

PSXseecon Traffic

Version 8.7
for Windows 10 (only)

Manual

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1 Introduction

With PSXseeconTraffic you can fly with Real Live Traffic in P3D and FSX. There is also a special version for the [Aerowinx PSX Simulator](#).

PSXseeconTraffic injects the aircraft within range of your aircraft in your Flight Simulator. For these aircraft the liveries (type and airline) are created as real as possible, depending on how many different AI aircraft you have installed in P3D/FSX.

A list of the liveries that you have installed is input for PSXseeconTraffic and can easily be created with my [VMRGenerator](#) application.

PSXseeconTraffic makes the AI traffic look very smooth. It calculates a position for each live AI aircraft approximately 32 times per second, by computing latitude, longitude, height, bank and pitch. It also takes care of setting the throttles, strobes, lights, flaps and it handles the landing gear at take-off and landing.

It also provides a mechanism to put AI aircraft at parking positions at your origin and destination airports.

In the version for PSX, PSXseeconTraffic sends information to PSX about nearby aircraft to be displayed in the Navigational Displays (TCAS) at the FlightDeck.

Flying in live traffic implies that you have to set your Flight Simulator at real-time, it has no use to choose another day/time, while the live traffic stream is always real-time. For the same reason one should not fly in accelerator mode.

The live traffic information is provided by [RealTraffic](#). The data from RealTraffic is based on ADS-B transponder data of aircraft. When airborne this gives very good results, on the ground it depends on airport policy. At some airports pilots must have their transponder on, while on other airports they have to switch off their transponder after landing. At those airports there will be not much taxiing traffic to see. But on the other airports you may follow the aircraft after landing taxiing to the gate or from the gate to the take-off runway.

You may also notice a difference in quality of their ADS-B equipment, the newest aircraft have the best while older ones need replacement. The good news is that these replacements will take place soon (within a few years).

RealTraffic allows playback of historical flight data up to 48h into the past (in real time), as well as injecting your own aircraft into the real world, allowing others to see where your aircraft is flying and showing up in their traffic feed.

1.1 Co-existence with 3d party traffic, such as VATSIM, IVAO, MyTraffic?

I made it technically possible (although not recommended) that PSXseeconTraffic can coexist with other 3d part traffic, or better phrased: PSXseeconTraffic will not be disturbed by other traffic. What the effect of PSXseeconTraffic aircraft on the third party will be, I don't know ...

PSXseeconTraffic will detect third party aircraft, injected in your Simulator by other programs then PSXseeconTraffic, and it will log a message containing the callsign. The third party aircraft will be ignored.

Do note that there is no collision detection between third party aircraft and live- or parked aircraft.

1.2 System Requirements

PSXseeconTraffic is a C++, 32 or 64 bit Windows application for **Windows 10**.


You need Microsoft Visual C++ Redistributable for Visual Studio **2015**. The standalone installers for x86 (vc_redist.x86.exe) and x64 (vc_redist.x64.exe) can be [downloaded here at Microsoft](#).

The 32 bit version of PSXseeconTraffic depends on (side-by-side-configuration) the Microsoft Simconnect Client version **10.0.61259**. The installation file **SimConnect.msi** can be found in

..\Prepar3D v3\redist\interface\FSX-SP2-XPack\retail\lib\SimConnect.msi

and in FSX at a similar location. Install the SimConnect Client at the PC running PSXseeconTraffic.

The 64 bit version has **no** side-by-side dependencies. It looks like you do not need to install any Simconnect Client.

	<p>The 64 bit version is for Prepar3D v4.1 only!</p>
---	---

1.3 Disclaimer

The RealTraffic stream gives position updates of all aircraft around you every nine seconds. In order to correct for internet transmission lags, and to be able to vectorise the traffic, PSXseeconTraffic buffers the input for thirty seconds. The traffic you see is therefore **thirty seconds behind real time**. If you would consult apps such as [FlightRadar24](#), or would listen to a real ATC channel, this has to be taken into account.

Note that one should also not use the FSUIPC traffic limiter.

The data of RealTraffic is not perfect. Most of the time aircraft land at runways, but sometimes they don't. Please take note of the known issues in following section.

1.4 Known issues

The data coming from **RealTraffic** is not always correct. This may lead to the following issues:

- Sometimes aircraft do not land at the runway but in the fields ...
- Some airlines/aircraft-types always seem to land besides the runway; as-if their ADS_B equipment is not sending the right info.
- Sometimes aircraft disappear from the RealTraffic stream for more than 30 seconds which will lead to disappearance from your Flight Simulator while popping up again (a little) later.
- Runways that lay higher than the surroundings, such as KFSO (with the sea) may cause problems with landings at certain QNHs. They may come in too low, due to the incorrect height above ground measurements, just before the runway.
- Some airlines perform much better than other airlines.

Issues with **SimConnect**:

If an aircraft's gear is not extended when landing or when it dives into the ground, or if an aircraft fails to climb after take-off, there is probably a temporary SimConnect problem in your Flight Simulator (*PSXseeconTraffic is not/no longer getting altitudes above ground from AI aircraft from SimConnect*).

If so, stop PSXseeconTraffic, restart your Flight Simulator and then restart PSXseeconTraffic, to get everything back to normal again.

Issues with **sceneries**:

Some sceneries have runways that are not at the exact spot. For example EHAM of Aerosoft. Aircraft land and take-off way off the centre line.

