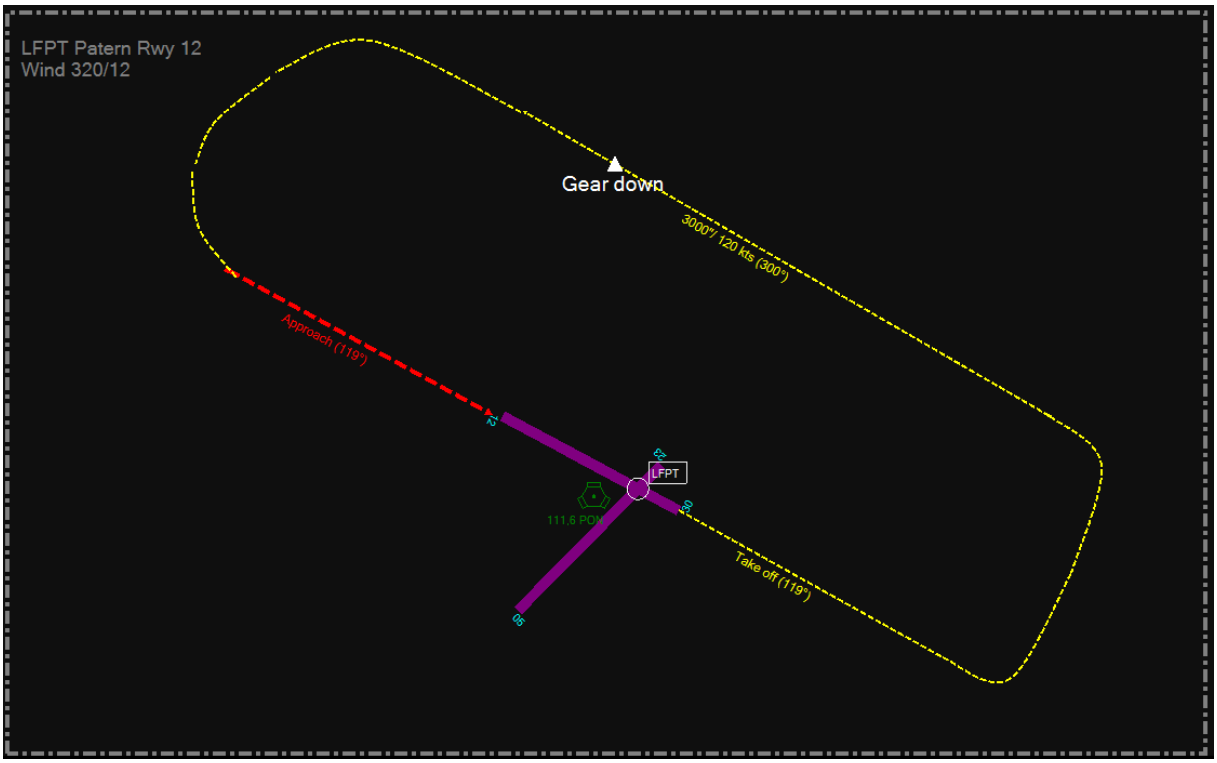




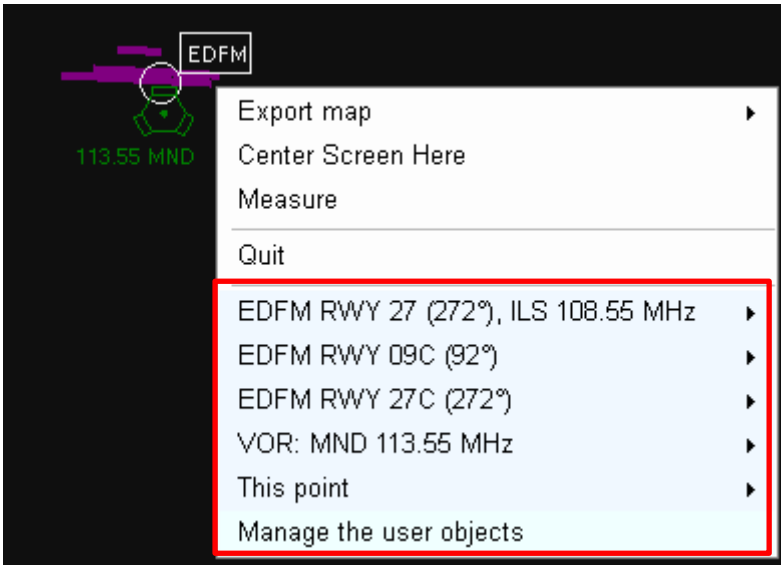
Measure creates an arrow with distance and bearing to the selected point.

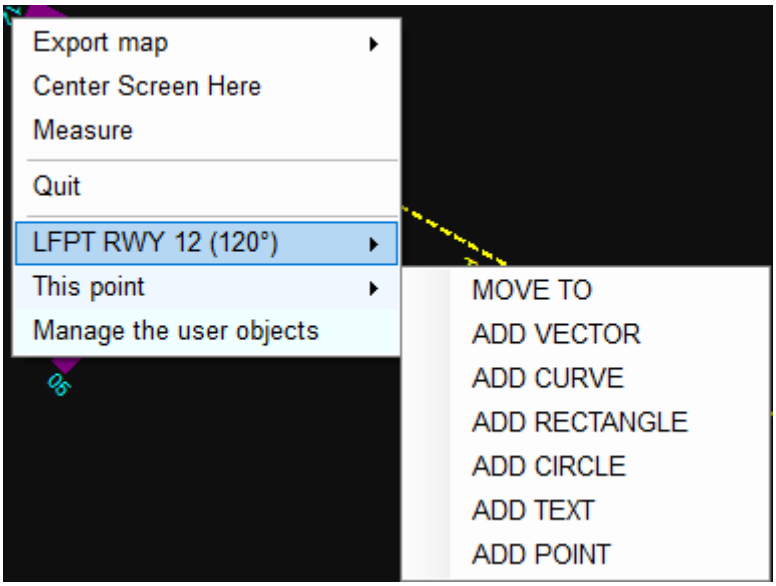
15.5 User objects

User map objects are graphic elements added on the map. Such as:



From a map click, you display a contextual menu

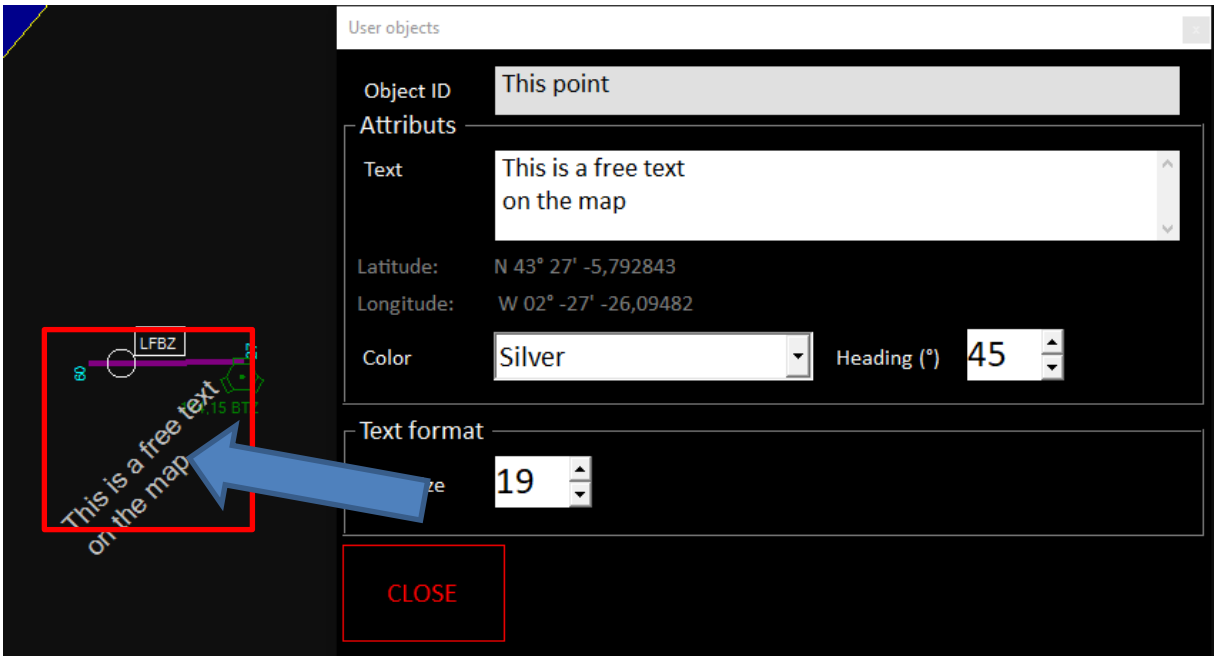




It is used to add some information on the map

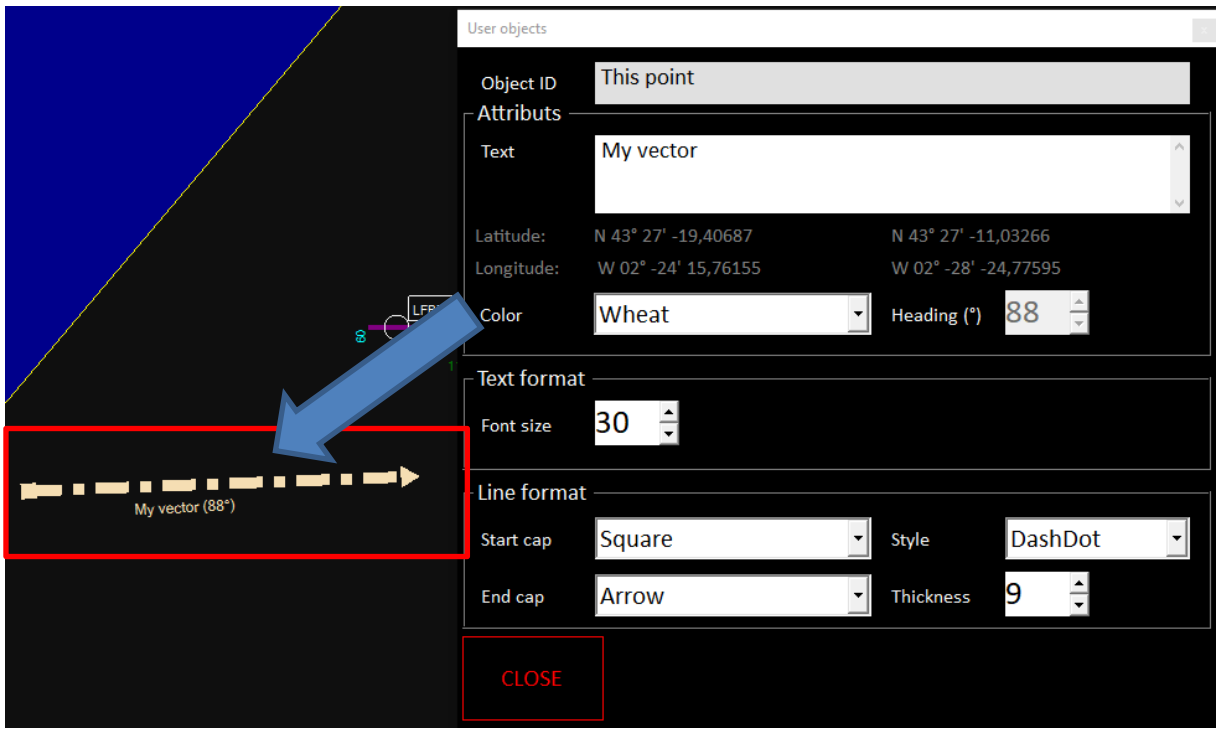
15.5.1 User object: Text

It adds a free text on the map.



15.5.2 User object: Vector

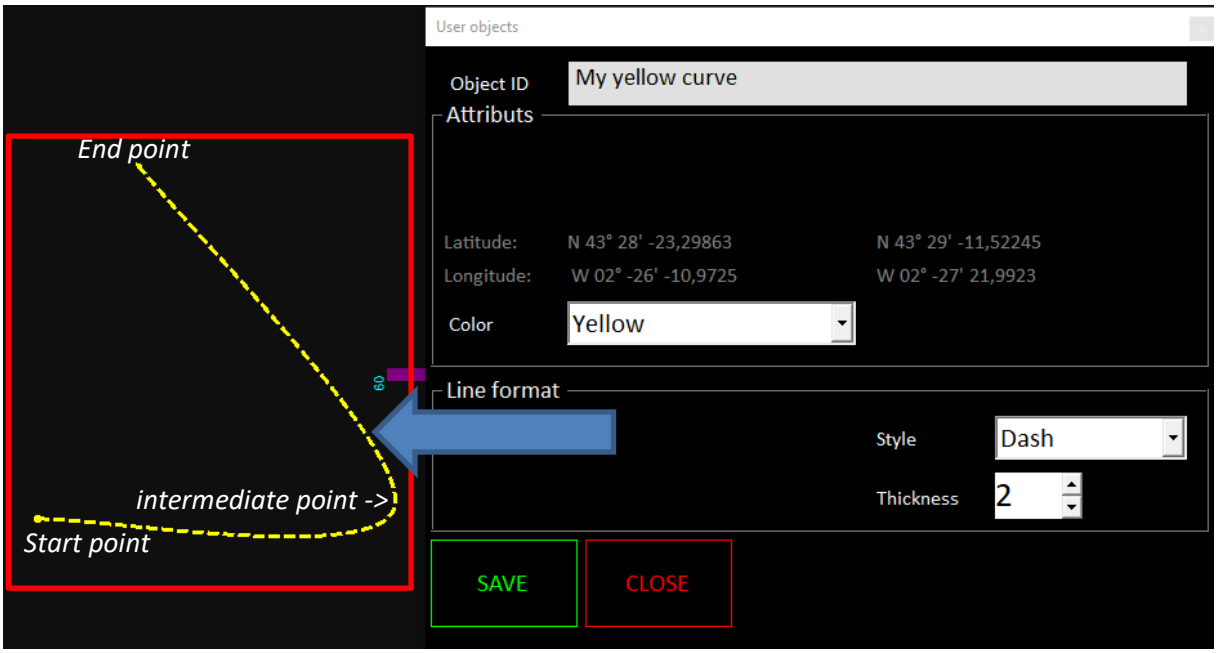
It creates lines. You can change the start and end cap (to create arrow) and modify the line style (dot, dash, fulled)



15.5.3 User object: curve

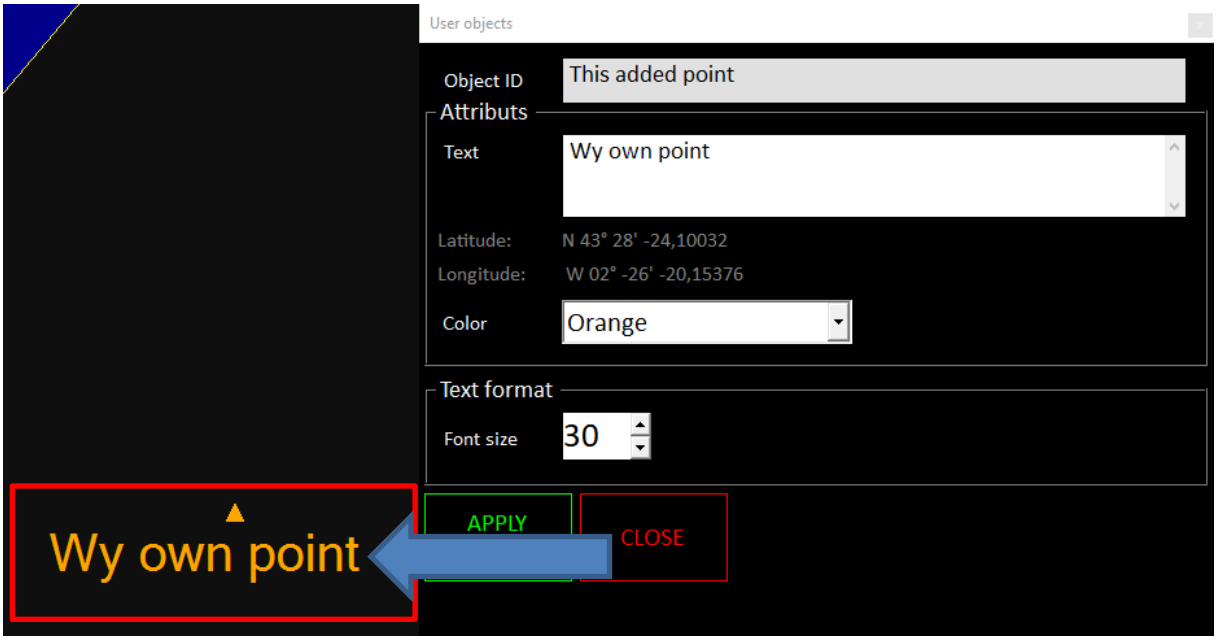
It draws curve on the map based on 3 points:

