Enhanced Live Traffic User Manual

V3.01

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What does Enhanced Live Traffic do

Enhanced Live Traffic (ELT) transfers real air traffic from flightradar24.com (FR24) into MSFS2020. Thereby the traffic in a radius of about 60 nm around your aircraft is displayed. So the displayed Area is 120 nm in all directions. The time delay is between 30 and 60 seconds. This time is needed to process and display the data accordingly. These data from FR24 represent the waypoints which are then flown by the AI-aircraft of the MSFS. These aircraft represent independent routes that may differ in some respects. It should be noted that these routes are not to be considered as one-to-one routes, since the AI-traffic controls this automatically. The settings of the individual aircraft installed in MSFS from the "aircraft.cfg" file are used. Thus, it is possible that the performance of the real aircraft and the one represented in the simulator will differ. For example, in certain phases of the flight, the speed and rate of climb, and thus the altitude, will differ from the real flight.

The following points can be observed:

- Routes are followed exactly as long as the AI aircraft is moving behind the real aircraft. When the AI aircraft overtakes the real aircraft, it has flown all the received waypoints from FR24 and makes a curve or even a 360 degree circle around the last waypoint until it receives a new waypoint to fly to again. Due to this delay, the AI aircraft of MSFS is again behind the original aircraft from FR24 and will again follow its route.
- If the distance between the AI-plane and the one from FR24 becomes too big, or if the original plane suddenly gets closer to the AI plane again because of its route, it can happen that the AI plane takes a shortcut. This happens most likely in the approach phase, which is favorable for the display of the landings, because then the AI aircraft are close to the original again and can then be observed at the approach also in the MSFS.
- In the case of airliners, the rate of climb of the AI aircraft does not correspond to that of the original plane. They are much lower. Therefore, especially after takeoff, the displayed flight is always below the original flight altitude. The longer the flight lasts, the more the displayed altitude approaches that of the original. This is also one of the reasons for the "High altitude traffic mode". This allows airliner pilots to have traffic that is more than 30,000 feet around them displayed in real time. Without this feature, AI planes will never reach this altitude before leaving the area, because these planes usually fly very fast and the climb rate of AI planes is not sufficient to reach such an altitude in a timely manner.

Known issues

- Sometimes it happens that a plane is flying very low in the area of an airport. This plane did not get the landing flag. It will disappear soon. That happens when FR24 is sending corrupt datas. Sometimes it helps to disconnect and connect ELT again as a workaround.
- Taxiing only with teleporting. With the actual tools from the SDK it is not possible to show live traffic taxiing without creating a flight plan. (That is probably the reason for the live traffic delay in the original MSFS traffic)
- Starts in the wrong direction. This can happen if the FR24 does not send the data of the last positioning of the aircraft. So the heading of the aircraft is not in the direction of the runway. This does not happen often and we are trying to find a workaround.
- Suddenly displayed landed aircraft. If the landed aircraft was too far away from the AI aircraft, then after landing the AI aircraft will be synchronized with the original landed aircraft. There is no other way to display the reality with MSFS AI planes.
- Aircraft flies over the runway or near it and does not land. This happens when the landing phase of the original aircraft takes longer and the landing information is delayed. (After the AI aircraft has passed the last waypoint without receiving the landing flag). However, it will be displayed as a landed aircraft shortly afterwards! This phase often lasts only a few seconds.

Installing

Installing the add-on is simple.
Just unzip the zip file, open the “Enhanced Live Traffic” folder and open the .exe file (“Enhanced Live Traffic.exe”) inside.
It should automatically detect your community folder. However, there is a chance it can’t find it. Then you must set it yourself in the “Settings.json”.