1.5 Forum and FAQ

For questions & answers and discussions use my Forum at [MyCockpit.org forum](https://mycockpit.org/forum).
or my [Support Forum at AVSIM](https://www.avsim.com/support)

In my MyForum you will find an [FAQ](#).

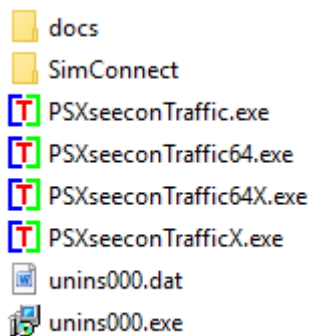
2 Installation

2.1 Download and install

Download setup_PSXseeconTraffic_vx.y.zip from www.lekseecon.nl/PSXseeconTraffic.html.

Unzip and run the **installer**. You may install PSXseeconTraffic at any Windows 10 PC in your local network. **However, do not install it in the C:\Program Files ... folder!**

After installation, you will have a PSXseeconTraffic folder containing the following files and folders:

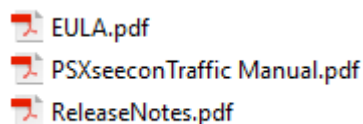


PSXseeconTraffic.exe is the 32 bit application to be used with any user aircraft in FSX or P3D (v3 or v4). PSXseeconTraffic64.exe is the 64 bit application to be used with any user aircraft in Prepar3D **v4.1** only!

PSXseeconTrafficX.exe is the 32 bit application to be used with the Aerowinx PSX with FSX or P3D (v3 or v4). PSXseeconTraffic64X.exe is the 64 bit application to be used the Aerowinx PSX with Prepar3D v4 only!

Note that for all versions the configuration and log files are named PSXseeconTraffic.cfg and PSXseeconTraffic.log.

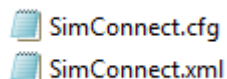
The **docs** folder contains the following files:



Documentation is provided by means of the pdf files PSXseeconTraffic Manual and ReleaseNotes.

The EULA is the End-User License Agreement. This is a legally enforceable contract between you and the Author. By accepting the installation you agree to be bound by the terms of this EULA.

The **SimConnect** folder contains the following files:



For the use of these files see section 3.2.

A **separate** download provides folder **parked** with 5398 airport files, see section 7.1. Unzip and put the folder parked inside PSXseeconTraffic.

Another **separate** download provides the **ParkPosGenerator**, see section 3.3.

2.2 Update and removal

Download PSXseeconTraffic_vx.y.zip, unzip and simply run the installer. It will first uninstall your previous version and then install the new one. PSXseeconTraffic.cfg and SimConnect.cfg (if in use) will not be touched, same for your parked folder.

Removing PSXseeconTraffic from your PC can be done running the uninstaller, just like any other Windows program.

3 Preparations

3.1 Create an AI_liveries.txt file

PSXseeconTraffic does not come with AI aircraft, you have to install these yourself.


On the internet you may find lots of sites describing how to install AI aircraft, for instance [this step-by-step guide for FSX](#), or this you tube video explaining [installing WoAI in P3D V3](#).

Don't forget to add the correct entries for your installed freeware and payware aircraft in
 P3D v2: <appdata> Prepar3D.cfg
 P3D v3: C:\ProgramData\Lockheed Martin\Prepar3D v3\SimObjects.cfg
 P3D v4: C:\ProgramData\Lockheed Martin\Prepar3D v4\SimObjects.cfg
 FSX: <appdata> FSX.cfg.

If you forget it your AI aircraft will not be activated in your Simulator and you will see no traffic and you will find lots of "cannot create messages" in the log of PSXseeconTraffic.

When you're satisfied with the number and diversity of the AI aircraft in your Flight Simulator, you have to create a file with all the AI liveries that you have installed. You have to do that with my tool [VMRGenerator](#).

Download and install VMRGenerator according to the instructions at my website. Run it, it will create the file **AI_liveries.txt**.

	<p>Copy the file AI_liveries.txt into your PSXseeconTraffic folder or enter a full path to the VMRGenerator folder in the User Interface, see section 5.2</p>
---	---

How VMRGenerator detects a livery is described in the VMRGenerator Manual.

How you should treat private aircraft (PVT) and governmental aircraft (GOV) is described in the VMRGenerator Manual too.

3.2 Configure SimConnect [networked use of PSXseeconTraffic only]

If, and only if, you run PSXseeconTraffic and your Flight Simulator at different computers, in your local area network, you have to configure SimConnect. If so perform the following two steps.

3.2.1 Configure SimConnect.cfg

Open the file SimConnect.cfg with Notepad and change the IP address in the line **Address=192.168.1.105** to show the IP address of the computer running your Flight Simulator and put the file in the PSXseeconTraffic folder!

3.2.2 Configure SimConnect.xml

*PSX users: If you already have VisualPSX running remotely from your Flight Simulator you do not have to change the **SimConnect.xml** file at the Flight Simulators computer, because PSXseeconTraffic uses the same Port (**29764**) as VisualPSX.*

Open the file SimConnect.xml, that comes with PSXseeconTraffic, with *NotePad* and change the IP address in the line **<Address>192.168.1.105</Address>** to show the IP address of the computer running your Flight Simulator.