- 1 – a start point
- 2 – an end point
- 3 – an intermediate point



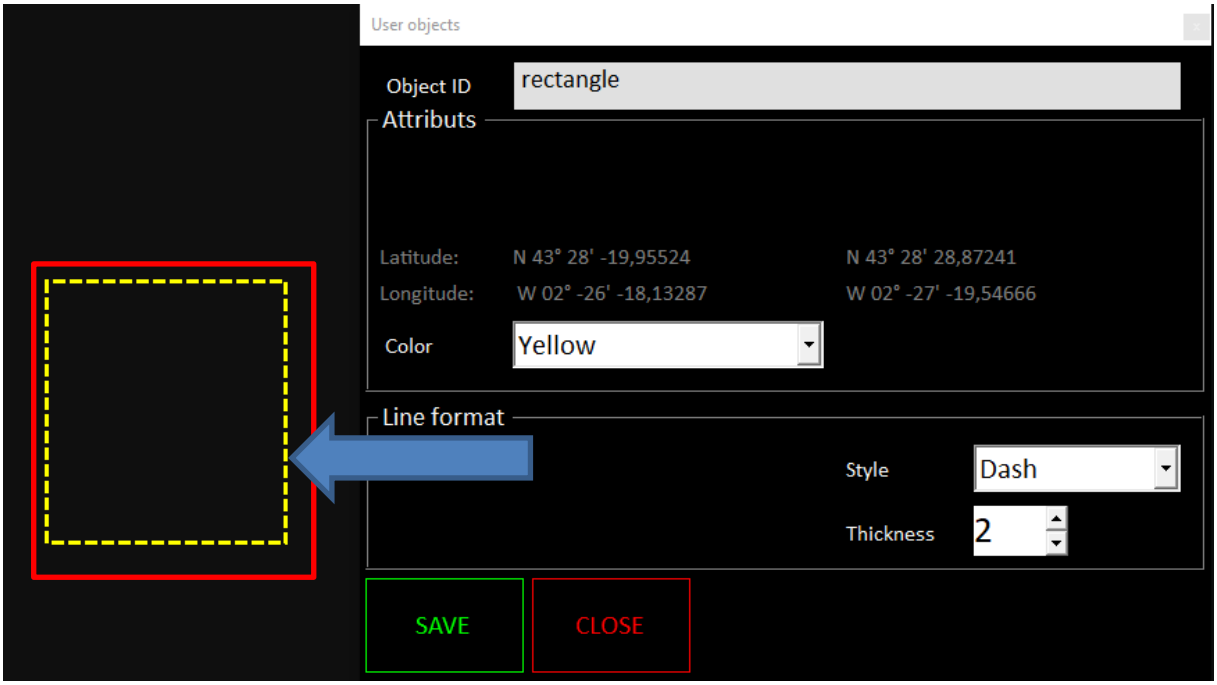
15.5.4 User object: Point

Add you waypoint on the map:

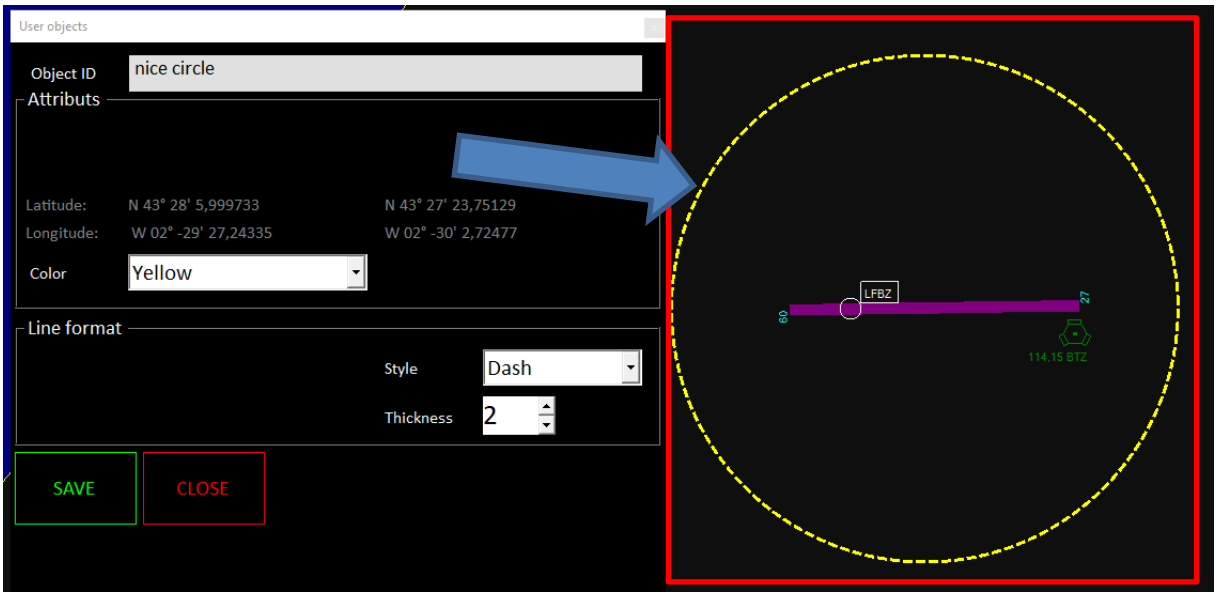


15.5.5 User object: Rectangle

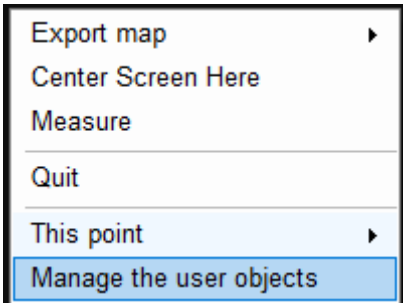
Create squares and rectangles



15.5.6 User object: Circle

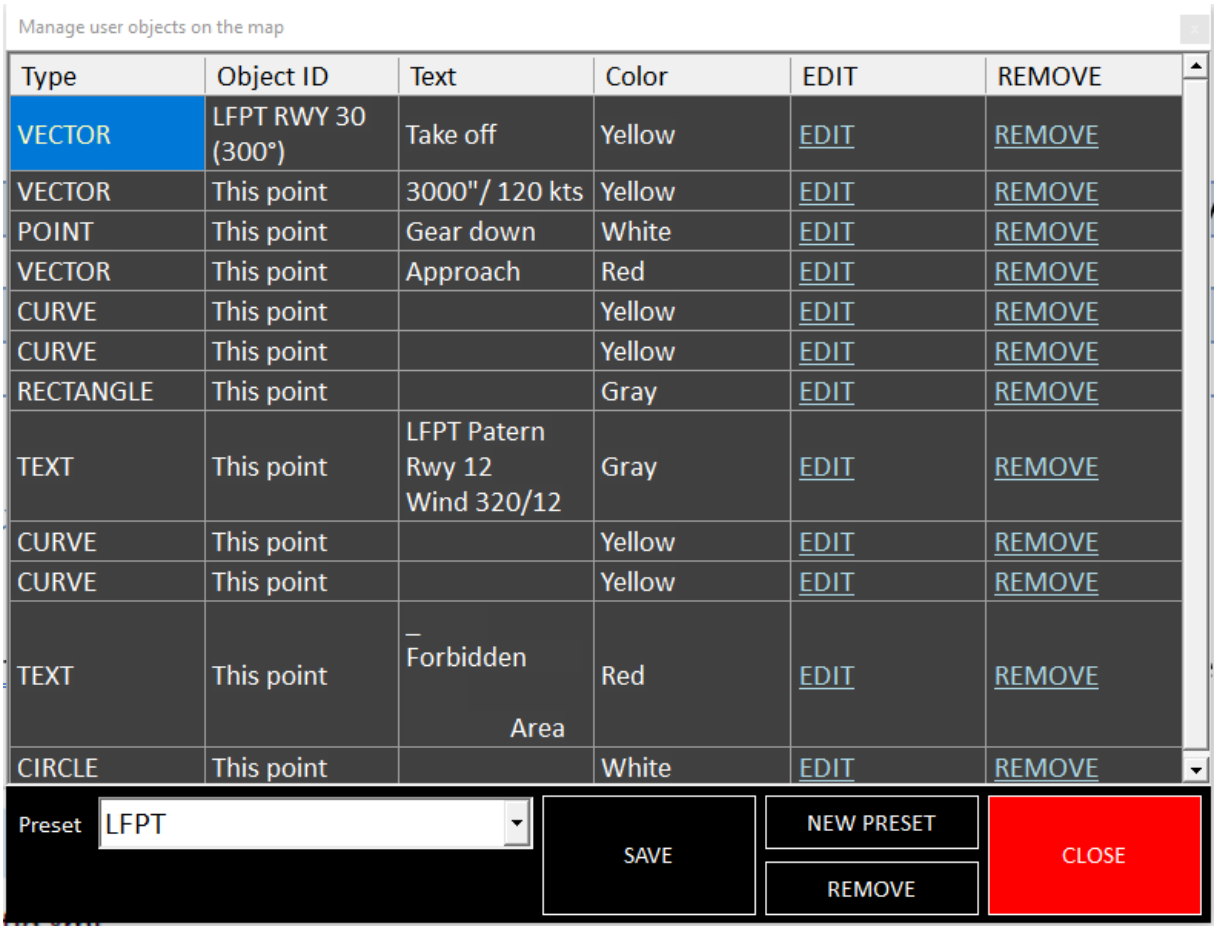


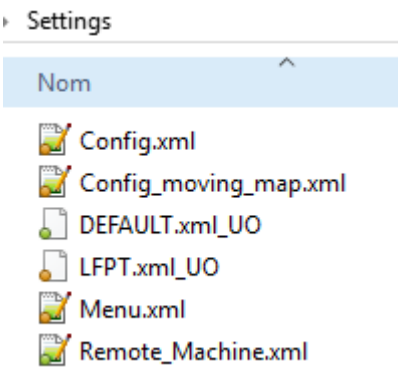
15.5.7 Custom objects manager



All your custom objects added on the map are managed from map click>Manage the user objects.

It opens a dedicated window

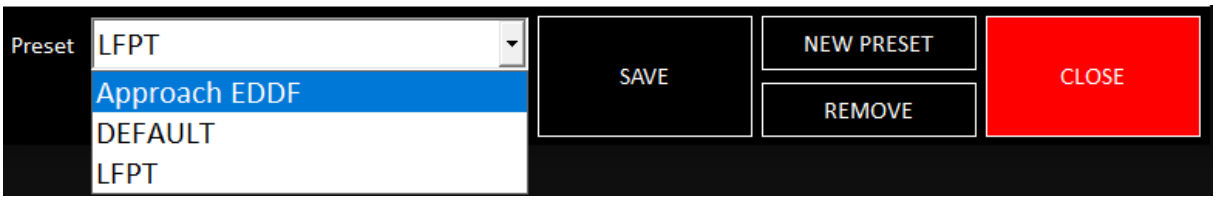




You can save your current list of objects into preset files.
These presets are stored as xml_UO files located in your FS instructor / SETTINGS directory

If you create objects and don't save the preset, you will not find your objects at the next session.

You can manage several presets:



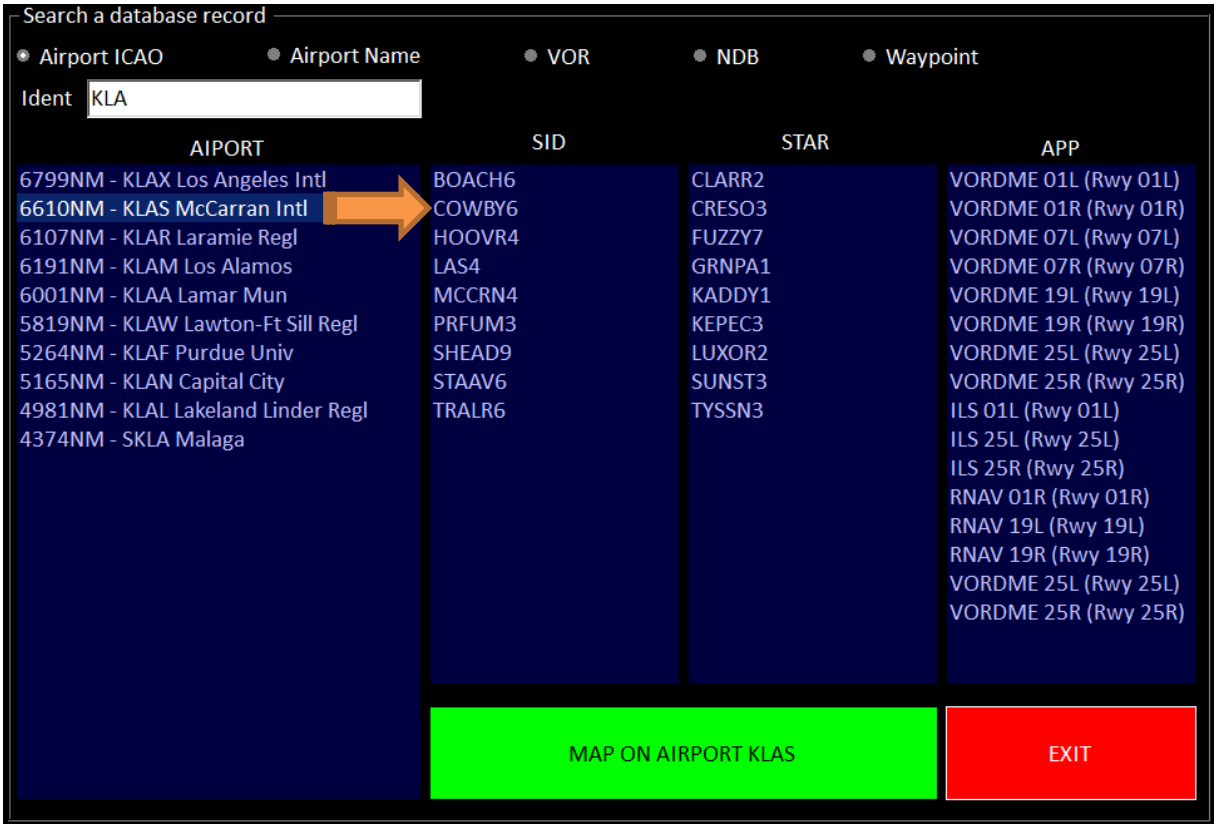
15.6 FIND button

Find button opens a window to find a database record: Airports, VOR, NDB and waypoints.

