fsAerodata Navigation Database

Flight Simulator FSX

Flight Simulator FSX Steam

Prepar3D

User Manual

Vers. 1.32

Web: www.fsaerodata.com

email/support: support@fsaerodata.com

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NOTE:

fsAerodata software is intended for hobbyists and personal training in conjunction with Flight Simulator tool, and is not suitable or certified for actually train a person to operate an aircraft.

Support

fsAerodata is a new product; check out on our website what support options are available. At this first stage of the product, support is available via email at support@fsaerodata.com

DEUTSCH: Fragen und Technische Untesrstüzung ist per email verfügbar: support@fsaerodata.com

ESPAÑOL: Para cuestiones o soporte técnico, pueden contactarnos a: support@fsaerodata.com

Quick Start

IF you are already familiar with the operation of the tool, here is a quick start guide. Follow the next steps to install and configure your flight simulator with an updated navigation database:

1. Open fsAerodata Configuration tool
2. Activate and download the latest AIRAC cycle (button 1)
3. Press INSTALL button to Install database in flight simulator (button 3)
4. Select flight simulator (box 2)
5. Press ENABLE button (button 4)
6. Launch flight simulator
   (repeat steps 4-5 to install database in other flight simulators)

When a new cycle is available, repeat steps 2-3 and launch flight simulator afterwards.

Introduction

fsAerodata is a product for flight simulation that enables the updating of the built-in default aeronautical navigation database in FSX and Prepar3D to current, real world, conditions. The updates follow the regular 28-day AIRAC cycles.

The FSX and Prepar3D flight simulation platforms include an outdated navigation database dated from 2005. The database has a complex and custom format that makes the updates a labour-intensive and challenging task, especially for approaches.

The fsAerodata tool includes algorithms that automate the conversion of the aeronautical source data released every 28 days, in a format that is compatible with FSX and Prepar3D.

The source data is supplied by Navigraph and is updated every AIRAC cycle. Each 28 days, a new dataset is ready in fsAeroData to download and install in your flight simulator. fsAerodata concerns only the default FSX/Prepar3D database; all flight simulator add-ons and tools are updated via Navigraph's FMS Data Manager directly.

In addition to Navaids, fsAerodata updates all approaches, departures and arrival procedures worldwide to real world conditions. Traffic Control and AI traffic will benefit by using real approaches (only on final approach).

The fsAerodata tool can be purchased as a 1-year license, valid 365 days from the date it was purchased. Additionally, you'll need an active subscription to Navigraph, which is the provider of the source data to fsAerodata. When downloading the cycle, you'll be requested to validate your Navigraph subscription.

Product features

Together with Navaids and Airways, a total of 6,700 airports get a full revision of more than 90,000 approaches including STAR arrivals, and SIDs departures.

Worldwide update of flight simulator navigation database, including following elements:
- Navaids: VORs, DME, NDB, TACAN, Enroute and Terminal Waypoints, (update identification IDs, frequency, coordinates, magnetic variation).
- Instrument Approaches, including SIDs and STARs procedures.
- Airways Routes, including High and Low altitude airways.
- Update of Airspace (currently includes US, Canada, most parts of Europe); see detailed coverage on forum
- Full coverage of ARTCC / FIR real-world sectoring, including altitudes and center frequencies, for following countries: US, Canada and West Europe.
- Update of Airport Comm Frequencies worldwide.
  Access to SIDs & STARs procedures on default GPS navigation unit (only Prepar3D).
- Update of Runway designators.
- Update of Airport Names and ICAO identifiers (more than 650 ICAO idents worldwide).
- ILS stations: update of frequency, name, Identifier, Magvar, correct heading acc published charts, DME and glideslope station. New stations added.
- Obsolete Navaids are disabled.
- Simulation of TACAN facilities (only Prepar3D).
- Air Traffic Control (ATC): Selection and aircraft vectoring of final approaches based on updated database.
- Capability to successfully execute real world routes.
- Fully Compatible with new Prepar3D V4.
- Update of Enroute ARTCC / FIR Flight Information Regions, including boundaries, frequencies, names, locations.
  Please note, fsAerodata does not update 3rd party addons airport data.
- Traffic Control: Simulation and tracking of real approaches using the updated database. If an ILS flight plan is entered, traffic control will use the updated approaches installed; on the ATC menu, the user can select alternative approaches.
- Flight planning using default tool will generate routes using real world navaids and airways.
- AI traffic benefits from updated approaches, following real world condition approaches in some conditions.