If you have no other applications using SimConnect with P3D/FSX you will need to install SimConnect.xml as follows:

P3D: Copy or move SimConnect.xml to the computer running P3D and place it in the folder C:\Users\\AppData\Roaming\Lockheed Martin\Prepar3D v3

FSX: similar

Otherwise, if you do have other applications using Simconnect with P3D, such as AS16/ASNNext, you will need to **append** the lines starting with <SimConnect.Comm> and ending with </SimConnect.Comm>, **to your existing Simconnect.xml** above the line </SimBase.Document>. The location of your SimConnect.xml file is given above.

So add this block of code, with of course the IP address of your FlightSim PC, see above:

```
<SimConnect.Comm>
  <Disabled>False</Disabled>
  <Protocol>IPv4</Protocol>
  <Scope>global</Scope>
  <MaxClients>64</MaxClients>
  <Address>192.168.1.105</Address>
  <Port>29764</Port>
  <MaxRecvSize>8192</MaxRecvSize>
  <DisableNagle>False</DisableNagle>
</SimConnect.Comm>
```

3.3 Install or generate parking positions for your simulator

You can download from my website a **Parked** folder with some **5400** airport files, put the Parked folder in the PSXseeconTraffic folder.

However, you may want to generate new ones, because you have other airports than I have, or you have the same airports but from a different manufacturer.

If so, download **ParkPosGenerator** from my website and unzip it to your FlightSim PC. See the ParkPosgenerator Manual for further instructions.

4 Operations

4.1 Start and configure Flight Simulator

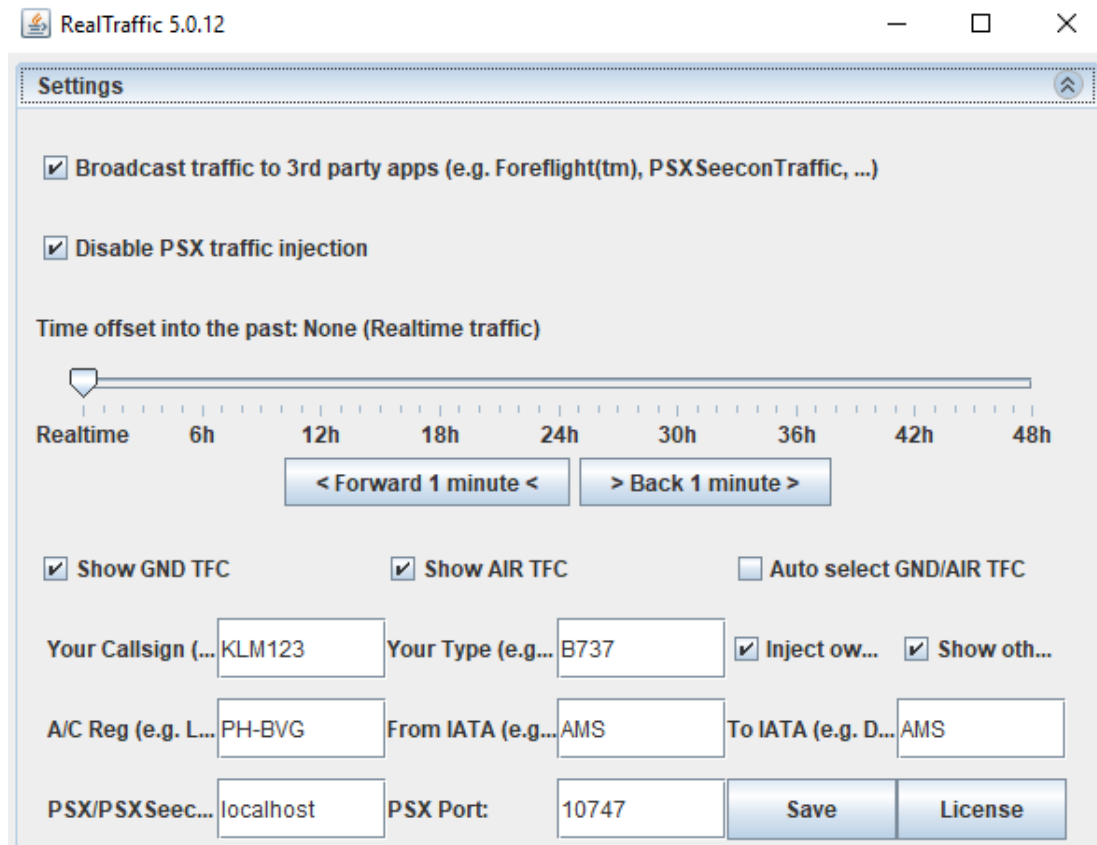
- Prepar3D versions 2.5 or later or Microsoft FSX SP2
- Make sure the Airline Traffic density and General aviation traffic density is set at **0%**.
- Set the day/time to system time, and fly in 1x mode (no acceleration).
- FSX: Do not select "Aircraft cast shadows on the ground"

4.2 Start and configure PSX (*PSX only of course!*).

- Make sure you have real-live / real-time weather in PSX.
- Connect PSX with your Flight Simulator, by using [VisualPSX](#) or [PSX.NET P3D ExternalSim](#) for visuals.

4.3 Start and configure RealTraffic

Make sure you are using **Windows** version **5.0.12** or later.



Always tick the **check boxes** (except Inject own and Show others) **exactly** as shown above and also always use **localhost** and port **10747**.