Insert at least 2 characters in the IDENT filed to search records.

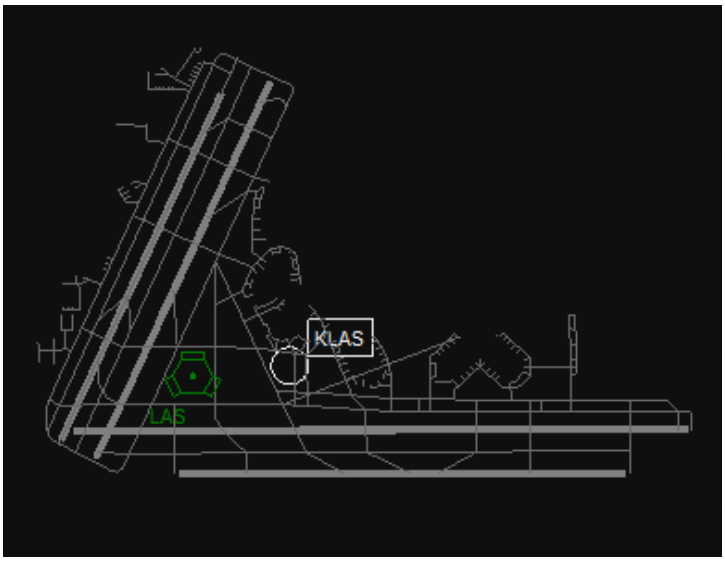
We use “KLA”. It gives all ICAO containing this string.

By selecting an airport, the SID, STAR and APP lists appear.



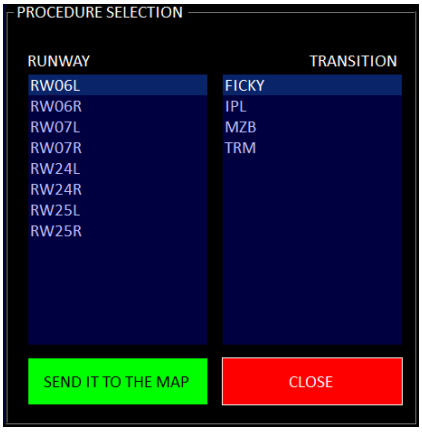
You have selected KLAS airport, you can choose a SID or STAR or APPROACH or just click on “MAP on AIPORT KLAS” green button.

The map is centered on our airport



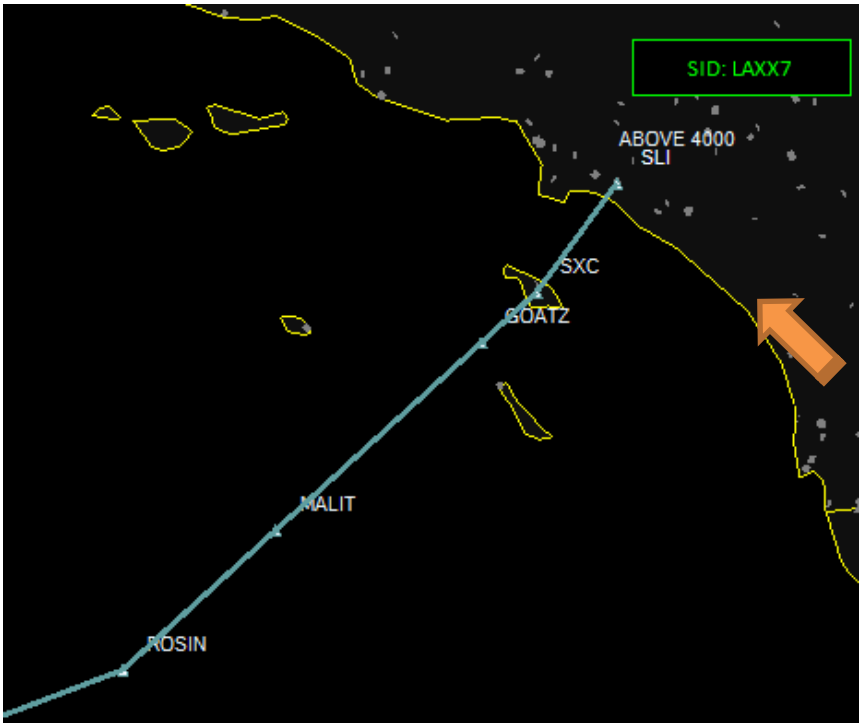
When you select an airport, you access to the SID/STAR and APPROACH.

If this procedure owns different runways and Transition, a new window asks you to select mode information. When you have selected all available information, the green button “SEND IT TO THE MAP” appears.

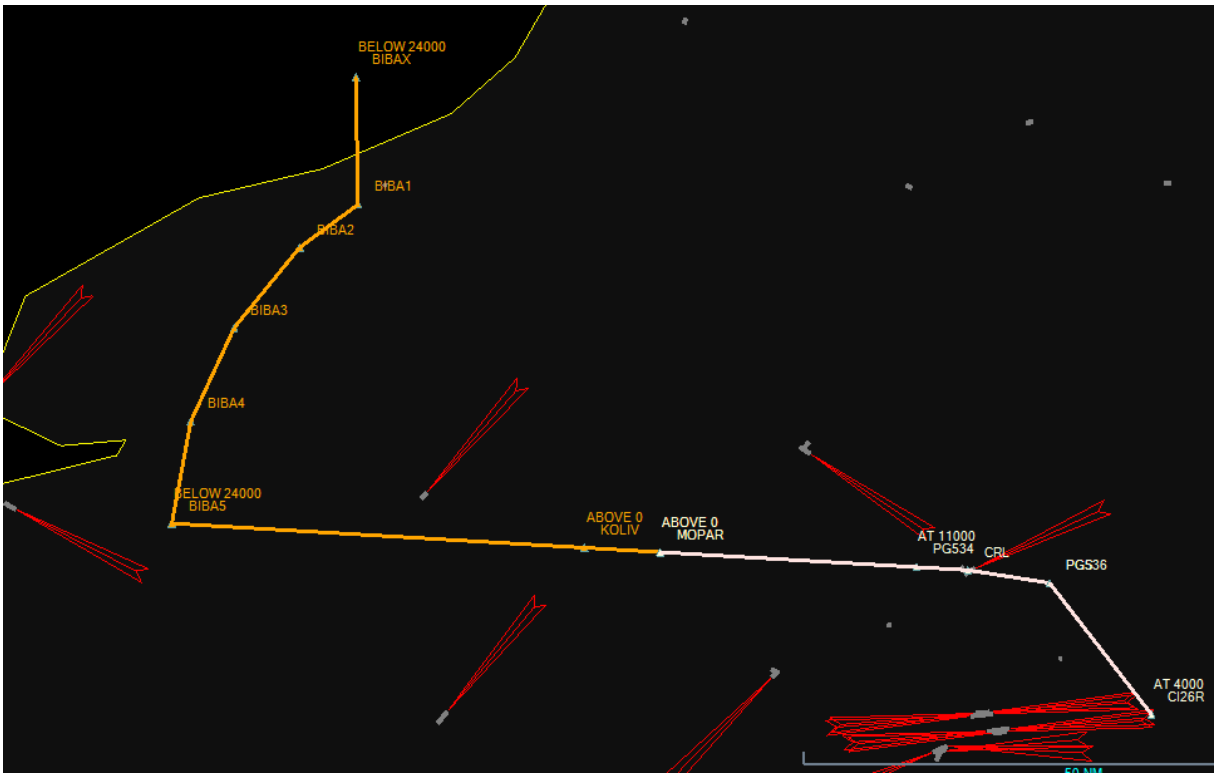


Our SID appears on the map. You could have to change zoom value to see your SID. A new button is

added (here SID: LAXX7). If you click on it, it remove the SID path.

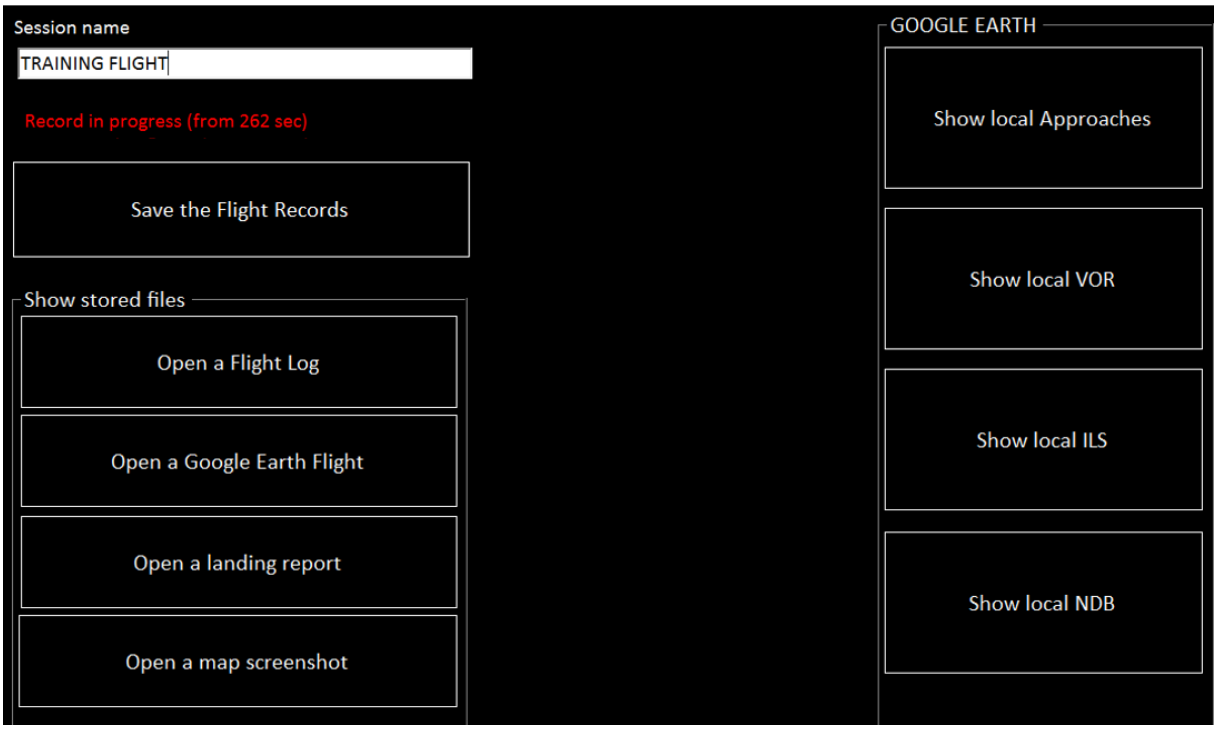


You can display on the map, at the same time, one SID, one STAR and one APP. In this picture, we see a STAR and his APProach on LFPG.



16 BLACK BOX PAGE

For debriefing, you have some tools located into the black Box page.



16.1 Flight Recording

During a flight, several kinds of file are generated:

- A raw flight log (csv file) that you can use to brief and create your own graphs.
- a Google Earth file to show your flight profile, events and mistakes
- a landing report (pdf format)

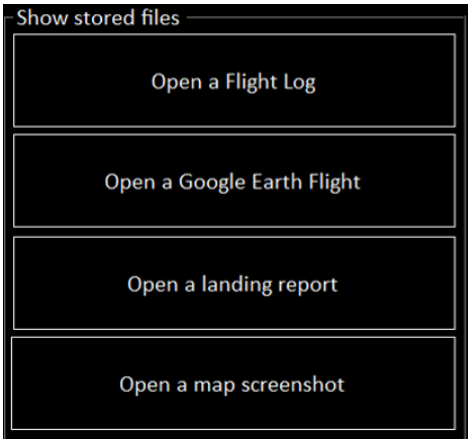
16.1.1 Control the files creation

The record feature is automatic. You can force a new file by clicking on “Save the Flight Records” button.

New flight files are created when:

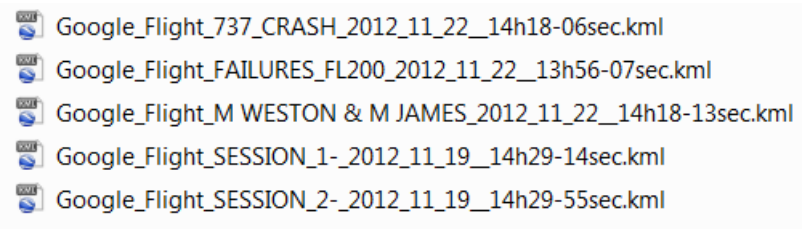
- The plane crashes
- You move the plane to a position
- Engines start

Then, you can open the files by using these following buttons



The files name uses the current session label 

. So, you can find easly a previous flight. Such as



16.1.2 Google Earth Flight recorder

Automatically, each flight is recorded into a *Google Earth file* (kml extension).

It i**ncludes Navaid** (VOR/ADF) near of the route.

It r**ecords Extra Data**. Shows on the flight trace some different information:

- **Flaps/Gear** shows Flaps UP, Flaps Down, Gear Up et Gear Down
- **Bank Angle** > x° Show bank angle overshooting. This value is editable in the preferences (menu > preferences).
- **V/S** > xxxx''/min: shows vertical speed excesses.
- **Overspeed**: VNE exceeding
- **Stall**: already not implemented
- **AP**: Autopilot ON and OFF

The .kml file can be opened with Google earth by clicking on “Open a Google Earth Flight”. Also, you will find these files into your FS Instructor/OUTPUT directory.

VOR DME example (Nantes)

16.1.3 CSV Flight logs

The first line is the header with the startup date/hour

Record start at: 01/06/2012 10:33:01

Time (sec)	ALT (ft)	AGL (ft)	IAS (kts)	TAS (kts)	VS (ft/min)	N1 (%)	THR (%)	PITCH	BANK	AP	FLAPS	GEAR	SPOILERS	STALL	FAILURES
0	1800	1800	150	155	8196	115	100%	45	5	AP ON	Flaps +				
1	1800	1800	150	155	8196	115	100%	45	10			Gear Down			
2	1800	1800	150	155	8196	115	100%	45	10						
3	1800	1800	150	155	8196	115	100%	45	15						
4	1900	1900	145	150	8026	115	100%	45	15						
5	2000	2000	140	145	7643	115	100%	45	20						
6	2200	2100	135	135	7053	115	100%	45	25						
7	2300	2200	125	130	6405	115	100%	45	25				SPOILER DEPLOYED		
8	2300	2300	120	125	5606	115	100%	45	30						
9	2400	2400	115	120	4773	115	100%	45	30						
10	2500	2500	110	115	3910	110	100%	40	35						
11	2500	2500	105	110	2984	110	100%	40	35		Flaps UP				
12	2500	2500	105	105	1829	110	100%	40	40						
13	2600	2500	100	105	1051	110	100%	35	40						
14	2500	2500	100	105	39	110	100%	35	40				SPOILER ARMED		
15	2500	2500	100	105	-1018	110	100%	30	40						
16	2500	2500	105	105	-2026	110	100%	30	40				SPOILER RETRACTED		
17	2400	2400	110	110	-3070	110	100%	25	35						
18	2300	2300	115	115	-4005	110	100%	20	35						
19	2300	2200	120	125	-4933	115	100%	20	35						
20	2100	2100	130	135	-5845	115	100%	15	30						
21	2000	2000	140	140	-6648	115	100%	10	25				SPOILER DEPLOYED		
22	1900	1900	150	150	-7319	115	100%	5	20	AP OFF					
23	1800	1800	160	165	-7916	115	100%	5	15						Failures: inhibit Flaps
24	1600	1600	170	175	-8393	115	100%	0	0						Failures: Reverser 1
25	1500	1500	180	185	-8742	115	100%	0	0						Failures: GEN1Failures: NAV
26	1300	1300	195	195	-8997	115	100%	-5	0					STALL	Failures: VACUUMFailures: GEN2

16.2 Real-Time graphs

These buttons allow displaying real-time graphs.