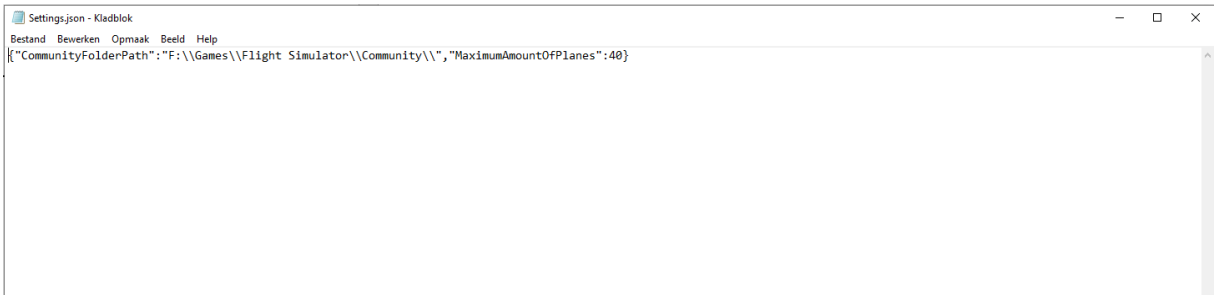

Figure 1 Settings.json

The json file should look like this, notice the double backslash (\\) in the folder path. These must be present! When using a single backslash, the add-on won’t be able to detect the Community folder.

Using the Add-On

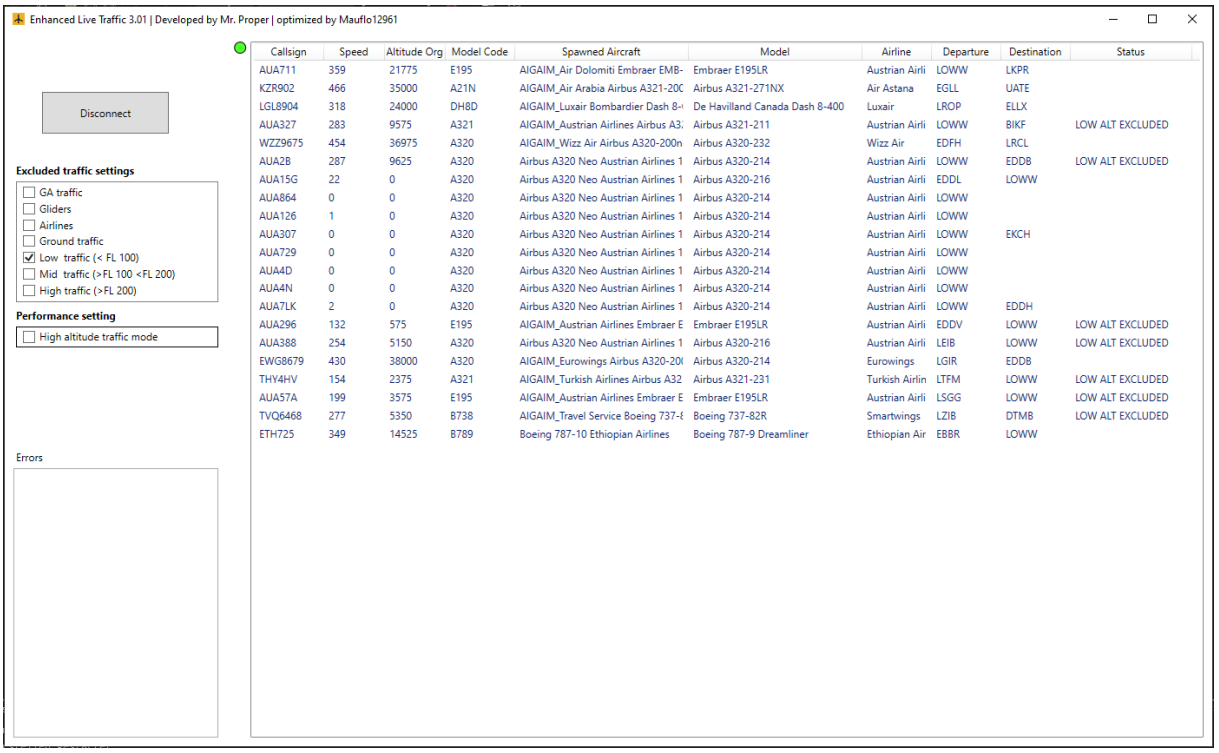

Figure 2 The application

To use the add-on, you will need to load into the game (MSFS 2020) first.
Once you are loaded in (Aircraft is spawned in the world), you should press the “Connect” button.
Once you pressed the button, the Red dot should be changing colors. After 10 seconds the aircraft will start spawning in, and appearing in the list.
Now you are ready to fly 😊