With the slider you can go back in time (up to 48 hours), and fly with historical data. You can set the slider back and then start PSXseeconTraffic or put the slider back on the fly (while PSXseeconTraffic is running). In the latter case, the aircraft from the previous time frame will gradually disappear within 30 seconds, and the aircraft from the new time frame will appear after 30 seconds.

You can also choose to **inject** your user aircraft position into the RealTraffic live data stream, and you can select to see the aircraft of other Simmers in your environment. Do

note that, just like live aircraft, your virtual user aircraft will always be 30 seconds behind (in time) to yourself in your Sim. So others see your position 30 seconds later. Fill in your callsign, type, registration, origin and destination.

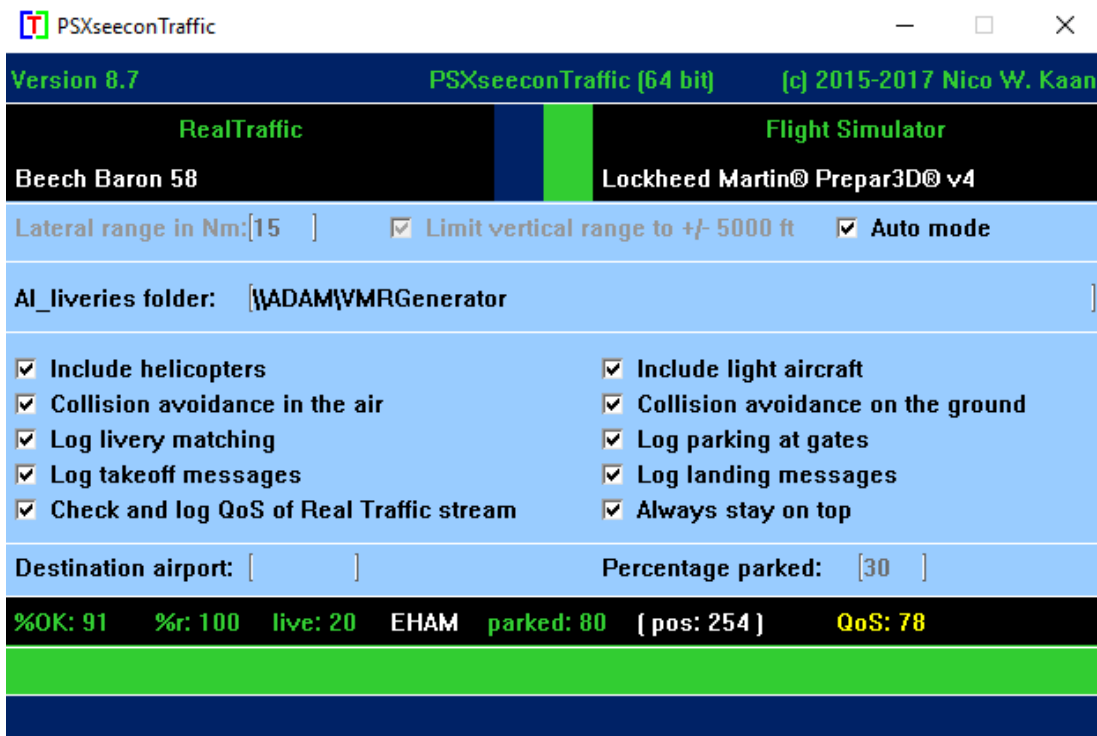
Other simulator users are shown with a leading [S] in the callsign, and [FLIGHT SIM USER] in the nearest 7 traffic list. The current (based on the time slider) weather is always shown for the nearest airport in the traffic list, as an easy reminder to always have the correct QNH and landing/takeoff runways available.

Note that injection of user aircraft is only available when flying real time, not with historical data.

The actual situation of PSXseeconTraffic users flying with live traffic and with "Inject own aircraft" selected is given at this [RealTraffic page](#).

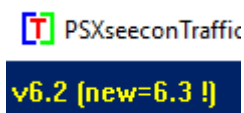
4.4 Start and configure PSXseeconTraffic

Out of the box, PSXseeconTraffic64 may start up like this:



The header line gives information about the version, program name (32/64 bit) and copyright. There is a checkbox to make the program always stay on top of your screen.

At each start-up PSXseeconTraffic will check if there is a new version available. If so the – normally- green version message in the main window will turn yellow, and the new version number will be indicated:



This is just a reminder, you have to download and install the new version yourself. Decimal version changes are just reminders. However, if a full version change is possible the program will halt with error 77, and you have to update first.

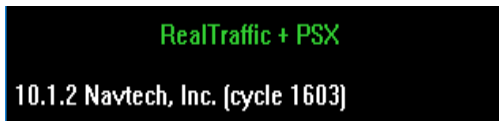
The black area below the header is divided into two sections:



The right section is always about your Flight Simulator (P3D or FSX), it shows in white font its version.

The left section depends on the version. In non-PSX version it is titled RealTraffic, it shows in white what aircraft you are flying in your Flight Simulator.

In the version for PSX the left section will be titled RealTraffic + PSX, and in white the Aerowinx PSX version is shown:



In the middle there are two adjacent coloured vertical status bars. The left one indicates the status of RealTraffic, the right one indicates the status of Flight Simulator.



