

# ProSim737 Manual

From Manuals

NEW CONTENT --- Basic

1. ProSim737 System
2. ProSim737 Display
3. ProSim737 CDU

Generic Pages B737NG/Max & A320

1. Initial Setup
2. Visual Flight Model
3. ProSim Hardware Connector
4. ProSim Audio
5. Instructor Operating Station
6. Generic support page
7. Frequently Asked Questions

Advanced

1. Interfacing with ProSim737 (XML queries)
  2. ACARS
  3. EGPWS Modulation
  4. Cockpit Setup Options B738 & B38M
- 
1. Wiki development progress page

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- This page was last modified on 12 October 2021, at 09:49.

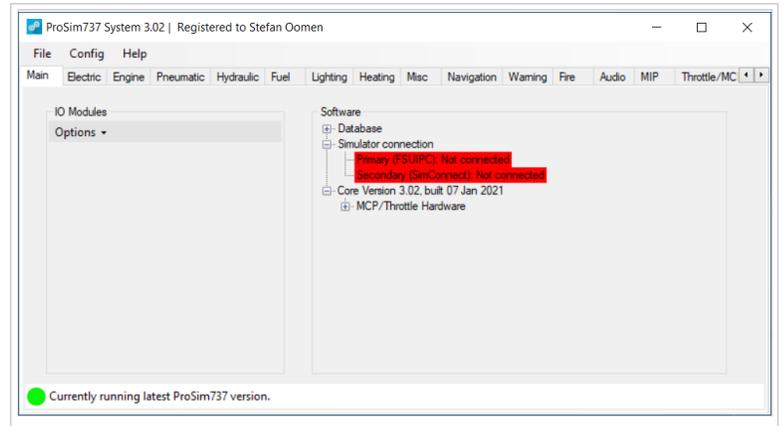
# ProSim737 System

From Manuals

ProSim737 System is the main server module of the ProSim737 suite. All other modules connect to this application in order to communicate with one another. The main use of this application, besides being a central hub for the suite, is to configure ProSim as well as checking the status of hardware and connected modules.

## Contents

- 1 Main interface
  - 1.1 Navigation bar
  - 1.2 System status tabs
  - 1.3 File dropdown
  - 1.4 Config dropdown
    - 1.4.1 Configuration
      - 1.4.1.1 Main tab
      - 1.4.1.2 Drivers tab
      - 1.4.1.3 Combined config tab
      - 1.4.1.4 MCP/ Throttle tab
      - 1.4.1.5 Tuning tab
    - 1.4.2 Import Configuration
    - 1.4.3 Database
    - 1.4.4 Audio Addons
    - 1.4.5 Company Routes
    - 1.4.6 Import From V2
  - 1.5 Help dropdown
    - 1.5.1 Web Access
    - 1.5.2 Updates
    - 1.5.3 Input debugger
    - 1.5.4 Licenses & About



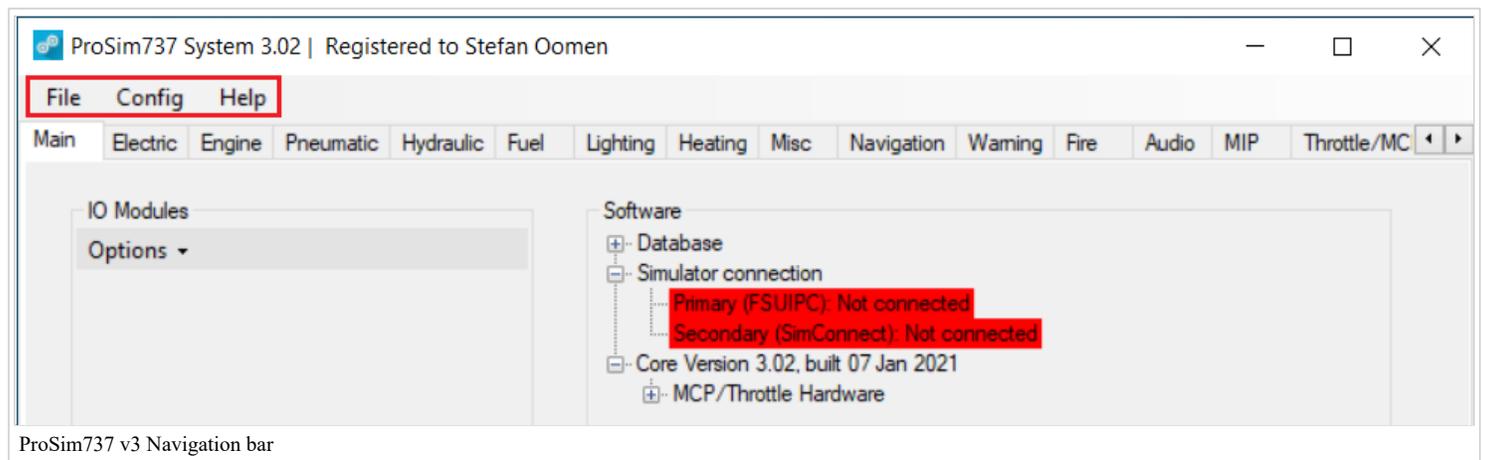
## 1 Main interface

The main interface comprises of two parts: the navigation bar at the top, and a row of tabs in the center of the screen. Note:

- At the very top: Current ProSim version and name of the licence holder
- At the very bottom: Indication of version status: indicates whether or not the latest (stable) version of ProSim is running

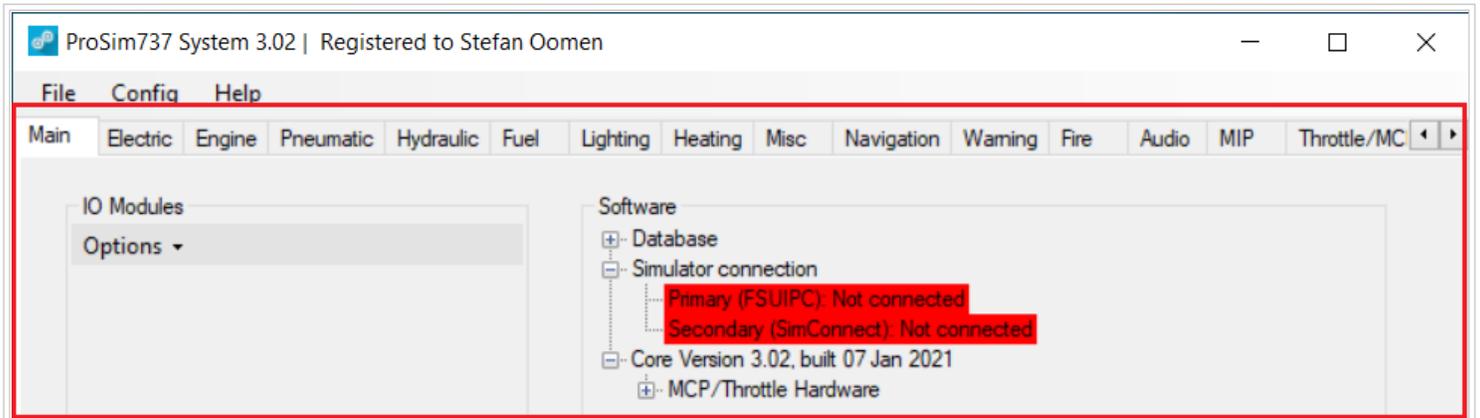
### 1.1 Navigation bar

The navigation bar consists of three buttons, each opening a dropdown menu.



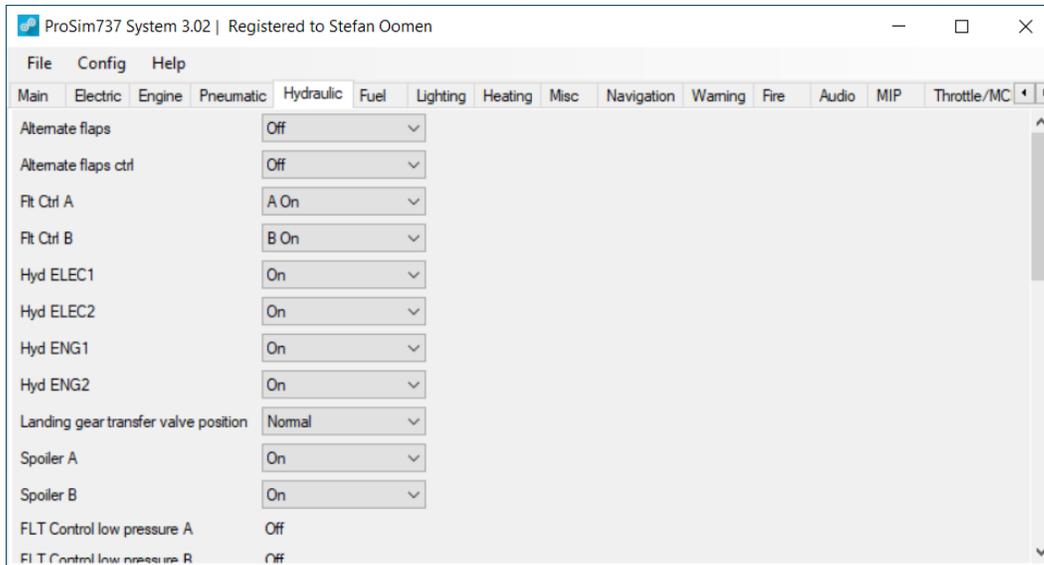
### 1.2 System status tabs

The row of tabs shows the current status of the different systems of the aircraft, such as electric systems, hydraulics, navigation, etc.



ProSim737 v3 Configuration window - Main tab

The default tab is always the 'Main' tab, showing the status of all currently connected hardware in the 'IO Modules'-box and the current status of the software in the 'Software'-box. Whenever a certain set of hardware is connected, that list can be saved as the required list of hardware; when something fails or is not connected, a red line in this box will give a warning.



### 1.3 File dropdown

The file dropdown is only used when ProSim737NG/MAX is started for the first time to enter your licensing information; as well, a button to exit ProSim737NG/MAX.

### 1.4 Config dropdown

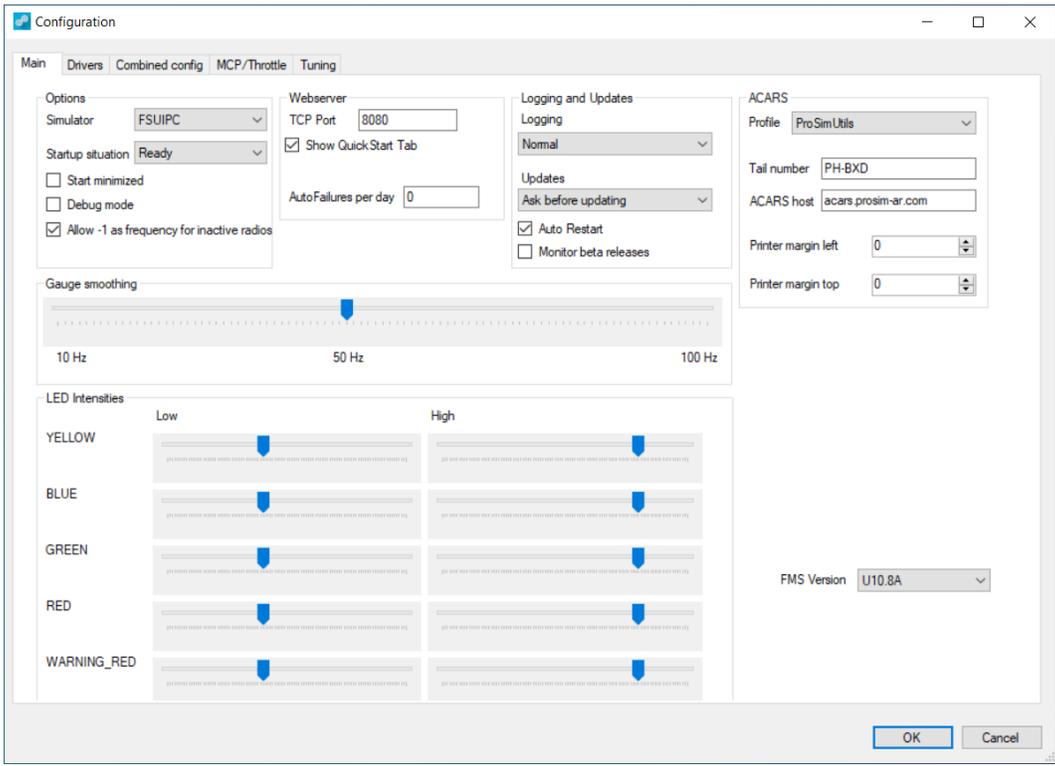
The Config dropdown allows access to certain configuration windows of ProSim System.

#### 1.4.1 Configuration

When clicking on 'Configuration' from the Config Menu dropdown, the configuration window will open. In this window, consisting of 5 tabs is the option to configure personal settings in ProSim737NG/MAX.

##### 1.4.1.1 Main tab

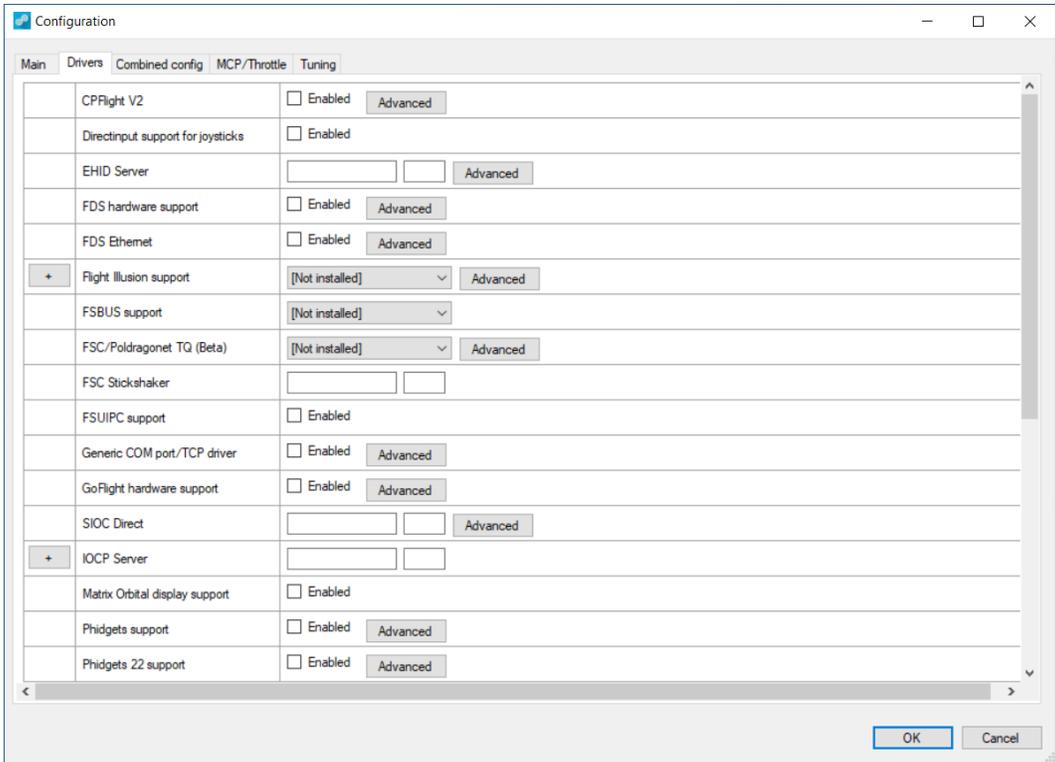
On the main tab, some of the basic settings of ProSim can be set up, such as the interface between ProSim and P3D/FSX: FSUIPC or SimConnect.



Most settings can be left as how they are set by default; others require manual experimenting, such as gauge smoothing and LED intensities. If ProSimUtils is used, as in the screenshot, please make sure to select it from the Acars Profile dropdown menu here.

**1.4.1.2 Drivers tab**

Hardware drivers can be enable- and disable in the Drivers tab, which is required for hardware to interface with ProSim.



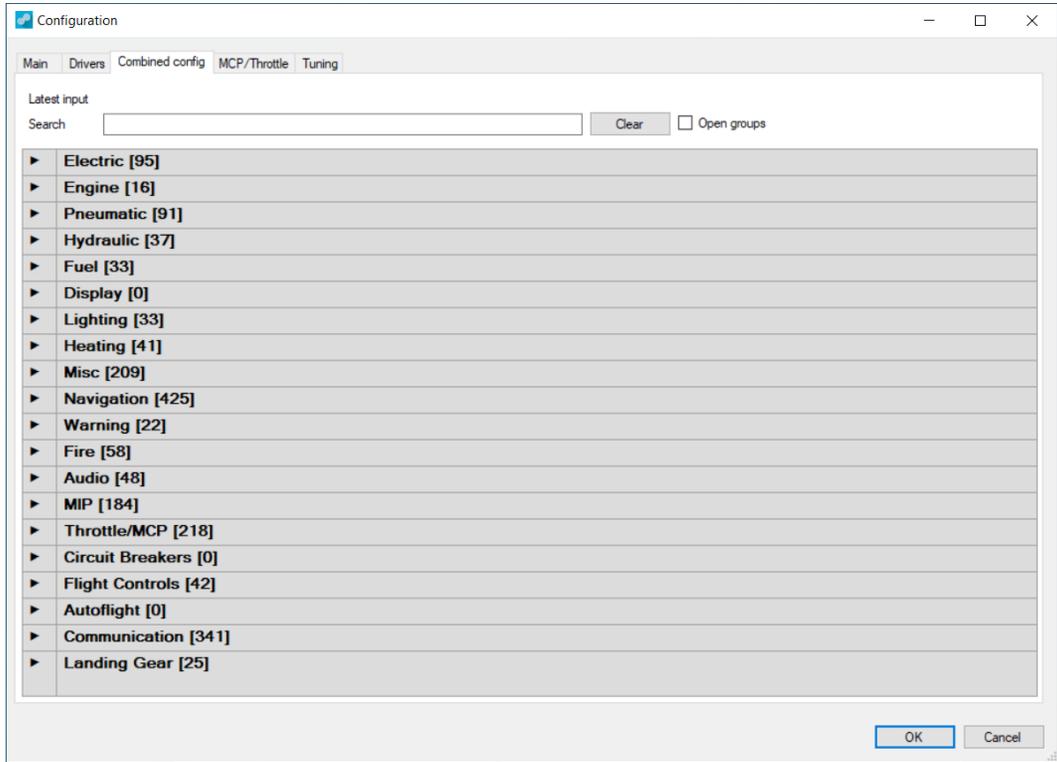
Some manufacturers, like CPFlight (<https://cpflight.com>), FlightDeckSolutions (<https://flightdecksolutions>) or Simworld (<https://simworld.aero>) have their own, dedicated driver(s). Other hardware, for example Saitek (<https://www.saitek.com/uk/prod-bak/yoke.html>) Pro Flight products (yoke, rudders) do not have dedicated drivers, but require the 'DirectInput support for joysticks'-driver to be enabled. This driver allows generic hardware to communicate with ProSim. Please refer to your manufacturers' manuals for setup details, or visit the ProSim forums (<https://prosim-ar.com/forum>) for

support!

To enable a driver, click on the checkbox next to 'Enabled', and again to disable the driver. Some drivers also offer advanced options. These can be configured by clicking on the designated 'Advanced'-button. Please refer to the hardware manual for further instructions.

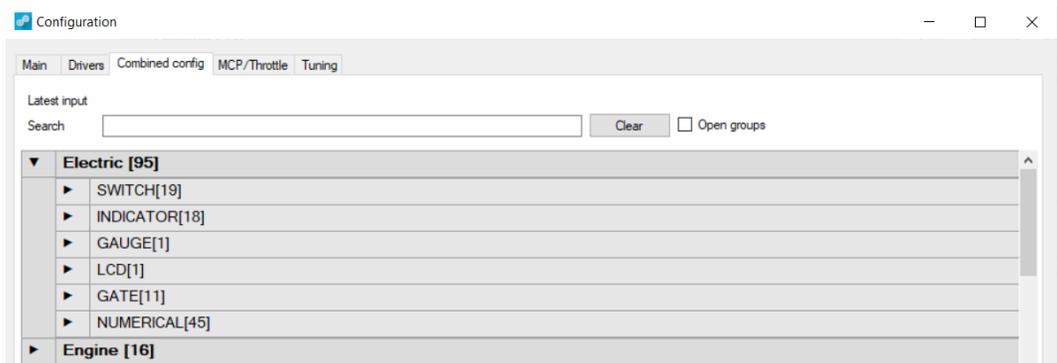
**1.4.1.3 Combined config tab**

The combined config tab is by far the largest and complex tab of ProSim, and allows the configuration of buttons, switches, lights, and even custom sounds as explained on the ProSim737\_Audio page.



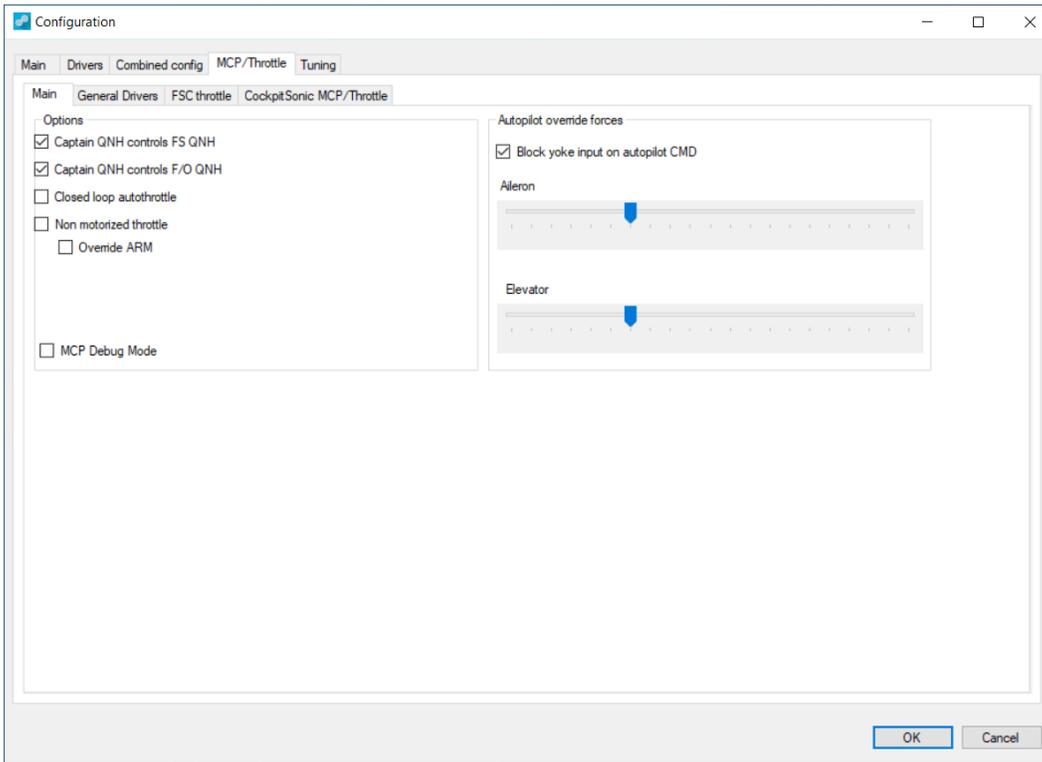
At the top of the window, the latest input that has been detected by ProSim is shown, next to 'Latest Input'. This is useful to check whether or not a button, switch or control axis is being (correctly) detected by ProSim. Also, when assigning buttons, switches and flight control axis, the desired button can be selected, switch or axis and automatically assign the latest input received by ProSim by pressing on the 'A' button next to the desired button, switch or axis.

All buttons, switches and sounds have been divided into categories, ranging from electric systems to fuel and from flight controls to warning systems. By clicking on a category, a drill-down list will unfold. Depending on the possible options within a certain category, further dropdown menus will be present.



**1.4.1.4 MCP/ Throttle tab**

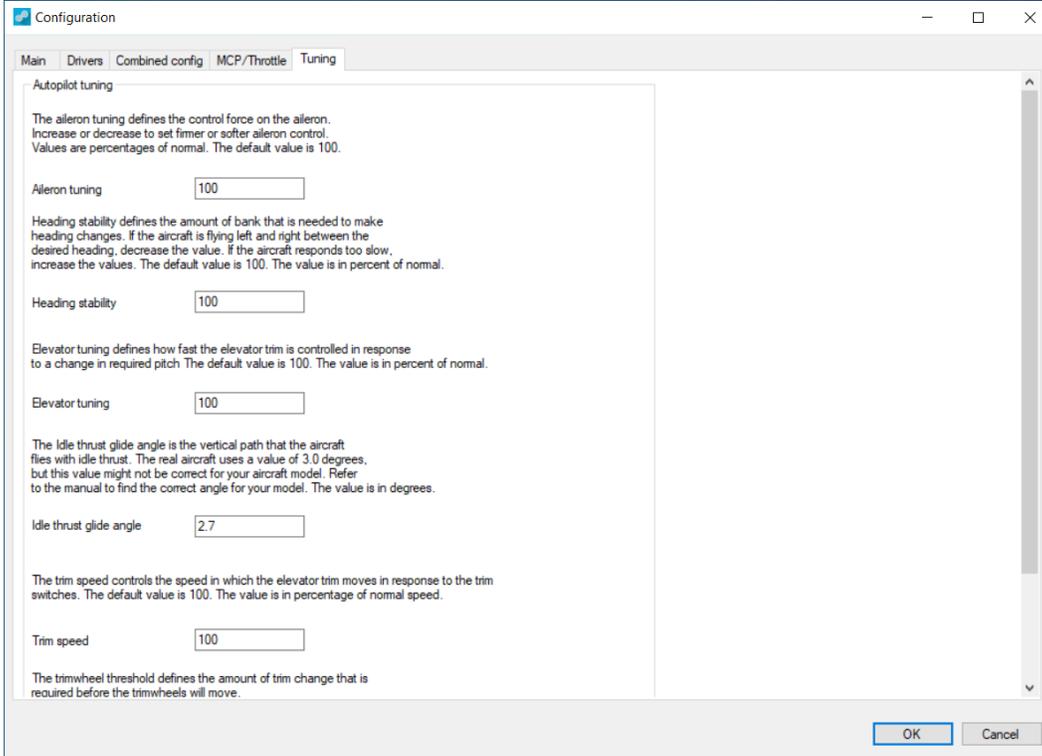
This tab contains certain advanced settings, mostly aimed at specific motorised throttle quadrants and yokes. Certain settings here, such as the QNH-settings, can also be configured from the ProSim IOS.



Refer to your manufacturers' manual for instructions regarding these settings.

#### 1.4.1.5 Tuning tab

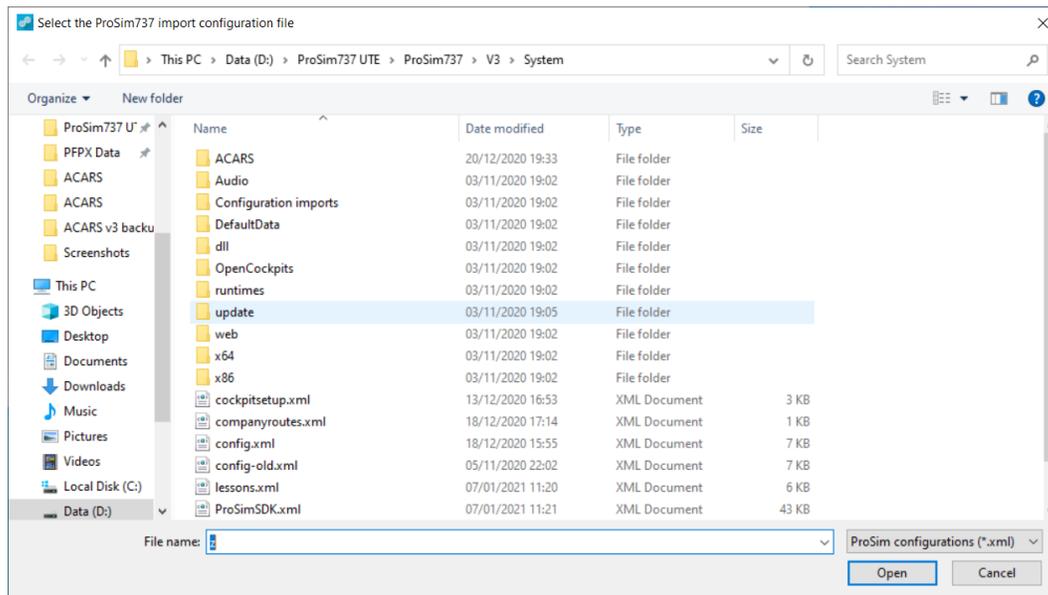
The tuning tab provides options to adjust certain parameters of the autopilot. Most users will want to leave these at their defaults.