1 – Approach graphs

2 – Parameters graphs

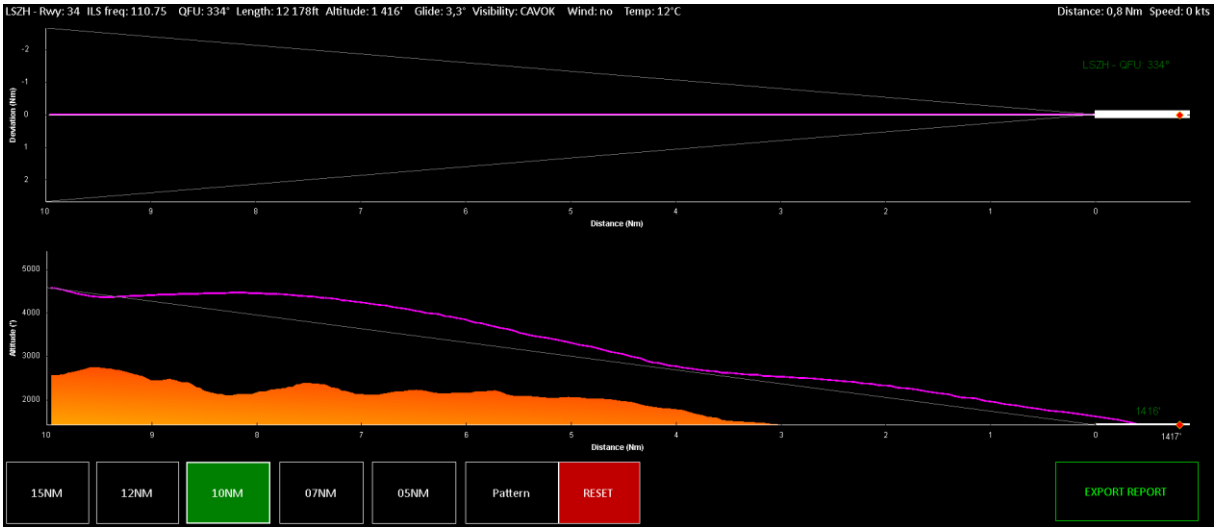
You can choose to see ALT, AGL, IAS, VS, PITCH and BANK.

Three buttons appear with the graph:

- FREEZE allows freezing a graph. It's useful to handle (zoom/move) or print the graph (see below). Beware, none data are storage during a freeze
- RESET resets ALL graphs at one stroke.
- PRINT – To print the page

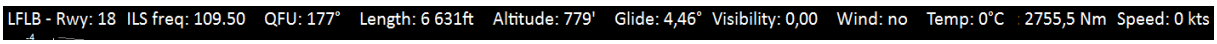
16.2.1 Approach graphs

You need to select an active runway before to use this feature.



This screen has 3 parts:

16.2.1.1 Information header part



You find some runway (on the left) and aircraft (on the right information).

For ILS, the glide value appears.

16.2.1.2 The vertical/horizontal approach graphs part

Beware about the glide. For ILS approach, the glide value is known, and the graph uses it. In the other case, FS Instructor uses the standard glide (3° / 5.2 %)

16.2.1.3 Range part

Select the graphs range

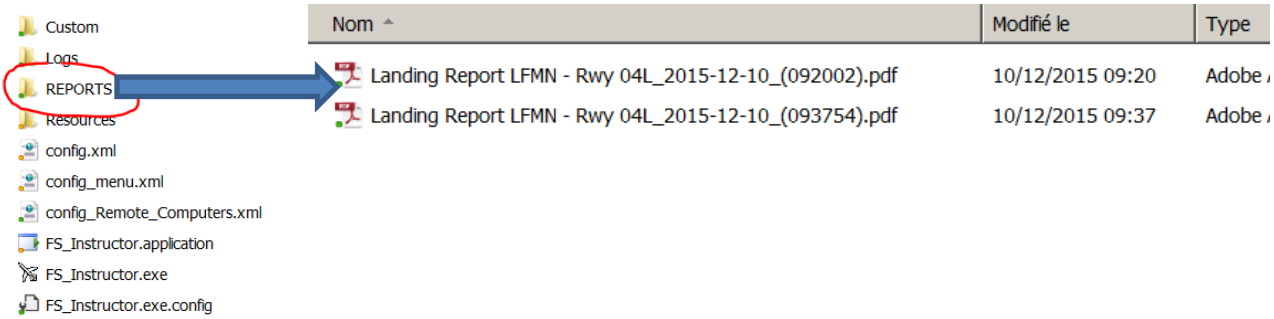
16.2.1.4 Report

- **How it works**

You can export an approach diagram to a pdf file or to a printer.

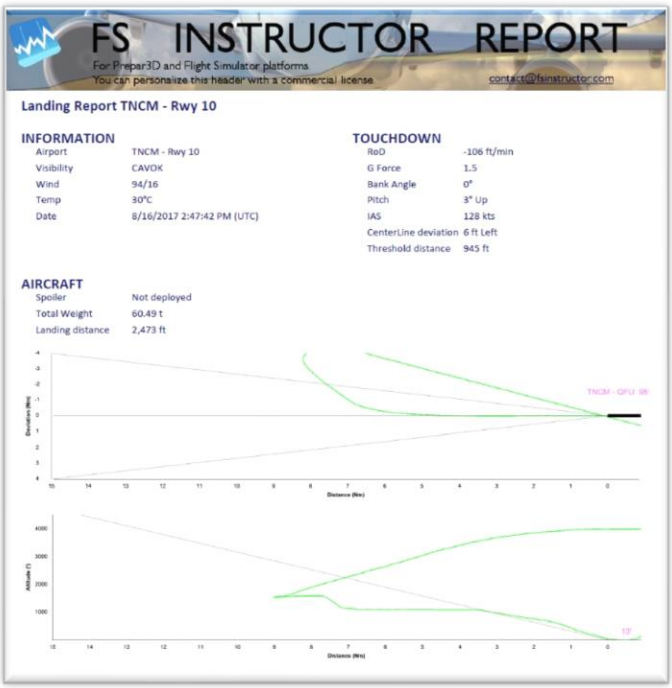
When FS Instructor detects a touchdown, it creates a report. Then, an “Export Report” green button appears.

It opens the last report pdf file. It is saved into the REPORTS directory located in FS Instructor. This directory is created when the first report pdf is generated



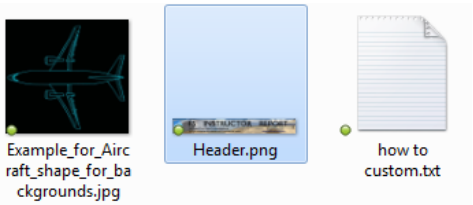
To read this file please install a PDF reader software.

- **Report content**
  You will find this data:
  - INFORMATION:
    - Airport ICAO Code + current runway
    - Horizontal visibility
    - Wind direction (°)/speed (kts) on ground
    - Ambient temperature on ground
    - Touchdown Datetime
  - TOUCHDOWN data:
    - RoD (Rate of Descent)
    - G Force
    - Bank angle
    - Pitch
    - IAS
    - Centerline deviation
    - Threshold distance
  - Aircraft data
    - Spoiler state
    - Total Weight
    - Landing distance

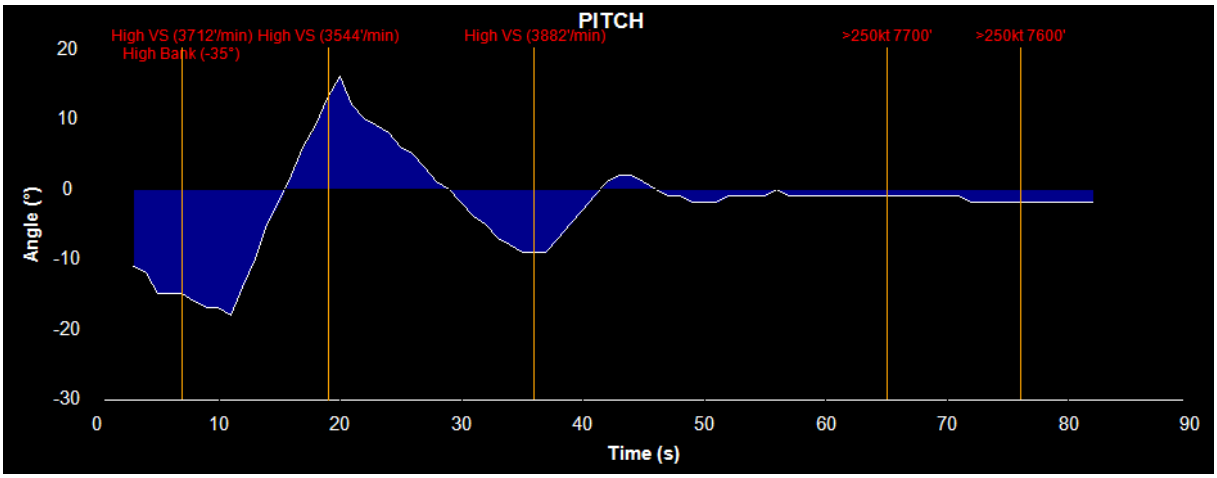


- **The header**

If you own a commercial license, you can customize the header image by changing the header.png image located in the FS Instructor/CUSTOM directory



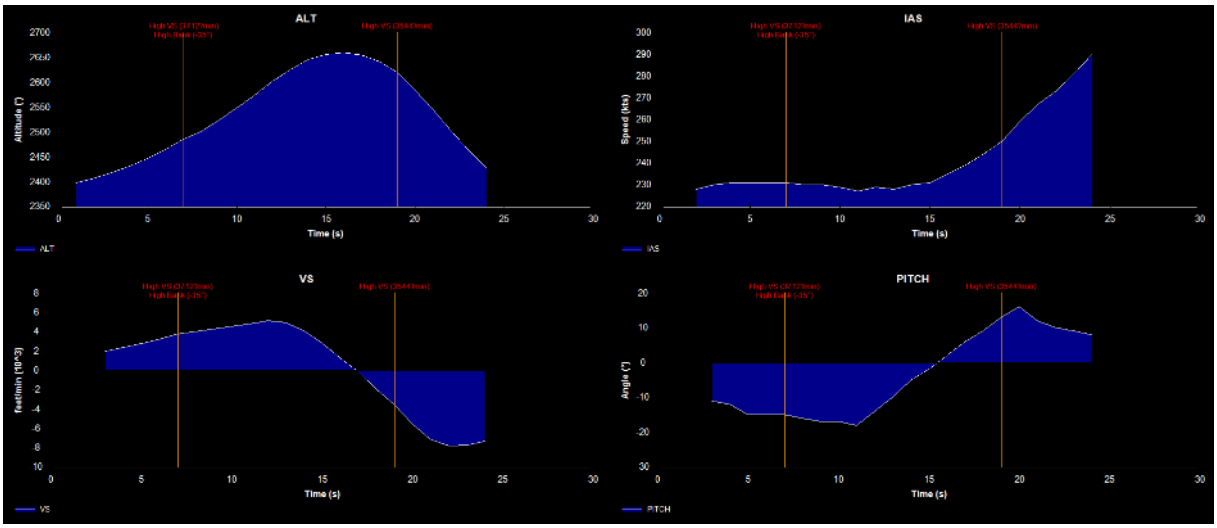
16.2.2 Real time parameters graphs



Some events appear on the graph:

Elements	Error
IAS	Overspeed IAS > 250kts under 10 000''
VS	Vertical speed > MAX Vertical Speed setting (see menu > Preference)

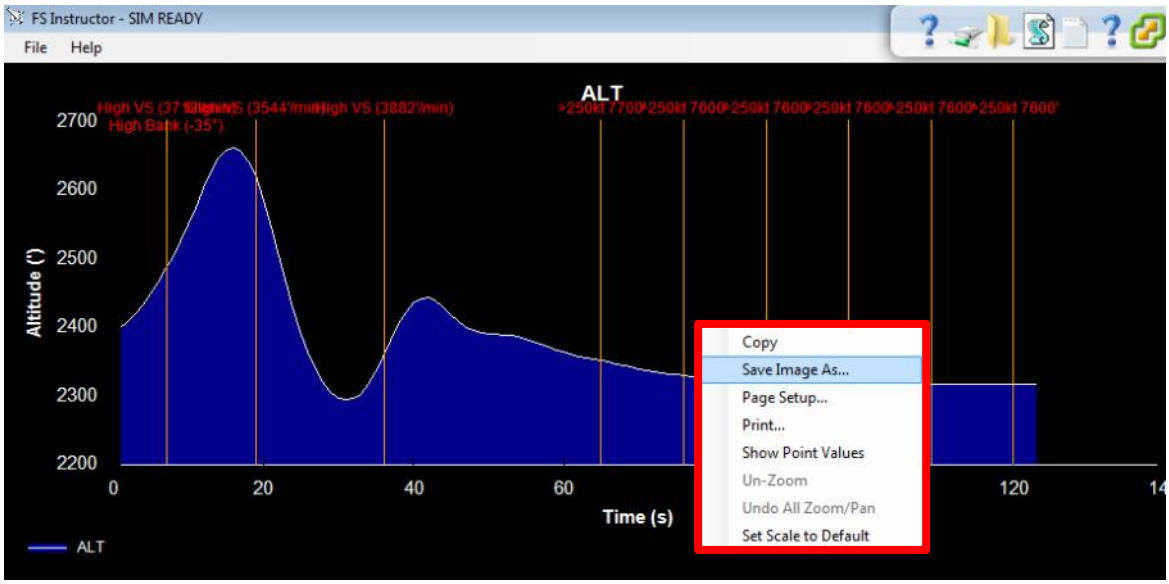
PITCH	Pitch > 20°
BANK	Bank angle > MAX BANK ANGLE setting (see menu > Preference)
AP	Shows Autopilot ON/OFF (available for FSX standard plane)
GEAR	Show Gear movements
FLAPS	Shows flaps movements
SPOILER	Show Airbrake movements (Retracted / Armed / Deployed)
STALL	Show STALL Warnings



16.2.3 Handle the graphs

With your mouse, you can:

- Scroll Wheel: you zoom/unzoom
- Right click: a menu appears depending on your OS language



You can copy the picture, save it on your hard drive, print it…

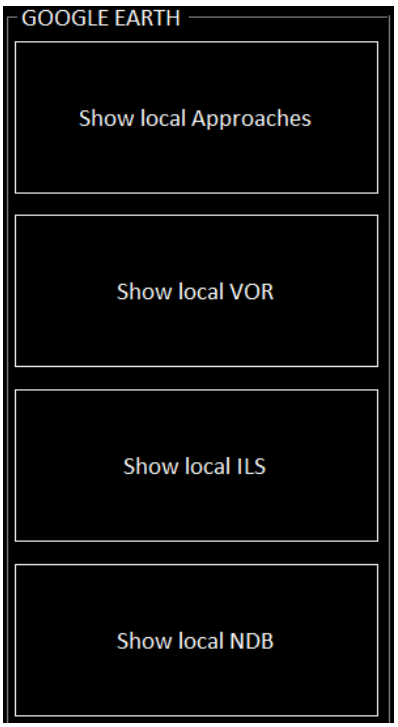
- Left click: it selects a graphic range to zoom on it

16.3 Google Earth – tracking

FS Instructor permits to show in real time the airplane in Google Earth.

Set Google Earth before (see 16.3.1 Google Earth settings) and activate this feature into the FS Instructor settings > Black Box.

The application will automatically choose the best zoom depending your flight phase.