If the right one is red, Flight Simulator is not connected. If the right one is yellow, Flight Simulator is connected but not running, maybe you are loading a flight or browsing in the menu items. If the left one is red: Real Traffic is not connected, or for the PSX version, PSX is not connected. If the left one is yellow: Real Traffic (or for the PSX version: PSX) is connected but PSXseeconTraffic is not yet connected to the Foreflight datastream provided by RealTraffic.

If the left one is **dark blue** and the right one **green**, the necessary programs for that version are successfully connected!

4.5 Log file

During each session a file **PSXseeconTraffic.log** will be written in the same folder as PSXseeconTraffic.exe. The **previous** version will be renamed to **PSXseeconTraffic0.log**.

Of interest are the warning messages about liveries that could not be created in your Flight Simulator. You should remove these from your AI_liveries.txt file, or better remove the respective AI aircraft in your Flight Simulator, by changing the aircraft.cfg file.

At the end of the log file a summary is given about the liveries used for live traffic.


5 Parameters

The light blue area in the middle contains the check and text boxes for parameters that you can set:

Lateral range in Nm: [15]		<input checked="" type="checkbox"/> Limit vertical range to +/- 5000 ft	<input checked="" type="checkbox"/> Auto mode
AI_liveries folder: [\\ADAM\VMRGenerator]			
<input checked="" type="checkbox"/> Include helicopters	<input checked="" type="checkbox"/> Include light aircraft		
<input checked="" type="checkbox"/> Collision avoidance in the air	<input checked="" type="checkbox"/> Collision avoidance on the ground		
<input checked="" type="checkbox"/> Log livery matching	<input checked="" type="checkbox"/> Log parking at gates		
<input checked="" type="checkbox"/> Log takeoff messages	<input checked="" type="checkbox"/> Log landing messages		
<input checked="" type="checkbox"/> Check and log QoS of Real Traffic stream	<input checked="" type="checkbox"/> Always stay on top		
Destination airport: []		Percentage parked: [30]	

In the PSX version there is this extra line:

PSX hostaddress: [127.0.0.1]


 <p>Important!</p>	<p>How to enter a new value:</p> <p>Put the cursor in the textbox (indicated by the light square brackets) edit the value, and after editing press the Enter key in order to make the new value active! In the green information line feedback will be given about your new value.</p>
---	---

5.1 Range section

The top bar has three controls for changing the range. They control how many live aircraft will be injected in your simulator.

Note that by default live aircraft at the ground will only be shown at your origin or destination airport. So when you are at Heathrow and you have set your lateral range to 40 nm, the aircraft at the ground at London City, Gatwick, Luton and Stanstad will not be injected in your sim.

All aircraft within a **lateral range** of 100 nm can be selected. The default lateral range is 40 nm, you may change that number in the lateral range text box to values between 5 and 100.

 <p>Important!</p>	<p>If you are using FSUIPC make sure that the settings for "Limit TCAS range" on the Misc tab are equal to the value in PSXseeconTraffic. And don't use the FSUIPC Traffic limiter!</p>
--	---

If the **Limit vertical range** checkbox (default off) is selected, then only aircraft within 10.000 feet difference in altitude with PSX/the user aircraft are taken into account. You can change the value 10.000 by your value by adding this line to PSXseeconTraffic.cfg:

LIMIT_VERTICAL_RANGE=<your value>

Lateral range in Nm: [15]	<input checked="" type="checkbox"/> Limit vertical range to +/- 5000 ft	<input checked="" type="checkbox"/> Auto mode
----------------------------	---	---

The **Auto mode** checkbox (default off) is meant for pilots flying with live traffic. If selected PSXseeconTraffic will dynamically and automatically set the lateral and vertical range parameters according to the stage of your flight.

This will have the effect that only the aircraft that may be of interest to you as a pilot flying will be injected in your simulator, resulting in as little as possible effect on your fps.

At the ground: the Lateral range is 15 nm and the vertical range +/- 5.000 ft.

In the air, at an altitude below 10.000 feet and within range of 15 nm of your origin /destination airport: 20 nm and 7.500 ft.

In the air, at an altitude below 10.000 feet and out of range of 15 nm of your origin /destination airport: 30 nm and 7.500 ft.

In the air at an altitude above 10.000 feet: 40 nm and +/- 15.000 ft.

You may change all these default values by your values by adding the following lines to PSXseeconTraffic.cfg (shown are the default values):

```
AUTO_ALT=10000
AUTO_RANGE=15
AUTO_GND=15
AUTO_BELOW_ALT_IN_RANGE=20
AUTO_BELOW_ALT_OUT_OF_RANGE=30
AUTO_ABOVE_ALT=40
AUTO_VERTICAL_RANGE_GND=5000
AUTO_VERTICAL_BELOW_ALT_IN_RANGE=7500
AUTO_VERTICAL_BELOW_ALT_OUT_OF_RANGE=10000
AUTO_VERTICAL_ABOVE_ALT=15000
```

5.2 AI_liveries folder (default empty)

This is a textbox in which you can enter a **full path name** to your VMGenerator folder. If you do that you do not need to copy the file AI_Liveries.txt into the PSXseeconTraffic folder each time after you have run VMGenerator.

It may be a full path at the same PC or at a networked PC. In case of networked, use two slashes followed by the PC name followed by a slash and then the name of the share.

5.3 Include helicopters (default off)

If include helicopters checkbox is selected, helicopters will be shown in your Simulator.

5.4 Include light aircraft (default off)

If include light aircraft checkbox is selected, light aircraft will be shown in your Simulator.