- You can arrange the columns in the list according to your wishes by moving the headers to the desired position.
- If aircraft cannot be displayed correctly via SimConnect, corresponding error messages are displayed in the error box. For example, if individual flight displays cannot be displayed or the ID's are lost because the connection to the flight simulator no longer works. (e.g.: If the flight is finished and you are back in the main menu).

Exclude traffic settings

This feature is used to exclude different traffic. So you can exclude GA traffic, Gliders, Airliners, Ground traffic and low-, mid-, and high altitude traffic. You will find the actual exclude-status of the aircraft in the row “Status” in the list.

High altitude traffic mode

This feature is used to control high flying traffic (over 30.000ft). If you check this checkbox, the high flying traffic will be set to the correct altitude. If the box remains checked, this traffic will be updated as teleported traffic every 10 seconds. If you uncheck the box after more than 10 seconds, the high flying traffic will fly as AI traffic straight ahead in the given direction until it leaves your area.

Recommended add-ons

We have a few supported add-ons which we think are a must have:

- Little Navmap: https://albar965.github.io/littlenavmap.html
- IVAO Liveries + Models: https://www.ivao.aero/softdev/beta/altitudebeta.asp (These planes might fly very slow compared to other flyable planes. This is probably because there IVAO planes don't have a proper flight model.)
- Discus 2B Glider: https://flightsim.to/file/6768/discus-2b-glider
- Airbus H135: https://flightsim.to/file/8970/airbus-h135-helicopter-project
- Liveries Mega Pack: https://discord.gg/XTE9gwmSyN
- Alpha India Group - AIG Manager: http://www.alpha-india.net/ai-manager/

Installing these add-ons (specially the AIG Manager) will make sure aircraft and liveries are being better matched.

Manually setting the Community folder

When you got the error that the Community folder could not be found, please manually set it in: Config/Settings.json
Please note, that the path should look like this: F:\\Games\\Flight Simulator\\Community\\
Make sure you use double backslashes (\\)

Using of the Alpha India Group Liveries (AI Manager)

If you have installed the Liveries from AIG via the "AIG Manager" in your Community folder, the Liveries should work fine. The Enhanced Live Traffic tool will look for the path: "C:\\Users\\Username\\AppData\\Local\\Packages\\Microsoft.FlightSimulator_8wekyb3d8bbwe\\LocalCache\\Packages\\Community\\aig-aitraffic-oci-beta\\SimObjects\\Airplanes\\"

When your folder will not found because you installed it at another place or once AIG will rename the folder path, then you have to set it manually in: Config/Settings.json
Therefore you have to set the "AdditionalFolderPath:" to the correct AIG path on your computer.
Please note, that the path should look like this: F:\\Games\\Flight Simulator\\Community\\
Make sure you use double backslashes (\\)

Setting of maximal number of planes

You can change the maximum number of aircraft that should be spawned in your area. Originally it was set to 60. You can try to set it higher, but then you may get strange behaviors - like planes showing up twice, or your flight crashing, or something like that. It also works with more than 60, but with how many planes it actually works depends on the power of your computer and number of planes actually present in your area. You can check this in Flightradar24.com and compare it with an appropriate tool (e.g. Little Navmap) and find a suitable setting for you.

Custom Model Matching

The application allows for custom model matching. This can be done in the “ModelMatching.json” file, which is in the Settings folder.