Background

Microsoft Flight Simulator franchise introduced a first navigation database on Flight Simulator 2000, released in 1999, which included worldwide radio navigation aids and airports, built from Jeppesen's database. Later releases of the franchise received updates of aeronautical information (2001, 2003, 2005). The last update was on FSX and based on Jeppesen navigation dataset from mid-2005.

Due to the closure of the franchise, the updates to the navigational coverage were terminated. New products Lockheed Martin's Prepar3D and Dovetail FSX Steam edition, based on FSX product, did not receive updates of aeronautical aids and airport coverage.

After 10 years without official navigational data updates, some alternatives are available. Several Payware add-ons include FMS and GPS systems which can work with updated navigational data. A freeware service which offers free monthly updates limited to worldwide navigational aids is available.

fsAerodata service claims the inclusion of every documented navigational aid, airways and airport approaches.

Attention: To access the updates, a subscription with Navigraph FMS service is required.

The program is compatible with FSX, FSX Steam and Prepar3D programs.

Comparative Table Navigation Database			
	Default Flight Simulator (data fom 2005)		fsAerodata (AIRAC 1705
Airports w. Instrument Approaches	5,422		6,723
Instrument Approaches (IAP)	20,656		30,205
SIDs	0		43,557
STARs	0		31,576
Airways segments	69,445		97,263
VOR / DME	3,610		3,834
TACAN / VORTAC	0		988
NDB	8,347		5,419
NDB/VOR/ILS frequencies updated			106
Runways designators updated			3,569
Obsolete NDBs disabled			3,041
Obsolete VORs/DME disabled			826
NAMED Waypoints			119,850
Terminal Waypoints	65,484		136,686
Airport Comms frequencies	36,879		41,584

Requirements:

FSX, FSX-SE, Prepar3D v1 to v3. Administrator rights may be required, depending where flight simulator is set up on a PC.

A subscription with Navigraph FMS Data service is required to access and download the AIRAC cycles.

An internet connection to validate and download AIRAC cycles.

Limitations / compatibility:

fsAerodata does not update 3rd party addons airport data.

Markers are not updated at present.

Navaids scenery objects, removed or no longer in use, are not removed at present.

Airport data are not updated or modified (runways info, communication frequencies).

The software has been verified with the default flight simulator.

Payware sceneries or tools may have already updated navaids and/or approaches of certain airports. fsAerodata will update approaches to the latest AIRAC dataset; navaids and terminal fixes are not removed or disabled. Please read instructions below on the arrangement of scenery priority on flight simulator, for Payware sceneries.

Please refer to the compatibility list, located on the FAQs section of our forum, for the latest status of compatibility or limitations:
https://www.fsaerodata.com/forum/viewtopic.php?f=5&t=127

License conditions:

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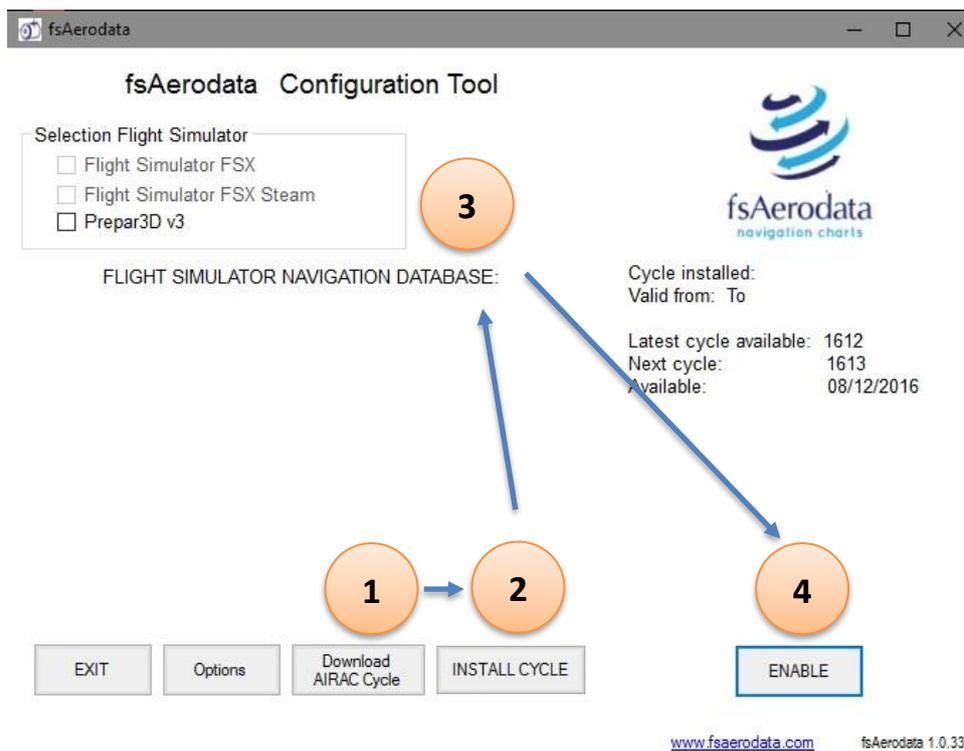
First Run of Configuration Tool

After the purchase of fsAerodata, download and install program on your computer; you can see download link on the email you received with your purchase order information. Installing it outside of Windows Program Files is recommended, to avoid administrative privileges issues. It's not necessary to install it within your flight simulator directory structure.

NOTE: fsAerodata needs administrative rights, particularly if the UAC (User Access Control) is activated. If so, Click right button on mouse, and select "Run as Administrator". Alternatively, open Properties, select Compatibility page and tick the option "Execute this program as Administrator".

Instructions for updating the navigation database

The configuration tool allows installation of new AIRAC cycles, including options to enable or disable the updated database and selection of the flight simulator directories.

Make sure, your flight simulator is not started during the installation and configuration of the database.

The installation of an updated navigation database consists of following steps:

1. Activation and download of AIRAC cycle (button 1)
2. Installation of database (button 2)
3. Selection of flight simulator (box 3)
4. To enable updated database on flight simulator (button 4)
5. Launch flight simulator
   (repeat steps 3-4 to install database in other flight simulators)

Before updating the data on your sim for the first time, the program will ask you to do a backup of the original files in flight simulator related to navigational data. By default, files are

stored under directory C:\fsad_backup_org, to avoid issues with administrative privileges. You can choose another directory, but the name cannot be changed. Once the directory is selected, the program will place the backup files in the location selected.
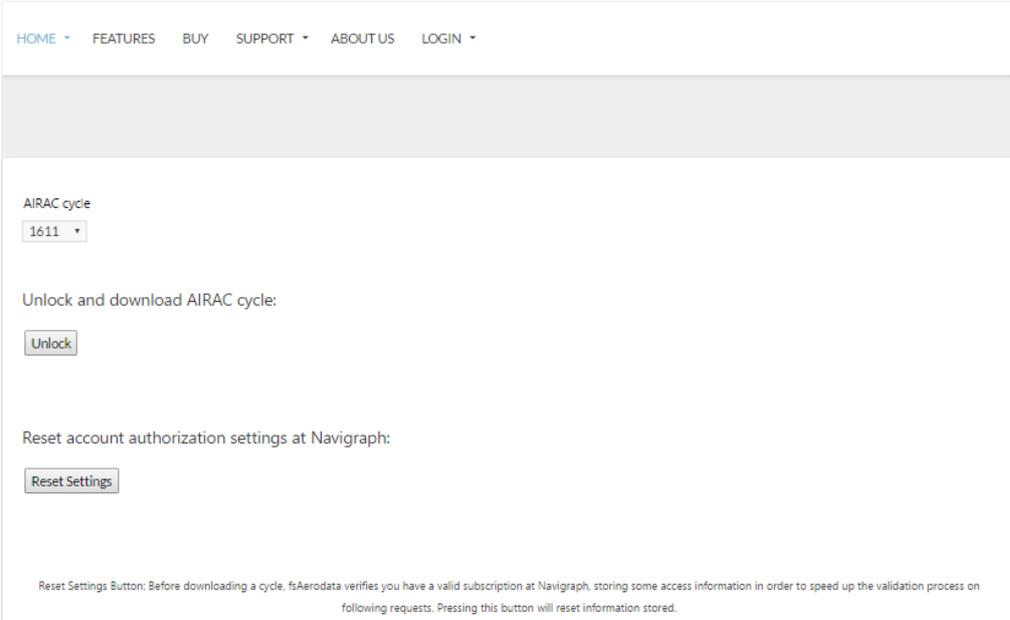
Activation and download of AIRAC dataset (button 1)