#### 1.4.2 Import Configuration

This functionality allows the import of all settings from a different installation of ProSim. This is especially useful when reinstalling a workstation running ProSim System, or when installing a new workstation that will run ProSim System. In order to use this functionality, follow the steps below:

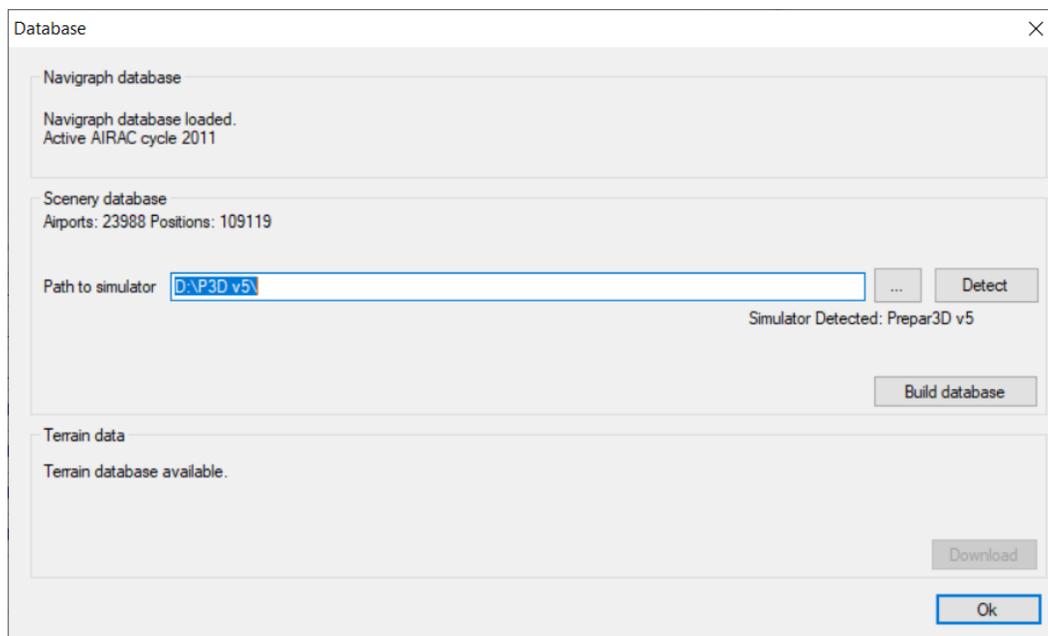
1. Create a back-up of your current 'Config.xml'. This file can be found in the installation folder of ProSim737 System. In case of a complete Windows reinstall or a new computer, place the back-up file on a USB-drive for example.
2. After the (re)installation of Windows and ProSim737, copy the file to 'desktop' and open ProSim737 System.
3. Click 'Config' in the navigation bar, and then 'Import Config'. Browse to back-up 'Config.xml' file on the 'desktop' or USB-drive, select it and click on 'Open'.
4. Settings will be confirmed by ProSim System.



### 1.4.3 Database

The database window shows the actual status of all three databases ProSim uses:

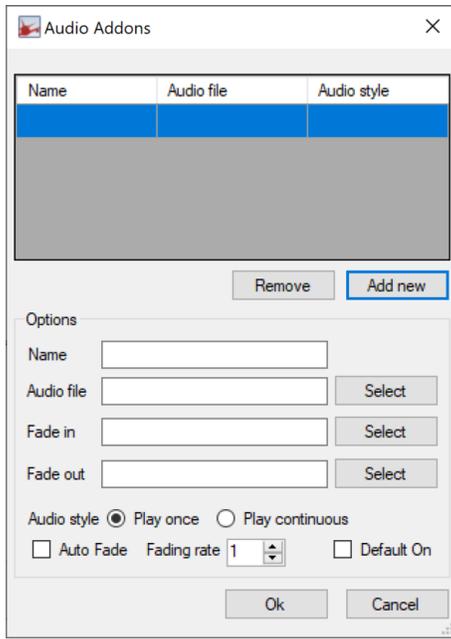
1. The Navigraph (<https://navigraph.com>) database: this database contains navigational data; SIDs, STARs, VORs, and more.
2. The scenery database: this database contains all simulator scenery currently installed and an initial version is created when ProSim737 System is run for the first time.
3. The terrain database: the terrain database is used to display ND terrain, when clicking the EFIS button 'TERR'. ProSim has its own database, which can be downloaded directly through the Database window or from the Prosim-AR.com downloads section here (<https://prosim-ar.com/downloads>).



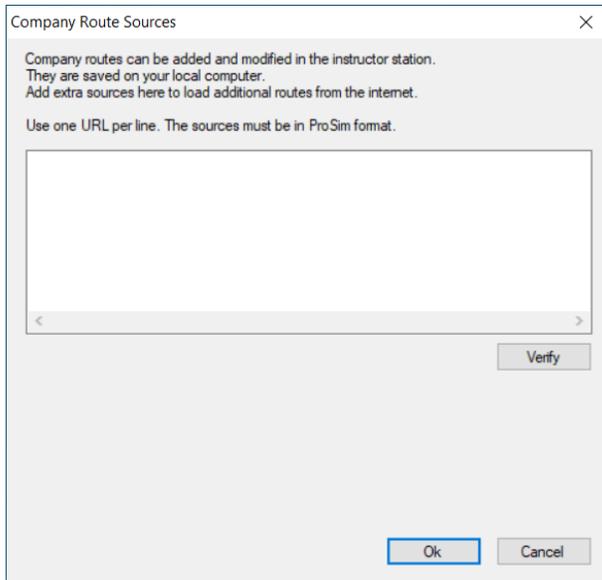
**Note that after installing new add-on scenery to Prepar3D or FSX, the scenery database builder should be run by pressing the 'Build database' button.**

### 1.4.4 Audio Addons

This window enables custom sounds to be added to ProSim737. Refer to the ProSim737\_Audio page for more information on this window and add-on sounds in general.



### 1.4.5 Company Routes



### 1.4.6 Import From V2

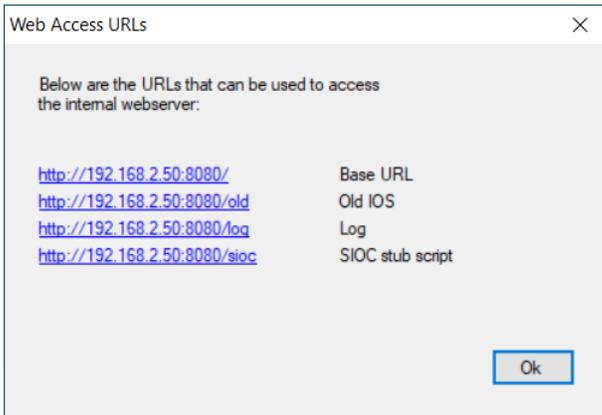
As a user from version 2 of ProSim, it is possible to import personalised settings from the V2 installation when upgrading to V3, and works exactly like the regular configuration import described above.

## 1.5 Help dropdown

The help dropdown menu gives access to updates and licenses, amongst some other features.

### 1.5.1 Web Access

Quick access to the Instructor\_Operating\_Station is possible via this window. Note it is the web application. For more info, refer to the Instructor\_Operating\_Station page.



**1.5.2 Updates**

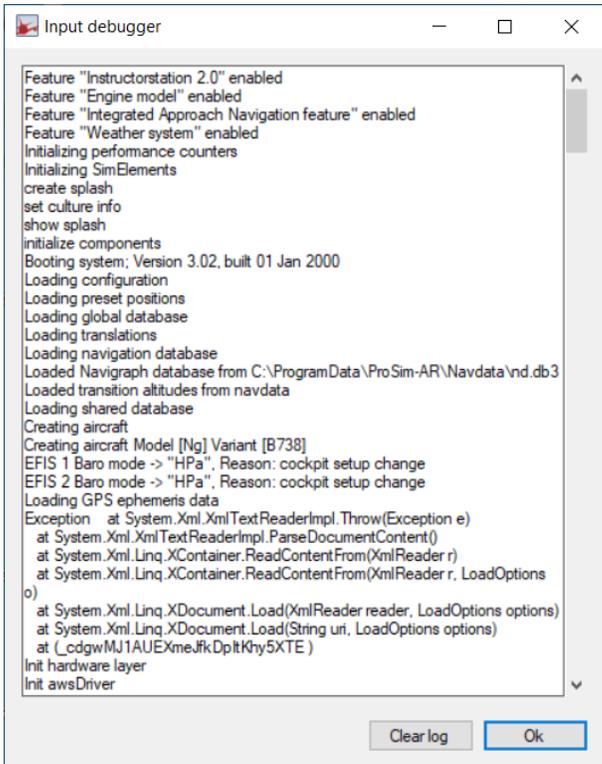
Notification of available updates are upon start-up of ProSim737 System in case download add-ons are needed, such as the Visual\_Flight\_Model or beta-versions of ProSim737 System. As seen in the image below, the 'updates'-window is divided into three separate tabs:

- Releases: Stable releases, versioning as vX.X (F.e. v3.01, v4.02, etc.)
- Addons: Add-ons released by ProSim, such as the Prepar3D Module and the [Visual\_Flight\_model]
- Pre-releases: Beta versions of ProSim737. Versioning as Vx.xbx (F.e. V3.02b5, V4.10b12, etc). Advised only for advanced users, or if advised by ProSim.

All releases and pre-releases are accompanied by release-notes. These are also posted on the forums (<https://www.prosim-ar.com/forum>).

**1.5.3 Input debugger**

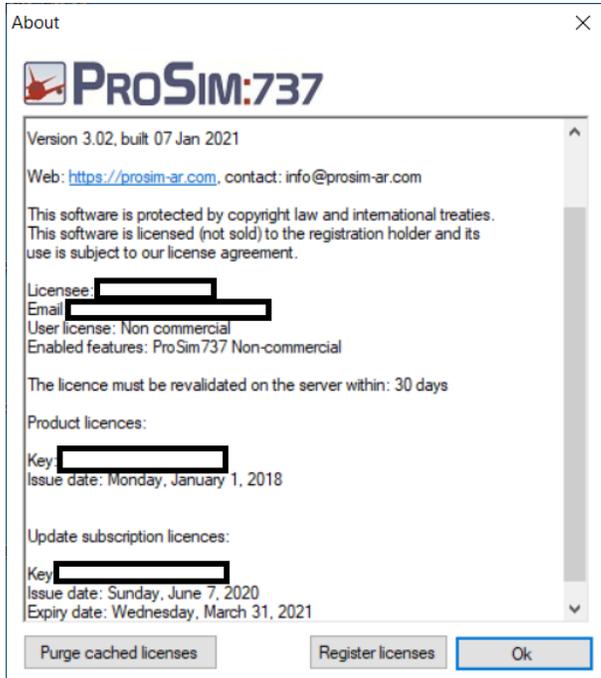
The input debugger will mostly be used in case of issues with hardware or ProSim737 System. If support is requested, a copy of the contents of the input debugger may be asked to be sent to ProSim-AR Support.



**1.5.4 Licenses & About**

This is the legal part of ProSim737. Opening this window will show the copyrights, as well as the currently linked software licence- and update keys. Two buttons are shown:

- Purge cached licenses: Note currently linked licence keys will be removed. Use this button when reinstalling Windows or when migrating to a new computer.
- Register licenses: Use this button after using the 'Purge cached licenses'-button to enter new software- or update licence keys.



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# ProSim737 Display

From Manuals

ProSim738 Display is used to display aircraft panels (MIP, Pedestal etc.) as well as aircraft Display Units ([http://www.b737.org.uk/flightinsts.htm#NG\\_Flight\\_Instruments](http://www.b737.org.uk/flightinsts.htm#NG_Flight_Instruments)).



## Contents

- 1 Displays
- 2 Gauges
- 3 Panels
- 4 Setup of displays, gauges and panels

## 1 Displays

ProSim Display is capable of displaying the following displays:

Display unit	Standard display
Captain outboard	Captain Primary Flight Display (PFD)
Captain inboard	Captain Navigation Display (ND)
Upper EICAS	Upper EICAS display
Lower EICAS	Lower EICAS display
First Officer outboard	First Officer Primary Flight Display (PFD)
First Officer inboard	First Officer Navigation Display (ND)

## 2 Gauges

ProSim Display is capable of displaying the following gauges:

Gauge
Captain outboard
Captain inboard
Upper EICAS
Lower EICAS
First Officer outboard
First Officer inboard

## 3 Panels

ProSim Display is capable of displaying the following panels:

Panel
Mode Control Panel (MCP)
Captains' EFIS
First Officers' EFIS
Aft overhead
Forward overhead
Upper Maint Instrument Panel (MIP)
Lower Maint Instrument Panel (MIP)
Radio pedestal

## 4 Setup of displays, gauges and panels

Setup of displays, gauges and panels can be done over the network. If the network steps have been followed over at the Initial Setup, follow the exact same steps for a local setup.

First of all, create new folders for each display, gauge and panel to use and use an indicative name. For example: 'CAPT\_INBD' (inboard display) can be used for the captains' display, or 'CAPT\_OUTBD' (outboard display). Alternatively, 'CAPT' and 'FO', depending on whether or not displaying both outer and inboard display images in one instance or separate instances of ProSim737 Display.

Place them on the appropriate computer (local or networked) and copy the contents from the original ProSim737NG/MAX folder to those folders. Displays, gauges and displays should now be configured. In case of a local setup, make sure ProSim737 Systems is not running, otherwise displays might be lost because there's no power source on line (GPU, APU or engines) and displays will be black. If a networked setup is run, do not put in the IP address of the computer running ProSim737 Systems for the same reason.

Press on the keyboard 'F12'-key to enter the Setup Mode. In this mode a blue background is seen. To exit the Setup Mode, press 'F12' again.

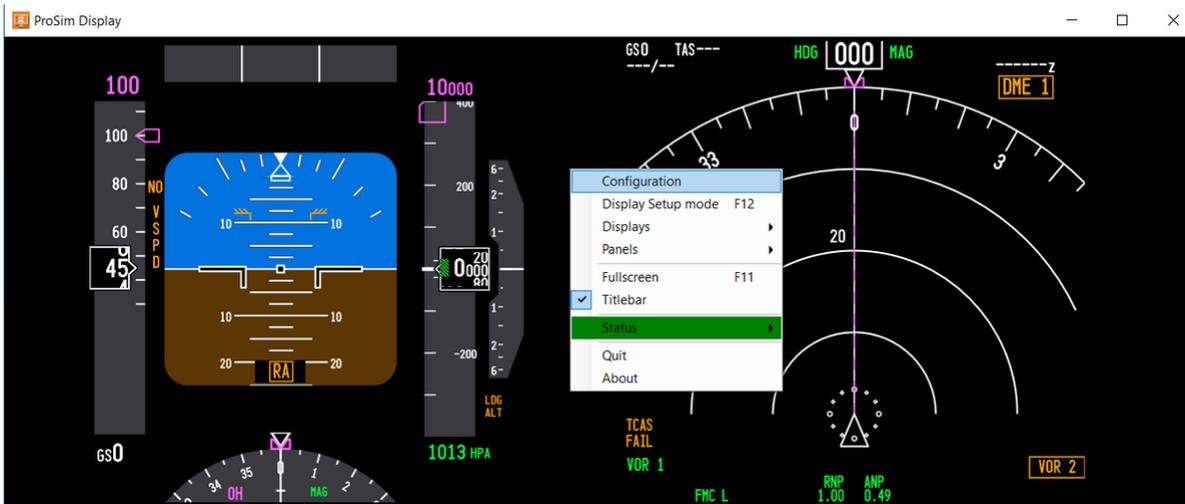
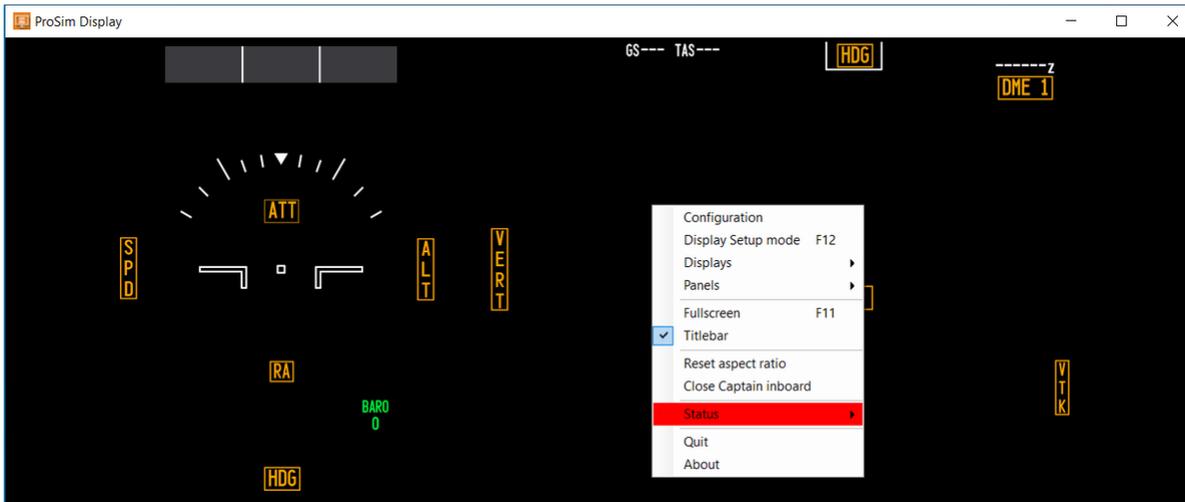


There are multiple ways to setup display(s). The first step is to determine which displays (PFD, ND, etc.) are required to be displayed in this ProSim737 Display instance. These should be adjusted in size to fit your actual hardware monitor. See below for an overview of mouse- and keyboard shortcuts.

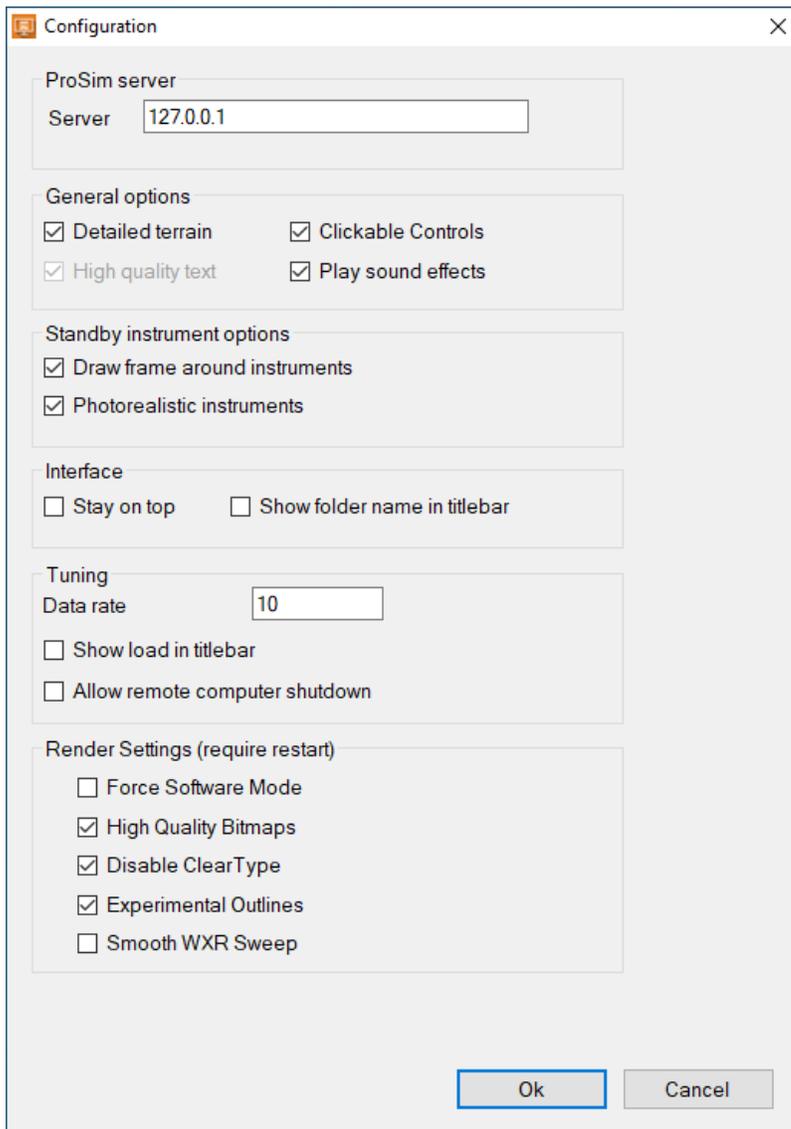
Key	Description
F12	Enter and exit the Display Setup Mode
Cursor keys	Move the displayed screen element
Shift + cursor keys	Quickly move the selected screen element
Numpad +/-	Adjust size of the selected screen element
Shift + Numpad +/-	Quickly adjust the size of the selected screen element
[ / ] (bracket keys)	Adjust only the width of the selected screen element
Shift + [ / ] (bracket keys)	Quickly adjust only the width of the selected screen element
*	Reset Height/Width of screen to Square
Tab key	Select next screen element
Mouse scroll wheel	Enlarge reduce size of display/panel/gauge by scrolling up or down

Once displays are positioned, test them by either starting ProSim737 System if running locally, or by entering the IP address of the computer running ProSim737 System with networked setup.

Right-click anywhere in the ProSim737 Display window to bring up the configuration menu. A red or green bar surrounding 'Status' indicates whether or not a connection has been established between ProSim737 Display and System:



The final step is to configure some software settings, mainly regarding performance. With the uncountable amount of different computer hardware combinations, it is impossible to give an off-the-shelf list of best options. Experiment with these combinations to see how they perform. Keep in mind that for the Navigation Display, performance is also impacted by certain settings in the [Instructor\_Operating\_Station], especially regarding the weather radar ([http://www.b737.org.uk/warningsystems.htm#Weather\\_Radar](http://www.b737.org.uk/warningsystems.htm#Weather_Radar)). Detailed information regarding these settings are given there.



As previously stated, it is not possible to give exact recommendations regarding settings impacting performance. Below is a list of options with their description and performance impact is given.

<b>Setting</b>	<b>Performance impact</b>	<b>Description</b>	<b>Recommended for normal operation?</b>
Detailed terrain	Moderate	High resolution terrain on ND terrain view	Recommended for normal operation
Photorealistic instruments	Low	Photorealistic images used for instruments, for better readability	Recommended for normal operation
Data rate	Moderate	Change frame- and data rates of a display or gauge. Default is 30FPS and the default data rate is 10	Default is normally OK
Force Software Mode	High	Move rendering from your graphics card (GPU) to your processor (CPU)	Not recommended for normal operation
High Quality Bitmaps	Moderate	Enter and exit the Display Setup Mode	Recommended for normal operation
Disable Cleartype	Low	(Experimental) font rendering. In case of readability issues it might prove useful to disable this feature	Recommended for normal operation
Experimental Outlines	Low	Different text outlining method which makes a thicker outline for bigger fonts and thinner for smaller ones	Recommended for normal operation
Smooth WXR Sweep	High	Smoother weather radar (WXR) sweep animation on the navigation displays (ND)	Recommended for normal operation

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# ProSim737 CDU

## From Manuals

ProSim737 CDU is the module that simulates the **C**ontrol **D**isplay **U**nit. Both pilots have a CDU at their disposal, and the units are situated on the right (Captains' CDU) and left (First Officers' CDU) hand side of the lower EICAS display ([http://localhost/pswiki/index.php/ProSim737\\_Display](http://localhost/pswiki/index.php/ProSim737_Display)).

The CDU allows pilots to mainly interact with the **F**light **M**anagement **C**omputer (FMC) (<http://www.b737.org.uk/fmc.htm>) and with the Datalink communication systems (ACARS (<https://en.wikipedia.org/wiki/ACARS>) & CPDLC ([https://en.wikipedia.org/wiki/Controller%E2%80%93pilot\\_data\\_link\\_communications](https://en.wikipedia.org/wiki/Controller%E2%80%93pilot_data_link_communications))).

The ProSim737 CDU module does not contain actual FMS logic. It is merely a module to access the Flight Management System (FMS) contained in the ProSim737 Systems module. Like all other modules of the ProSim737 suite, it is possible to run ProSimCDU from any computer connected to the same network as ProSim737 Systems.

For every hardware CDU connected, a separate folder containing all files from ProSim737 CDU must be created, if both the captain and first officer's CDU's are connected to the same computer.

This is the basic main menu of the ProSim737 V3 CDU. With LSK1L, the FMC may be accessed. By pressing LSK6R, the MAINT menu is accessed.

## Contents

- 1 Software
  - 1.1 Installation
  - 1.2 Configuration
    - 1.2.1 Options
    - 1.2.2 Drivers
    - 1.2.3 Screen Layout
    - 1.2.4 Adjusting for hardware CDU
    - 1.2.5 ProSimUtils
  - 1.3 Maintenance Menu
    - 1.3.1 Pause & Freeze
    - 1.3.2 Sim Rate
    - 1.3.3 COM/NAV
    - 1.3.4 Reset FMS
    - 1.3.5 Ground service

## 1 Software

### 1.1 Installation



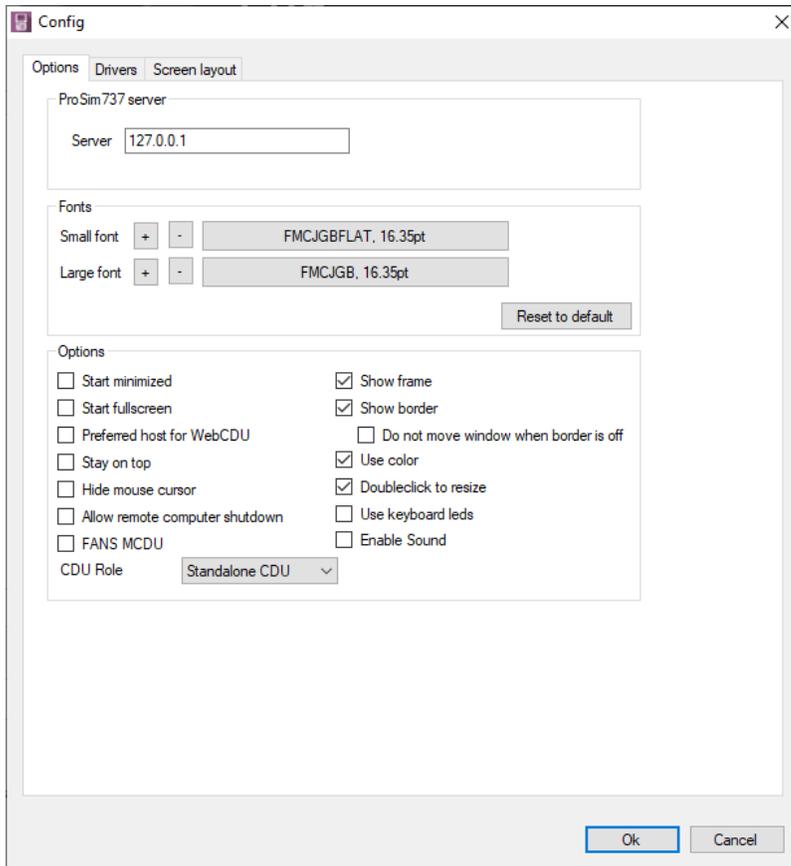
ProSim737 v3 CDU Main Menu

The ProSim738 CDU module can have multiple instances on the same computer, but must be in separate folders. Simply copy and rename the first folder to, for example 'ProSim738 CDU - CAPT' and the second one to 'ProSim738 CDU - FO'. Each folder will have its own configuration file.