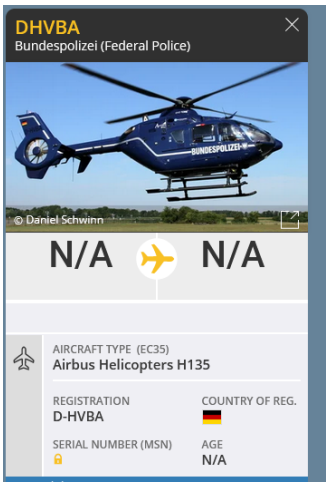

Figure 3 Aircraft which we would like to model match. https://www.flightradar24.com/

In this case we are going to match this helicopter with the Airbus H135.
To do this, a few lines need to be added to the model matching file.
The first line we want to add is the model name of the H135.
This can be found in the “aircraft.cfg” file located under:
“Community\hpg-airbus-h135\Simobjects\Airplanes\H-135 DEV SERIES PROJECT””

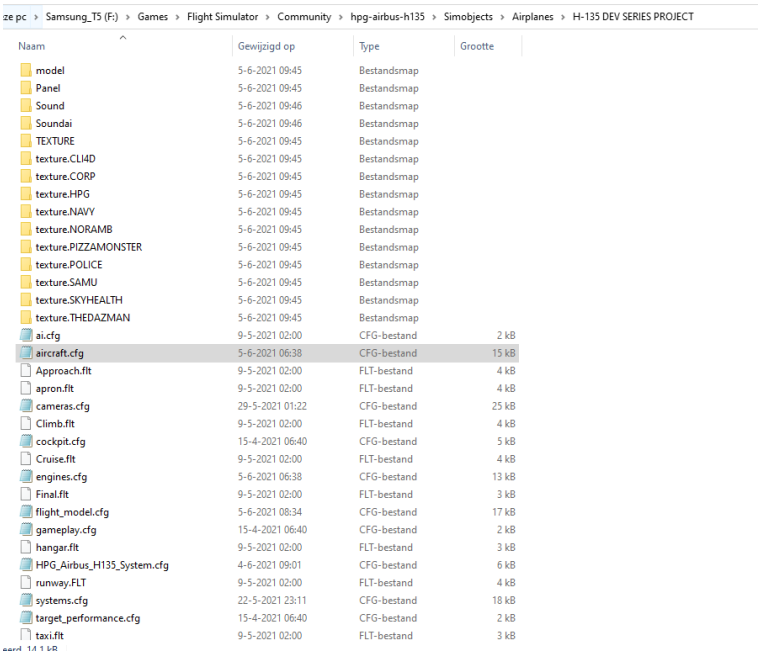

Figure 4 H-135 Folder

Once you opened the file, scroll down to: “[FLTSIM.0]”

Figure 5 Aircraft.cfg

Here you will see: “Title=”, this is what we need.
Now back to the model matching file, add the following:

```
"Airbus H135": "Airbus H135",
```

Figure 6 First entry

Later on in the manual you can see why we want the key (first value) to be Airbus H135.
Now we need to add another entry:

```
"Airbus H135 Default": "Airbus H135",
```

Figure 7 Second entry

The second entry is the Default model it will use, if the add-on cannot find a livery matching the airline from FlightRadar. If you want to, you can also change the value to: “Airbus H135 UK Police Air Service”. So that every H135 that did not match with a livery will be the Police Air Service.

```
"Airbus H135 Default": "Airbus H135 UK Police Air Service",
```

Figure 8 Police Air Service Default livery

Now we got the basic setup done.
However it still will not match the helicopter from FlightRadar.
To fix that, add another line. The key value is: “Airbus Helicopters H135” or use the aircraft model code: “EC35”.
This will result in the following line:

```
"Airbus Helicopters H135": "Airbus H135",
```

Figure 9 FlightRadar Support

```
"EC30": "Airbus H135",
```

Figure 10 Model matching based on aircraft model Code

Now the helicopter from FlightRadar will match with the H135 in-game.