Every 28 days, an updated dataset is available. The dataset consists of files formatted and ready to install on flight sim.

The database includes two versions; one version for FSX/FSX-SE and another for Prepar3D; the FSX version does not include SIDs and STARs data. Both versions are included in the downloaded archive.

Press button "Download AIRAC cycle" to redirect to the Validation webpage on fsAerodata webpage. Alternatively, activation page is located at following web address: https://www.fsaerodata.com/support/airac-cycle.

To access validation page, you need to be registered as a user on fsAerodata.

The validation system is used to verify that you have an active subscription at both Navigraph and fsAerodata. Press "Unlock" button to start validation. The first step is the validation with Navigraph; the system connects with Navigraph server and a window pops up requesting rights to access your subscription information at Navigraph. After authorizing access, the system verifies subscription at Navigraph and later at fsAerodata. After positive verification, the latest cycle is downloaded onto your computer. If there are any errors, they will be displayed on a pop up window.

To speed up the authorization process on the following cycles, fsAerodata keeps authorization access information for later use. In case you need to initiate or reset, please press "Reset" button and afterwards start unlock of cycle as instructed above.

Navigraph user log in is stored as cookies in your browser. If you need to sign in and validate as a different user with Navigraph, please delete cookies linked with Navigraph. You can find more information how to do this on the help menu of your default browser.

After the cycle has been downloaded, open the Configuration Tool and press INSTALL button. In the directory window, enter the directory path where the fsAerodata was downloaded. Afterwards, the tool will install and configure the navigation dataset on your flight sim.

Selection of the flight sim (button 2):

The configuration tool detects automatically which simulators are currently installed. You can install the navigation data on one simulator at a time. To install the database on one of the flight sims, check it in the selection box and then press button INSTALL CYCLE.

In the case of the simulator not being detected automatically, its location can be entered manually via the options menu.

Installation of new AIRAC cycle (button 3)

At program start, it shows the current AIRAC cycle installed on your sim, its validity and when the next cycle is available.

Press the INSTALL button to install the latest navigation dataset in flight sim. A window opens to browse the location where the AIRAC database was downloaded. After the AIRAC file has been selected, the program installs the navigation files onto the fsAerodata subdirectory [fsAerodata dir]\Navigation Data. The first time an AIRAC is installed, it sets the scenery configuration files [scenery.cfg] of the selected flight simulator, with the proper entries.

During the installation, the program creates a backup of the previous dataset. They can be found in folder [fsAerodata dir]\Navigation Data\OLD\

Please try to always use the latest cycle available. Previous cycles which were already activated, are available on our server maximum one month after its expiry date.

Enable/disable navigation database (button 2)

The status of the navigation database installed is displayed in the status window.

If the default (original configuration) database is installed, the button displays ENABLE.

ENABLE button: press the button to install the updated navigation database in flight sim. During the process, a window opens during a few seconds, and the program creates a backup of files and activation of new navigation data on flight sim. After the installation finishes, the

text of the button changes from ENABLE to DISABLE. The status shows the message "FLIGHT SIMULATOR DATABASE: UPDATED"

DISABLE button: press the button to revert to flight sim default database. A new window opens up for a few seconds, while the files are being copied to the flight sim directory and fsAerodata database becomes disabled.