NOTE: Gliders and Ground Vehicles are never generated in your sim, they will be skipped if they are available in the RealTraffic stream.

5.5 Collision avoidance in the air (default off)

In the air a "near collision" is defined if an AI aircraft is within 3 nm laterally and +/- 800 feet vertically from the user aircraft. See further the next section.

5.6 Collision avoidance on the ground (default on)

It will check, each second, for the near collision of the PSX /user aircraft with a live aircraft. If so, the live aircraft will be removed for at least 30 seconds. It will return if there is no longer a near collision.

It will also check, each second, for the near collision of the PSX/user aircraft or a live aircraft with a parked aircraft. If so, the parked aircraft will be removed. It will not return during the session at this airport.

The "rules of thumb" for detecting a near collision at the ground are as follows:

1. there are three categories of aircraft Light+Helicopters, Middle or Heavy;
2. two aircraft types collide if the distance between their main gears is less than a value dependent on the aircraft categories of both parties.

5.7 Log livery matching (default off)

If checked information about each livery match (parked and live aircraft) is written to the log file. For the matching process of live aircraft see the Introduction chapter. For the

5.8 Log parking (default off)

If checked the log file will contain messages about static and live aircraft parking (or removal from a parking place). Do note that when a live aircraft starts its flight with a position close to a gate, PSXseeconTraffic will position this aircraft spot on and with the right heading at the gate. When a live aircraft leaves the traffic stream while it is at a gate, PSXseeconTraffic will change the live aircraft into a static aircraft, its callsign is lengthened with an underscore character.

5.9 Log takeoff messages (default off)

If checked the log file will contain messages about aircraft taking off. The message will also be shown as information message in the main window.

5.10 Log landing messages (default off)

If checked the log file will contain messages about aircraft that have landed. The message will also be shown as information message in the main window.

5.11 Check and log QoS of Real Traffic stream (default off)

If checked a QoS parameter will be calculated, see section 6.2.7, and in the log file every minute the QoS is logged.

5.12 Always stay on top (default off)

If checked the application will always stay on top of your screen. matching process of parked aircraft see section 7.1.

5.13 Destination airport (default empty)

This is the ICAO code of your destination airport. Put the cursor in the textbox, type an ICAO code edit and **press Enter**. Information messages will give you feedback. Only destinations that are present in your parked folder (section 7.1) are allowed.

If your destination is within 40 NM, parked aircraft will be placed on your destination airport (if percentage parked > 0 of course).

If you fill in a new destination, and there are no parked aircraft at your origin, PSXseeconTraffic will show the # parking positions and percentage parked values of your destination airport file immediately.

If you fill in a new destination while you are still at your origin, the # parking positions and percentage parked values of your destination will be shown as soon as your origin airport is out of sight and parked aircraft have been removed.

So you have enough time to manually overrule the percentage (if needed), before parking of aircraft at your destination takes place.

PSXseeconTraffic will automatically detect your Destination airport from a .PLN file exported –for instance- by Professional Flight Planner X (**PFPX**) into a subfolder

flightplans.

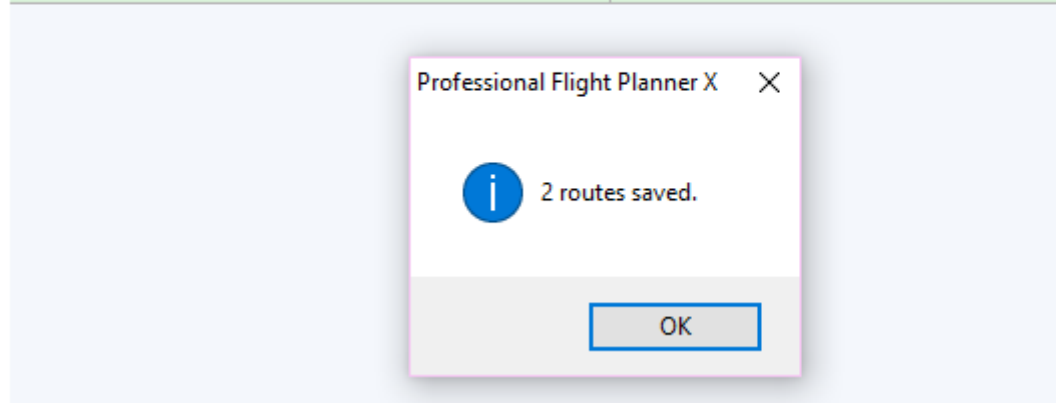
Create an empty subfolder first.

In order to let PFPX export a .pln file, you could perform the following 'trick': Use the Prepar3D v2 entry and give it a link to PSXseeconTraffic\flightplans, by browsing to it:

<input checked="" type="checkbox"/>	Prepar3d v2	D:\PSXseeconTraffic\flightplans
<input checked="" type="checkbox"/>	Prepar3d v3	<Documents>\Prepar3D v4 Files

If you now prepare a flightplan for your flight, it will not only be exported to Prepar3D v3/v4 Files but also to PSXseeconTraffic\flightplans!

Add-On	Location
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Prepar3d v2	D:\PSXseeconTraffic\flightplans
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Prepar3d v3	<Documents>\Prepar3D v4 Files



PSXseeconTraffic will take the latest (in time) created .PLN file with a DepartureID equal to your actual origin airport.

Other tools that provide a .PLN file –such as ProATC- maybe used too.