## 1.2 Configuration

There are a host of configuration options available in order to personally adjust the software. The configuration of ProSim737 - CDU has been divided into three tabs:

### 1.2.1 Options



On this tab, general options of the CDU module can be modified to your requirements.

*ProSim737 server:* If running ProSim737 CDU on a different computer than ProSim737 Systems, the **IP address** of the computer running ProSim737 Systems must be filled in. For more information, please refer to the Initial Setup page of this wiki.

*Fonts:* If required, it is possible to change the size and font used by the ProSim737 CDU module. A very realistic font comes included with the ProSim737 CDU module. Sometimes hardware manufacturers advise a change to the font size. Please consult your hardware's manual for correct sizes.

When using a hardware CDU, the following options are advised to

**turn on:**

- Start full screen
- Stay on top
- Hide mouse cursor

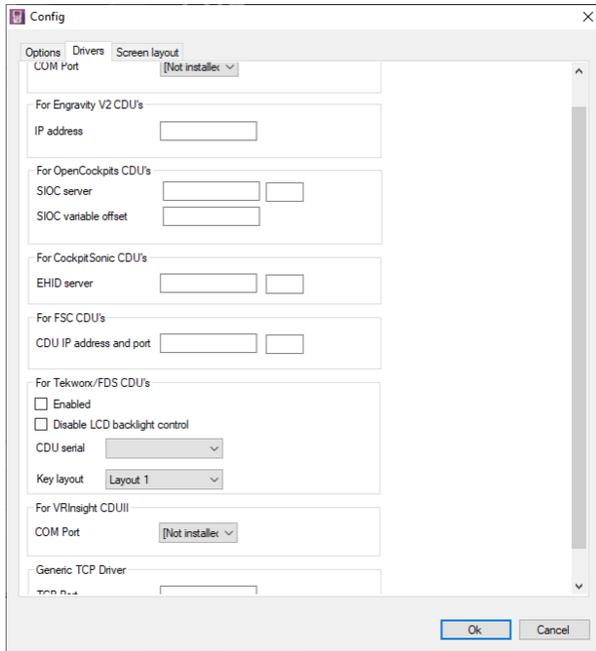
- Allow remote computer shutdown
- Use color.

### Turn off:

- Show frame
- Show border

Set 'CDU Role' to the required setting: Standalone, Captain or First Officer.

### 1.2.2 Drivers



### 1.2.3 Screen Layout

#### ProSim737 v3 CDU Configuration - Screen layout tab

Instructions can be found on this tab on how to adjust the screen layout in order to adjust the software display the desired hardware display. The lines can be lined up on the display with the hardware unit Line Select Keys. Use the 'Reset Layout' button to return to 'factory settings'. See the 'Adjusting for hardware CDU' paragraph below for more information.

### 1.2.4 Adjusting for hardware CDU

For CDU hardware unites connecting the display through VGA or DisplayPort, it might be required to manually adjust the size of the CDU software display. First, right-click on the CDU display, and then click 'Line Setup Mode'. A yellow box is shown, indicating the line currently selected to be modified. By clicking on the left line select keys, a different line can be selected to adjust. LSK1R is used to select the menu line (line displaying the pages' name at the top) while LSK6R is used to select the scratchpad at the very bottom of the display.

To modify the lines to suit the desired hardware display, use the following keys on your keyboard:

U / D	Up / Down
L / R	Left / Right
W / S	Widen / Shorten

### 1.2.5 ProSimUtils

ProSimUtils (PSU) is a utility developed by Humberto Miguel, who is a developer for ProSim-AR's. It is a free add-on, which simulates two datalink systems: ACARS (<https://en.wikipedia.org/wiki/ACARS>) & CPDLC ([https://en.wikipedia.org/wiki/Controller%E2%80%93pilot\\_data\\_link\\_communications](https://en.wikipedia.org/wiki/Controller%E2%80%93pilot_data_link_communications)) For more information and support on PSU, please visit the dedicated subforum (<https://prosim-ar.com/forum/viewforum.php?f=86>) on the ProSim-AR Forums.

## 1.3 Maintenance Menu

The Maintenance menu is a submenu accessible through the CDU, which in real-life is used by avionic engineers to access several systems of the 737. In ProSim737, this menu is used to access several functionalities related to simulation.



### 1.3.1 Pauze & Freeze

The **Pause** (LSK1L) will pause the complete simulator, and acts as a alternative to pressing the 'P'-key on your keyboard. Click the line select key again to un-pause the simulator. The **Freeze** (LSK2L) will pause the simulator, but will allow adjustments to roll and pitch without changing position.

### 1.3.2 Sim Rate

By pressing LSK3L the simulation rate can be adjusted. Options are 'normal', '2x' and '4x'. This will decrease the real world time required to perform a flight, but might cause a blurred effect and other negative effects.

### 1.3.3 COM/NAV

LSK4L will open the COM/NAV page, which gives an overview of all communication and navigation radio's and the frequencies currently dialed in. This also includes the transponder. It is possible to change frequencies by using the numbers on the numeric keypad of the CDU.

### 1.3.4 Reset FMS

This will reset the FMS (FMC) to a clean state. Note that this will undo any changes made to the FMS, such as performance data, route, etc. Press LSK5L once to activate.

### 1.3.5 Ground service



The Ground Service menu allows the performance of several tasks concerning ground operations:

LSK1R will turn on or turn off the ground power. When ProSim737 has been configured to start in cold and dark state, ground power will be **connected** by default. This option can be changed in the ProSim737 Instructor Operating Station.

LSK2R gives you the option to turn the ground air conditioning on or off. By default, this option is set to **off**.

LSK3R will start the pushback. The direction (Straight, Left, Right) of the pushback may be changed by pressing LSK4R until the desired direction has been selected in green.



LSK5R will open the refueling menu. Use the numeric keypad of the CDU to enter the desired amount of fuel in KG or LB (depending on the configuration in the Instructor Operating Station) and then transfer it to the desired tank by pressing the correct LSK. Finally, press LSK2R 'REQUEST' to start the refueling.

Retrieved from "[https://wiki.prosim-ar.com/index.php?title=ProSim737\\_CDU&oldid=1217](https://wiki.prosim-ar.com/index.php?title=ProSim737_CDU&oldid=1217)"

Category: Pages with broken file links

- This page was last modified on 2 March 2021, at 20:26.

# Initial Setup

From Manuals

Welcome to ProSim. This guide has been created in order to get started with using the suite. As there are different needs and hardware, it is *impossible* to cater for each and every combination. Go through the guide and select the most useful parts.

*Note: help and support can be found in the forum (<https://prosim-ar.com/forum>)*

## Contents

- 1 Things to consider
- 2 Required information
- 3 Initial Setup
  - 3.1 ProSim Systems
    - 3.1.1 ProSim License
    - 3.1.2 Database
  - 3.2 Network setup
    - 3.2.1 Computer running ProSim737/A320 System
    - 3.2.2 Other computers
  - 3.3 Prepar3D/ FSX

## 1 Things to consider

There are several things to consider before starting the installation of ProSim737/A320 and it is always good to think and then do, rather than doing and thinking at the same time.

- If running a networked setup, in other words with multiple computers, then it is worth reading up on Windows networking basics.
- Decide which computer is going to run which modules, keeping in mind the required specs of a module and the hardware available. For instance, ProSim Display requires a bit more power than ProSim Audio does.
- It is good practice to create an overview of the machines to use. What IP address do they have? What modules do they run? What router port number are they connected to?
- This guide is written with the assumption that a fully up-to-date version of Windows is installed and a version of either Prepar3D V4.5/V5 or FSX is installed on the main simulator computer.
- In the configuration panel of Windows, the name of the computer can be changed. Rename it to something relatable, such as 'CAPTAIN\_SIDE' or 'SIMULATOR SERVER' for easy recognition.

## 2 Required information

- ProSim737/320 Product key
- ProSim737/320 Subscription key

## 3 Initial Setup

The very first practical step in this guide is to download the suite from ProSim-AR.com. This can be done from the downloads page (<https://prosim-ar.com/downloads/>).

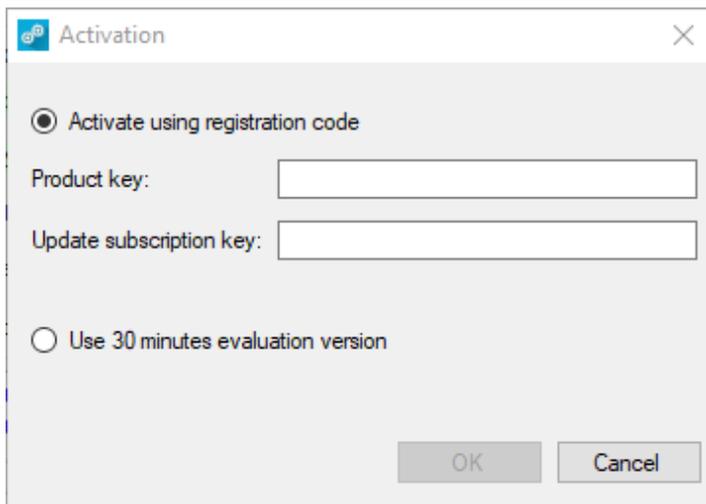
Create the desired location of a folder. This could be in 'C'-drive (C:/ProSim737 for example), on a separate hard drive partition (<https://www.computerhope.com/jargon/p/partition.htm>) or even on a separate drive.

Unzip the downloaded .zip file to this folder. A list of folders, one for each module, will be created. In general, create a new folder for each instance of a module, especially when running multiple instances of a certain module from the same computer. For example: If all displays are running (Captain PFD/ND, F/O PFD/ND, Upper EICAS and Lower EICAS) from one computer, ensure to copy the ProSim Display folder, and use it to create a folder for each instance. These could be called 'ProSim Display CAPT' and 'ProSim Display FO'. Each ProSim Display instance will have its very own configuration file ([http://wikidev.prosim-ar.com/index.php/Generic\\_support\\_page#Support\\_files](http://wikidev.prosim-ar.com/index.php/Generic_support_page#Support_files)).

## 3.1 ProSim Systems

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### 3.1.1 ProSim License

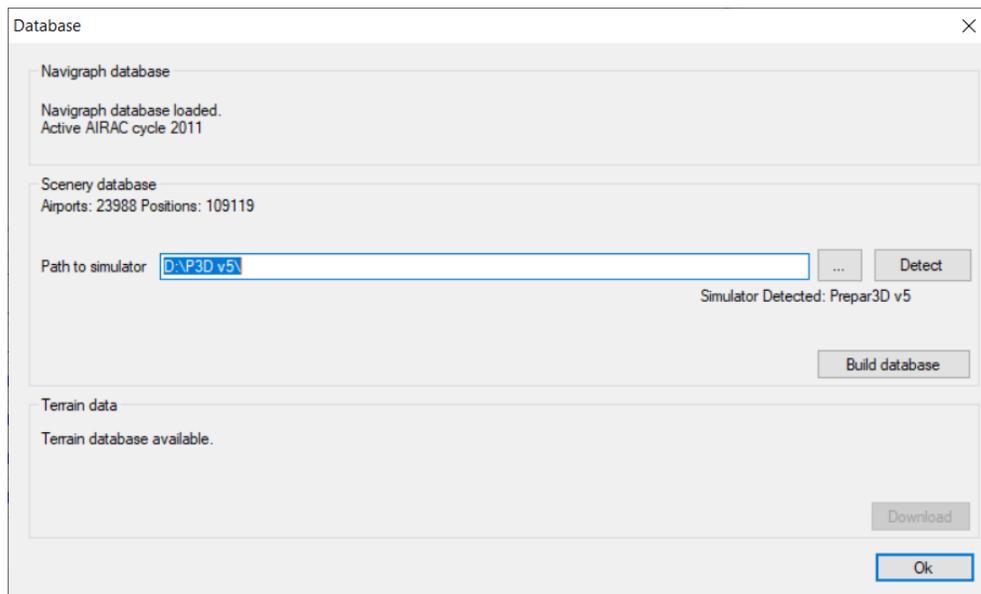


The first step in getting started with ProSim, is to fill out the licence information, which will have been sent by email after purchase. The licence-window will pop-up automatically when ProSim is started for the first time. Once the licence has been validated, it will no longer pop-up.

If required, the licence window can be accessed by opening ProSim737 Systems, and then clicking 'File' -> 'Licence'.

### 3.1.2 Database

Next, the system will open a new window and attempt to automatically detect the simulator installation. If it is not able to, manually browse for the path to the simulator by clicking on the button with the three small dots. Once the path has been filled in, click the 'Build database'-button to start the indexation of the scenery database.



In order to be able to display any terrain data on the ND, the Terrain Database must be downloaded. Simply press the 'Download'-button to start the download. As this is a large file, this might take some time. Once downloaded, it is possible to show terrain data on the Navigation Display (ND) by pressing the EFIS 'TERR'-button on.

ProSim737 comes with a default navigation database, supplied by Navigraph (<https://navigraph.com>). This is monthly cycle 1901. The data contained in this cycle is from January 2019. Download and install a newer navigational database cycle from Navigraph or Aerosoft's NavDataPro in order to remain up-to-date. This, however, is not required for the initial setup of ProSim. It is advised to update this database, especially if intentions are to fly online on VATSIM (<https://vatsim.net>), IVAO (<https://ivao.aero>) or another online flight simulation network.

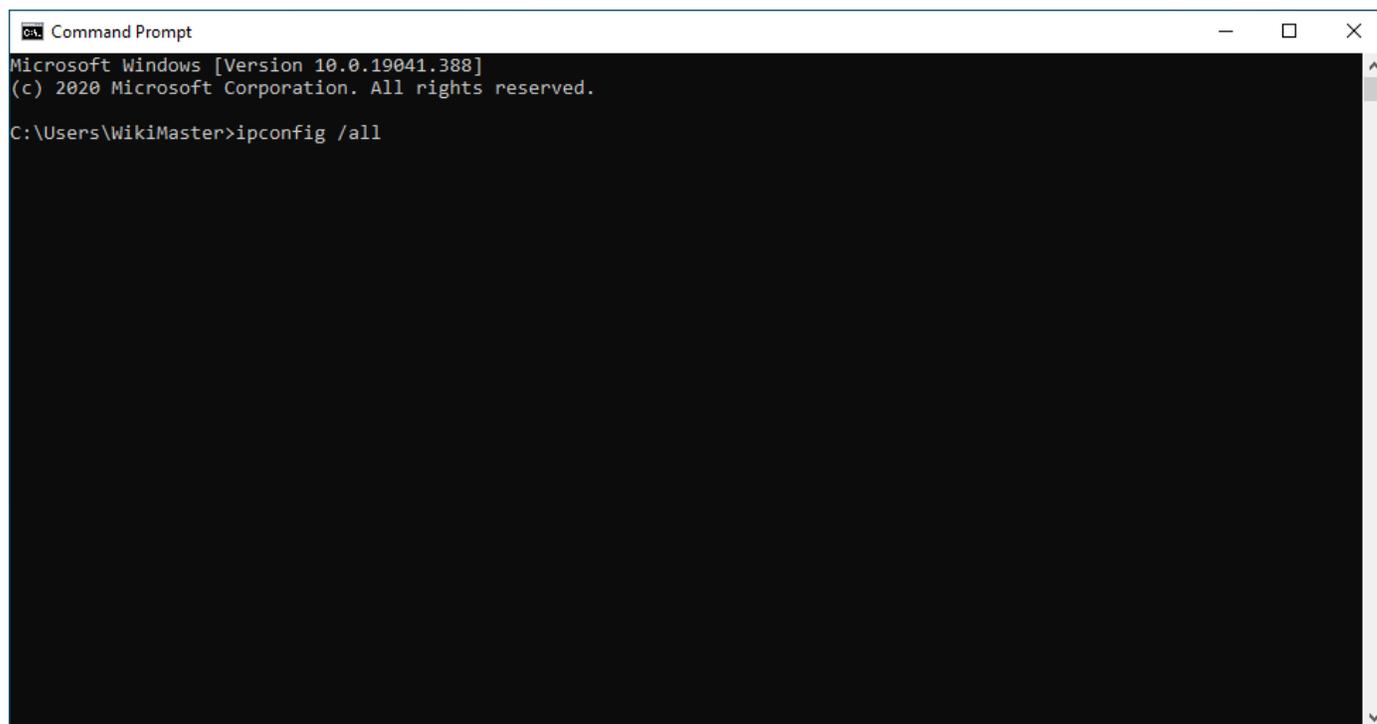
## 3.2 Network setup

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### 3.2.1 Computer running ProSim737/A320 System

Now that the very basic setup of ProSim Systems has been completed, it is time to configure the local network, however, this is only useful when using multiple computers.

First, press the keyboard 'Windows'-key and type 'cmd'. This will show the Command Prompt application, which comes default with Windows. Right click on it, and click on 'Run as administrator'. A black window will open. Type the following command: `IPConfig /all`.

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The window content shows the following text:

```
Microsoft Windows [Version 10.0.19041.388]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\WikiMaster>ipconfig /all
```

The rest of the window is black, indicating that the output of the command is not visible in this view.

Press 'Enter' on your keyboard. A list of network data is shown. Write down the information from the following lines:

- IPv4 Address
- Subnet Mask
- Default Gateway
- DNS Servers

```

Microsoft Windows [Version 10.0.19041.388]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\WikiMaster>ipconfig /all

Windows IP Configuration

Host Name . . . . . : DESKTOP-M3LN5EN
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet0:

Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) 82574L Gigabit Network Connection
Physical Address. . . . . : 00-0C-29-1E-78-8B
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::b6:33e7:9cf:6d46%11(Preferred)
IPv4 Address. . . . . : 192.168.32.198(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.32.2
DHCPv6 IAID . . . . . : 117443625
DHCPv6 Client DUID. . . . . : 00-01-00-01-26-B3-0D-F2-00-0C-29-1E-78-8B
DNS Servers . . . . . : 192.168.32.2
                        1.1.1.1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter Bluetooth Network Connection:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Bluetooth Device (Personal Area Network)
Physical Address. . . . . : 78-4F-43-5C-BD-32
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes

C:\Users\WikiMaster>

```

Close the Command Prompt, and open the properties window for the network connection. Visit this help page (<https://help.keenetic.com/hc/en-us/articles/213965929-How-to-change-the-network-adapter-settings-in-Windows-to-automatically-obtain-an-IP-address-from-the-router>) for any assistance. Select the 'Use the following IP Address'-radio button, to unlock the settings.

- Fill out the address from the 'IPv4 Address'-line on the 'IP Address'-line
- Fill out the address from the 'Subnet Mask'-line on the 'Subnet Mask'-line
- Fill out the address from the 'Default Gateway'-line on the 'Default Gateway'-line
- Fill out the addresses from the 'DNS Servers'-line on the 'Preferred' and 'Secondary' DNS Server lines

Normally, the Windows Firewall does not require any adjustment. When starting each module of the suite for the first time, a security prompt from Windows asks if that module is allowed to make a network connection. Make sure to always allow this.

### 3.2.2 Other computers

First, repeat the above steps using the Command Prompt on all other computers that will run one or modules of the ProSim737 suite. This will ensure all computers have a fixed IP address, which is especially important for the main system, running FSX or Prepar3D and the main ProSim737 Systems module. All other modules will use this IP address to connect to the Systems module. Once that has been done, test a functioning connection by starting the Command Prompt again, and then typing the following command: `ping <IP ADDRESS OF OTHER COMPUTER>`

Repeat this step, until all machines have been 'pinged' successfully.

Now is the time to create a folder on each computer and copy over the modules each computer will run. Make sure to rename the folders to something recognisable, such as 'ProSim Display - CAPT' or 'ProSim Audio - EXTERNAL'.

### 3.3 Prepar3D/ FSX

ProSim737/A320 comes with its own visual flight model (VFM), which not only gives a visual representation of the aircraft, it also offers a very realistic aerodynamic model. Luckily, installation of the VFM is quick and straight forward, as it can be downloaded directly from within ProSim737 Systems and comes with its own automated installer.

First, open ProSim Systems. In the navigation bar at the top, click on **Help** and then on **Updates**. This will open the 'Updates' window. From here, download and automatically install version updates, Addons (such as the visual flight model) and beta-updates.

Version manager

Currently installed version: 3.00b15  
Update subscription expires at: N/A

Releases Add ons Pre-releases

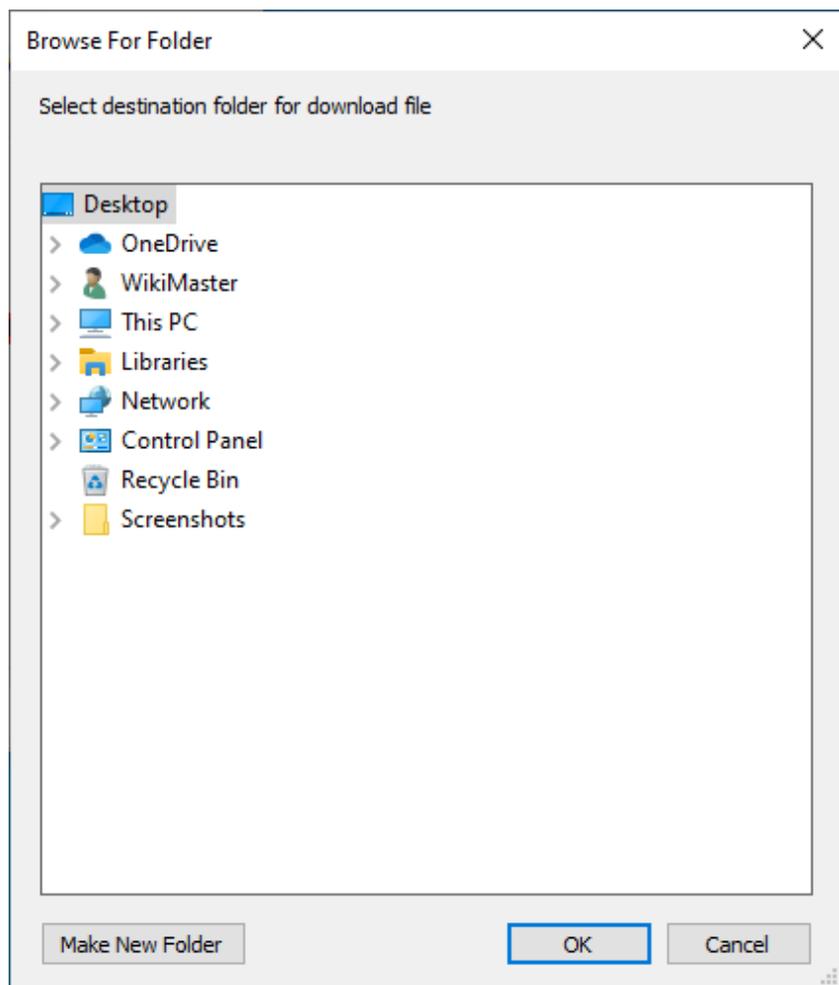
Name	Version	Release date	Release notes	Actions
ProSimB738 PBR Flight Model & Visual Mo...	1.32	Tuesday, July 21, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.05	Monday, July 13, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.04	Thursday, April 30, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.03	Monday, April 27, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.02	Thursday, April 2, 2020	<a href="#">release notes</a>	<a href="#">download</a>

Manual updating

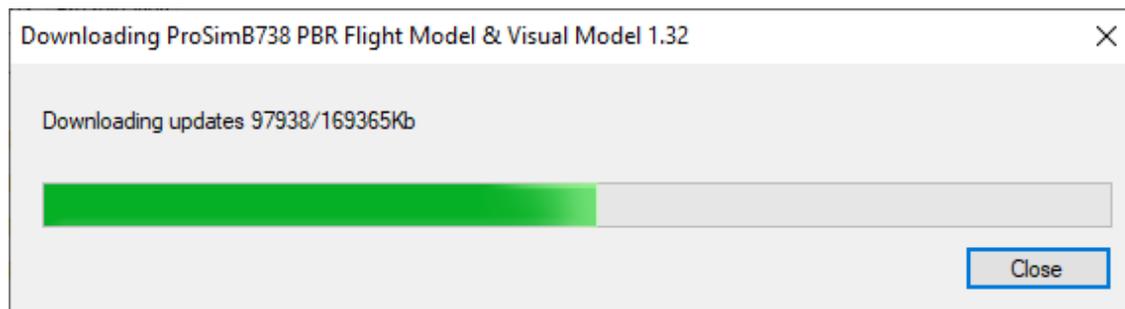
You can update ProSim737 and all of the connected modules by manually downloading a release file and using this function.

[Update with zip file](#)

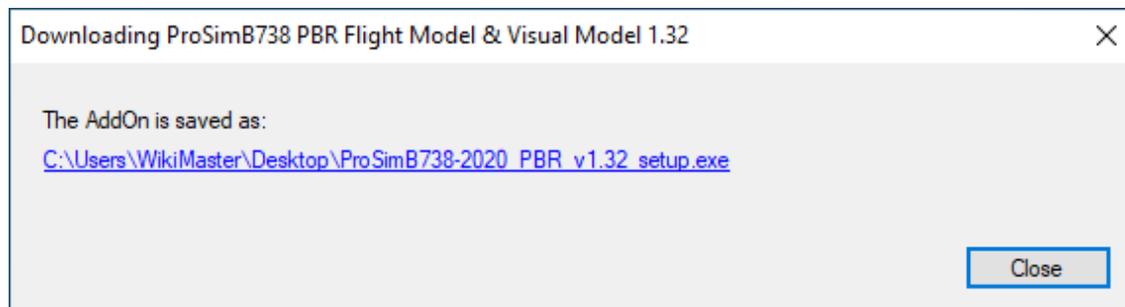
Open the **Addons** tab, and click on the **Download** button next to the 'PBR model' to begin the download process. A window will open, asking to select a folder in which to save the installer. Select one, and continue.



A new window will open to inform of the downloads' progress.



Once the installer has been downloaded, click on the blue link to open the folder to which it has been saved. Double-click on the .exe file to start the installation. Follow the on-screen instructions.



In case running on Prepar3D, also download and install the required **Prepar3D Module**. To download and install, repeat the instructions as written above for the VFM.

Retrieved from "[https://wiki.prosim-ar.com/index.php?title=Initial\\_Setup&oldid=1225](https://wiki.prosim-ar.com/index.php?title=Initial_Setup&oldid=1225)"

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- This page was last modified on 3 March 2021, at 10:34.

# Visual Flight Model

From Manuals

ProSim737NG, ProSim737Max and ProSimA320 all come with their own **visual flight model (VFM)**, which not only gives a visual representation of the aircraft, it also offers a very realistic aerodynamic model. Luckily, installation of the VFM is quick and straight forward, as it can be downloaded directly from within ProSim737NG/Max/A320 Systems and comes with its own automated installer. The VFM is created by Lapi. For additional support or custom liveries, visit the dedicated sub-forum of the Visual Flight Model: B737NG (<https://prosim-ar.com/forum/viewforum.php?f=130>), B737MAX (<https://prosim-ar.com/forum/viewforum.php?f=136>) or the A320 (<https://prosim-ar.com/forum/viewforum.php?f=100>).

## Contents

- 1 Installation & updates
- 2 VFM Addons
  - 2.1 Opening aircraft doors
  - 2.2 Ground Services X
  - 2.3 TOPCAT (737NG only)

## 1 Installation & updates

First, open ProSim737 Systems. In the navigation bar at the top, click on **Help** and then on **Updates**. This will open the 'Updates' window. From here, download and automatically install version updates, Addons (such as the visual flight model) and beta-updates.