You can choose to add some information to Google earth.

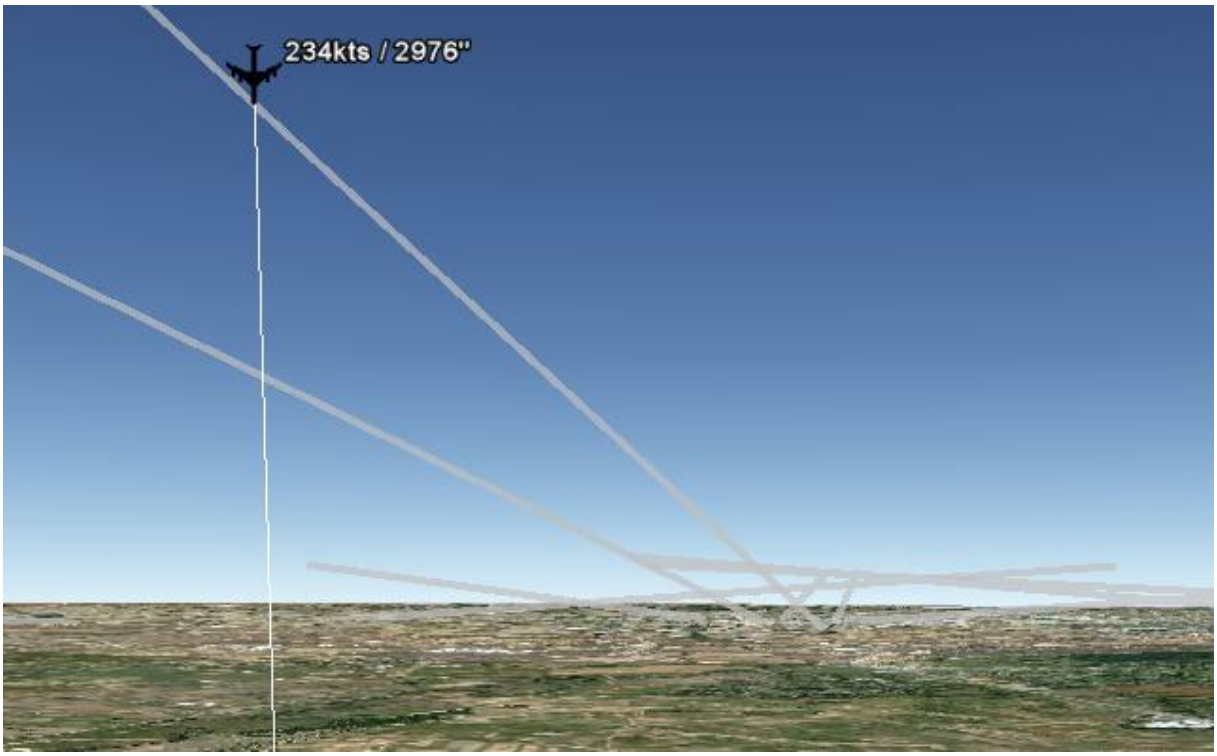
Show local Approaches generates, in a 100nm range around the aircraft, approach road.

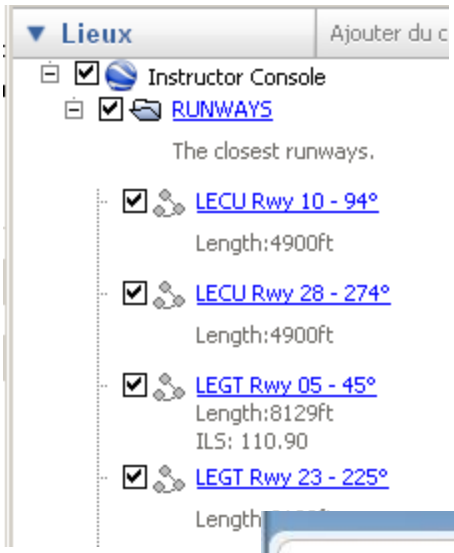
- We use the standard glide (5.2% / 3°). It couldn't match with the true operative rate of the runway.
- The approach entry is located 12nm before runway threshold
- Only > 4000'' length concrete runways appear
- During flight, you can generate this file again.

Show local VOR / ILS / NDB generate NAVAID in a 100nm range around the aircraft.

Top view

Lateral view





In the Google Earth right lateral bar, you have access to all approaches (RUNWWAYS folder)

- OACI code, Runway number, QFU

- Runway length and ILS frequency

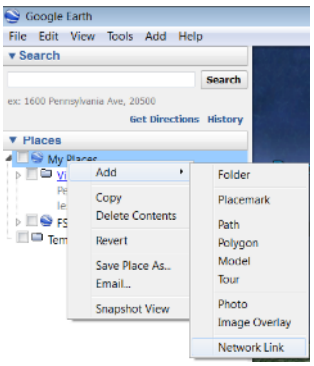
By clicking one time on the runway link, information appears on the scope.

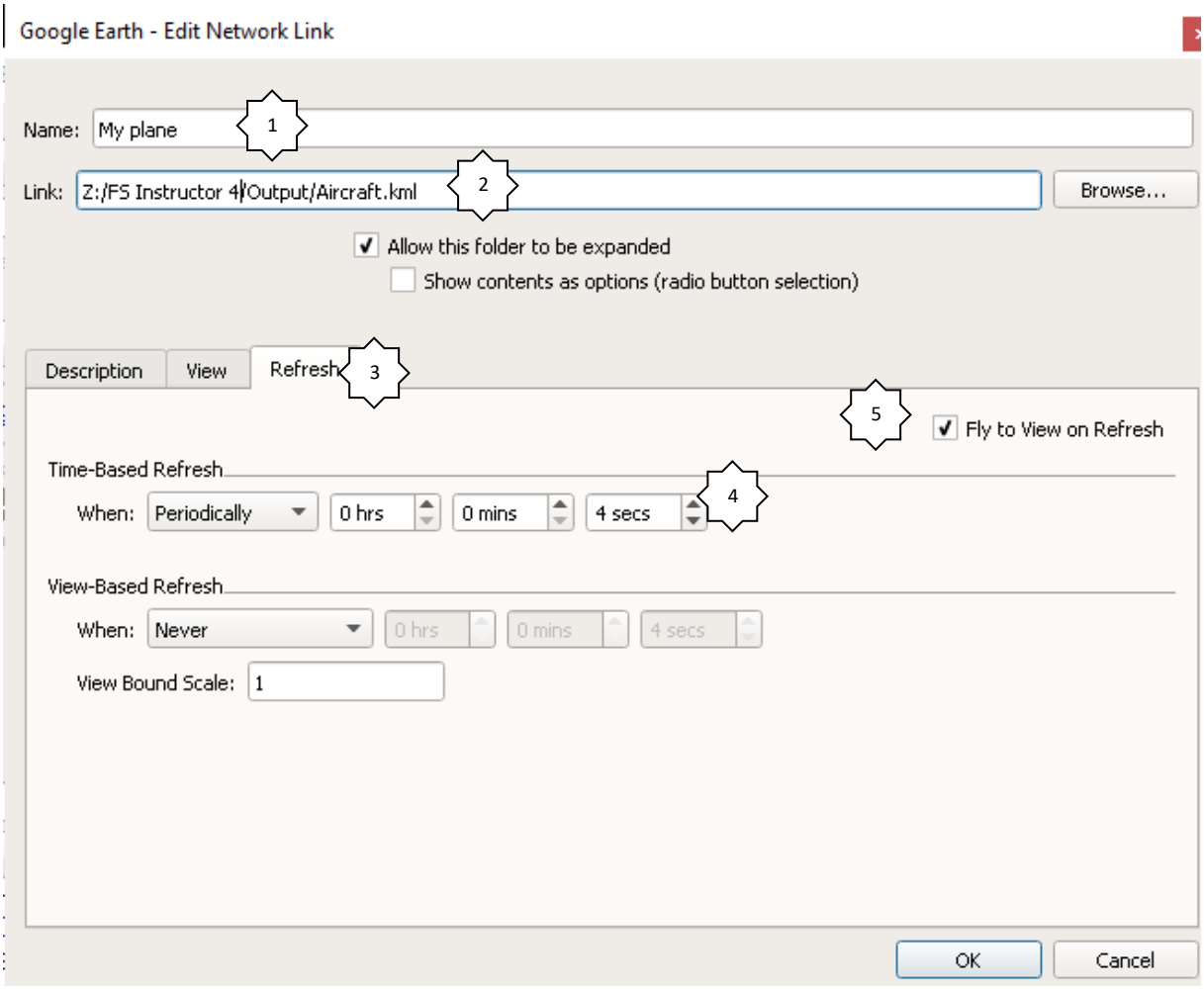
By double clicking, scope view goes on this approach.

16.3.1 Google Earth settings

If you want to use the tracking, you must set up *Google Earth*.

Places > Add > *Network link*





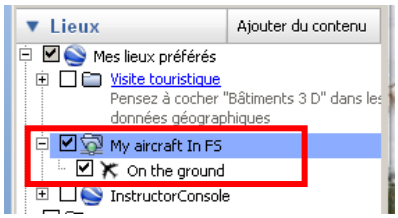
1 – Choose a name

2 - Link: Write the aircraft.kml file address which is in your «FS Instructor/OUPUT » directory. It is created when you launch tracking for the first time.

3 – Open the Refresh Tab

4 – Select Periodically and 4 seconds

5 – Check “Direct access to the view during actualization” or “Fly to view on refresh” to center view on the aircraft.

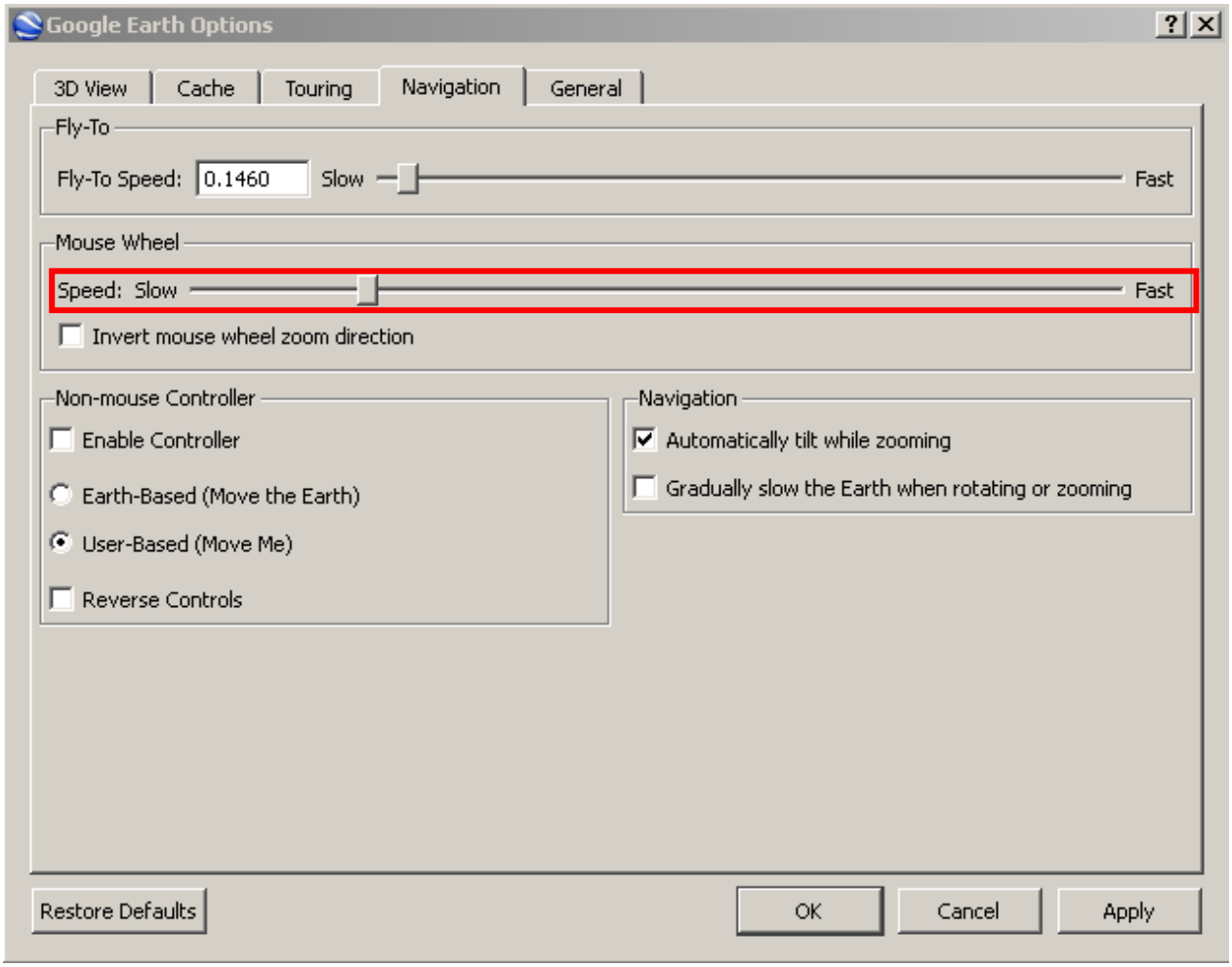


Now, you see the network link in your lateral bar

What to do if I see the plane but the camera moves slowly or not at all?

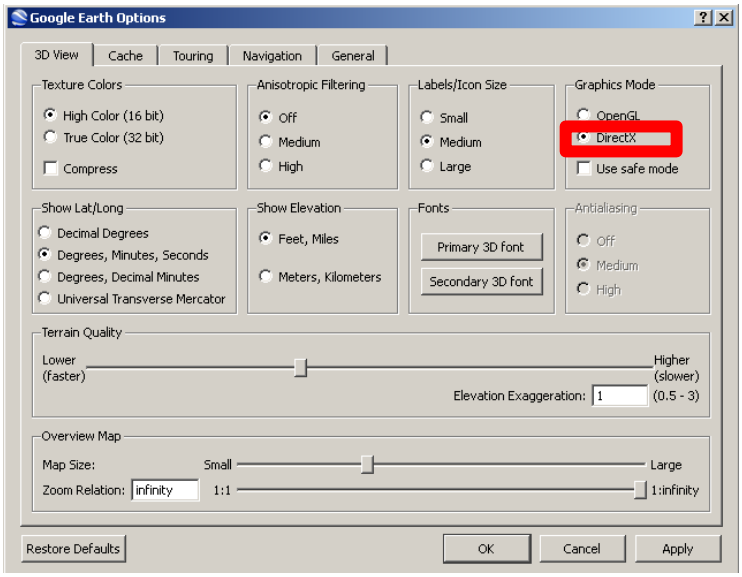
Go to *Google Earth options*, Navigation tab. My favorite Fly-To-Speed is 0.1460. You can grow this

value to speed-up the camera move.