Note that if you fly to an airport without filling in the destination, you will get parked aircraft (if there is a parking position file) and live ground traffic at that airport automatically, but only after you have landed. So it is always better to fill in your destination. The parking and ground traffic then starts when you are within 40 nm from the airport, so the airport looks lively when you descend.

5.14 Percentage parked (default 30)

The percentage parked value. This defines, on average, how many of the available parking positions at an airport will get a parked aircraft. These parking positions are drawn randomly such that on average the specified percentage of the parking positions will have an aircraft (see section 7.1).

This value will be set to the airport specific value automatically, if an airport file contains a setting for parameter PERCENTAGE_PARKED, see section 7.1

Only for destination airports you may change this value manually, in the time frame between PSXseeconTraffic showing the percentage in the destination airport file, and when parking starts!

5.15 Hostaddress (default 127.0.0.1 PSX version only)

The IP-address (hostaddress) of PSX. If PSX runs at another computer then the one running PSXseeconTraffic you have to give the IP-address of the PSX main server If you have entered a valid IP-address PSXseeconTraffic will exit. Just re-start PSXseeconTraffic to let this new IP-address become active.

6 Messages

6.1 Info line

In the green box below the parameters, information messages in yellow font, may appear:

09:59:34 looking up QNH for airport EHAM

6.2 Status line

The black box, below the parameters section, gives the following information:

%OK: 91 %r: 100 live: 20 EHAM parked: 80 [pos: 254] QoS: 78

6.2.1 %OK

Shows how successful PSXseeconTraffic is in matching the correct liveries for the live aircraft. Above 80% it is shown in green, between 50% and 79% it is shown in Yellow, and below 50% it is shown in red.

6.2.2 %r

Shows the percentage of the matched liveries that were matched upon registration code. Above 80% it is shown in green, below it is shown in yellow.

6.2.3 Live

Shown is the number of live aircraft injected and controlled by PSXseeconTraffic in your Flight Simulator. Note that this number includes the (up-coming) ones that are in the 30 seconds buffer, so it is not always the number of aircraft that you see (immediately) in your flight simulator.

6.2.4 ICAO airport code

The ICAO code of your origin airport (when on the ground) or destination airport when in the air and destination airport is within reach.

6.2.5 Parked

Shown is the number of parked aircraft at your origin or for your destination, in your Flight Simulator.

This value may decrease while PSXseeconTraffic removes a parked aircraft when a collision with the user aircraft or a live aircraft is about to happen.

This value may increase when a live aircraft disappears from the RealTraffic stream while it is at a parking position (probably arriving at this position). PSXseeconTraffic will position it correctly at the parking position and it'll stay there as a parked aircraft, until another live aircraft claims this position.

6.2.6 (pos: xy)

Shows the number of parking positions available at either the origin airport (where you start your flight) or at the destination airport.

6.2.7 QoS

This parameters gives an indication of the quality of the data stream received from RealTraffic. Ideally every 9 seconds a new position update for a live aircraft is received. However, this is not always the case unfortunately, sometimes we get a new position

after 18 seconds, sometimes even after 27 seconds or even worse. These missed positions are counted and a QoS parameter is calculated for the last 5 minutes and is updated every minute. The "individual minute values" can be found in the log file.

100% is perfect, the lower the worse. Values above 85% are shown in green colour, between 70 and 85 in yellow, and below 70 in red.

If no traffic data at all is received, the text **"No traffic?"** will be displayed.

6.3 Warning / Error messages line

In the dark blue (bottom) box of the window, warning messages, in red font, may appear:

PSXseeconTraffic [64 bit], for any user aircraft in Prepar3D v4

The dark blue box turns red if an error messages in yellow appears, for example:

51: File AI_liveries.txt not found

Error messages are always **severe**. You have to exit PSXseeconTraffic yourself with the Windows X button.

The error messages (*and what to do*) are:

#	Error Message (and what to do)
51	File AI_liveries.txt not found <i>Create this file, see section 3.1, and either put it in the PSXseeconTraffic folder or make a link to it (see section 5.2)</i>
52	AI_liveries.txt does not contain liveries <i>Make sure you have AI aircraft installed, and create such a file, see section 3.1.</i>
71	atc_model= in [General] section of your aircraft.cfg is empty <i>Add this line to your user aircraft aircraft.cfg file. Fill in a valid ICAO type</i>
77	New full version is available, update first please. <i>Update to the latest version first, please.</i>

Aerowinx PSX version only:

17	Connect to TCP/IP failure, <hostaddress>, <port> <i>A Fire Wall might block the connection to PSXSeeconTraffic request. Allow PSXseeconTraffic access.</i>
18	Connection attempt to PSX timed out <i>Is your hostaddress value correct (see section 5.1)?</i>
19	PSX not detected <i>Is PSX running?</i>
20	Bind to RealTraffic failed. <i>Is Aerowinx PSX running? Are you running the non-PSX version? Use a ...X.exe version.</i>

7 Support Files

7.1 Airport files in folder parked

In order to get rid of empty airports PSXseecontraffic provides a mechanism to park aircraft at parking positions. Sub folder **parked** contains the files, with names as (airport) ICAO code.txt, that specify parking positions.

At my website you can download a folder **parked** with a large number of airports. However, you can generate all files for your airports with my **ParkPosGenerator** tool (see section 3.3). These files can be used directly or you can manually make them even better fit to your liking.