Version manager ✕

Currently installed version: 3.00b15  
Update subscription expires at: N/A

Releases Add ons Pre-releases

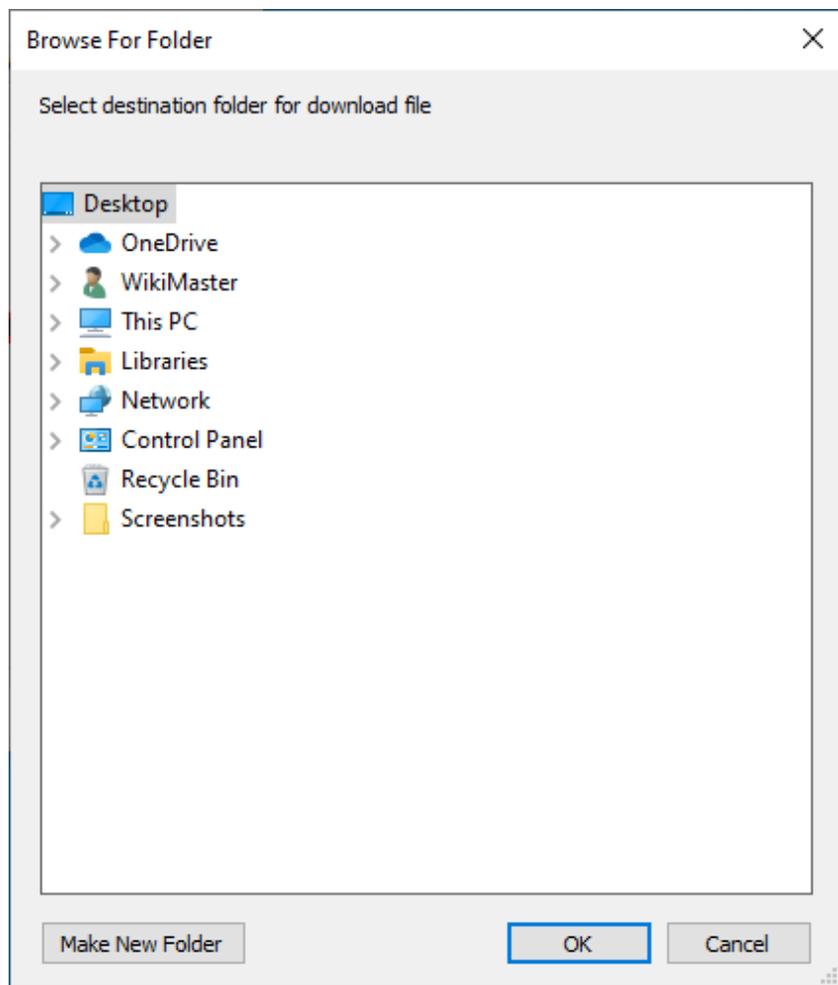
Name	Version	Release date	Release notes	Actions
ProSimB738 PBR Flight Model & Visual Mo...	1.32	Tuesday, July 21, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.05	Monday, July 13, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.04	Thursday, April 30, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.03	Monday, April 27, 2020	<a href="#">release notes</a>	<a href="#">download</a>
ProSim Prepar3D Module	2.02	Thursday, April 2, 2020	<a href="#">release notes</a>	<a href="#">download</a>

Manual updating

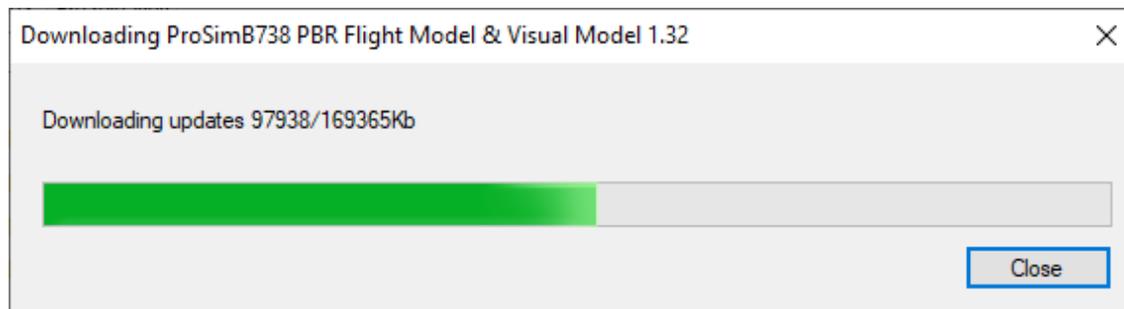
You can update ProSim737 and all of the connected modules by manually downloading a release file and using this function.

[Update with zip file](#)

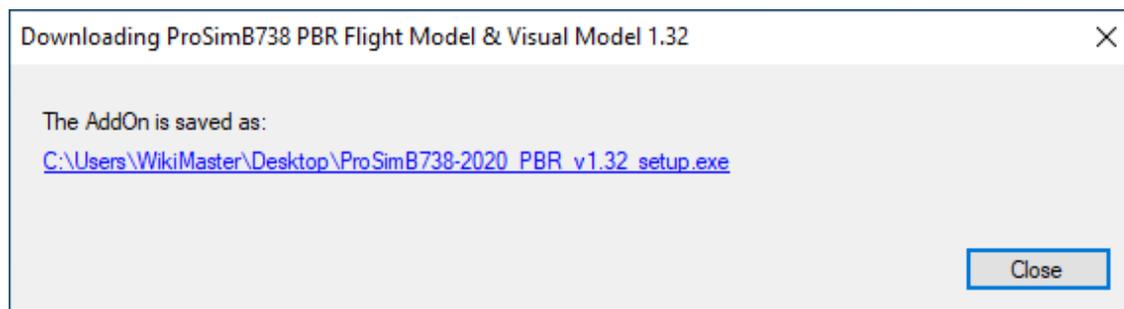
Open the **Addons** tab, and click on the **Download** button next to the 'PBR model' to begin the download process. A window will open to select a folder in which to save the installer. Select one, and continue.



A new window will open to inform of the downloads' progress.



Once the installer has been downloaded, click on the blue link to open the folder to which it has been saved. Double-click on the .exe file to start the installation and follow the on-screen instructions.



If running on Prepar3D, also download and install the required **Prepar3D Module**. To download and install, repeat the instructions as written above for the VFM.

## 2 VFM Addons

There are several popular 3rd party applications able to interact with the visual flight model, such as FSDreamTeams' Ground Services X ([http://update.fsdreamteam.com/public\\_html/products\\_gsx.html](http://update.fsdreamteam.com/public_html/products_gsx.html)).

### 2.1 Opening aircraft doors

Please see the instructions from ProSim's model author Lapi in the ProSim-AR 737NG/MAX/A320 models' folder: C:\Users\your username\Documents\Prepar3D v4 Add-ons\ProSim-AR\Simobjects\Airplanes\ProSim737-800-2019-PBR Professional

### 2.2 Ground Services X

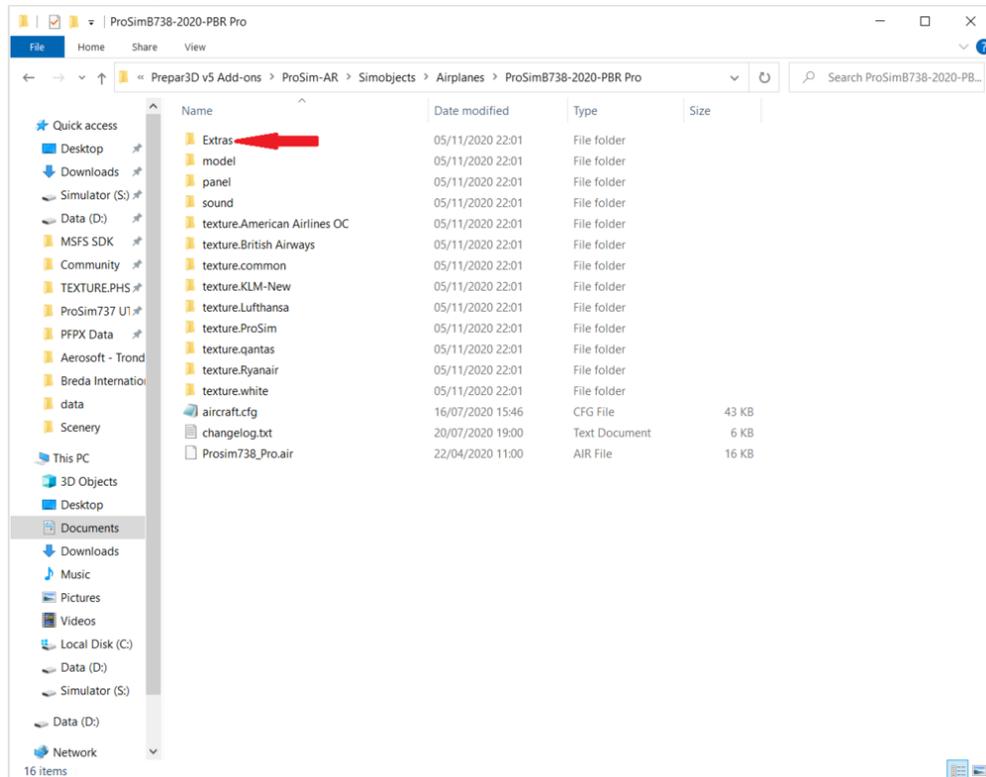
GSX is a payware 3rd party add-on that simulates ground services, such as catering, passenger boarding/de-boarding, pushback and more.

In order to use GSX in combination with the ProSim737/A320 Visual Flight Model (VFM), a configuration file must be copied to a certain folder on your computer. This configuration file has been created by user Lapi and is included with the VFM-download from ProSim-Systems. This file can be found in the 'Extras'-folder within the VFM-model folder in your P3D Add-ons folder.

#### B737NG/MAX

Go to the following folder:

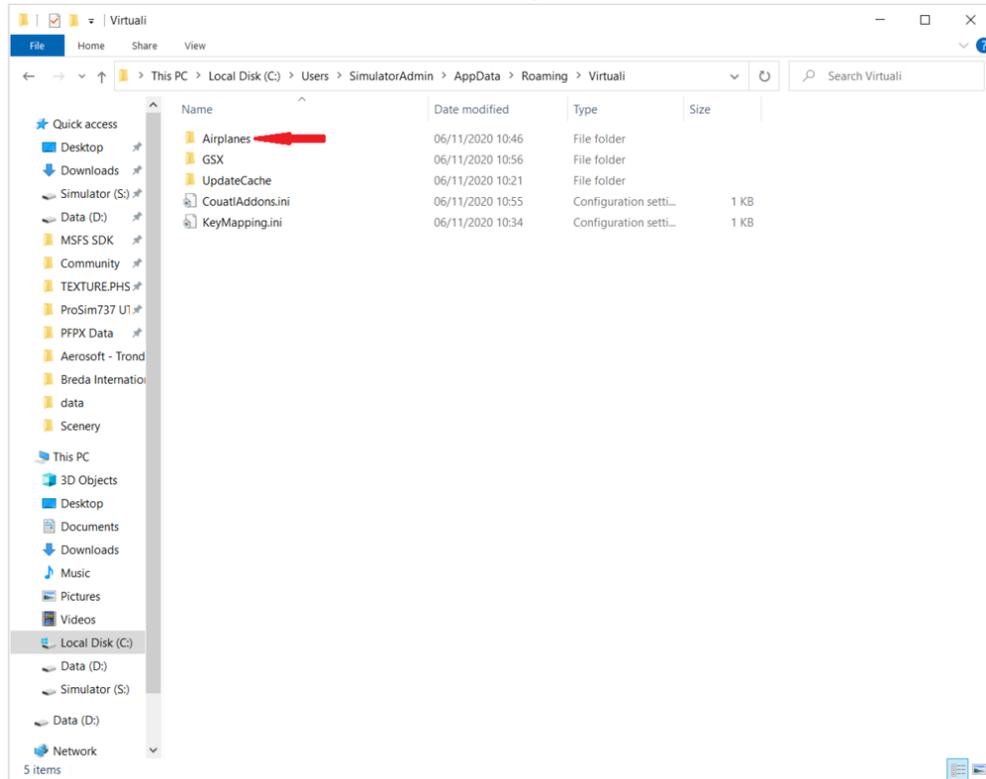
C:\Users\YOUR USERNAME\Documents\Prepar3D v5 Add-ons\ProSim-AR\Simobjects\Airplanes\ProSimB738-2020-PBR Pro\Extras\GSX



In this folder, two .cfg files can be found: gsx.cfg and gsx-cargo.cfg and one ReadMe file. Since GSX can work with only one gsx.cfg file, choose between gsx.cfg (passenger version) or gsx-cargo.cfg (for the 737 cargo variant). If the latter is chosen, rename the file to 'gsx.cfg' after copying it to the appropriate folder.

Now click on the file to select it and copy it by pressing ctrl+c or by right-clicking and then clicking on 'copy' in the dropdown menu. With the gsx.cfg or gsx-cargo.cfg file copied, go to the following folder:

C:\Users\YOUR USERNAME\AppData\Roaming\Virtuali\Airplanes\ProSimB738-2020-PBR Pro



*Note 1: If the 'AppData' folder cannot be seen, refer to these steps (<https://support.microsoft.com/en-us/windows/show-hidden-files-0320fe58-0117-fd59-6851-9b7f9840fdb2>) in order to show hidden files and folders in Windows.*

*Note 2: If the 'AppData' folder cannot be seen, first start P3D or FSX, and spawn on an airport with the VFM. Then open GSX and request ground services. Alternatively, create the folder by copy and pasting the name from the link above. Now paste the gsx.cfg or gsx-cargo.cfg file here by either pressing ctrl+v on the keyboard or by right-clicking inside the folder and the clicking on 'paste' in the dropdown menu.*

**Note: if the gsx-cargo.cfg file has been chosen to be copied over, rename it to gsx.cfg in order for GSX to recognise the configuration file.**

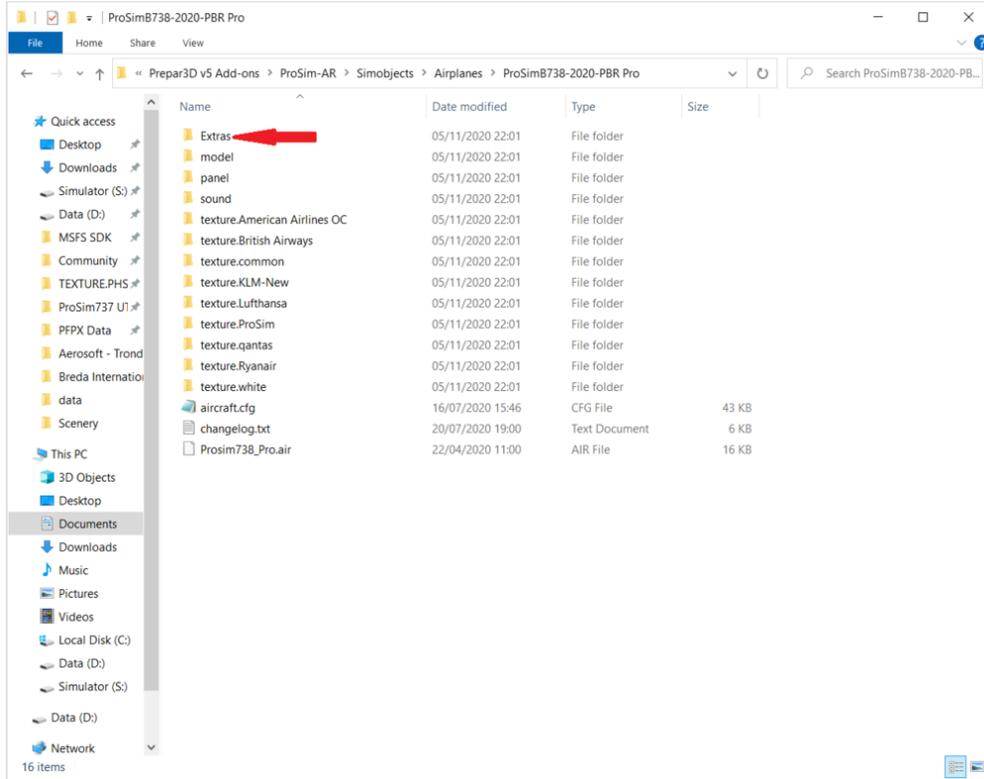
## A320

For the A320:

C:\Users\YOUR USERNAME\Documents\Prepar3D v5 Add-ons\ProSim-AR\Simobjects\Airplanes\ProSim320\Extras\GSX

Go to the following folder:

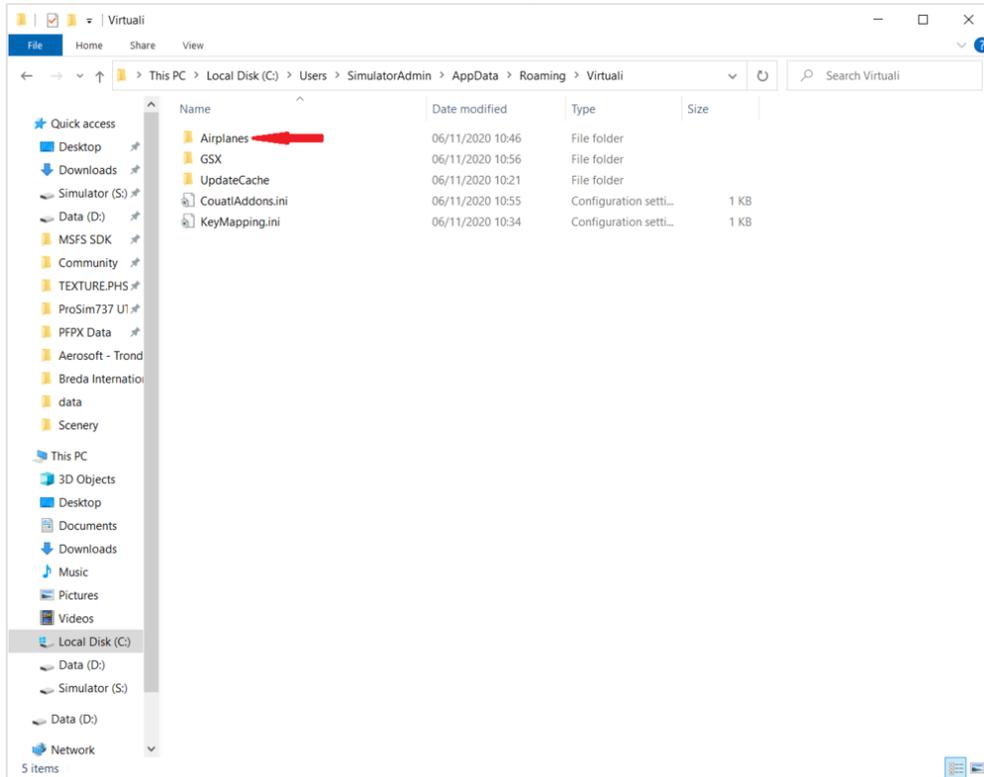
C:\Users\YOUR USERNAME\Documents\Prepar3D v5 Add-ons\ProSim-AR\Simobjects\Airplanes\ProSim320\Extras\GSX



In this folder, two files: gsx.cfg and a ReadMe file can be found.

Now click on the file to select it and copy it by pressing `ctrl+c` or by right-clicking and then clicking on 'copy' in the dropdown menu. With the `gsx.cfg` or `gsx-cargo.cfg` file copied, go to the following folder:

C:\Users\YOUR USERNAME\AppData\Roaming\Virtuali\Airplanes\ProSim320



Note 1: If the 'AppData' cannot be seen, refer to these steps (<https://support.microsoft.com/en-us/windows/show-hidden-files-0320fe58-0117-fd59-6851-9b7f9840fdb2>) in order to show hidden files and folders in Windows.

Note 2: If the 'AppData' folder cannot be seen, first start P3D or FSX, and spawn on an airport with the VFM. Then

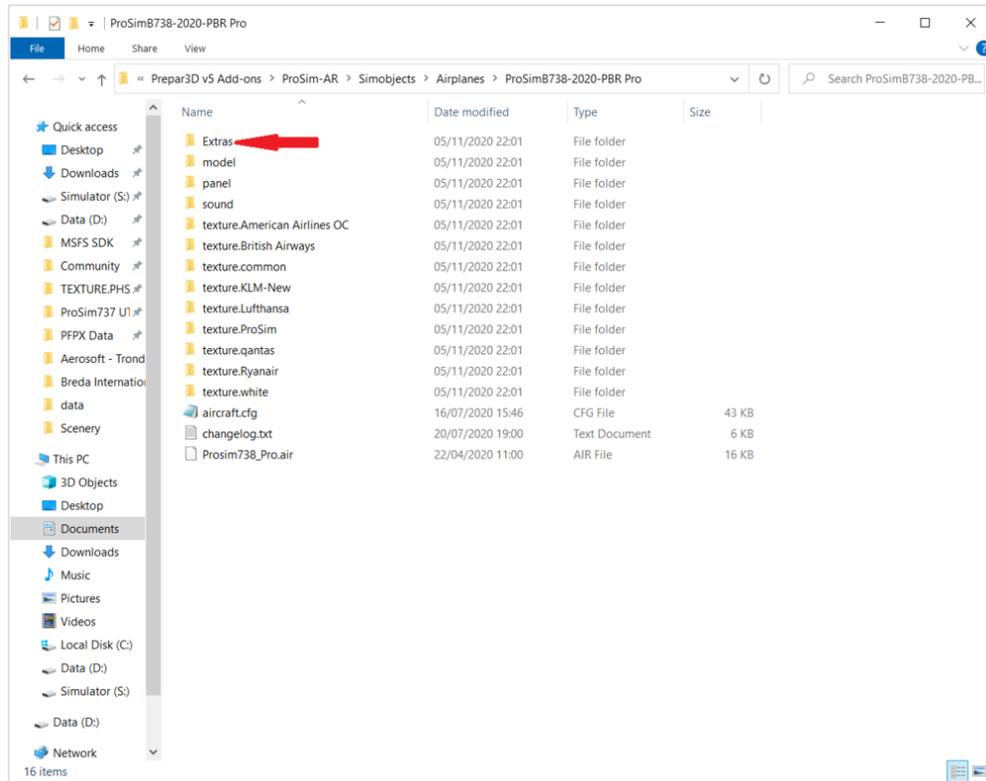
open GSX and request ground services. Alternatively, create the folder by copy and pasting the name from the link above. Now paste the gsx.cfg file here by either pressing ctrl+v on your keyboard or by right-clicking inside the folder and the clicking on 'paste' in the dropdown menu.

## 2.3 TOPCAT (737NG only)

TOPCAT (<http://flightsimsoft.com/topcat/>), is a highly realistic take-off and landing performance calculator tool, developed by FlightSimSoft. Forum user Lapi has provided an accurate profile for use with the B737NG package of ProSim.

Go to the following folder:

C:\Users\YOUR USERNAME\Documents\Prepar3D v5 Add-ons\ProSim-AR\Simobjects\Airplanes\ProSimB738-2020-PBR Pro\Extras\TOPCAT



In this folder .txt file, called B738 Prosim.txt can be found.

Now click on the file to select it and copy it by pressing ctrl+c or by right-clicking and then clicking on 'copy' in the dropdown menu.

Next, paste the 'B738 Prosim.txt'-file into the following folder:

C:\Program Files (x86)\TOPCAT\Configurations

Retrieved from "[https://wiki.prosim-ar.com/index.php?title=Visual\\_Flight\\_Model&oldid=1220](https://wiki.prosim-ar.com/index.php?title=Visual_Flight_Model&oldid=1220)"

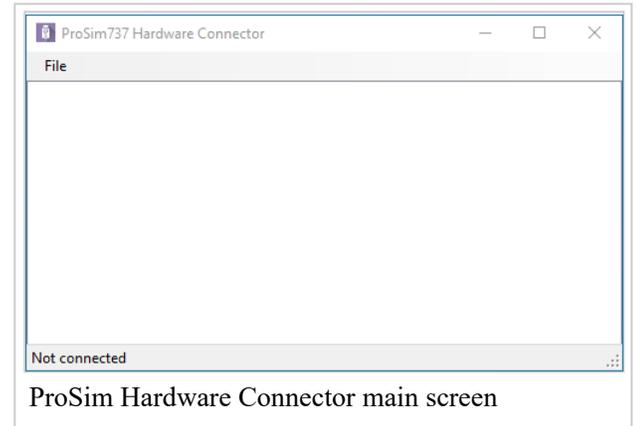
- This page was last modified on 2 March 2021, at 20:33.

# ProSim Hardware Connector

From Manuals

ProSim Hardware Connector is the module that enables users to connect hardware to other computers than the one running ProSim737 System or ProSimA320 System.

This is the basic main menu of the ProSim Hardware Connector, which shows currently connected hardware. If no hardware is connected to the computer running the Hardware Connector, the screen is empty as in the image on the right.



## Contents

- 1 Software
  - 1.1 Installation
  - 1.2 Configuration
    - 1.2.1 Configuration of the Hardware Connector
    - 1.2.2 Configuration of ProSim System

## 1 Software

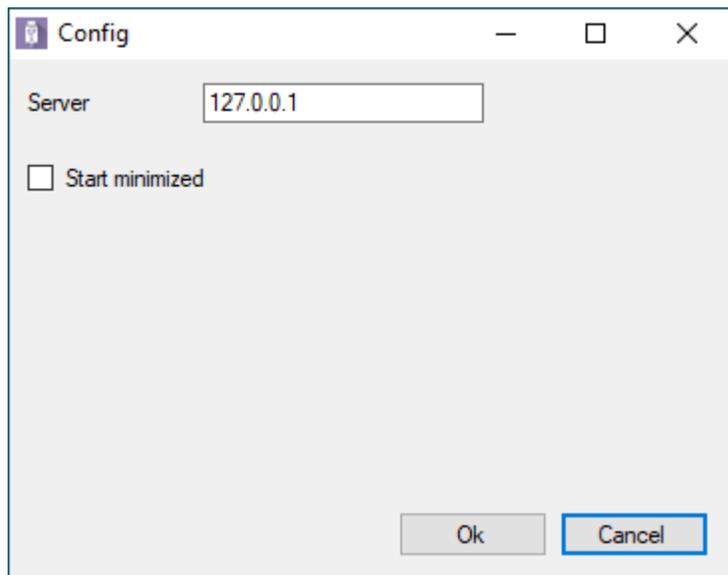
### 1.1 Installation

To install, copy and paste the folder to a directory on all computers that will run an instance of the Hardware Connector module. Note that the ProSim Hardware Connector module can have only **one** instance on the same computer, and should also not be run on the computer running either ProSim737 System or ProSimA320 System.

### 1.2 Configuration

#### 1.2.1 Configuration of the Hardware Connector

The module does not require much configuration, other than the IP address of the computer running ProSim737 System or ProSimA320 System. Refer to the paragraph 3.2.1 'Computer running ProSim737/A320 System' of the Initial Setup page on how to retrieve an IP address.



Tick the checkbox next to 'Start Minimized' if the Hardware Connector is to be started but not shown up when the icon is double-clicked.

### 1.2.2 Configuration of ProSim System

In order for the hardware to also be recognised correctly in ProSim737 System or ProSimA320 System, enable certain tick boxes to enable drivers. For example: connect the captains' yoke to a computer running all the captains' monitors and hardware, enable the 'Generic hardware' driver in ProSim. The same for the captains' CDU; if connected the captains' CDU, made by FlightDeckSolutions to the same computer as the yoke, enable the FlightDeckSolutions driver in ProSim System. Refer to the ProSim737 System or ProSimA320 System pages for guidance on how to enable the correct hardware drivers.

Retrieved from "[https://wiki.prosim-ar.com/index.php?title=ProSim\\_Hardware\\_Connector&oldid=1108](https://wiki.prosim-ar.com/index.php?title=ProSim_Hardware_Connector&oldid=1108)"

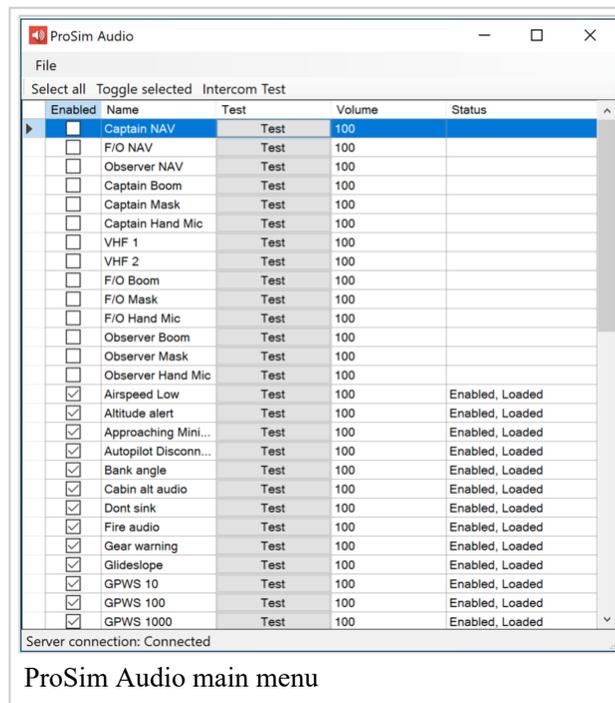
- 
- This page was last modified on 18 February 2021, at 08:10.