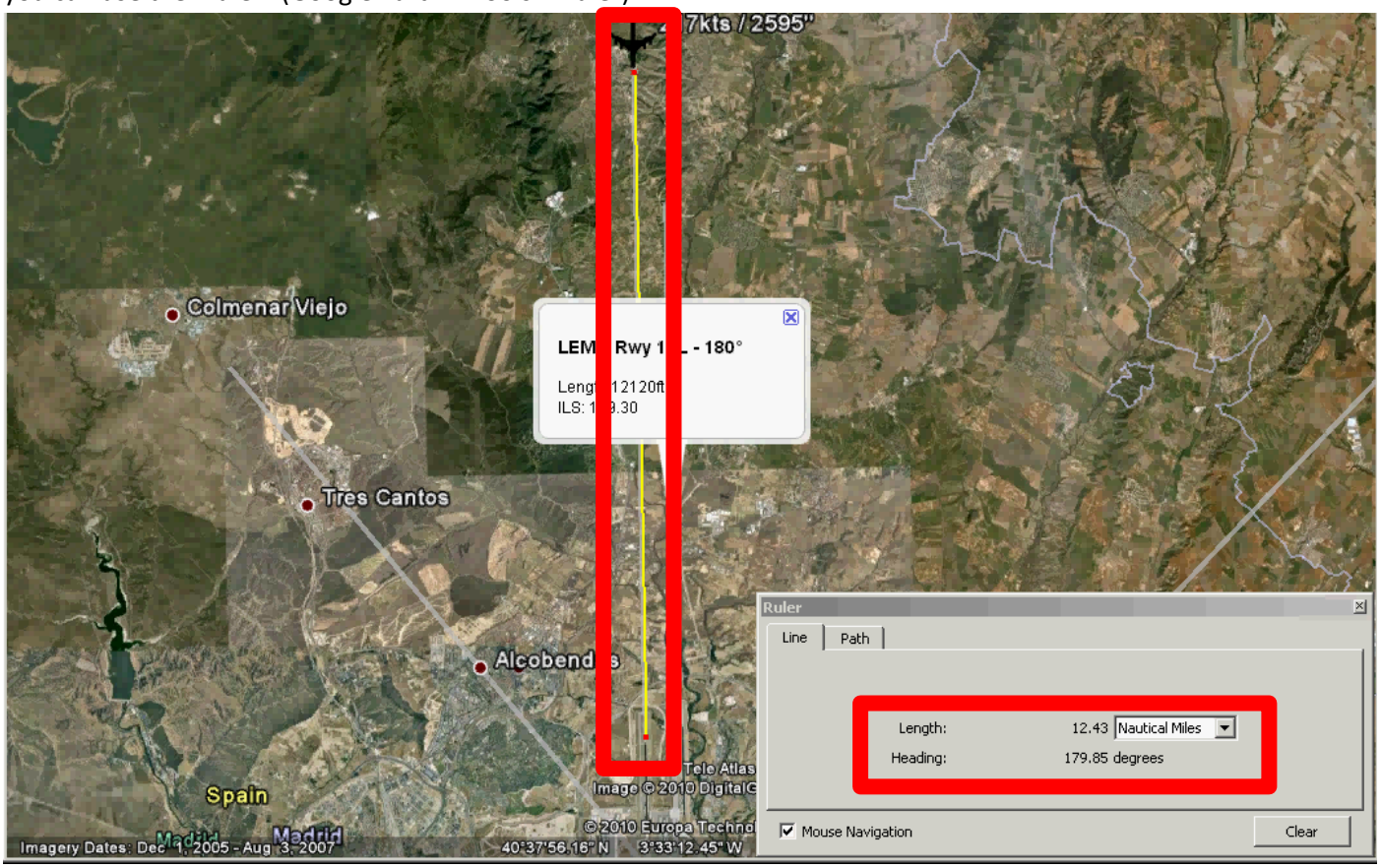
When you try to open the aircraft information module inside Google Earth, the bar disappears

Please set Google Earth into DirectX mode



16.3.2 Google Earth Tricks

If you want to measure the angle and the distance between the aircraft and a location on the map, you can use the “ruler” (Google Earth > Tools > Ruler).



17 Remote COMPUTERS system

Install and set “Soft Launcher V4 client” on each computer you want to control. **See chapter 17.2 Soft Launcher)**

If you own Soft Launcher V2 you please upgrade to V4: http://fsinstructor.com/news/?product=soft-launcher-v4

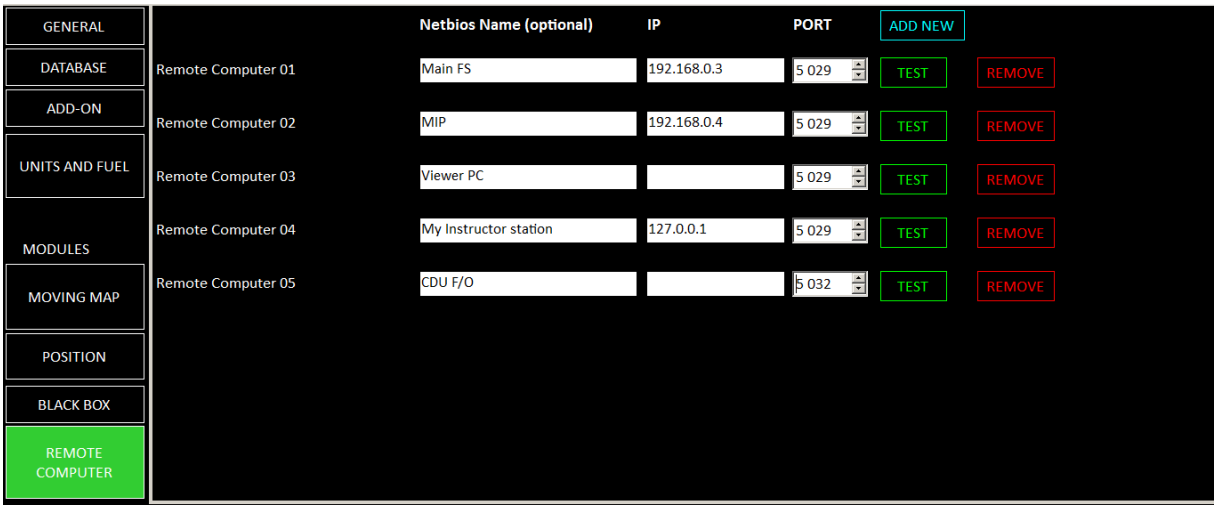
This software works as a client. It's dedicated to start automatically all needed software shared on several computers. For example, on your first computer, it starts Prepar3D. Waits 60 sec. After, it launches Flight Illusion gauges, wait 15sec and starts Project Magenta/PROSIM. When it’s done, it gives the focus to the Flight Simulator in a full screen mode. During this time, on your second machine, other softs are started automatically. While all these steps, pilots only see a message on the full screens with a timer.

Then, you have a control on this software from FS Instructor computer module.

17.1 FS instructor Settings

Menu file > config > Computers TAB

Insert the remote computers using “Soft Launcher”. If you just field a machine name, the system will find this name on the network (NETBIOS), you can use an IP address to force it.



Any modification of this screen is applied immediately. You don’t need to restart FS Instructor.

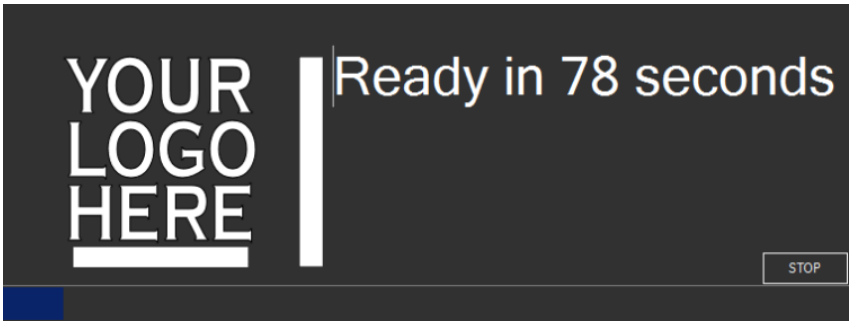
17.2 Soft Launcher V4

Soft Launcher is included with the FS Instructor. You can buy this software separately. It can be installed all your machine

Each installation needs a specific license. Please send us the given id to generate your licenses.

It is dedicated to start and control automatically all your software’s needed for your simulator and shared on several computers.

During start, pilots see only a message on the full screens with a timer and a logo (Ready in x seconds).



On this image, 3 different computers are started. User doesn't see the Windows desktop. All software is launching in the background. As soon as everything is ready, Soft Launcher gives the hand.

You just have to set your computers to start when they are supply with electrical power. After, you have just to wait.

Please contact us to know the tariff:

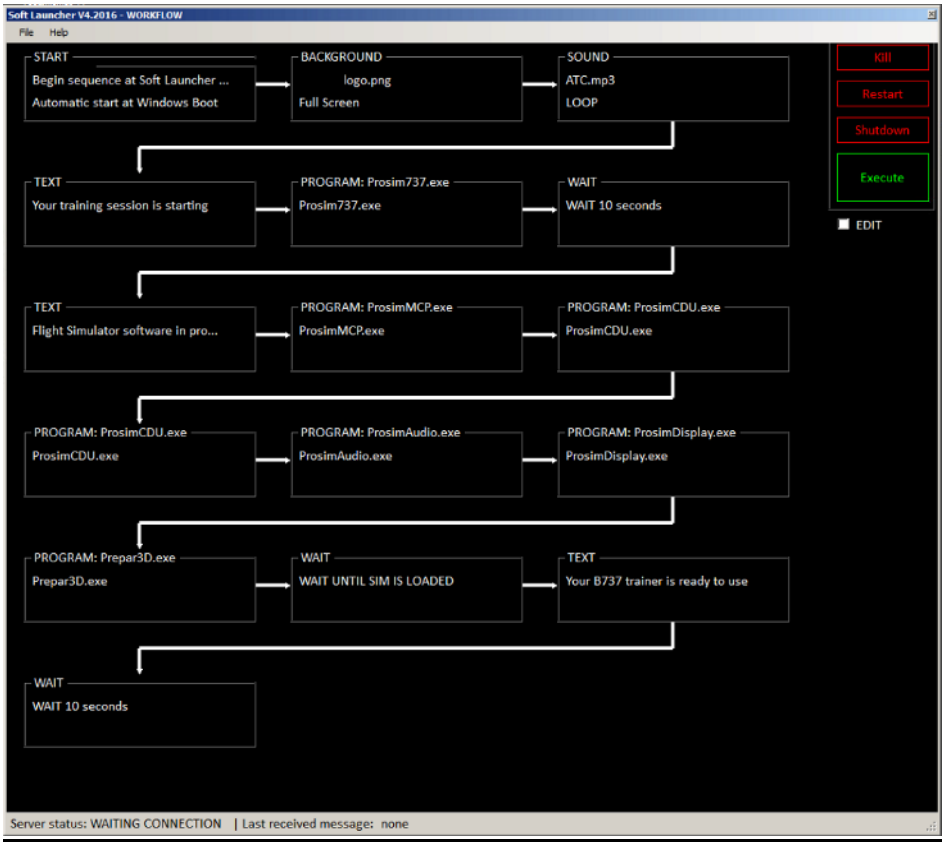
- To personalize this waiting screen (logo + colors)
- For a remote assistance to set your machine.

Thanks to this software you can also manage these software's. Imagine your Flight Illusion gauges don't react. With FS Instructor you can ask, by remote, to kill and launch again this part only.

17.2.1 Requirements

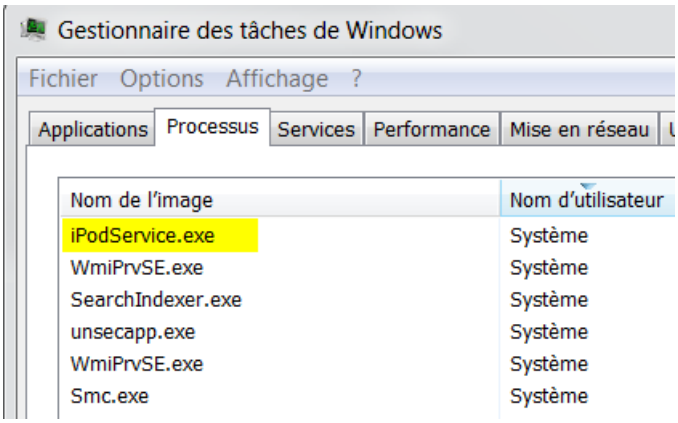
- .NET Framework 4.5
- Win 7 and + (32 or 64 bits)
- None firewall on 5029 port (you can choose another setting port)

17.2.2 How to set your software



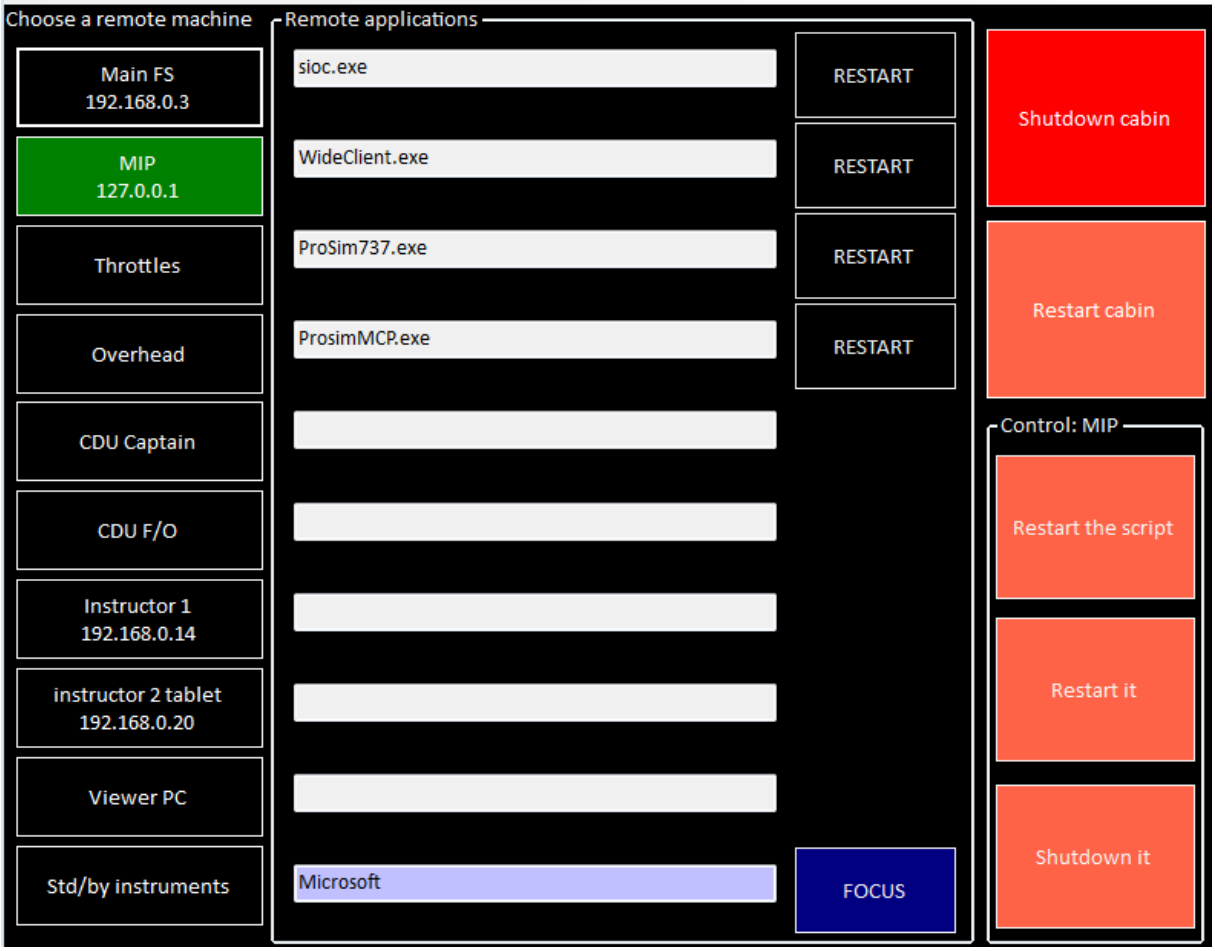
Directory: Click on “Directory” button to choose the file to execute
After wait: choose the waiting time after the execution of the selected program
Minimized: if you check it, Soft Launcher tries to minimized the window of the selected program (some software’s don’t support it)
kill app: it the name that appears into the software window title

here Microsoft Flight. Beware of the case of the text. You can insert only the first string. Such as Microsoft
some program doesn’t open a window and are only present into Windows Process. So, check Proc. It means that it will find the name into the Processes task manager.