With "___" (three underscores) you can specify a wild card for the airline, so PSXseeconTraffic may take any airline available. With the (non-ICAO) existing code **PVT** you specify that you only want private (non airline) aircraft at this position.

A line that starts with a semicolon is treated as a comment.

When you start a session at the ground at an (origin) airport for which there are parking positions defined, PSXseeconTraffic will generate parked aircraft. Live traffic will appear after the parked aircraft have been generated.

When you fly away from the origin airport, the parked aircraft will be removed when you are greater than 5 nm from the airport.

When a destination airport comes into sight (40 nm or closer), PSXseeconTraffic will place aircraft at the specified parking positions of the new airport. During the allocation of parked airport, live traffic is placed on hold in order to prevent SimConnect errors. *This is a temporary solution until we have found the cause of these SimConnect errors.*

How many parking positions will get a parked aircraft depends on the percentage parked value. If you do not want parked aircraft, just specify 0% percentage parked.

The **matching** is slightly different from the matching for live aircraft, while if no suitable livery is found, the gate will not get a parked aircraft.

The call sign of a parked aircraft is **ICAO Airlinecode + sequence number + _**

In an airport file you may also specify a value for the following parameter:

PERCENTAGE_PARKED=nn

You may put this line anywhere in the file. Airport files generated by the ParkPosGenerator (see section 3.3) already contain such a line.

If you start PSXseeconTraffic at an airport for which an airport file exists in folder parked with this parameter, this value will be taken into account immediately, instead of the current generic one.

Other advantages of having parking positions defined for an airport is that it makes it possible to place departing live traffic at parking positions at the right position with the right heading and to "promote" a live aircraft ending its session at a parking position to a parked aircraft instead of having it disappear. So even with percentage_parked=0 you may see some parked aircraft.

8 Live aircraft animations

PSXseecontraffic may control landing gear, throttles, spoilers, flaps and all lights of live aircraft. Of course only for those aircraft that support the respective SimConnect events!

8.1 Landing gear

The landing gear is retracted about three seconds after lift-off. The landing gear is extended if the aircraft is landing (lowering in height) and less than 2000 feet above the ground.

8.2 Throttles

The engines are switched off when positioned at a gate. The throttles are set to idle at the ground, to full when taking off and in the air, and to half when landing. This has effect on the sound coming from the AI aircraft (if sound is configured for the AI aircraft in your Sim).

8.3 Spoilers

The spoilers will go up at touch down; the spoilers go back to normal when speed is low enough or the aircraft has vacated the runway.

8.4 Flaps

The flaps are set to twenty at the ground for departing aircraft and to up for arriving aircraft and when in the air. During the landing phase the flaps will go gradually to flaps down. Flaps will go up when the aircraft vacates the landing runway.

8.5 Strobes

The strobes are set to on if an aircraft is taking-off; the strobes are set back to normal when the aircraft has landed and vacated the runway.

8.6 Landing Lights

Landing lights are on below 10.000 feet, and off when the aircraft has landed and vacated the runway.

8.7 Cabin Lights, Navigation Lights and Beacon

Cabin lights, Navigation lights and Beacon are always on.

8.8 Taxi, Logo and Recognition Lights

Taxi lights are on at the ground.

Logo lights are always on below 10.000 feet (although lots of AI aircraft also put Logo Lights on if cabin lights are on ...).

Recognition lights are always on below 10.000 feet.

[For the parked aircraft: cabin lights and logo lights are on (if not parked at a ramp), engines are shut down, spoilers set to normal and flaps are up.]

9 Livery matching proces

From the information coming from RealTraffic:

```
Total traffic in area: 148. Nearest 7 are:
BRG  Dist  C/S  (Type  Reg)  From -> To
325* 0.6NM  KLM980 ( RJ85  EI-RJH) LCY -> AMS
123* 1.1NM  KV3 ( GRND  KV3)  ->
123* 1.4NM  ACA824 ( B763  C-FCAB) YYZ -> AMS
112* 1.8NM  BRW878 ( GRND  BRW878)  ->
126* 1.8NM  ( GRND  )  ->
121* 1.9NM  C5 ( GRND  C5)  ->
3* 2.0NM  SAS821 ( B737  LN-RNN) OSL -> AMS
```

the following items are important for livery matching:

RealTraffic info	Role in matching
C/S	From the call sign the three letter ICAO airline code will be derived (if available, else the airline code will remain empty). The airline code determines the "paint" of the livery.
Type	Determines the ICAO aircraft type of the livery. If this field is empty, the aircraft will be skipped / ignored.
Reg	The registration code uniquely identifies a livery (type + paint).

With this information a livery for a live aircraft is searched in a best effort matching process in -up to- seven steps:

Step	Match	Indicated by
1	Registration code	=== r
2	ICAO airline code and ICAO aircraft type	===
3	airline and similar type(-s)	=s=
4	Generic Boeing, Airbus, Embraer, Bombardier or ATR livery and type. Generic (fabric) livery without an airline paint. In order to get these liveries found, use BOE, AIB, EMB, BBA or AED as airline code in your [fltsim.x] section as parking_codes= value.	=g=
5	random airline livery and type	=x=
6	random airline livery and similar type(-s)	=X=
7	a default aircraft livery, chosen out of a number of liveries from the same aircraft category (Heavy, Middle, Light or Helicopter)	=d=