# ProSim Audio

From Manuals

ProSim - Audio is the module that manages all *in-cockpit sounds*. Environmental sounds such as rain, wind etc. are managed by the simulator, while engine sounds for example are incorporated with the ProSim Visual Flight Model.

Note that only **one** instance of ProSim Audio is allowed to run on one machine. It is however, possible to run multiple instances over the network, in other words on multiple computers. This is also used to run an intercom system.



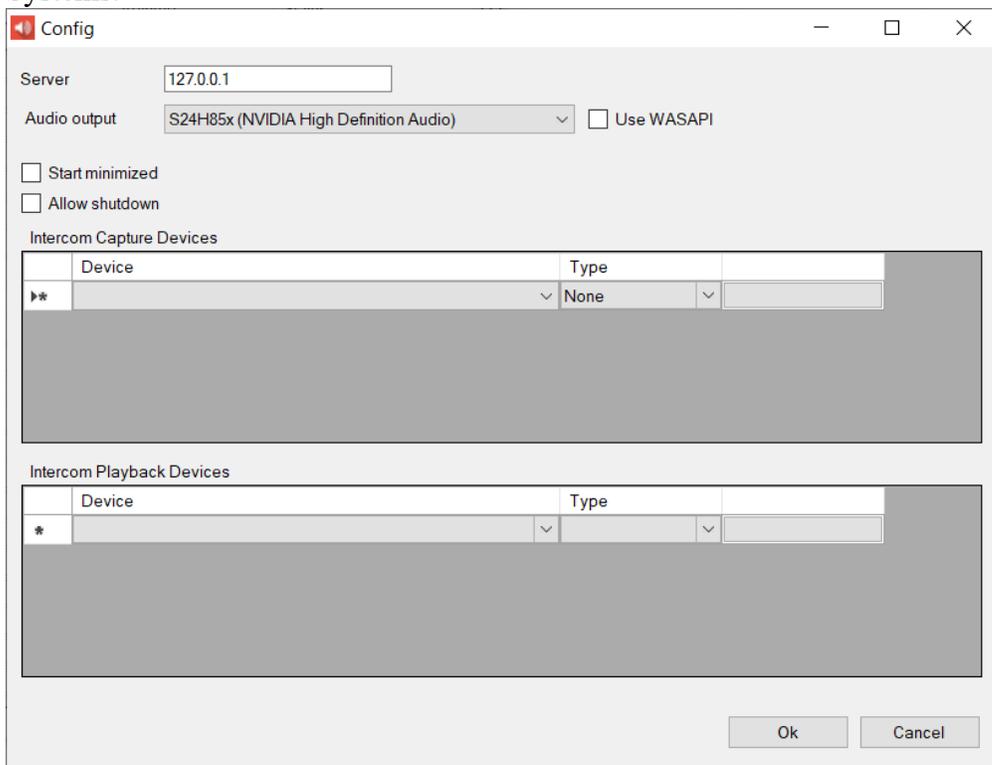
ProSim Audio main menu

## Contents

- 1 Configuration
  - 1.1 Basic setup
  - 1.2 Networked setup
  - 1.3 Intercom setup
- 2 Adding new sounds
  - 2.1 Steps in ProSim Systems
  - 2.2 Steps in ProSim Audio

## 1 Configuration

ProSim Audio does not have a lot of configurable options, as most of the setup of sounds is done in ProSim Systems.



## 1.1 Basic setup

### Server

If ProSim Audio is running locally (on the same machine as ProSim Systems), the IP Address of the server does not need to be changed, and will remain at 127.0.0.1.

### Audio output device

Select an output device. This could be speakers, but also a headset. This fully depends on the setup. Click on the small arrow next to the dropdown menu and select the desired audio device.

### Use WASAPI

WASAPI is an internal Windows multi-channel audio interface. More about it can be read here (<https://newsandviews.dataton.com/what-is-wasapi>). Try enabling this feature, but in case of trouble, disable it again by removing the mark from the tick-box.

### Start Minimized

This is a handy option, as it will automatically minimise ProSim Audio to the Windows taskbar upon start of the application. Tick to enable this feature.

### Allow Shutdown

This option allows remote shut-down of ProSim Audio via the Instruction Operating Station. This option can also be found in all other modules of ProSim. Tick to enable this feature.

## 1.2 Networked setup

For a networked setup, the most important option is to change the IP address of the computer running ProSim Systems (a.k.a. 'Server'). If the steps on the Initial Setup page have been followed, paragraph 3.2, simply fill in the IP address of the server machine.

## 1.3 Intercom setup

TO BE ADDED

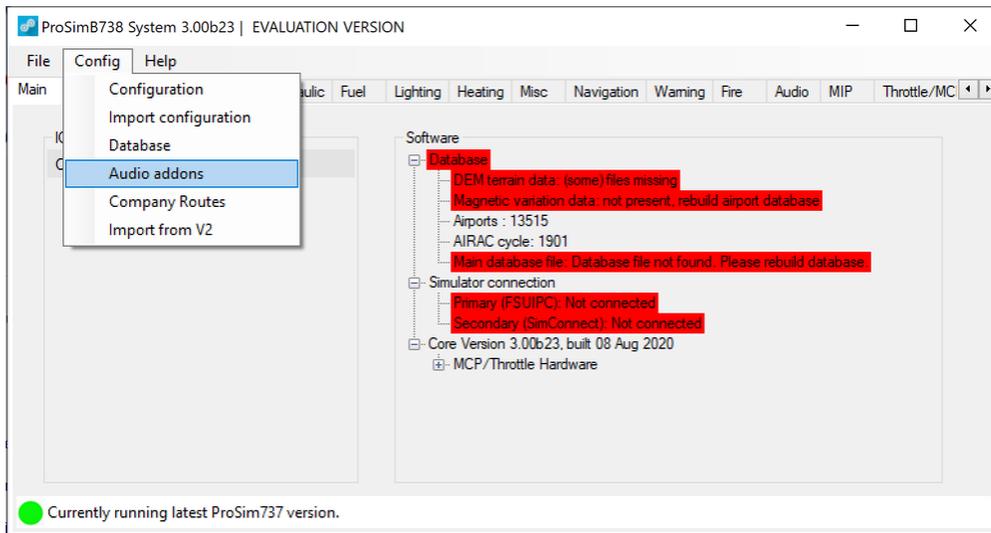
## 2 Adding new sounds

In order to add a new sound to ProSim738 or ProSim320, a few steps to accomplish this must be taken. To be able to better explain this process, a sound is added to ProSim738 as an example, the whole process is explained. This process is exactly the same with ProSim320. The sound that will be added in this example is the sound of the AC power.

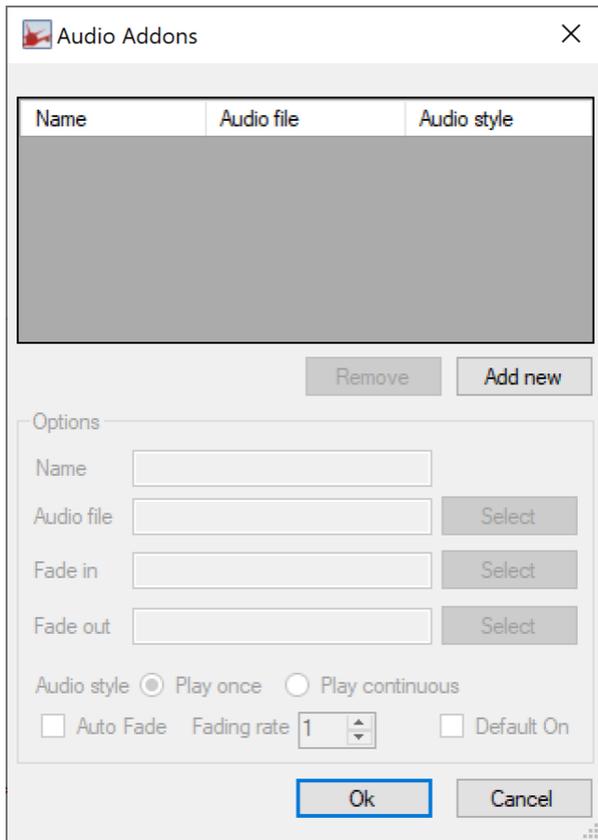
### 2.1 Steps in ProSim Systems

There are a few steps that must be taken in ProSim738/320 Systems before a new additional sound can be played by ProSim Audio. Additional sounds can be sourced from the internet such as AVSIM (<https://library.avsim.com>), or from third-party sound packs. Also a lot of sounds are shared through the ProSim-AR forums (<https://prosim-ar.com/forum>).

When the file(s) has/have been downloaded, to add to ProSim, save them in an easy-to-access folder, such as a new 'Audio'-folder within the ProSim Audio folder. You should now start ProSim738 Systems to get started. Open the 'Audio Addons'-window by clicking 'Configuration' on the navigation bar, and then 'Audio Addons'.

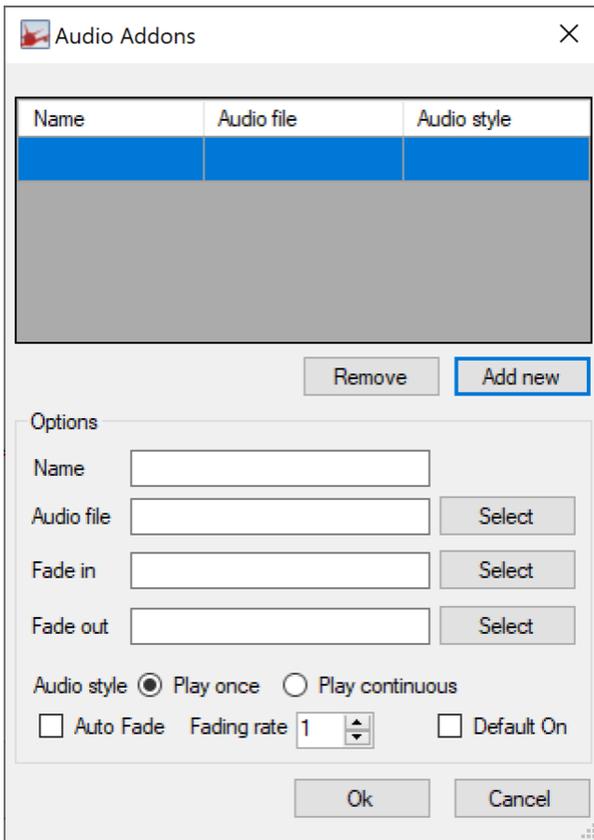


You will then be presented with a window listing all your addon sounds.



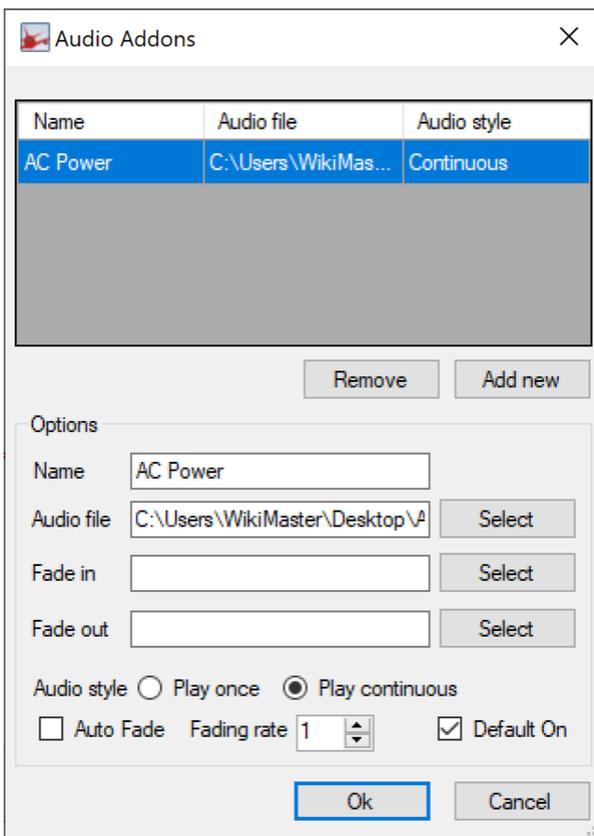
To add a new sound, press the 'Add new'-button. A new row will be inserted, and the options below will be opened to fill in:

- Name
- File
- Fade in file
- Fade out file
- Audio style: Play once or play continuous
- Auto fade on or off
- Fading rate
- Default on or off

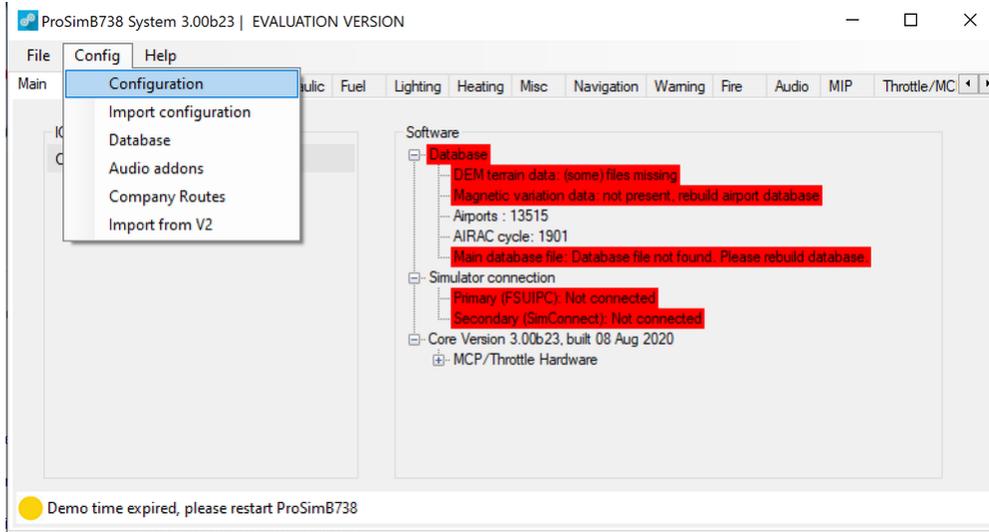


The settings depend on the type of sound and its purpose. The sounds generated by the packs for example should play continuously, whereas the sound of the seat belt sign should only play once, which is when the switch is flicked. Use the 'Select'-button next to the 'File'-field to browse and select an audio-file to use.

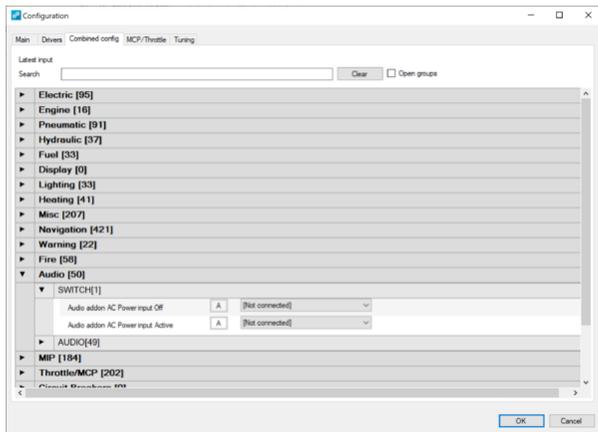
For this example, the following settings where used:



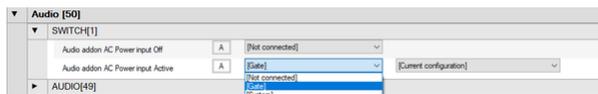
Now that the new audio add-on has been made 'known' to ProSim Systems, instruct the system what the trigger is to play the sound. This is done by so-called **gates** and ProSim738/320 has a gate for every switch and also for a lot of different situations (whether on the ground or not). An audio add-on can be coupled to a gate using the 'Combined Configuration'-window in [ProSim737 Systems|ProSim738 Systems]. Open the 'Combined Config'-window to by clicking on the 'Config'-button on the menu bar, and then select 'Configuration' in the drop down menu.



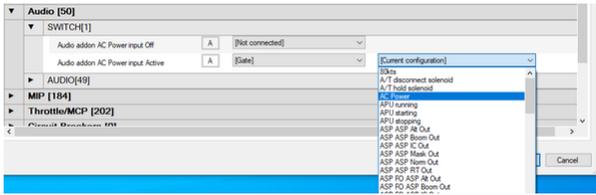
In the window that opens, select and open the 'Combined Config'-tab and then open the 'Audio'-menu by scrolling down and clicking on the black arrow on the left of 'Audio'. The list will unfold into 'Switch' and 'Audio'. Click on 'Switch' to open that menu. A list of all selected add-on sounds will be displayed here. In this example, we see the AC-Power add-on sound listed as the only add-on sound.



We must now tell ProSim Systems that the sound must be triggered by a 'gate'. This is done by opening the dropdown menu that says 'Not connected' and then clicking on 'Gate'.



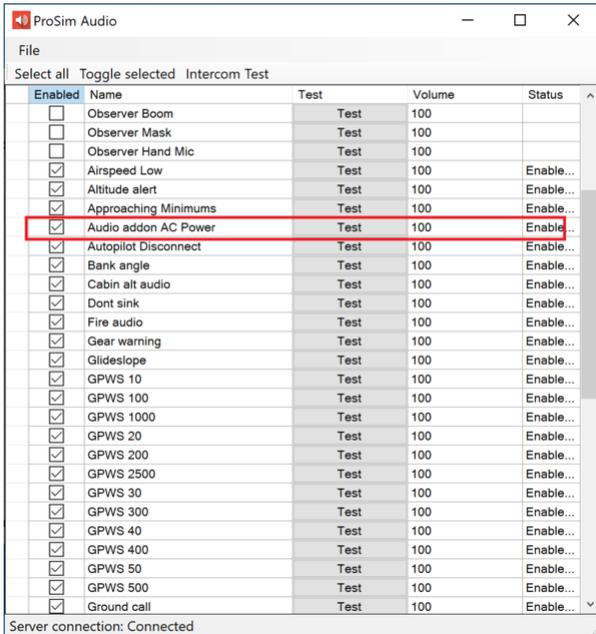
Now the triggering 'gate' must be selected. Open the dropdown-menu next to 'NAME OF YOUR AUDIO ADD-ON input active'. The full list of gates available is presented. In this example, the AC-Power gate is all the way at the top.



Once completed, click the 'OK' button and **restart** ProSim Systems and ProSim Audio.

### 2.2 Steps in ProSim Audio

Now that the new audio add-on has been successfully added in ProSim Systems, a few last steps are required in ProSim Audio. After both ProSim Systems and ProSim Audio have been restarted, the list of all audio files in the Audio module should be shown there. Scroll down and locate the audio add-on. It is recognisable by the 'Audio Addon' prefix. It is automatically selected 'on' if this box is ticked when adding the new audio add-on.



Press the 'Test'-button to make sure the audio add-on is playing correctly. Take the time to select the correct audio level. By default all sounds are set to 100% audio level, but this can be lowered if required. This depends on your audio hardware and its location, as well as the sound levels in Windows and/or on the audio hardware itself. The audio level must always be between 0 and 100.

The last test is to flick the switch to test if the whole chain is correct. In this example, AC-power, means that the ground power (GND PWR) should be switched to trigger the sound.

Retrieved from "[https://wiki.prosim-ar.com/index.php?title=ProSim\\_Audio&oldid=1222](https://wiki.prosim-ar.com/index.php?title=ProSim_Audio&oldid=1222)"

- This page was last modified on 2 March 2021, at 20:37.

# Instructor Operating Station

From Manuals

**Contents**

- 1 ProSimIOS
  - 1.1 General
  - 1.2 Installation
  - 1.3 First run
  - 1.4 Keyboard Shortcuts
- 2 Features
  - 2.1 Position
  - 2.2 Map
  - 2.3 Flight Plan
  - 2.4 Conditions
  - 2.5 Pushback
  - 2.6 Fuel & Load
  - 2.7 View/Slew
  - 2.8 Failures
  - 2.9 Aircraft
- 3 ProSim specifics
  - 3.1 Settings
    - 3.1.1 B737NG



ProSim737 v3 IOS Main Menu

## 1 ProSimIOS

All ProSim software suites now feature professional, desktop-based Instructor Operating Station (IOS). The original browser-based Instructor Operating Station is still available.

### 1.1 General

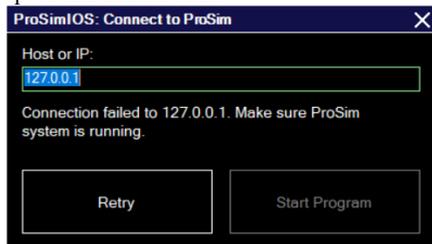
ProSimIOS is a Windows application that will run on all Windows-based devices with the .NET Framework 4.7.2 or higher installed. ProSimIOS could run on any simulator computer, the only requirement is a stable network connection to the computer running ProSim System.

### 1.2 Installation

ProSimIOS is included in the release zip archive, available on the download page (<https://prosim-ar.com/downloads/>). Same as for other ProSim modules, no installation is required - just extract the content of ProSimIOS.zip to the desired location.

### 1.3 First run

ProSimIOS will only start if successfully connected to ProSim System (and will not start if ProSim System is not running). If starting the ProSimIOS on a networked computer for the first time, you'll be prompted to enter the IP address of the computer running the ProSim System. On the next run, ProSim IOS will connect automatically to that IP address again. Upon the first start, ProSimIOS will copy the scenery and navigation database from the ProSim System - that might take some time, depending on the network speed and database size.



### 1.4 Keyboard Shortcuts

The IOS has several keyboard shortcuts programmed. In order to use the application more efficiently, see the table below for an overview. **NOTE:** Every keyboard shortcut includes **ctrl+shift**. For example: press **ctrl+shift+p** to open the 'position' module.

POSITION	MAP	FLIGHT PLAN	CONDITIONS	PUSHBACK	FUEL/LOAD	VIEW/SLEW	FAILURES
AIRCRAFT	STATISTICS	NETWORK	MOTION	SETTINGS	FREEZE	PAUSE	INFO EXIT

<b>Key</b>	<b>Module or action</b>	<b>Key</b>	<b>Module or action</b>
P	Position	S	Statistics
M	Map	N	Network
F	Flight Plan	O	Motion
C	Conditions	T	Settings
B	Pushback	H	Info
L	Fuel/Load	Z	Freeze
V	View/Slew	U	Pause
I	Failures	E	Exit
A	Aircraft		

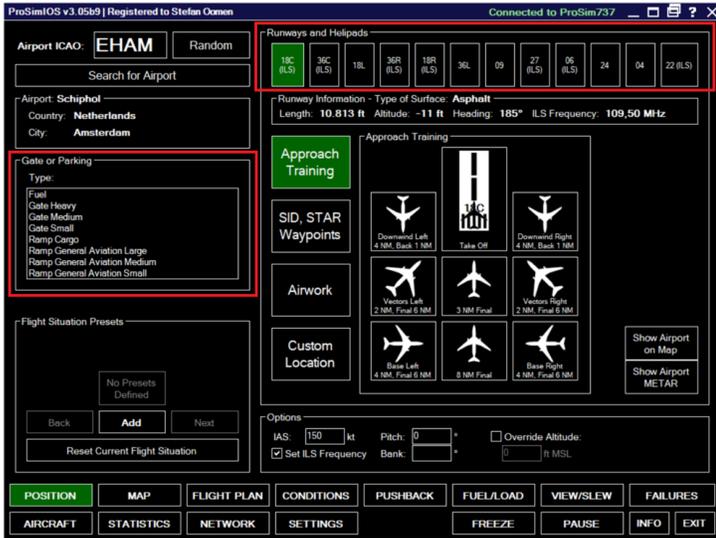
## 2 Features

### 2.1 Position

The Position page is used to relocate your aircraft to a specific position, such as on an approach, a runway take-off point or at a gate. It is also possible to position your aircraft at any given geographical location in the world. First, an airport needs to be selected. This can be done either via an ICAO code or via the search window. It is also possible to randomly select an airport by clicking on the 'Random'-button.



Next, select a runway at the top or a gate on the left hand side of the screen:



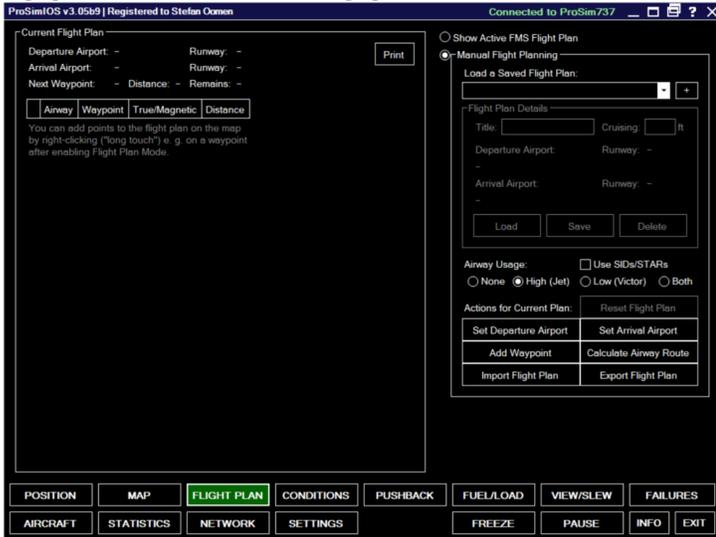
From there, it is possible to choose from 4 options in the center of the window: Approach training, SID/STAR or waypoint, Airwork or a custom geographical location.



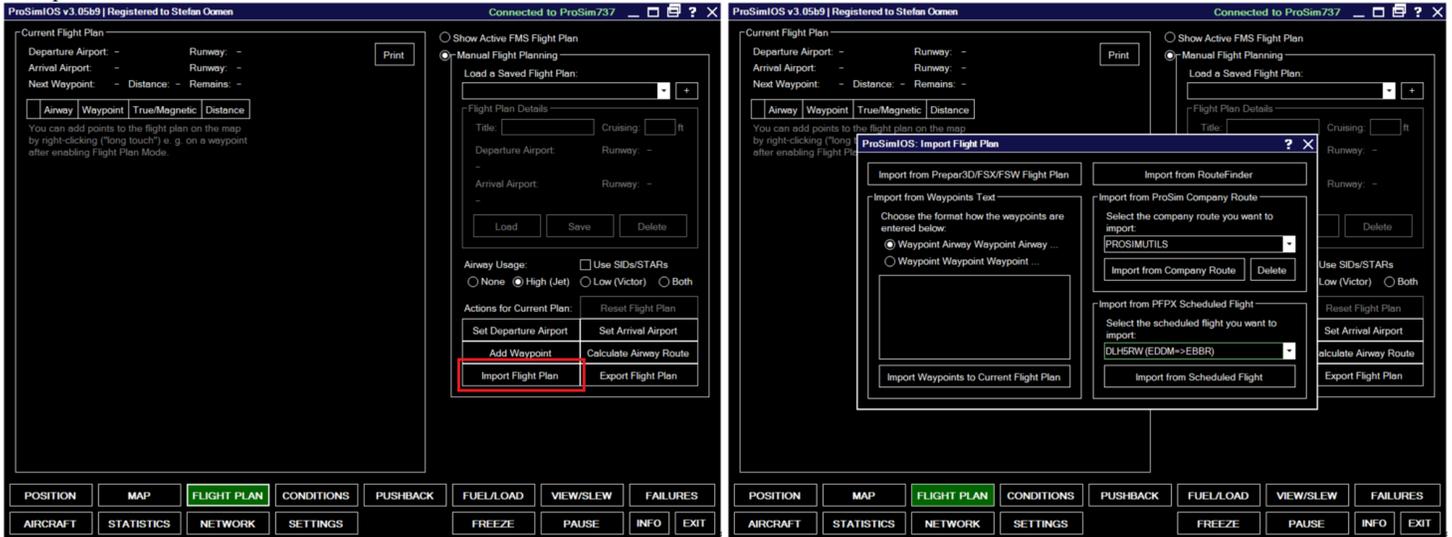
## 2.2 Map

## 2.3 Flight Plan

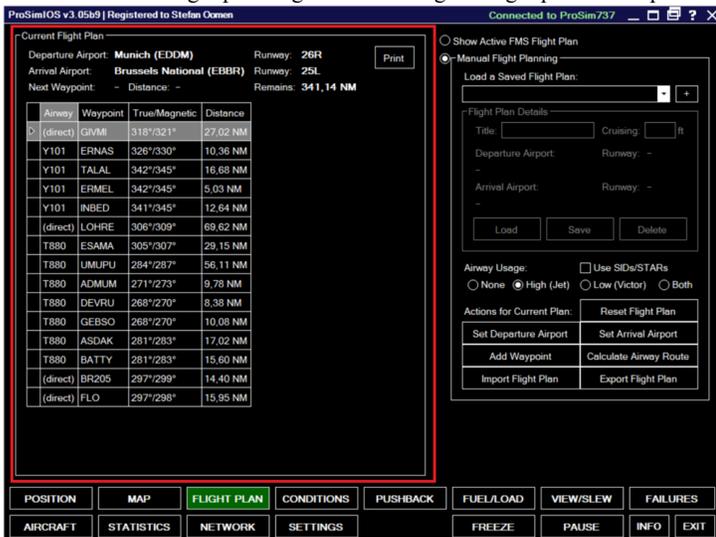
The Flight Plan module of the IOS allows you to manually plan a route, or use one of many available import options. It is also possible to export your created flightplan, such as to an FSX/P3D flightplan file.