Beware some full screen mode can stick software’s. If you run Flight Simulator X or Prepar3D into a full screen mode, we advise to start them at the end.

17.3 FS Instructor Remote Computer module



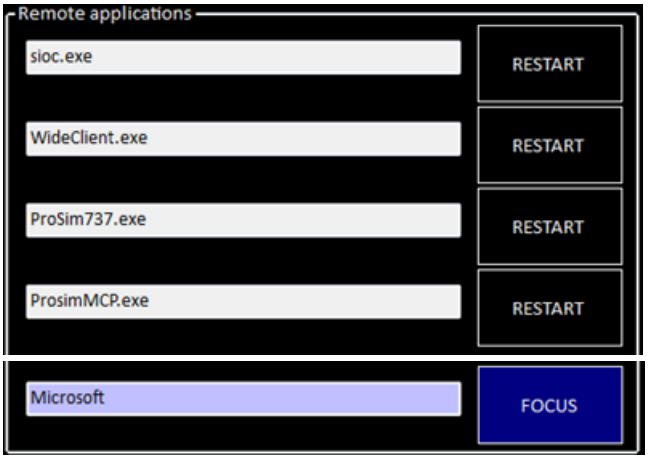
17.3.1 On the left: remote machines list (see previous chapter).

When you click on a machine, it tries to connect to the remote Soft Launcher. If it works, the rest of the screen appears.

If it can't be connected, "Unable to connect" appears after a while.

17.3.2 On the middle: remote applications

If the connection is established, the remote applications are shown



You can restart one of them. Just click on “RESTART” button to re-launch one application.

The last line gives the focus on a program. Such as PROSIM Display or Prepar3D

17.3.3 On the right: restart/shutdown machine(s)

SHUTDOWN CABIN Button stops all machines. It tries to connect on each machine and ask to stop after one minute. You can go. After a while (2 min) all your computers are stopped

RESTART CABIN button restarts all machines. Beware, it doesn’t stop electricity feed. So, I you have issues with interface like CP FLIGHT. It’s better to Shut down, stopped electrical power, wait 1 min and restart all.

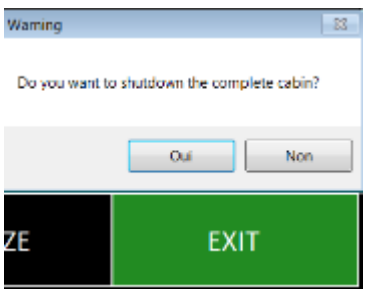
Control a machine:

RESTART THE SCRIPT asks Soft Launcher to kill and restart all the application of one machine

RESTART IT: restart only this machine after 1 minute.

SHUTDOWN IT: Stop only this machine after 1 minute.

Note: When you exit from FS Instructor, the system will ask automatically if you want to shut down the cabin.

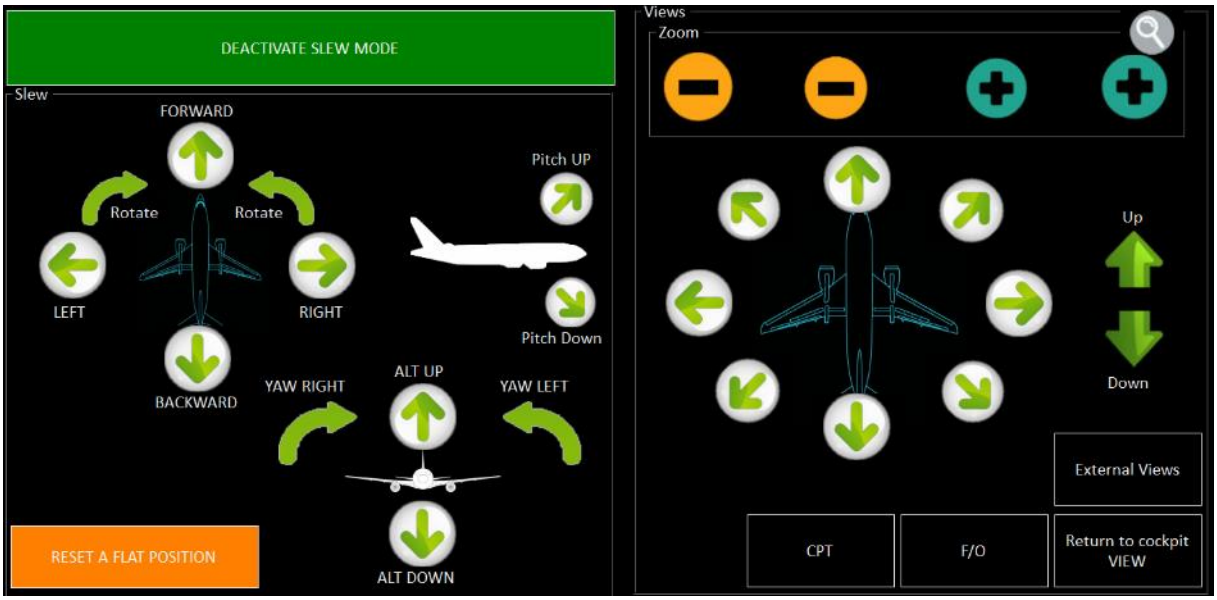


17.3.4 If something goes wrong

If you can't connect to soft launcher check:

- Start Soft Launcher as administrator
- Give rights in your Firewall
- Try to stop your security suit
- Check in <your user>/APPDATA/ROAMING/Soft Launcher/ the log file

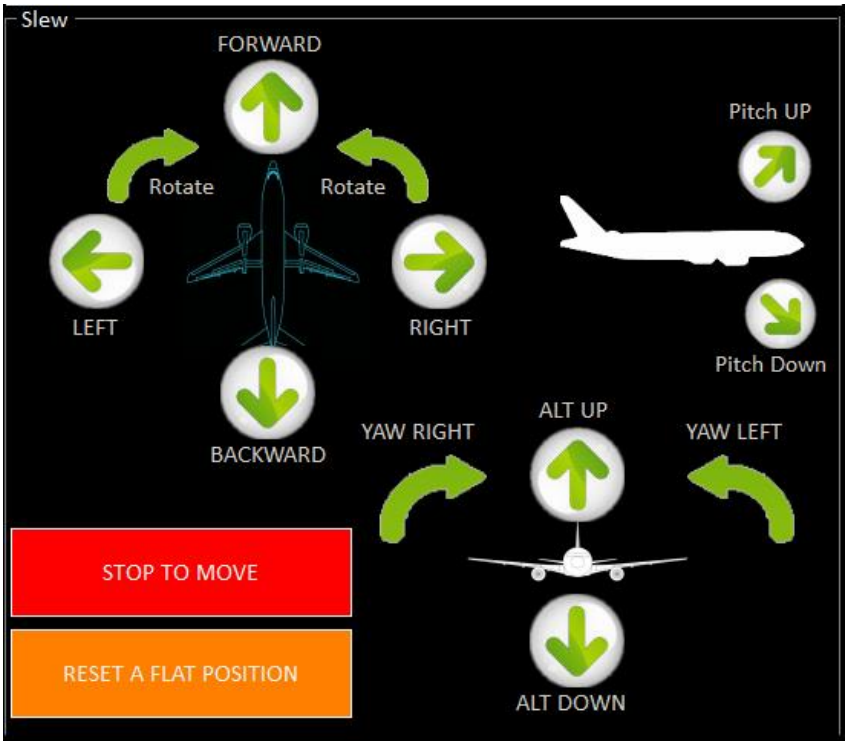
18 View & Slew PAGE



This page is split into 2 modules. Slew mode on the left and View settings on the right

18.1 Slew mode

The slew mode allows the instructor to move the aircraft. To activate this mode, just click on the "Activate Slew Mode" button 



To exit from the slew mode, you have to click on “DEACTIVATE”

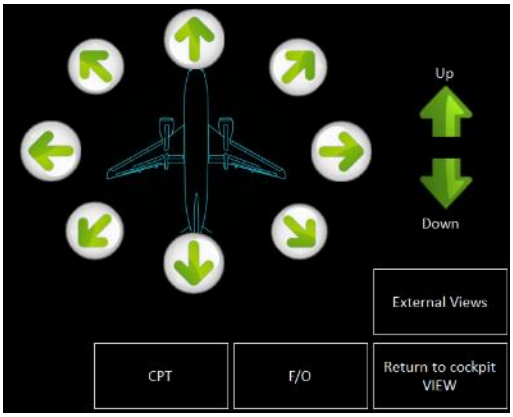
18.2 Views management

The view module works **ONLY into the Virtual Cockpit View with PREPAR3D**. Some of these features don’t work with the 2D view.

18.2.1 Zoom

You can increase or decrease the current zoom (quick and slew buttons)

18.2.2 View change



The green arrows change the orientation of the view.

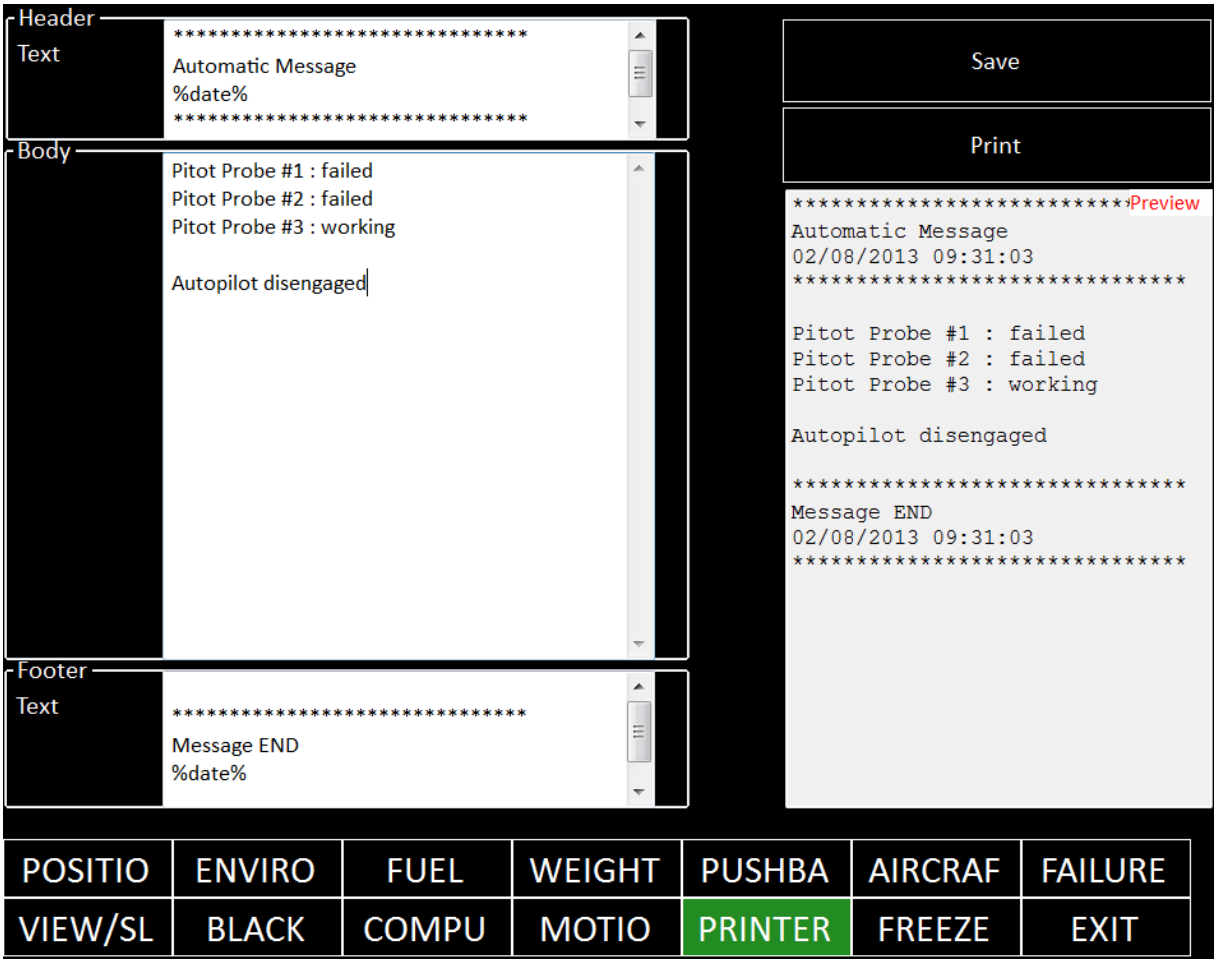
"External Views" button switches the view (spot) to come back into the cabin, use the button "***Return to cockpit View"***

CPT & F/O buttons switch between the CAPTAIN and FIRST OFFICER views to avoid parallax.
To allow this function, ask us our handbook to set these views (only commercial licensed users).

19 Printer module

This module manages the USB thermal printer and simulates the Acars system.

These printers are very close to the Airbus or Boeing pedestal printer.



On the left, you have the three areas of the message:

- Header
- Body
- Footer

You can use the %date% variable to display the current date

On the right, it displays a printer preview.

By clicking on PRINT, it sends the message on the DEFAULT printer connected on the local machine. None window appears.

You can save the current message with the SAVE button.

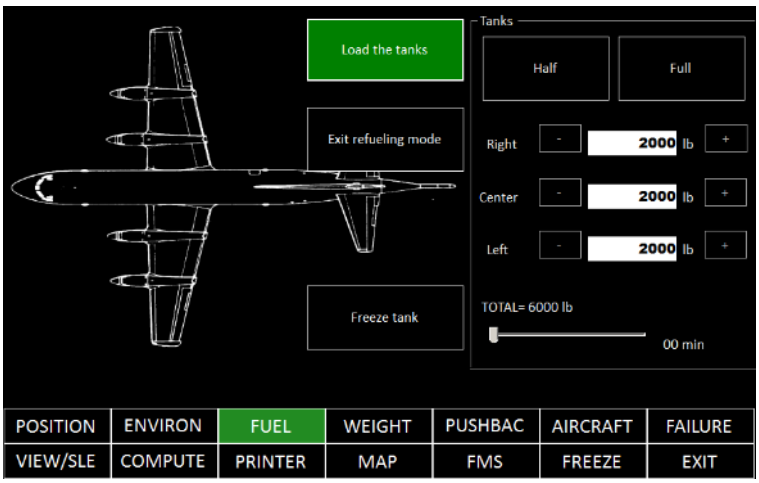
20 Motion Page

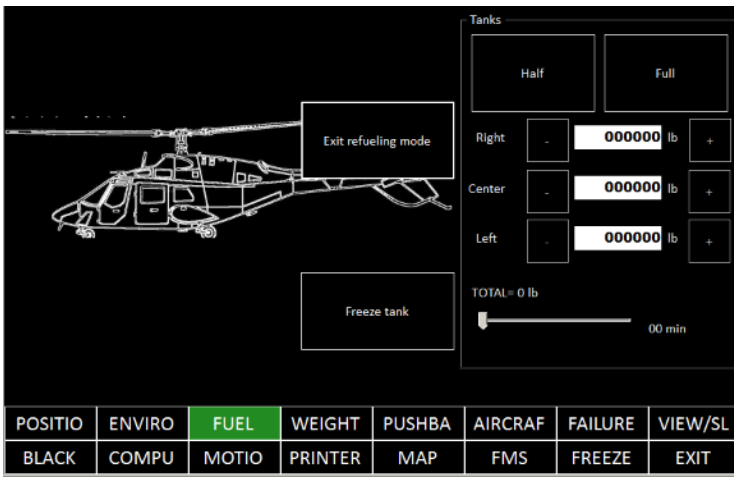
This feature is only available for Revolution-Simproducts full motion.