It's not necessary to disable navigation database when installing a new cycle.

NOTE: if you install new sceneries/airports on flight sim, please DISABLE fsAerodata first, to guarantee compatibility between fsAerodata and other sceneries. After the installation is completed, fsAerodata can be enabled again.

Options

Press Options button to access to manual selection of paths and options. Following options are available and they are set by default:

Airspace: includes updated controlled airspace and restricted sectors.

FIR Space Regions: includes ARTCC / FIR / Center sectors.

ICAO Identifiers: updates airport IDs that have been replaced by new ones.

Airport Comms: updates flight simulator airport communication and enroute frequencies.

Default ATC Callsign: when enabled (default state), the Airport Comms callsign's are adapted for compatibility with default ATC (e.g. KSAN Ground is named *San Diego Intl*). When disabled, the actual names are used instead (e.g. KSAN Ground is named *Lindbergh*).

Logging and Diagnostics: enables the logging of config tool; only to be used for diagnostics and swhen requested by support team.

Arrangement of scenery priority on flight simulator

As a general rule, put fsAerodata scenery entries, on top of your scenery library. fsAerodata navdata will take priority over old data positioned below, especially for Payware airports with old approaches.

Configuration of GPS units on Prepar3D

The option to load and simulate SIDs and STAR procedures is available on the default GPS units delivered with Prepar3D platform. The GPS unit with SIDS/STARS support is named p3dgps.cab and is located on Prepar3D subfolder \Prepar3D v3\gauges. To enable them, you need to perform the following change in the panel configuration file on your aircraft.

Open panel.cfg file, located in the panel folder of your aircraft directory, with your preferred text editor and replace the entries 'fs9gps' with text 'p3dgps' instead.

As example, to activate the new GPS on default Beech Baron 58 aircraft, go to folder
\Prepar3D v3\SimObjects\Airplanes\beech_baron_58\panel, and open file panel.cfg. Search
for line with text:

    gauge00=fs9gps!gps_500, 0,0

and replace by:

    gauge00=p3dgps!gps_500, 0,0

Save the file and open the simulator. The PROC button on the GPS will show departure and
arrival procedures together with the default approaches.

Uninstalling of fsAerodata

If you reinstall fsAerodata or flight simulator, you can set fsAerodata to the default status for
the selected simulator first.

If the directory of flight simulator has changed due to a new installation, you have to reset the
backup directories on fsAerodata, used when database is enabled or disabled. After fsAerodata
is moved to default status and simulator is reinstalled, delete directories located on
[fsAerodata dir]\system\backup\[flight simulator dir], where flight simulator directory can be
FSX, P3D or FSXSE. Additionally, scenery entries that were inserted by fsAerodata in
scenery.cfg file, have to be removed manually.

After directory, has been deleted, launch fsAerodata and enable the updated database; a new
backup will be created using the new flight simulator directory.

If you forget to disable fsAerodata before reinstalling a flight simulator, run fsAerodata and
disable it for the selected simulator, then re-enable it to re-enable the navigation database.

The backup files can be copied back to the flight simulator in the case of issues with
uninstalling. Go to backup folder selected during first run of the program (by default, it's
located on C:\ fsad_backup_org), enter the directory of the simulator you want to do a backup
of and copy all subdirectories to your scenery folder in flight simulator folder \scenery.

Others

IMPORTANT: Our database is based on latest magnetic declination data. FSX/P3D includes a magnetic declination table (often named MagVar table), based on 2005 data. Most functions, such as the display of magnetic heading and track line are done with reference to MagVar table built inside flight simulator. If the MagVar data is different to actual variation, this will show a small difference between track line and course. The deviation is particularly apparent on an NDB, VOR approach.

The config tool is able to detect and obsolete MagVar table on flight simulator and update it to latest year available. Updated MagVar tables are available at the first cycle each year.

A list of FAQs is maintained and is available on:

Website: www.fsaerodata.com/faqs.htm

Forum FAQs section: https://www.fsaerodata.com/forum/viewforum.php?f=5

Others

End-User License Agreement

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