In order to import a flight plan, click the Import flight plan button. A window will pop-up giving several options, such as creating and importing a route directly from the Asalink Routefinder (<http://rfinder.asalink.net/free/>) or from Flightsimsofts' Professional Flight Planner X (<http://flightsimsoft.com/pfp/x/>) for example.



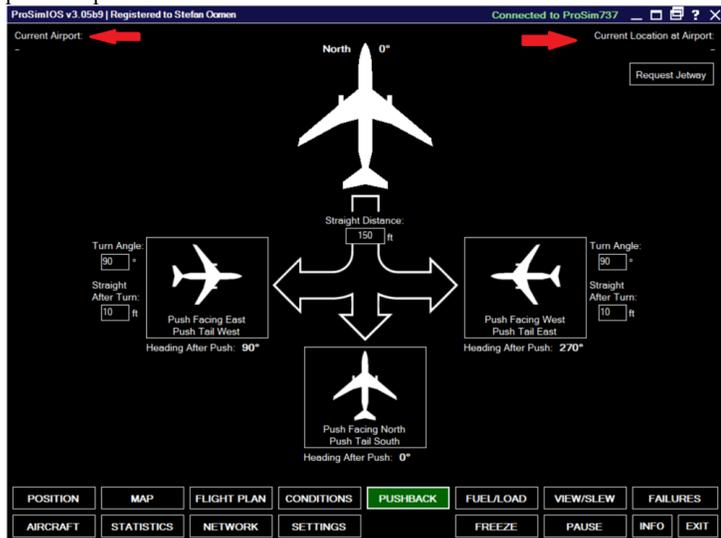
Once a flight plan has been either created manually or has been imported, it is shown on the left hand side of the window. If connected to ProSim and FSX/P3D or MSFS2020, it will also list your next waypoint with the remaining distance to that waypoint in real time. Right-click on any waypoint to either delete it, move it up or down, center the map on this point or completely clear the plan again. **Note:** Keep in mind that editing the flight plan is only possible when you are in the manual flight planning mode. Printing the flight plan is also possible using the Print button.



## 2.4 Conditions

### 2.5 Pushback

Control aircraft pushback operations in any direction you want, stop it again at any time and always know the exact location of the aircraft on the airport. When not using FSDreamteams' Ground Services X (GSX) ([https://www.fsdreamteam.com/products\\_gsx.html](https://www.fsdreamteam.com/products_gsx.html)) to perform your pushback, the IOS Pushback is the perfect replacement!

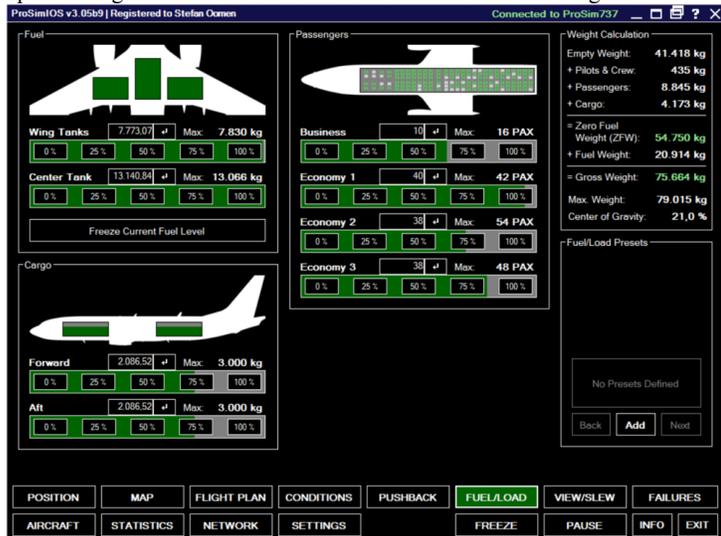


In the top-left corner your current location (airport) is indicated, while at the top-right hand side your current location at that airport is shown, indicating at which gate or parking you are located. Use the button below that to request the jetway at your gate. **Note:** this feature requires animated jetways and these might not be available in your specific (add-on) scenery.

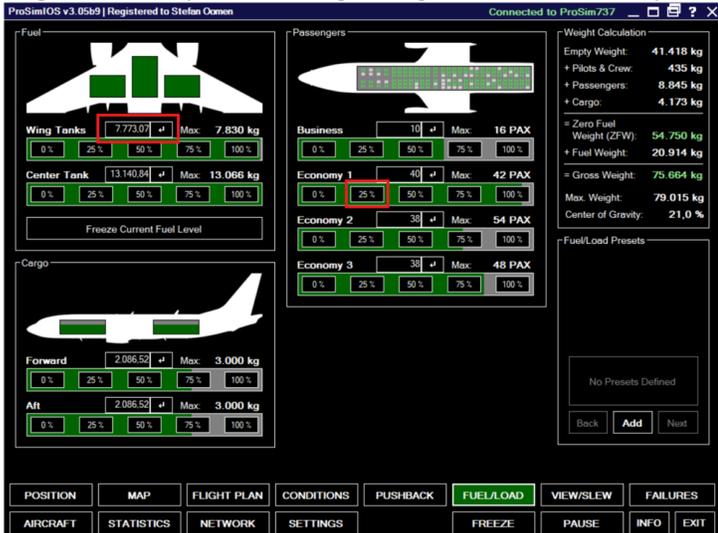
Before starting the pushback operation you can define the distance the aircraft is pushed back. If you push to the left or right you can even define the turn angle and an additional straight distance after the turn has been completed. To start the pushback operation, click on one of the three buttons depending on the direction the aircraft should be pushed to. The program calculates the expected aircraft heading after the pushback below the buttons. The pushback operation will stop automatically after the defined push distance and in case of pushback to left or right the turn including the additional straight distance after turn has been reached. Pushback operation can be stopped manually at any time by clicking on the Stop Pushback button.

### 2.6 Fuel & Load

On the Fuel & Load page, fuel amounts can be set in the aircrafts' tanks, as well as distribute payload over the aircraft. Automated weight calculation allows the operator to get a detailed overview of the aircrafts' fuel and weights.



Click on one of the boxes with an arrow to the right to enter a total amount of fuel, cargo or passengers for the ProSimIOS to automatically distribute the weight. Alternatively, click on the 4 percentage buttons to automatically set fuel, cargo or passenger amount to 0%, 25%, 50%, 75% or 100%.



2.7 View/Slew

2.8 Failures

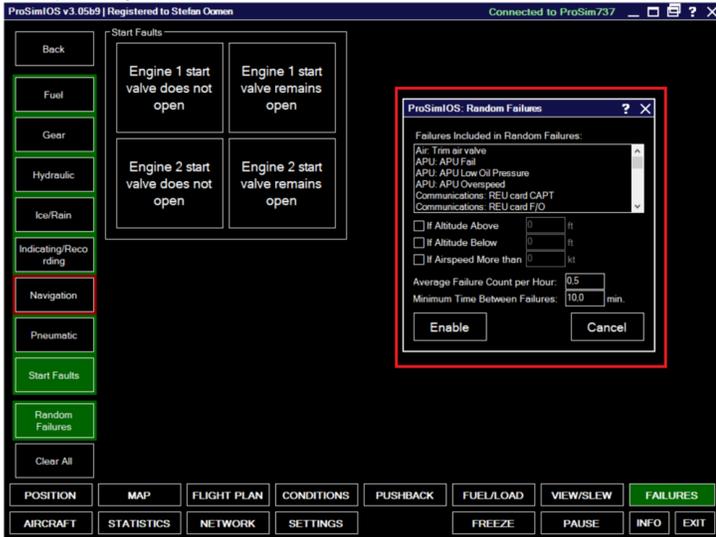
Fail any aircraft component with just one click manually or define detailed failure conditions like fail if aircraft is above a specific altitude or airspeed. Besides generic failures, aircraft-type specific failures are also available. Failures are divided into several system areas:

Air	APU	Communications	Start Faults
Doors	Electric	Engines	
Fire	Flight Controls	Fuel	
Gear	Hydraulic	Ice/Rain	
Indicating/Recording	Navigation	Pneumatic	



The IOS also allows for the generation of random failures. Click on the 'Random Failures'-button, and select the required failure(s) from the list. Press and hold shift to select a batch of failures at once, or press and hold and click to select multiple specific failures. It is also possible to configure the triggering of random

failures to be above or below a certain altitude, or when airspeed is above a certain speed. Finally, it is also possible to set an average amount of failures per hour (one may use decimal numbers such as 0.5 for a low amount of random failures) or set a minimum time between them.



### 2.9 Aircraft

Get an overview of all important aircraft data and control parts such as engines, gear, flaps and spoilers, even auto pilot and radio control panel directly. On the first page, the **Status** page, ground power can be (dis)connected, ground pneumatics, reset the FMS and get a total overview of the most important aircraft systems and their statuses. Finally, the operator has the option to open and close the aircraft doors. Refer to the Visual Flight Model page for more information regarding the opening of doors.



Click on the **Systems** button to go to the Systems-page. This page shows more in-depth and detailed statistics and facts regarding the aircrafts' systems. These have been divided into three sections: engines, hydraulics and radios.





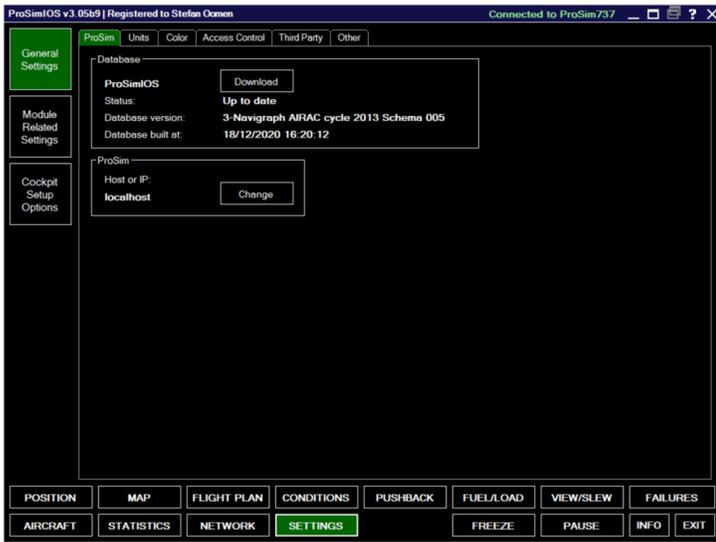
Lastly, on the **Monitor** page, internal and driver timings can be monitored. These are not used in normal operations, though may be useful during the setup and/or optimisation of your simulator, or during troubleshooting (with help of ProSim Support).



### 3 ProSim specifics

#### 3.1 Settings

The **General settings** page; This page consists of several tabs, but for ProSim-users, only the first tab is important. Here, the IP Address of the computer running ProSim Systems can be entered. In case the IOS will always run on the same computer as the ProSim Systems application, leave **Host or IP** as **Localhost**.



To change certain options regarding the cockpit of your aircraft (for example, digital vs. analog standby gauges) click on the **Cockpit Setup Options** button. These options are known as 'Carrier options', as these usually vary between one operator to another. Once set, an option becomes effective immediately. The carrier options are divided into four sections: Audio, Display, FMS/CDU, and Options. As these are different between the 737NG, 737MAX and A320, their explanations have been divided per aircraft type.

### 3.1.1 B737NG



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- This page was last modified on 6 April 2021, at 09:38.

# Generic support page

From Manuals

The three ProSim-AR suites (737NG, 737MAX and A320) can be complex, therefore, additional support may be required. ProSim-AR provides support in two ways:

## 1 The ProSim-AR forum

If support is required, the first option is to visit the ProSim-AR forum (<https://forum.prosim-ar.com/>); Here, many helpful and knowledgeable users in addition to ProSim-AR's developers can be found. Several hardware suppliers also have a presence in the forum.

Use the following links to visit specific parts of the forum:

- ProSim-AR General forum (<https://forum.prosim-ar.com/viewforum.php?f=2>)
- B737NG forum (<https://forum.prosim-ar.com/viewforum.php?f=11>)
- B737MAX forum (<https://forum.prosim-ar.com/viewforum.php?f=132>)
- A320 forum (<https://forum.prosim-ar.com/viewforum.php?f=92>)
- various forum (<https://forum.prosim-ar.com/viewforum.php?f=16>)

## 2 ProSim-AR Technical Support

If you require more in-depth support or want to file a bug, you are advised to file a ticket on the ProSim-AR Support Center via the following link: ProSim-AR Support Center (<https://prosim.atlassian.net/servicedesk/customer/portal/1/group/1/create/1>)

Note, when filing a ticket describe your setup and issue as detailed as possible:

- Computer hardware
  - CPU
  - RAM amount
  - Graphics card
  - Networked setup or is everything on one computer?
- Software
  - Windows version
  - Antivirus?
  - Version of FSX/P3D/MSFS2020
  - ProSim suite version (737NG/MAX/A320)
- Any add-ons such as GSX, ProSimUtils, etc.
- Issue description
  - What behaviour are you observing?
  - What are you trying to achieve?
  - What must be done to replicate the issue?
  - Always attach the crashlog.xml to your ticket

## 3 Support files

Each module creates several support files in the folder where the module is executed. This makes it possible to move the folder around without issue. Below is a short overview of these support files. Do note that not all files are created by each module, some are specific to a ProSim module.

Filename	Description
Config.xml	All ProSim modules will store their configuration in a file called config.xml. This file contains all the selected options.
Cockpitsetup.xml	ProSim stores the various cockpit configurations in this file. The configurations can be changed in the 'Cockpit Setup' tab of the instructor station.
Positions.xml	ProSim stores preset positions in this file. Preset positions can be stored in the "Setup" tab of the instructor station.
Translations.xml	ProSim stores position translations in this file. Translations can be configured in the 'Setup' tab of the instructor station.
Companyroutes.xml	ProSim stores all company routes in this file. Company routes are managed in the CoRoutes tab of the instructor station.
Transitionaltitudes.xml	This file contains the transition altitudes for all global airports. It is only read by ProSim and distributed in the main package.
Log.txt	The log.txt file and log_x.txt files contain logging information about the running system. ProSim system rotates log.txt into log_1.txt when the file is full, so only the most recent logs are kept.
Crashlog.txt	The Crashlog.txt files contains logged internal exceptions from ProSim737 System. Always include this file when reporting an issue to the support.

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- This page was last modified on 3 March 2021, at 10:31.

# Frequently Asked Questions

From Manuals

A list of frequently asked questions has been compiled on this page complete with their respective answer. This is a so-called 'living document', which means that it gets updated regularly with new questions or improved answers. The FAQ's have been divided into two subsections: **licensing** and **technical**. The first section is self-explanatory, while the latter is a collection of questions regarding the configuration of all the ProSim suites.

## Contents

- 1 ProSim-AR Frequently Asked Questions
  - 1.1 Licensing
    - 1.1.1 How do I move my ProSim suite (737NG, 737MAX, A320) to another computer?
    - 1.1.2 Where can I see the expiry date of my current active subscription?
    - 1.1.3 I have purchased a 12 month update subscription, but the new expiry date is less than 12 months from now?
    - 1.1.4 Can I sell my licence to another user?
    - 1.1.5 I have a valid licence but I get an activation error?
    - 1.1.6 How much does a commercial licence cost?
  - 1.2 Technical
    - 1.2.1 Do I need an internet connection to run ProSim?
    - 1.2.2 Does ProSim work with MSFS 2020?
    - 1.2.3 What are the hardware requirements for ProSim?
    - 1.2.4 Where can I download the latest ProSim version?
    - 1.2.5 Is there an installer for the ProSim suite?
    - 1.2.6 Is ProSim compatible with X-Plane?
    - 1.2.7 How many computers should I use for my simulator?
    - 1.2.8 How can I add custom sounds to ProSim Audio?
    - 1.2.9 How can I configure the ProSim flight model to work with GSX?
    - 1.2.10 How can I access the Instructor Operation Station?

## 1 ProSim-AR Frequently Asked Questions

### 1.1 Licensing

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#### 1.1.1 How do I move my ProSim suite (737NG, 737MAX, A320) to another computer?

Your licence is bound to your hardware. In order to move it to another computer, contact Prosim Support to reactivate your licence.

#### 1.1.2 Where can I see the expiry date of my current active subscription?

In ProSim Systems, click on 'Help' and then on 'Licence'. Refer to the applicable Systems page of your suite in the wiki for more information.

### **1.1.3 I have purchased a 12 month update subscription, but the new expiry date is less than 12 months from now?**

The update subscription is incremental - when you purchase a new extension, we simply add 12 months to the date your current update subscription expired. **The date of purchase is not relevant to the new expiry date.**

If your last update subscription expired more than 12 months ago and you purchase an extension, your new expiry date will still be in the past. If your current update subscription has not yet expired and you purchase an extension, 12 months will be added to the expiry date, so you don't have to wait until the subscription actually expires. You always get 12 months of updates.

*Example - your update subscription expired 31 March 2019 and on 30 July 2019 you decided to extend your update subscription. After the purchase, your new expiry date will be 31 March 2020.*

### **1.1.4 Can I sell my licence to another user?**

Yes, but the licence has to be transferred to the new owner and some conditions apply. Contact ProSim Support with your request.

**Note:** Only licenses with a valid update subscription can be transferred.

### **1.1.5 I have a valid licence but I get an activation error?**

Make sure that:

- You are starting ProSim with administrator rights;
- The computer running ProSim System has access to the Internet;
- no firewall or other network protection software is blocking ProSim

Try to delete all the \*.lic files in your ProSim System folder, start ProSim again and re-enter your license keys. If not successful, please contact ProSim Support.

### **1.1.6 How much does a commercial licence cost?**

There are multiple commercial licence options available, please contact [sales@prosim-ar.com](mailto:sales@prosim-ar.com) for more information.

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## **1.2 Technical**

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### **1.2.1 Do I need an internet connection to run ProSim?**

Yes, but not all the time. You need an internet connection for the initial license activation. Then the computer running ProSim Systems must connect to the internet once every **30 days** to validate your license. After 30 days without an internet connection, ProSim will not start.

### **1.2.2 Does ProSim work with MSFS 2020?**

Partially, compatibility is still under development. Please follow this forum thread (<https://forum.prosim-ar.com/viewtopic.php?f=121&t=20505>) for further announcements.

### **1.2.3 What are the hardware requirements for ProSim?**

Hardware requirements mostly depend on your own requirements and how you are spreading the workload. More modules on a single computer require a more powerful machine. There are, however, some basic guidelines:

- **Master PC** (running ProSim System and Simulator (P3D/MSFS)) - please refer to the recommended HW requirements for the simulator platform

- Prepar3D v5.x (<https://www.prepar3d.com/system-requirements/>)
- Prepar3D v4.x (<https://www.prepar3d.com/system-requirements/>)
- MSFS 2020 (<https://www.microsoft.com/en-us/p/microsoft-flight-simulator-standard/9nxxn8gf8n9ht?activetab=pivot:regionofsystemrequirementstab>)

- **Secondary PC** (running ProSim clients - Display, Audio, (M)CDU...) - Intel i5 class CPU (or similar), 8 GB RAM, mid-range GPU (2GB GDDR), Windows 10.

#### **1.2.4 Where can I download the latest ProSim version?**

This can be done through the ProSim Systems module, or via this link (<https://download.prosim-ar.com>)

#### **1.2.5 Is there an installer for the ProSim suite?**

There is no installer available for the suite, only for the Visual Flight Model.

#### **1.2.6 Is ProSim compatible with X-Plane?**

No, ProSim is not compatible with X-Plane nor is support provided to users trying to establish compatibility.

#### **1.2.7 How many computers should I use for my simulator?**

This depends on your setup, budget and own requirements. The most common setup is 1 Master PC for ProSim System and FSX/P3D and 1 Secondary PC for Displays. Eventually another Secondary PC, laptop or tablet for the Instructor Operating Station.

#### **1.2.8 How can I add custom sounds to ProSim Audio?**

Please refer to the ProSim737 Audio page for instructions.

#### **1.2.9 How can I configure the ProSim flight model to work with GSX?**

Please refer to the Visual Flight Model page, subsection 'Add-ons' for instructions.

#### **1.2.10 How can I access the Instructor Operation Station?**

Please see the Instructor Operating Station page for more information.

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# Interfacing with ProSim737

From Manuals

## Contents

- 1 Interfacing with ProSim737
  - 1.1 Query FMS
  - 1.2 Query Aircraft
  - 1.3 Query failures
  - 1.4 Query armed failures
  - 1.5 Query ground power
  - 1.6 Query load sheet
  - 1.7 Query acars
    - 1.7.1 ACARS uplink
    - 1.7.2 ACARS downlink

## 1 Interfacing with ProSim737

The ProSim737 main program has an internal web server that can be used to control some parts of the system. This can be used to develop add-ons or custom software.

The standard way to interface with ProSim737 is to call the XML gateway URL on the web server. This URL has the format: `http://<host>:<port>/xml?query=<action>[&parameter=value]`

As a reply to this call, an XML document is sent back in the following format:

```
<root>
<query>[A copy of the query]</query>
<success>[true or false depending on the outcome]</success>
<answer>
The content of the answer
</answer>
</root>
```

At the moment, the following queries are available:

fms	Retrieve FMS data
aircraft	Retrieve basic aircraft data
failures	Retrieve a list of supported failures
armedFailures	Interact with the failure system
load sheet	Retrieve data to generate a load sheet

### 1.1 Query FMS

**Supported parameters: None** Retrieves the content of the route in the FMS. Specifications are not finalised.

## 1.2 Query Aircraft

**Supported parameters: None** Retrieves a list of basic parameters of the aircraft. Specifications are not finalised.

## 1.3 Query failures

**Supported parameters: None**

Retrieves all supported failures in the system. This list is a fixed list of what the instance of ProSim737 supports and need only be retrieved once. The answer contains a sequence of <failure> elements in this format: <failures>

```
<failure id="f1">
<name>TransBus1</name>
<domain>Busses</domain>
<help>The TransBus1 bus has failed</help>
</failure>
```

...

```
</failures>
```

The ID attribute is used to communicate with the system about this failure through the “armedFailures” query.

The name attribute can be used to display to the user. The domain attribute provides the means to classify failures. The help attribute is a short string that contains additional information about the failure.

## 1.4 Query armed failures

**Supported parameters:** failures, remove, ias, alt, altb, min

The armedFailures query is used to interact with the failure system. Armed failures are groups of failures that are either triggered immediately, or are triggered based on certain conditions. Each armed failures entry has an ID that can be used to remove it.

This query will always reply with the current list of armed failures. This list is a sequence of <armedFailure> elements in the following format:

```
<armedFailure id="0">
<failures>f106</failures>
<triggered>true</triggered>
<condition>
<ias>120</ias>
<altAbove>1000</altAbove>
<altBelow>2000</altBelow>
2011-03-22T12:38:15.390625+01:00
<condition>
</armedFailure>
```

The <failures> element contains a comma separated list of failure ID’s that this entry will trigger. The <triggered> element is true when the failures were triggered and false when the armedFailure is still waiting for a condition to become true. The <condition> element will typically be empty, or contain a single condition, but all possible conditions are shown for reference.

To set a new armed failure, the “failures” parameter must be present and should contain a list of failure ID’s, separated by commas. Optionally, the ias, alt, altb, or min parameters may be provided to make the armed failure a condition based failure. When no condition is provided, the failure will be triggered immediately.

- ias is the speed in KTS above which the failures should trigger
- alt is the altitude above which the failures should trigger
- altb is the altitude below which the failures should trigger
- min is the amount of minutes that should pass before the failure should trigger

To remove a failure, the parameter “remove=<id>” should be used. When an armedFailure is removed, the systems involved will be repaired.

Some example URL’s:

- Trigger failure f108 above 80kts: <http://localhost:8080/xml?query=armedFailures&failures=f108&ias=80>
- Remove failure number 0: <http://localhost:8080/xml?query=armedFailures&remove=0>

## 1.5 Query ground power

**Supported parameters:** active

This query is used to read or set the state of the ground power. The query always returns the current state of the ground power in the following format: `<groundPower active="true|false"/>` To set the ground power, the 'active' parameter can be used. The value of this parameter should be 'true' or 'false'. Note that ground power will only be provided under the condition that the aircraft is not moving and on the ground.

## 1.6 Query load sheet

**Supported parameters:** none

This query is used to retrieve information from the FMS which can be used to create a load sheet. An active PERF INIT page and an active route must be present in the FMS for the query to succeed. A block of XML is returned with all information necessary to build a load sheet.

One way to build a load sheet is to run the XML through an XSLT, which outputs the load sheet. An example XSLT “loadsheet.xslt” is provided in the web folder of ProSim737.

The instructor station url <http://localhost:8080/loadsheet> uses this XSLT to build a load sheet from this XML query. It uses this XML query and adds an XML processing instruction for the browser to use the XSLT for rendering the XML.

This is an example URL:

- Query loadsheet: <http://localhost:8080/xml?query=loadsheet>

## 1.7 Query acars

**Supported parameters:** message, content, type

This query is used to uplink or downlink an ACARS message. In both uplink or downlink mode, the 'message' parameter is required and should be the ID of the message, as defined in the currently active ACARS profile.

### 1.7.1 ACARS uplink

In this mode, a message can be uplinked from the ground to the aircraft. In this mode, the 'content' parameter is required and contains the actual content of the uplinked message.

### 1.7.2 ACARS downlink

In this mode, the aircraft is told to downlink a message to the ground station. To activate the downlink mode, specify the attribute 'type=downlink'. This mode can be used to trigger the aircraft to send automated status messages. Since the message content is constructed from the definition in the active ACARS profile, no 'content' parameter is needed.