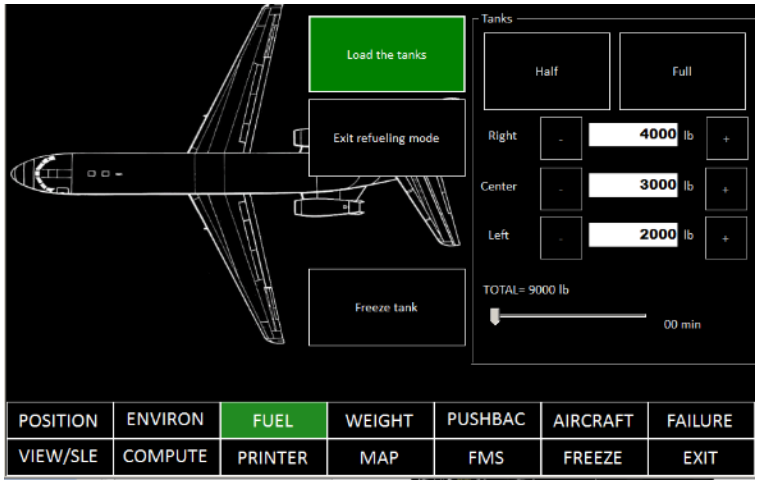
21 Personalized the interface look

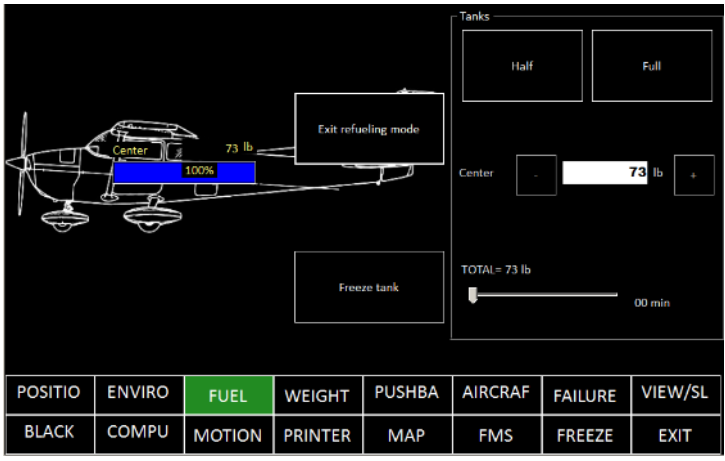
21.1 Backgrounds

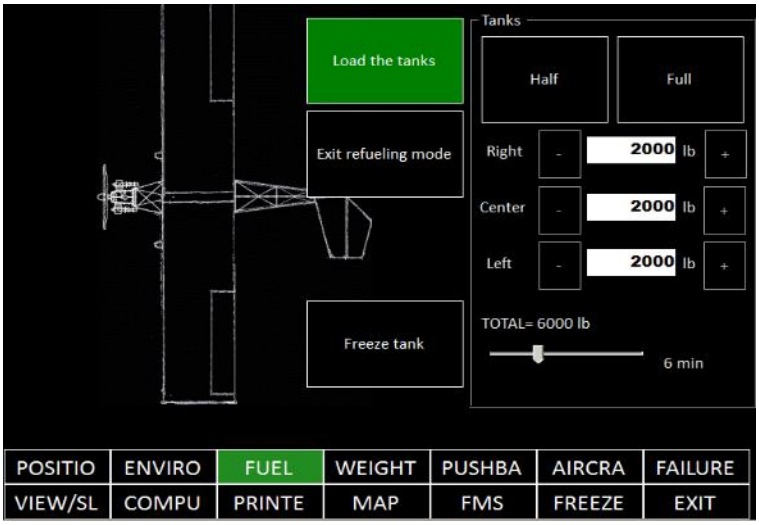
FS Instructor is delivered with B737 background but you can custom this image with your specific aircraft (helo, Airbus, Cessna…).





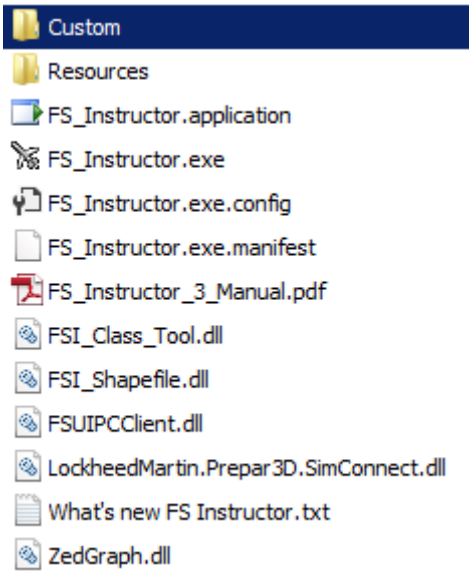




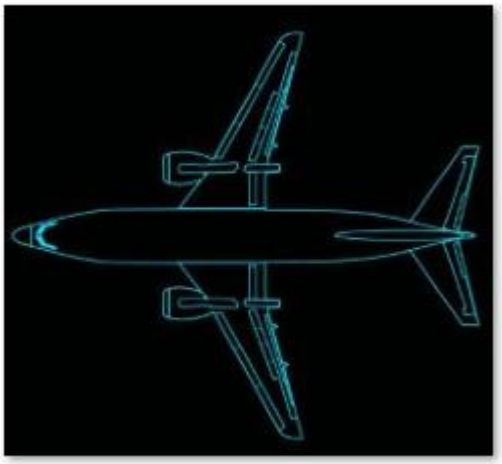


Only Integrator and Commercial licenses have access to this feature.

1 – Open the custom directory



2 – In this directory you will find the default shape



Example_for_Aircraft_shape_for_backgrounds.jpg

how to custom.txt

Copy “Example for aircraft shape for backgrounds.jpg” and rename it to “aircraft shape for backgrounds.jpg”. Modify this file to display your own aircraft.

Advice:

- Choose a top-view with the aircraft nose on the left

- Do not resize the image

- Keep a black background.

21.2 Display your logo instead of “FS Instructor splash screen”

During start-up, a splash screen appears

We have a dedicated service to integrate your own logo. Please contact us for pricing (contact@fsinstructor.com)

21.3 Hide some pages

You can customize the menu bar.

Such as, from this menu bar:

POSITION	ENVIRONMENT	FUEL	WEIGHT	PUSHBACK	AIRCRAFT	FAILURE
VIEW/SLEW	BLACK BOX	COMPUTERS	MOTION	PRINTER	FREEZE	EXIT

To

POSITION	FUEL	PUSHBACK	FAILURE	BLACK BOX	FREEZE	EXIT

MENU > SETTINGS > MENU.

Select the displayed pages

ID	NAME	SHOW	UP	DN
POSITION	POSITION	☑	UP	DN
ENVIRONMENT	ENVIRONMENT	☑	UP	DN
FUEL	FUEL	☑	UP	DN
WEIGHT	CHOUCOLAT	☑	UP	DN
PUSHBACK	PUSH	☐	UP	DN
AIRCRAFT	AIRCRAFT	☐	UP	DN
RADIO	RADIO	☐	UP	DN
FAILURE	FAILURES	☐	UP	DN
VIEW/SLEW	VIEW/SLEW	☐	UP	DN
BLACK BOX	BLACK BOX	☐	UP	DN
COMPUTERS	COMPUTERS	☐	UP	DN
MOTION	MOTION	☑	UP	DN
PRINTER	PRINTER	☑	UP	DN
SITUATION	SITUATION	☑	UP	DN
FMS	MAURICE	☑	UP	DN
GRAPH	GRAPH	☑	UP	DN
MAP	MAP	☑	UP	DN
DOWNLOAD	DOWNLOAD	☐	UP	DN
FREEZE	FREEZE	☑	UP	DN
SETTING	SETTING	☐	UP	DN
EXIT	EXIT	☑	UP	DN

You find a list of the pages.

- check or uncheck which page you want (Show column)

- Change the order (UP/DN buttons).
- Change the display name (NAME column)

22 FS Instructor Add-ons

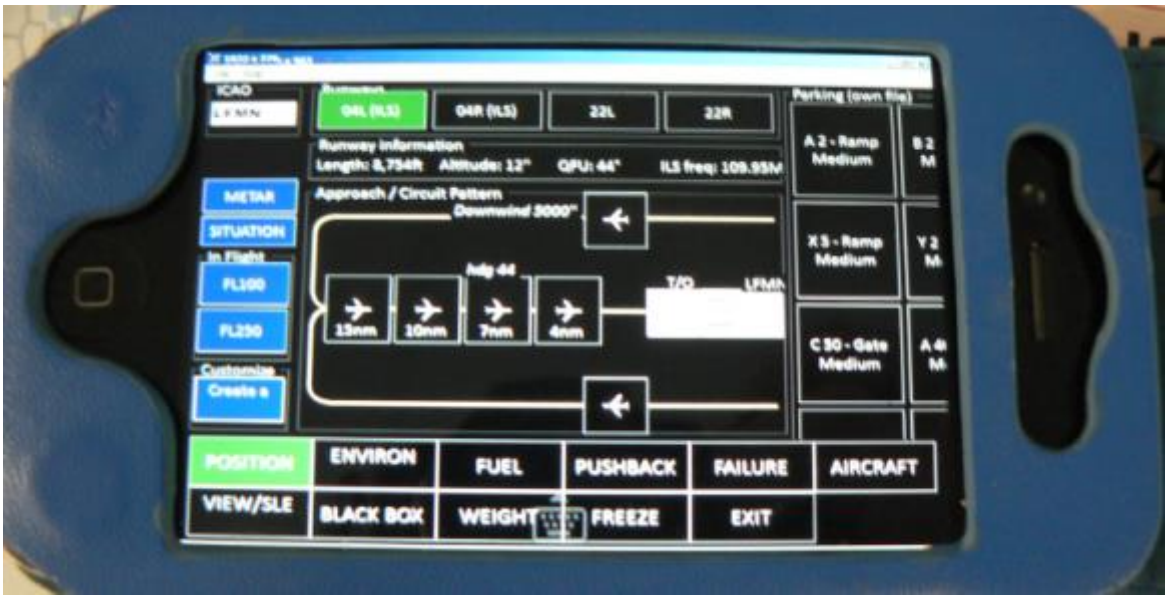
FS Instructor is an open software. Editor car write plugins.

They appear as page.

Currently DODOSIM PROFESSIONAL is available

23 IPhone/IPad and Android support

You can open a remote session from your IPhone or Android to your FS Instructor PC instance by installing Air Display http://avatron.com/apps/air-display



24 FAQ

24.1 Is FS Instructor control planes on IVAO/VATSIM servers?

No, FS Instructor and VATSIM/IVAO don't use the same protocol.

24.2 Does it manage many planes?

Commercial users can launch several FS Instructor from the same computer and manage several WideClient connections.

One FS instructor is linked to **one** WideClient.

Please contact us to have the complete procedure.

24.3 Can people switch to FSX or Prepar3D without restarting the application?

No, each time you restart the flight simulator you should reopen FS instructor. If not, some features loaded at the beginning of the application could not work (Find a gate for example).

25 Additional service for professional/integrators

- Remote installation, configuration, customization of our products...
- New developments
- For simulator renters, a FS instructor plugin to manage cabin access from RFID badge.

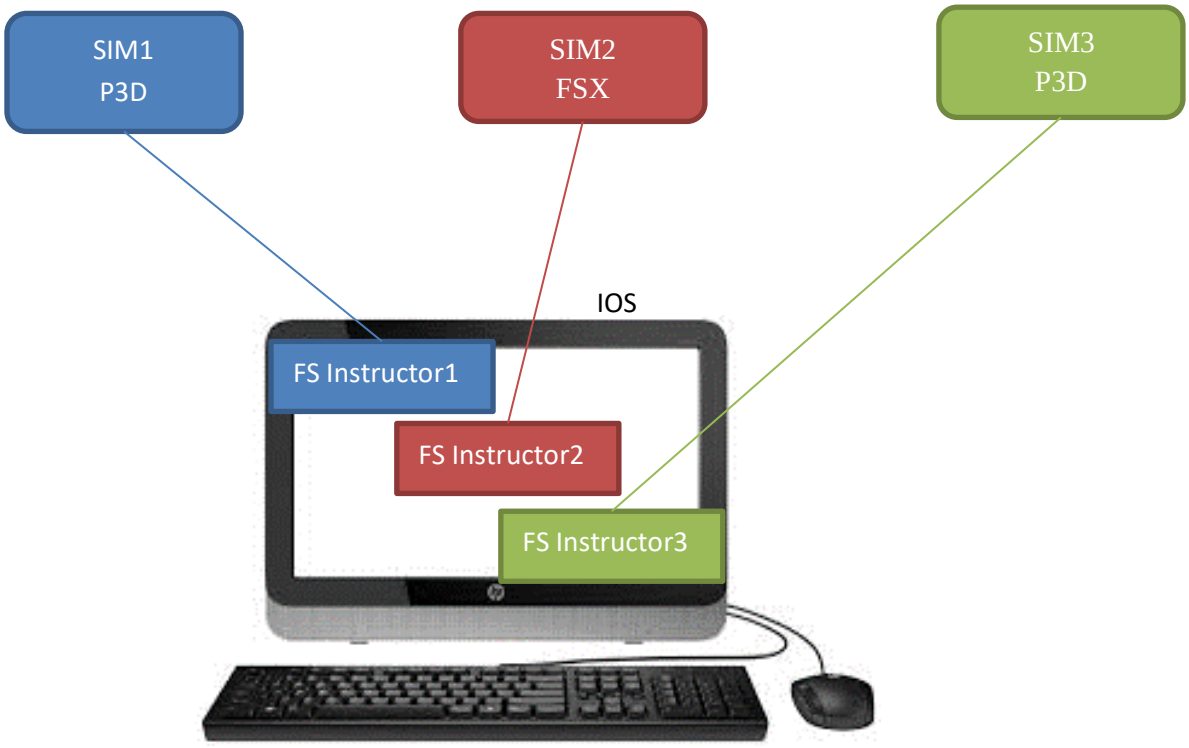
- To help you to certificate your sim: **Qualification Test Studio**.

This tool has been developed to assist with the Master and Recurrent Qualification Test preparation (MQTG/RQTG) for sim based on FSUIPC (FSX and higher) or XPLANE
What you can do:

  - Create your own scenarios/tests found in MQTG/RQTG guides.
  - Record these tests
  - Obtain pdf or jpg files with all recorded events. You can customize the header.
- We provide over fifty different events to record but you can personalize the tool creating your specific FSUIPC offsets.
- If you are interesting by **Qualification Test Studio**, tell us and we will send you a demo.

26 Manage several sims at a same time

You can start several FS Instructor's (one instance= one license) under a same Windows session. Each one can manage one simulator



Please ask us the documentation to set this architecture.

27 Copyrights

FS Instructor uses these components:

- FSUIPCClient.dll - version 2.4 by Paul Henty
- ZedGraph - version 5.1.5
- FSUIPC and WideFS by Peter Dowson (Payware) - http://www.schiratti.com/dowson.html
- PdfSharp – version 1.32

FS Instructor could be interfaced with

- PROSIM - http://prosim737.com (Payware)
- DODOSIM http://www.dodosim.com/ (payware)
- Air Display http://avatron.com/apps/air-display (Payware) - © 2017 Avatron Software

This software is not associated with any aircraft manufacturers. It can NOT be used for the real flight. It is designed exclusively for training simulator sessions.