Examples:

- Uplink a metar response:  
`http://localhost:8080/xml?query=acars&message=metar+response&content=metar+data`
- Trigger the aircraft to submit a position report:  
`http://localhost:8080/xml?query=acars&type=downlink&message=position+report`

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Category: ProSim737 Manual

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# ACARS

From Manuals

## 1 ACARS

### 1.1 ACARS general description

ACARS configurations are split into profiles. A profile is a set of CDU pages, message layouts and a list of automatically generated messages that are loaded into the FMS. The user is able to configure the active ACARS profile in the Prosim737 configuration screen. An ACARS profile is created with an <acars/> eleme

### 1.2 ACARS Variables

A number of read-only variables are available to use. These are:

fms.origin	Route origin
fms.destination	Route destination
fms.flightno	Route flight number
fms.tailnumber	Tailnumber
fms.flightphase	Flight phase (GRND/CLB/CRZ/DES)
fms.heading	Magnetic heading
fms.wind	Current wind in HHH/SS format
fms.ref_airport	Reference airport entered in POS INIT page
progress.from.waypoint	Progress from field
progress.from.ata	Progress ATA field
progress.next.waypoint	Next LNAV waypoint
progress.next.eta	Next LNAV waypoint ETA
progress.next2.waypoint	Second Next LNAV waypoint
progress.next2.eta	Second Next LNAV waypoint ETA
progress.dest.eta	Destination ETA
airdata.ias	Current IAS
airdata.gs	Current ground speed
airdata.altitude	Current altitude
airdata.fuel	Current fuel (kg)
airdata.mach	Current Mach
airdata.oat	Current OAT
position.lat	Latitude of aircraft
position.lon	Longitude of aircraft
radio.com1	COM1 frequency
radio.com2	COM2 frequency
radio.nav1	NAV1 frequency
radio.nav2	NAV2 frequency
radio.adf1	ADF1 frequency
radio.adf2	ADF2 frequency
radio.xpdr	Transponder frequency

## <ACARS>

The <acars> element defines an acars profile. Attributes:

- name (Optional)
  - The name of the profile. Only profiles with a name show up in the 'Profile' selection of the ACARS configuration.
- id (Optional)
  - The ID of the profile. Profiles with an ID can be included in other profiles by using an <include> element.
- default (Optional)

- 'true' or 'false'. When 'true', this profile will be the default when the user selects no other profile.

## <PAGE>

- title
  - Title shown in CDU
- pagenumbers (Optional)
  - attribute that controls the usage of page numbers in the top right corner. Set to 'auto' to show page numbers when more than one page exists. Set to 'true' to force page numbers, even when only one page exists. Default is 'auto'.
- titlealign
  - Allows control over title alignment. Default = 'left'. Other option is 'center'.
- subsystem
  - When this attribute is present, the page is an upper level menu that is accessible from the cdu main menu. The value of the attribute is the name that is shown in the CDU menu.
- id
  - ID of page used to link to it. When id's are repeated, the last matching page in the document is used. ID's starting with an underscore ("\_") are special and result in a specific page like described below:
    - id = "\_uplinks": Generate a list of ACARS uplinks
    - id = "\_genericUplink": Used as a template for showing ACARS uplinks with no associated page (raw message page)
- uplink
  - Defines the page as an uplink page, which is used to show ACARS uplinks. The uplink attribute defines the message id that this page receives.
- subpages
  - Optional attribute that controls how subpages are created. If this is set to 'auto', the page will be repeated to fit the content of the message. If this attribute is left out, then <subpage> elements can be used to create extra pages.

A <page> element may contain extra <subpage> elements to create multiple pages. This is optional.

## <LSK>

An <lsk.> element defines a line select key. Various types are available:

- Link elements
  - Link elements link to a CDU page. Specify a link="<target>" attribute. The LSK will link to the page with id=<target>. Optionally, specify set="<variable>=<value>", to change a variable when following the link.
- Error elements
  - Will proceed to an error message in the scratchpad. Specify an error="<message>" attribute. The LSK will trigger the error in the scratchpad.
- Send elements
  - Send elements will send an ACARS message. Specify send="<message id>" to set the message id. The message with id=<message> will be sent.
- Input elements
  - Input elements allow the user to set variables.
  - Specify input="<variable>" to set the target variable of the input.
  - For free form text inputs:
    - Specify size=<size> to set the amount of characters allowed for the input. This will place brackets on the line.
  - A default can be set with the default="" variable. Default attributes may refer to other variables.
  - For choosing between options:

- Specify selection="<selection1>,<selection2>,..." to set the allowed options. The CDU will show all options with the select one in green. Pushing the LSK will change the selection.
- For dropdown options:
  - Specify selection="<selection1>,<selection2>,..." to set the allowed options.
  - Add type="dropdown", to make the LSK a dropdown box.
- Output elements:
  - Output elements show the content of variables. Specify output="<variable>" to show the content of the variable.
  - To span the content across the regular line and the header line, add a lines="2" attribute.

The optional header="<header>" attribute can be used to set the header of the LSK. The optional centerHeader="<header>" attribute can be used to set a center aligned header surrounded with dashes on the whole line of the LSK. The optional attribute delimiter="<char>" can be used to override the "<" , ">" or "\*" delimiter at the edge of the display

## <IF>

Conditional LSK's: Use an <if/> block to surround conditional LSK's:

```
<if variable="<variable>" equals="<value>"></if> OR <if variable="<variable>" notEquals="<value>"></if>
```

## <MONITOR>

Monitor is used to monitor events and trigger actions. It contains these attributes:

- action
  - The action to take when an event is triggered. Currently only 'CDUMessage' is available. With CDUMessage, the content of the MONITOR element contains the message to trigger.
- trigger
  - The trigger value.
- fsuipc
  - An FSUIPC offset to test. If the offset has the value in the "trigger" attribute, the event is triggered.
- fsuipcType
  - The FSUIPC offset data type. Any of "u8", "u16", "s16", "u32", "s32", "f32", "f64"

Example: <monitor fsuipc="0xbc8" fsuipcType="u16" trigger="32767" action="CDUMessage">Parking brake is on</monitor>

## <MESSAGE>

A <message> element defines an ACARS message. Attributes:

- id
  - The ID of the message used to refer to it.
- code
  - The ACARS code that is used in the ACARS message to identify this message.
- description
  - The description of this message, used in ACARS programs.
- title
  - The link displayed in the CDU on LSK6R when an uplink is received.
- type
  - Optional, default is 'acars'. Can be 'acars' for regular ACARS server processing or 'http' for a http request.
- response

- For http requests, this contains the message id of the message that will handle the output of the http request.
- inactiveAdvisory
  - The advisory message in LSK5 that is displayed when this message is being transmitted.
- chime
  - Optional, when set to 'true' a chime sound is played when an uplink of this message arrives
- EICASAdvisory
  - The advisory message displayed on the upper EICAS when a message of this type arrives.
- CDUadvisory
  - The advisory message displayed in the CDU scratchpad when a message of this type arrives.

Message elements contain <field> elements that describe the fields inside the message. Attributes of <field> elements are:

- id
  - The ID of the element. The ID is the variable name the contains the content for this field.
- size
  - The amount of characters in this field. All but the last field should contain a size attribute.
- description
  - The description of this field, used in ACARS programs.
- trim
  - When set to 'true', the data that is received will be trimmed to remove all leading and trailing white spaces.

HTTP requests need an <url> element which contains the URL to call

HTTP requests:

To read/write HTTP, you create a new <message> element with type='http'. The output from a HTTP request can be used to either trigger an incoming message, or it can be placed in variables without triggering a message. The former case uses a 'response' attribute to point towards the message describing the output of the HTTP request. The latter case uses a <response> element inside the <message> element to directly describe the fields in the output. The <url> element is used to build the URL. Use the \${<variable>} format to include the content of variables that were filled in on the page. If the http request is successful and it has output, the associated response message is used to process it. Once the output of the HTTP request has been defined in a <message>, the <message> can be used to display the content on a custom page or the default uplink page.

Here is an example of two messages for processing IVAO weather. It uses a response message to parse the response:

```
<message title="weather" id="ivaoMetarResponse">
<field id="metar response content"/>
</message>
<message id="ivaoMetar" response="ivaoMetarResponse" type="http">
<url>http://wx.ivao.aero/metar.php?id=${ICAO}</url>
</message>
```

Here is an example of the same weather request, but instead it stores the output directly into a variable:

```
<message id="ivaoMetar" type="http">
<url>http://wx.ivao.aero/metar.php?id=${ICAO}</url>
<response>
```

```
<field id="metar response content"/>  
</response>  
</message>
```

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Category: ProSim737 Manual

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# EGPWS Modulation

From Manuals

## Contents

- 1 Background
- 2 XML example
- 3 General
- 4 Terrain Clearance Floor
- 5 Runway Field Clearance Floor
- 6 Look Ahead Terrain

## 1 Background

EGPWS contains some advanced modes to prevent CFIT. Unfortunately, these modes can create some nuisance alerts when terrain is present close to the airport. To prevent these “false” warnings, a modulation database needs to be defined to control the mode or to simply disable it. This database is proprietary information and needs to be manually defined

The modulation database is made of a single xml file named `egpws.xml` and located in *ProgramData\ProSim-AR\Database* folder

## 2 XML example

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<egpwsDatabase xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

```
<airport id="MROC">
```

```
<tcf enabled="true"/>
```

```
<rfcf enabled="true"/>
```

```
<lookAhead enabled="true"/>
```

```
<runway id="07">
```

```
<tcf enabled="false" />
```

```
<rfcf enabled="false" />
```

```
<lookAhead enabled="false" />
```

```
</runway>
```

```
</airport>  
  
<airport id="MMMX">  
  
<runway id="32L">  
  
<tcf enabled="false" />  
<rfcf enabled="false" />  
<lookAhead enabled="false" />  
  
</runway>  
  
<runway id="5R">  
  
<tcf enabled="false" />  
<rfcf enabled="false" />  
<lookAhead enabled="false" />  
  
</runway>  
  
</airport>  
  
</egpwsDatabase>
```

## 3 General

There are 3 modes that can be modulated. TCF, RFCF and Look Ahead terrain.

Modulation can be done by airport, runway or a combination of both.

The following example disables all 3 modes for runway 07 only:

```
<airport id="MROC">  
  
<runway id="07">  
  
<tcf enabled="false" />  
<rfcf enabled="false" />  
<lookAhead enabled="false" />  
  
</runway>  
  
</airport>
```

To disable all 3 modes for all MROC runways, just use:

```
<airport id="MROC">
```

```
<tcf enabled="false" />
```

```
<rfcf enabled="false" />
```

```
<lookAhead enabled="false" />
```

```
</airport>
```

And this will disable all modes for all runways, except TCF for runway 07:

```
<airport id="MROC">
```

```
<tcf enabled="false" />
```

```
<rfcf enabled="false" />
```

```
<lookAhead enabled="false" />
```

```
<runway id="07">
```

```
<tcf>
```

```
<bias>2</bias>
```

```
</tcf>
```

```
</runway>
```

```
</airport>
```

## 4 Terrain Clearance Floor

The Terrain Clearance Floor (TCF) function (enabled with TAD) enhances the basic GPWS Modes by alerting the pilot of descent below a defined “Terrain Clearance Floor” regardless of the aircraft configuration. The TCF alert is a function of the aircraft’s Radio Altitude and distance (calculated from latitude/longitude position) relative to the center of the nearest runway in the database (all runways greater than 3500 feet in length). The TCF envelope is defined for all runways as illustrated below and extends to infinity, or until it meets the envelope of another runway. The envelope bias factor is typically 1/2 to 2 nm and varies as a function of position accuracy.

TCF modulation:

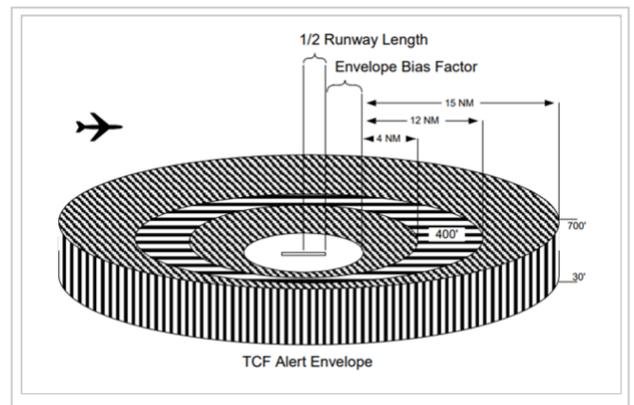
```
<tcf>
```

```
<bias>2</bias>
```

```
</tcf>
```

The *enable* = “*true*” can be suppressed as it is implicit when creating the modulation entry

Bias [integer]: moves the envelope away from the runway by the value (in NM) entered.



## 5 Runway Field Clearance Floor

This is similar to the TCF feature except that RFCF is based on the current aircraft position and height above the destination runway, using Geometric Altitude (in lieu of Radio Altitude). This provides improved protection at locations where the runway is significantly higher than the surrounding terrain as illustrated below. With version -218-218 and later models, the RFCF envelope is moved from 1nm to 1/2nm if runway and position data is of high integrity.

RFCF modulation:

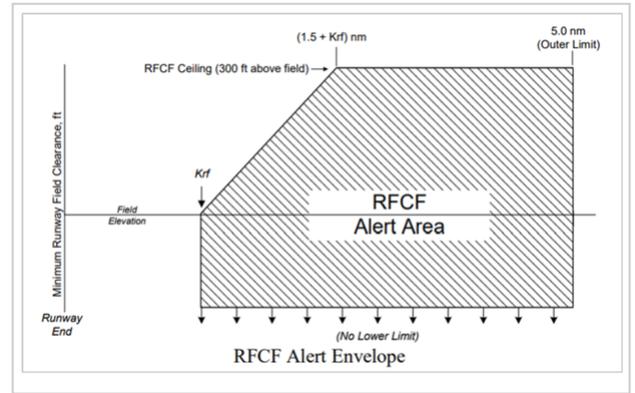
<rfcf>

<bias>2</bias>

</rfcf>

The *enable* = “true” can be suppressed as it is implicit when creating the modulation entry

Bias [integer]: moves the envelope away from the runway by the value (in NM) entered.



## 6 Look Ahead Terrain

Another enhancement provided by the internal terrain database, is the ability to look ahead of the aircraft and detect terrain or obstacle conflicts with greater alerting time.

This is accomplished (when enabled) based on aircraft position, flight path angle, track, and speed relative to the terrain database image forward the aircraft.

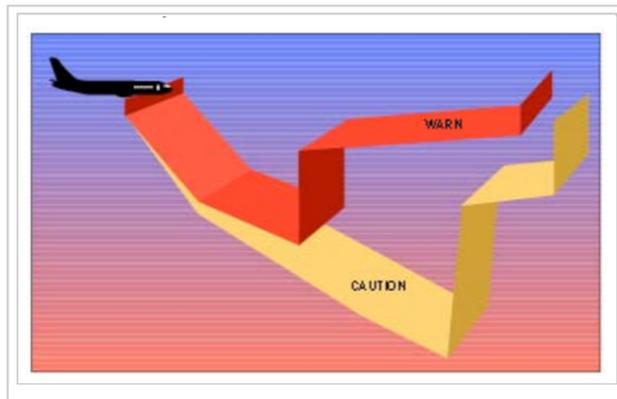
Through sophisticated look ahead algorithms, both caution and warning alerts are generated if terrain or an obstacle conflict with “ribbons” projected forward of the aircraft (see following illustration). These ribbons project down, forward, then up from the aircraft with a width starting at 1/4 nm and extending out at  $\pm 3^\circ$  laterally, more if turning. The look-down and up angles are a function of the aircraft flight path angle, and the look-down distance a function of the aircraft’s altitude with respect to the nearest or destination runway. This relationship prevents undesired alerts when taking off or landing. The look-ahead distance is a function of the aircraft’s speed, and distance to the nearest runway.

A terrain conflict intruding into the caution ribbon activates EGPWS caution lights and the aural message “CAUTION TERRAIN, CAUTION TERRAIN” or “TERRAIN AHEAD, TERRAIN AHEAD”. An obstacle conflict provides a “CAUTION OBSTACLE, CAUTION OBSTACLE” or “OBSTACLE AHEAD, OBSTACLE AHEAD” message.<sup>1</sup> The caution alert is given typically 60 seconds ahead of the terrain/obstacle conflict and is repeated every seven seconds as long as the conflict remains within the caution area. When the warning ribbon is intruded (typically 30 seconds prior to the terrain/obstacle conflict), EGPWS warning lights activate and the aural message “TERRAIN, TERRAIN, PULL UP” or “OBSTACLE, OBSTACLE, PULL UP” is enunciated with “PULL UP” repeating continuously while the conflict is within the warning area.

Look Ahead Modulation:

<lookAhead>

```
<warningLookAheadSeconds>30</
warningLookAheadSeconds >
```



```
<cautionLookAheadSeconds>40</cautionLookAheadSeconds>
```

```
<warningLookUpSeconds>60</warningLookUpSeconds>
```

```
<cautionLookUpSeconds>80</cautionLookUpSeconds>
```

```
</lookAhead>
```

The *enable* = “*true*” can be suppressed as it is implicit when creating the modulation entry

warningLookAheadSeconds [integer]: Time in seconds to red band’s first step

cautionLookAheadSeconds [integer]: Time in seconds to yellow band’s first step entered.

warningLookUpSeconds [integer]: Time in seconds to red band’s second step

cautionLookUpSeconds [integer]: Time in seconds to yellow band’s second step.

<sup>1</sup>ProSim does not support OBSTACLE alerts

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# Cockpit Setup Options B738 & B38M

From Manuals

## Contents

- 1 Audio
- 2 Displays
- 3 FMS/CDU
- 4 HGS (HUD)
- 5 Options
- 6 QTG
- 7 Units
- 8 Remarks

## 1 Audio

**Name: EGPWS TCF inhibit**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Disables TCF mode globally (bypassing modulation file)

**Name: EGPWS RFCF inhibit**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Disables RFCF mode globally (bypassing modulation file)

**Name: EGPWS terrain ahead inhibit**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Disables terrain ahead mode globally (bypassing modulation file)

**Name: GPWS 2500**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: GPWS 1000**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 500**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 400**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 300**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 200**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 100**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 50**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 40**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 30**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 20**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: GPWS 10**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: Altitude alert**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: Minimums callout**

Options: [0: Approaching minimums | 1: Plus 100]

Default: [0: Approaching minimums]

**Name: Airspeed Low alert**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Datalink Chime**

Options: [0: None | 1: All | 2: Sterile Cockpit]

Default: [1: All]

Description: Sterile option will disable chimes below 10000ft with any engine running

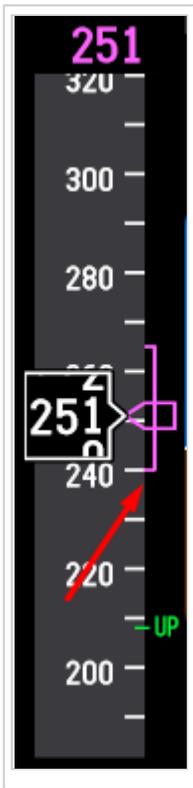
## 2 Displays

### Name: VNAV Speed band (beta<sup>1</sup>)

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Indicates the FMC target speed range during VNAV PTH descents. Bottom of speed band indicates AT wake up speed and top indicates [PTH -> SPD reversion (U14) / DRAG REQRD FMC message (up to U13)]



### Name: WX radar resolution (px / nm)

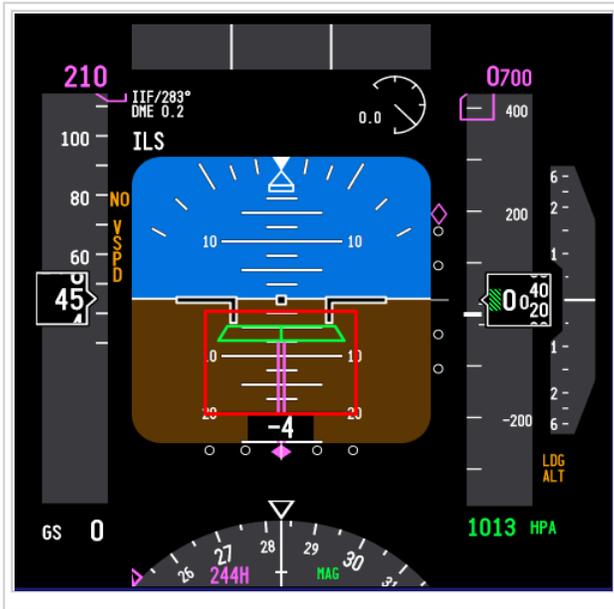
Options: [0: 20 | 1: 10 | 2: 5]

Default: [0: 20]

### Name: Rising runway

Options: [0: NO | 1: YES]

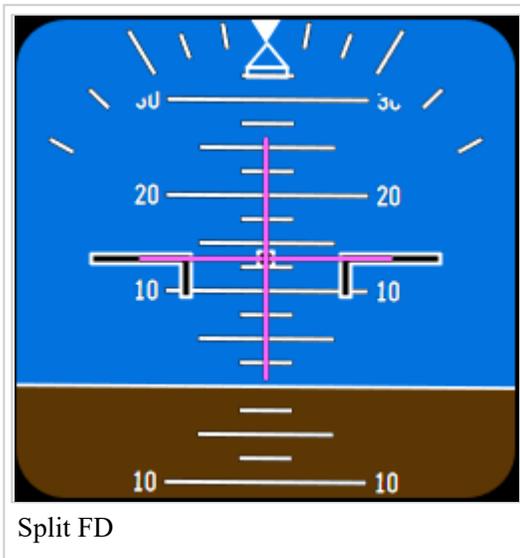
Default: [0: NO]

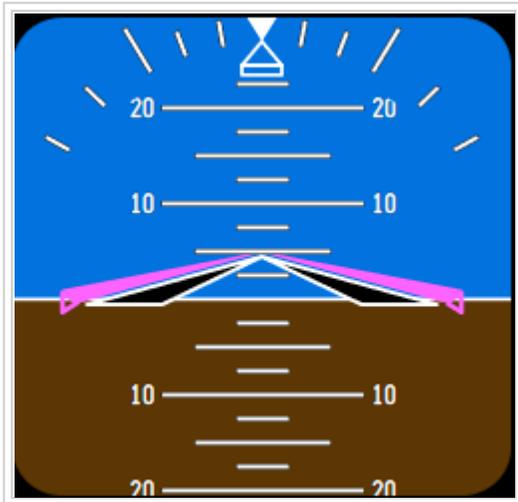


Name: Single cue F/D

Options: [0: NO | 1: YES]

Default: [0: NO]





Single cue FD

**Name: Heading scale** B38M Only

Options: [0: NO | 1: YES]

Default: [0: NO]



**Name: Trim indicator** B38M Only

Options: [0: NO | 1: YES]

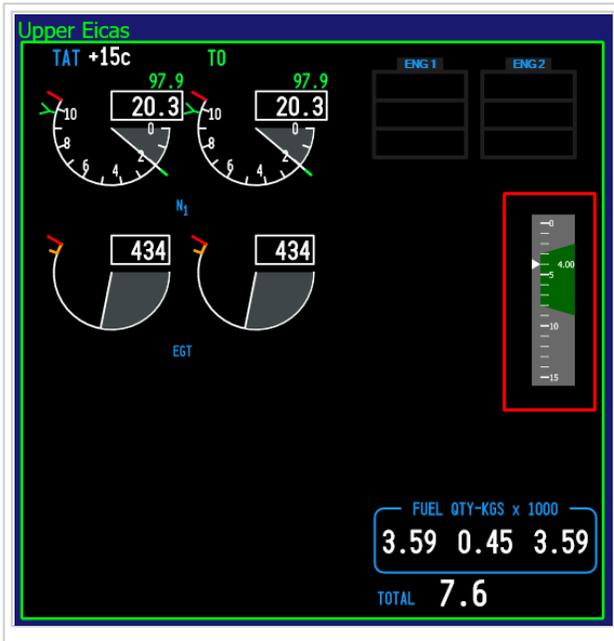
Default: [0: NO]



**Name: Trim indicator upper B738 Only**

Options: [0: NO | 1: YES]

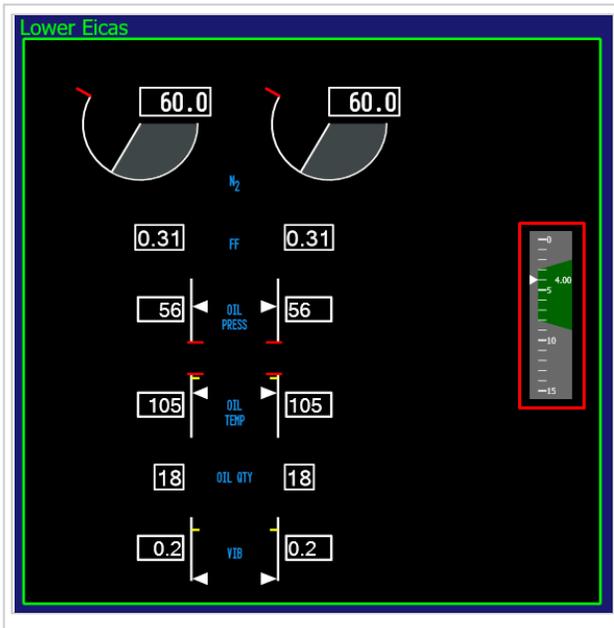
Default: [0: NO]



**Name: Trim indicator lower B738 Only**

Options: [0: NO | 1: YES]

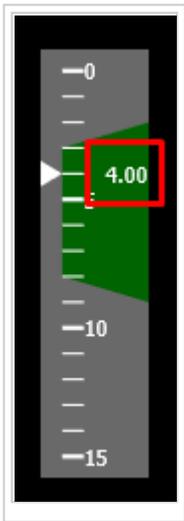
Default: [0: NO]



**Name: Show trim value B738 Only**

Options: [0: NO | 1: YES]

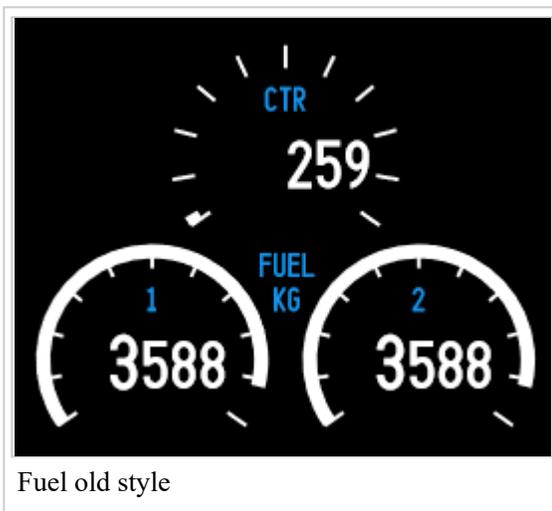
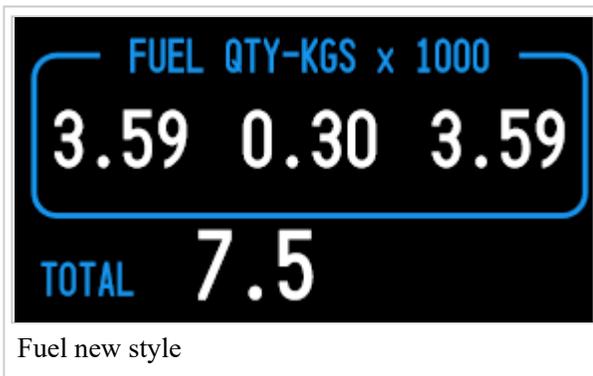
Default: [0: NO]



**Name: Fuel gauges**

Options: [0: New style | 1: Old style]

Default: [0: New style]



**Name: Course lines**

Options: [0: NO | 1: YES]

Default: [1: YES]



**Name: Range rings**

Options: [0: NO | 1: YES]

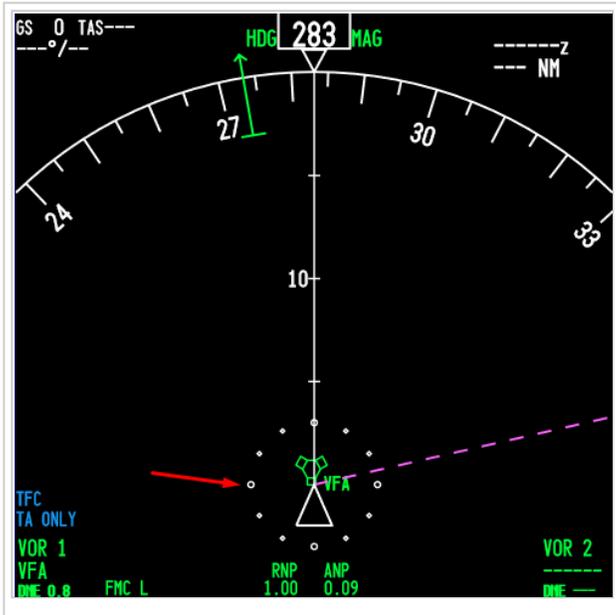
Default: [1: YES]



**Name: TCAS range rings**

Options: [0: NO | 1: YES]

Default: [1: YES]



**Name: Orientation:Map**

Options: [0: Track up | 1: Heading up]

Default: [1: Heading up]

**Name: Orientation:Vor**

Options: [0: Track up | 1: Heading up]

Default: [1: Heading up]

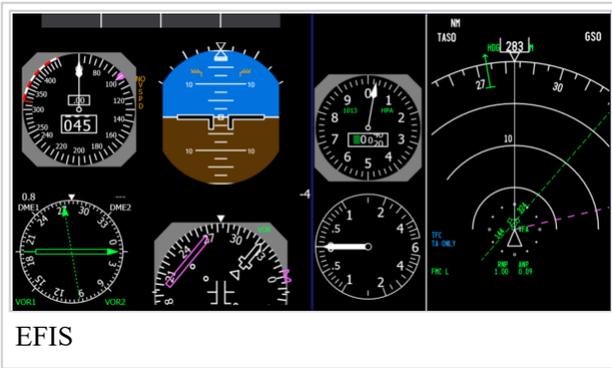
**Name: Layout B738 Only** - Option not available if FMS version is U13 or later

Options: [0: Normal | 1: EFIS]

Default: [0: Normal]

Note: Selection of EFIS mode will show EICAS in side by side mode.

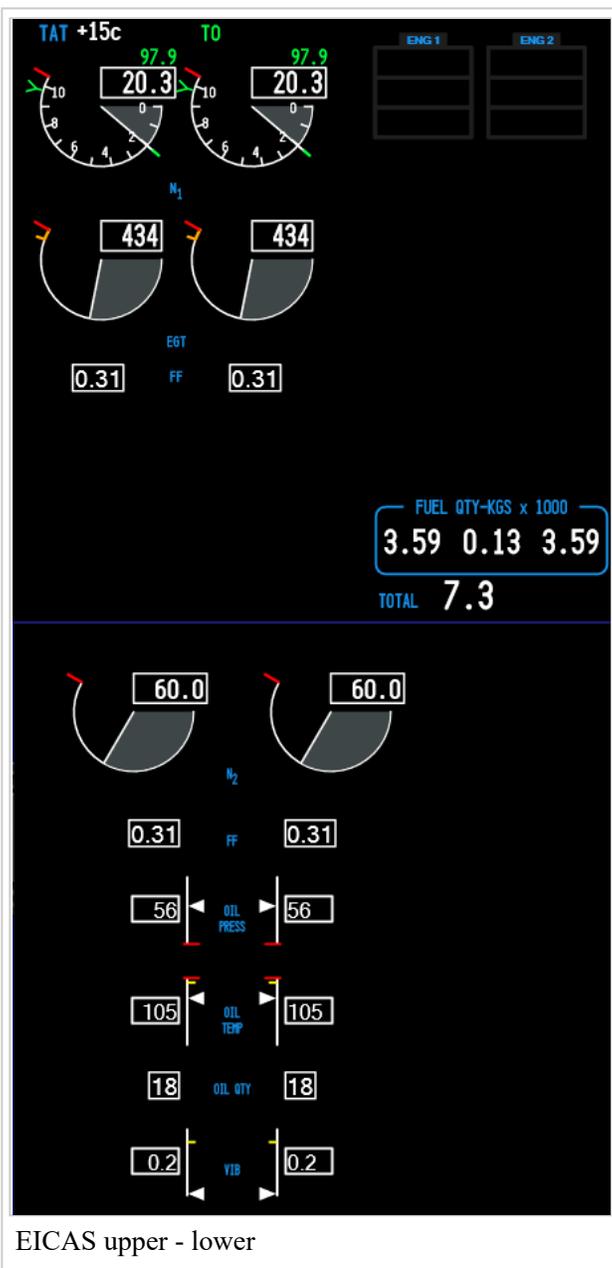




**Name: EICAS layout B738 Only**

Options: [0: Over/Under | 1: Side by Side]

Default: [0: Over/Under]





EICAS side by side

**Name: Vertical Situation Display B738 Only**

Options: [0: NO | 1: YES]

Default: [0: NO]

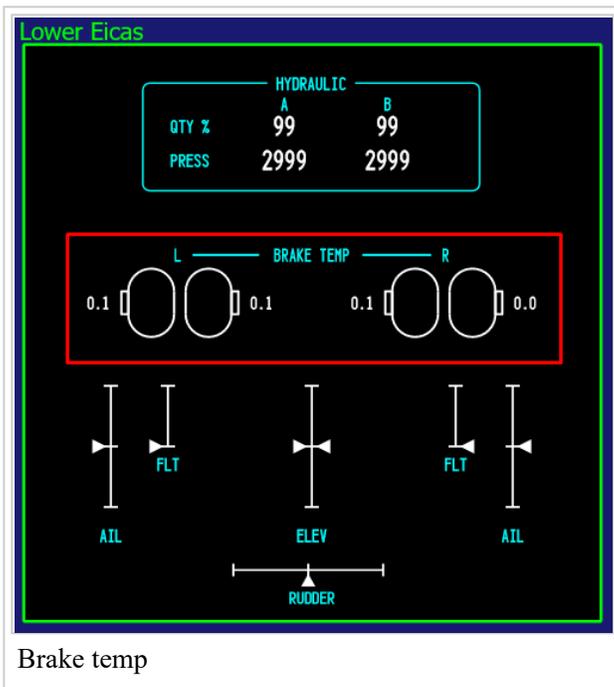


VSD

**Name: Brake temperature**

Options: [0: NO | 1: YES]

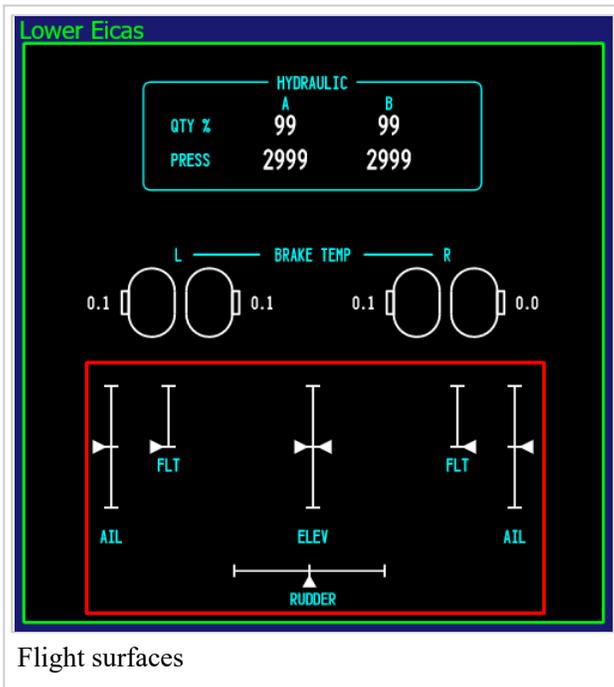
Default: [1: YES]



**Name: Flight surfaces**

Options: [0: NO | 1: YES]

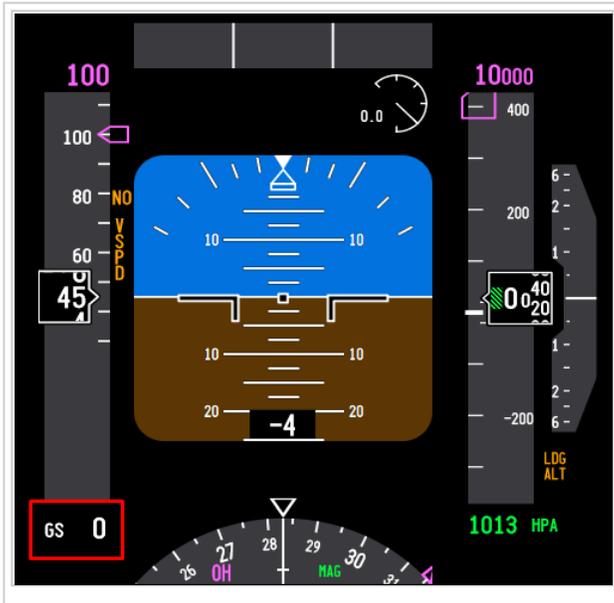
Default: [1: YES]



**Name: Groundspeed in speedtape**

Options: [0: NO | 1: YES]

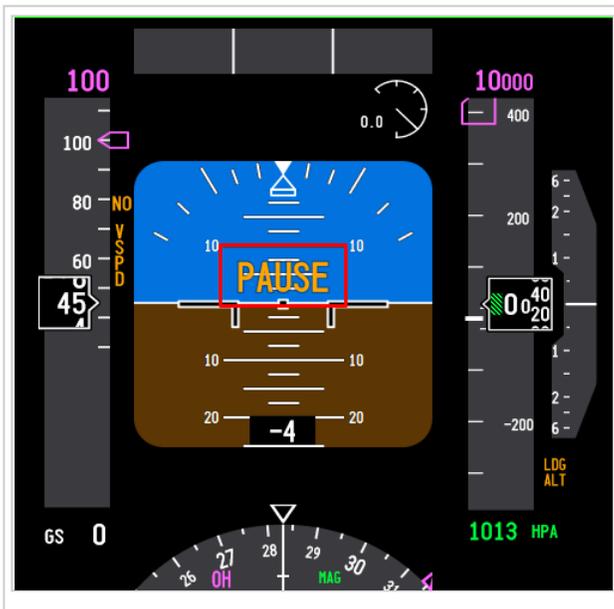
Default: [0: NO]



**Name: Sim state in PFD**

Options: [0: NO | 1: YES]

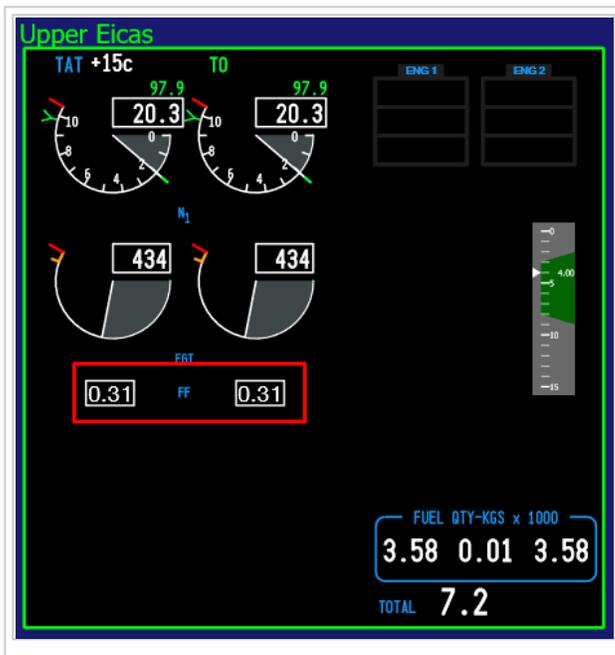
Default: [1: YES]



**Name: Show fuel flow in upper EICAS B738 Only**

Options: [0: NO | 1: YES]

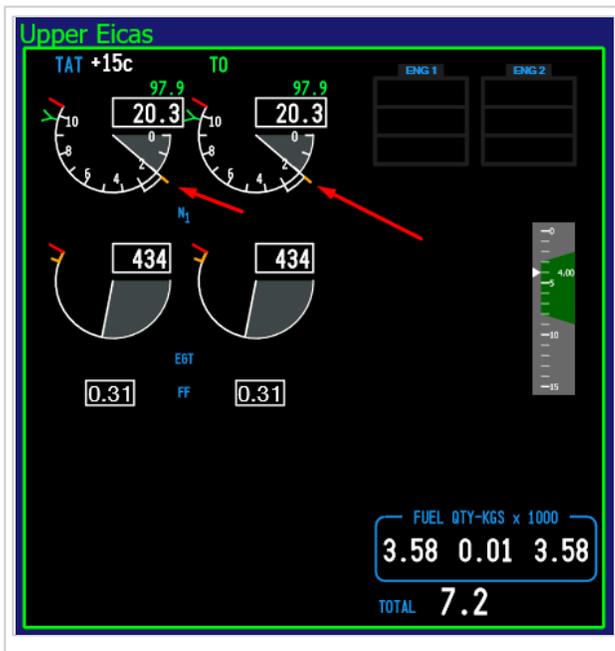
Default: [1: YES]



**Name: Show manual throttle position in EICAS**

Options: [0: NO | 1: YES]

Default: [0: NO]



**Name: Show datalink advisories in EICAS**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Suppress EXCESS DATA message**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Gauge Backlight** B738 Only

Options: [0: Dimmable | 1: Always On]

Default: [0: Dimmable]



Dimmed gauge

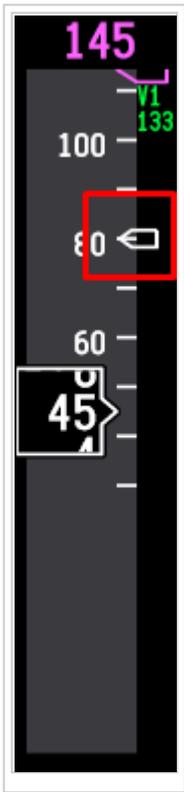


Illuminated gauge

**Name: Extra speedbug**

Options: [0: None | 1: 80 kts | 2: 100 kts]

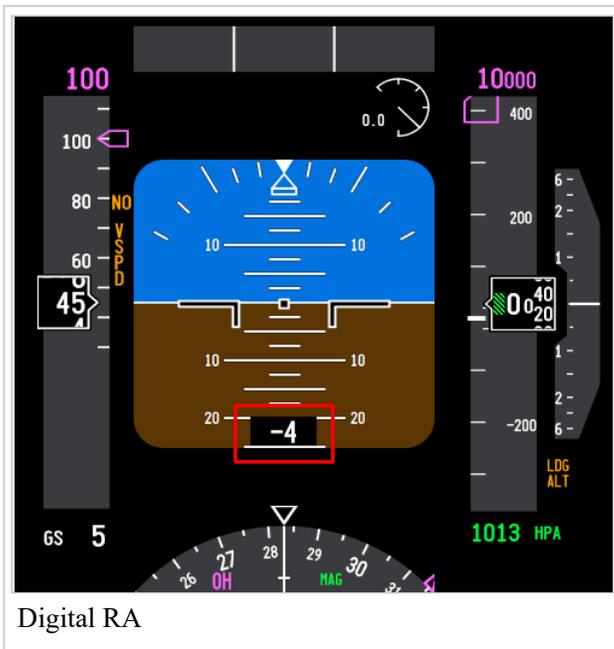
Default: [0: None]

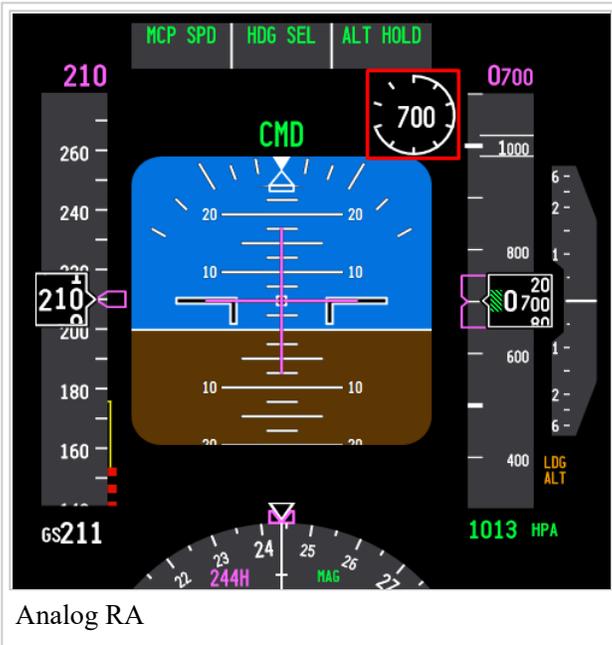


**Name: Radio Altimeter B738 Only**

Options: [0: Digital | 1: Analog]

Default: [0: Digital]

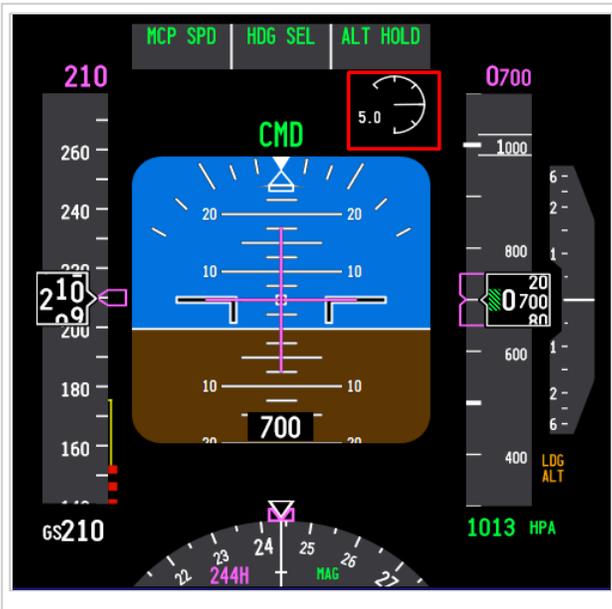




Name: AOA Indicator B738 Only

Options: [0: NO | 1: YES]

Default: [0: NO]



### 3 FMS/CDU

Name: ALTN DEST Requires commercial license

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Enables the ALTN DEST FMS option in the RTE page

**Name: PLAN FUEL** Requires commercial license

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Enables the PLAN FUEL FMS option in the PERF INIT page

**Name: Standby Database** Requires commercial license

Options: [0: NO | 1: YES]

Default: [1: YES]

Description: Enables standby database selection (procedure simulation only) from the IDENT page

**Name: Reset FMS with no power (Commercial Only)** Requires commercial license

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Resets the FMS in case of power loss

**Name: Reset FMS after landing**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Resets the FMS after landing

**Name: RW/APP CRS error message**

Options: [0: NO | 1: YES]

Default: [1: YES]

Description: Prevents the RW/APP CRS alert message (i.e. in case of inconsistent database)

**Name: Limit CRZ to TRIP alt**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Limit CRZ entry to TRIP altitude

**Name: QRH Speeds Default**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Default display of QRH speeds

**Name: Single click to select QRH speed**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Enables single LSK select to select V speed, instead of 2 selects (copy to SP, then paste on LSK)

**Name: Flap source**

Options: [0: Handle | 1: Position]

Default: [0: Handle]

Description: Use of simulator flap position or TQ flap handle for some logic inputs. If TQ flap handle is assigned in ProSim, then Handle(Default) should be use

**Name: Allow APP REF on ground**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Allows approach speed entry using APP REF page, while on ground

**Name: VNAV Speed upper limit**

Options: [0: +5 | 1: +10 | 2: +15]

Default: [2: +15]

Description: Upper VNAV speed threshold (DES) - (U14: VNAV PATH will revert to VNAV SPEED / up to U13: Trigger DRAG REQUIRED message)

**Name: VNAV Speed lower limit**

Options: [0: -5 | 1: -10 | 2: -15]

Default: [1: -10]

Description: Lower VNAV speed threshold (DES) - AT wake up speed

**Name: VNAV Energy Compensation**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Gradual commanded speed change (beta<sup>1</sup>)**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Reserved for future use

**Name: Common VNAV**

Options: [0: NO | 1: YES]

Default: [1: YES]

Description: Enables Common VNAV option

**Name: VNAV ALT**

Options: [0: NO | 1: YES]

Default: [1: YES]

Description: Enables VNAV ALT option

**Name: ALT INT mode**

Options: [0: Delete all restrictions to MCP altitude | 1: Delete first restriction only]

Default: [0: Delete all restrictions to MCP altitude]

Description: Deletes ALL or just the FIRST altitude restriction up/down to MCP altitude

**Name: Thrust Mode Display header**

Options: [0: Option 1 | 1: Option 2]

Default: [0: Option 1]

Description: Changes TMD format on upper EICAS



TMD Option 1



TMD Option 2

**Name: Alternate coordinate validation** Requires commercial license

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Enables alternate coordinates entry format

**Name: UNABLE NEXT ALT alert message** Requires commercial license

Options: [0: Enabled | 1: Disabled]

Default: [0: Enabled]

Description: DEBUG option. Should only be used if requested

**Name: Reference N1 Readout(AUTO)**

Options: [0: NO | 1: YES]

Default: [1: YES]

Description: Enable visibility of N1 target above N1 gauges if AUTO is selected



Ref N1 enabled



Ref N1 disabled

**Name: Reference N1(AUTO) with assumed temp**

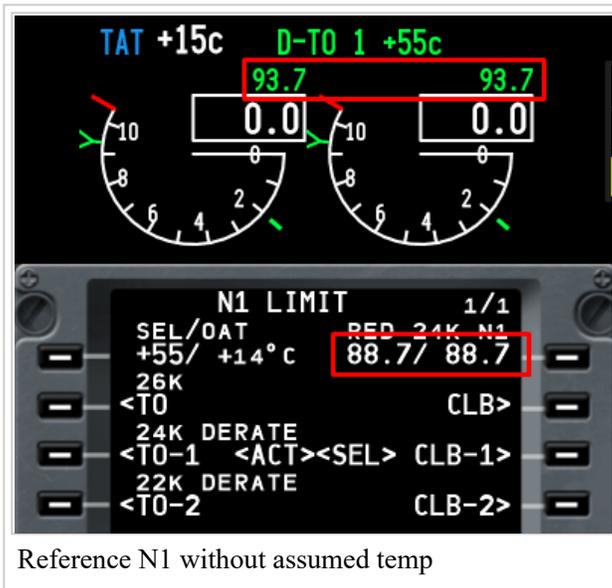
Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Enable the use of assumed temp to



Reference N1 with assumed temp



**Name: ABEAM Waypoints** Requires U13 feature

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Enable the ABEAM prompt in the LEGS page

**Name: EO SIDs** Requires U13 feature

Options: [0: NO | 1: YES]

Default: [1: YES]

Description: Reserved for future use

## 4 HGS (HUD)

*All options require HUD feature*

**Name: AII Mode**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Ground Decel symbol**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Tail Strike symbol**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Ground Loc Dev Scale**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: AIII Rollout**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Armed FD symbol**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Flash Pitch & Roll diff**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Inhibit Single Channel autopilot annunciation**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Digital Annunciator Panel**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Horizontal Flip**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Vertical Flip**

Options: [0: NO | 1: YES]

Default: [0: NO]

## 5 Options

**Name: IAN**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Approach option to provide an ILS-like display indications, and autopilot control laws for non-precision (Category I) approaches.

**Name: NPS**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Displays the combined current lateral navigation (LNAV) and vertical navigation (VNAV) with actual navigation performance (ANP) and required navigation performance (RNP).

**Name: Aspirated TAT probe**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Door Control**

Options: [0: ProSim | 1: External]

Default: [0: ProSim]

**Name: Navaid virtualization**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Weather radar mode**

Options: [0: Single | 1: Dual]

Default: [0: Single]

**Name: Terrain Mode**

Options: [0: SIMPLE | 1: ADVANCED]

Default: [0: SIMPLE]

Description: Advanced option has sweep effect and allows PEAKS/CYAN selection.

**Name: Terrain Display Cyan**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Terrain Peaks**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Auto Mute**

Options: [0: Disabled | 1: Enabled]

Default: [1: Enabled]

**Name: Autofailures**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Engine rating B738**

Options: [0: 24k | 1: 26k]

Default: [1: 26k]

**Name: Engine rating B38M**

Options: [0: 25k | 1: 27k | 2: 28k]

Default: [2: 28k]

**Name: Takeoff speed**

Options: [0: V2 + 15 | 1: V2 + 20]

Default: [1: V2 + 20]

**Name: Takeoff lateral mode**

Options: [0: Blank | 1: HDG SEL]

Default: [1: HDG SEL]

**Name: Automatic ground call**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: Repositioning**

Options: [0: Always quick | 1: Automatic | 2: Always full]

Default: [1: Automatic]

**Name: Attend indicator**

Options: [0: Blink | 1: Steady | 2: Blink 10 sec | 3: Steady 10 sec | 4: Blink 10 sec + Reset Call | 5: Steady 10 sec + Reset Call]

Default: [0: Blink]

**Name: Call indicator ON when pressing the attend button**

Options: [0: NO | 1: YES]

Default: [1: YES]

**Name: Acquisition alert altitude B738**

Options: [0: 750 ft | 1: 900 ft]

Default: [0: 750 ft]

**Name: Acquisition alert altitude B38M**

Options: [0: 750/200 ft | 1: 900/200 ft | 2: 900/300 ft]

Default: [0: 750/200 ft]

**Name: Short field Package**

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

**Name: Seatbelt auto 10k feet option**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Dual elevator trim switches**

Options: [0: NO | 1: YES]

Default: [0: NO]

Description: Some hardware has 2 independent trim switches. Enable this option if you want to make the trim input to work in the correct way(using BOTH switches)

**Name: IRS alignment time**

Options: [0: Normal | 1: Quick]

Default: [0: Normal]

Description: Normal will take up to 15 min. Time is based on latitude. The further north, the longer it will take). Quick will take 1 minute.

**Name: Slave ISFD barometric setting to Capt EFIS**

Options: [0: No | 1: Yes]

Default: [0: No]

**Name: Default ground power at start up**

Options: [0: Disconnected | 1: Connected]

Default: [1: Connected]

**Name: Use legacy radios (5 digits)**

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

Description: Allows the use of older hardware (script based) where frequencies are handled with 5 digits only.

**Name: Link RMI switches to EFIS**

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

Description: Links RMI ADF/VOR selectors to EFIS. This will allow the proper use of the RMI in case RMI hardware is not in use.

**Name: AP Disconnect Warning** B738 Only

Options: [0: CMD Only | 1: CMD + CWS Reversion]

Default: [1: CMD + CWS Reversion]

**Name: Stickshaker trim** B738 Only - Requires additional feature

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Rudder trim mixer** Requires commercial license

Options: [0: Enabled | 1: Disabled]

Default: [0: Enabled]

Description: If using control loading systems, option should be disabled to allow proper trim control. For spring centered flight controls, option should be enabled.

**Name: Aileron trim mixer** Requires commercial license

Options: [0: Enabled | 1: Disabled]

Default: [0: Enabled]

Description: If using control loading systems, option should be disabled to allow proper trim control. For spring centered flight controls, option should be enabled.

**Name: Automatic Windshear** Requires commercial license

Options: [0: Enabled | 1: Disabled]

Default: [0: Enabled]

**Name: A/P Engage Logic** Requires commercial license

Options: [0: Unrealistic | 1: Realistic]

Default: [0: Unrealistic]

**Name: High Altitude Landing Option** Requires commercial license

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

Description: If enabled, EFIS baro minimums maximum value changes from 9999 to 14000 and cabin altitude alert threshold changes to 14000

**Name: PLI mode** Requires professional license

Options: [0: Normal | 1: Enhanced]

Default: [0: Normal]

**Name: Voice Channel Spacing**

Options: [0: 25Khz | 1: 8.33Khz]

Default: [0: 25Khz]

**Name: Use ARP elevation as runway elevation**

Options: [0: NO | 1: YES]

Default: [0: NO]

**Name: Live Weather mode**

Options: [0: Manual | 1: Auto (15 minutes) | 2: Auto (30 minutes)]

Default: [0: Manual]

**Name: 737 Classic Option** B738 Only, Requires classic feature

Options: [0: Disabled | 1: Enabled]

Default: [1: Enabled]

**Name: Speed Trim** Requires professional license

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

**Name: Operational Autoland** Requires professional license

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

## 6 QTG

*All options require eQTG feature*

**Name: Transport Delay on Visual**

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

**Name: Transport Delay on Displays**

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

**Name: Flight Controls trigger transport delay**

Options: [0: Disabled | 1: Enabled]

Default: [0: Disabled]

## 7 Units

**Name: Weight**

Options: [0: KG | 1: LBS]

Default: [0: KG]

**Name: Temperature**

Options: [0: C | 1: F]

Default: [0: C]

**Name: Time**

Options: [0: Local time | 1: UTC | 2: FS time]

Default: [0: Local time]

**Name: Default baro**

Options: [0: HectoPascal | 1: Inches]

Default: [0: HectoPascal]

**Name: Runway** Requires commercial license

Options: [0: FT | 1: MT]

Default: [0: FT]

**Name: Oil Qty** Requires commercial license

Options: [0: Units | 1: Percentage]

Default: [0: Units]

## 8 Remarks

<sup>1</sup> Available only with beta releases. Stable releases will not have this option available

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