



# FSrealWX – Manual

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## **Introduction**

How did I get to FSrealWX?

When I did my pilot license, I noticed that the wind in the simulator was pretty quiet. Then I decided to develop a weather add-on to make the wind something realistic. First, I developed FSrealWX Lite, a small freeware weather add-on, which was released in October 2010.

Since I developed quite unstructured at that time, I started everything again from the beginning and so came FSrealWX Pro version 2.

Since the costs for the server were high in the long run and the donations low, I decided to download the paid version. The first commercial and free version of FSrealWX.

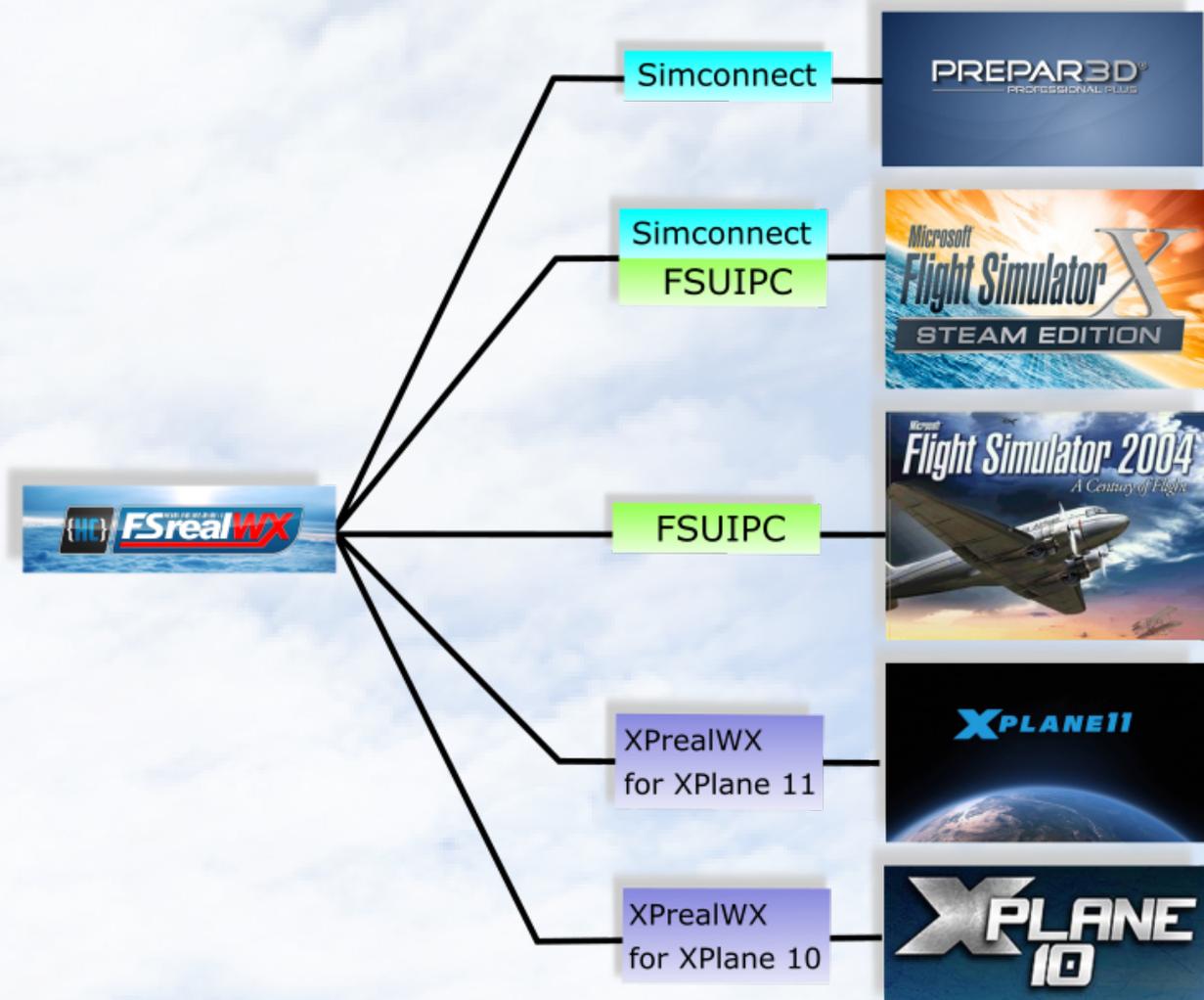
Because I've been developing FSrealWX by myself so far, I did not use graphical highlight and used native windows.

In 2018 I started developing FSrealWX 3.0. For this I first had to re-structure the weather server and create to be able to use more features.

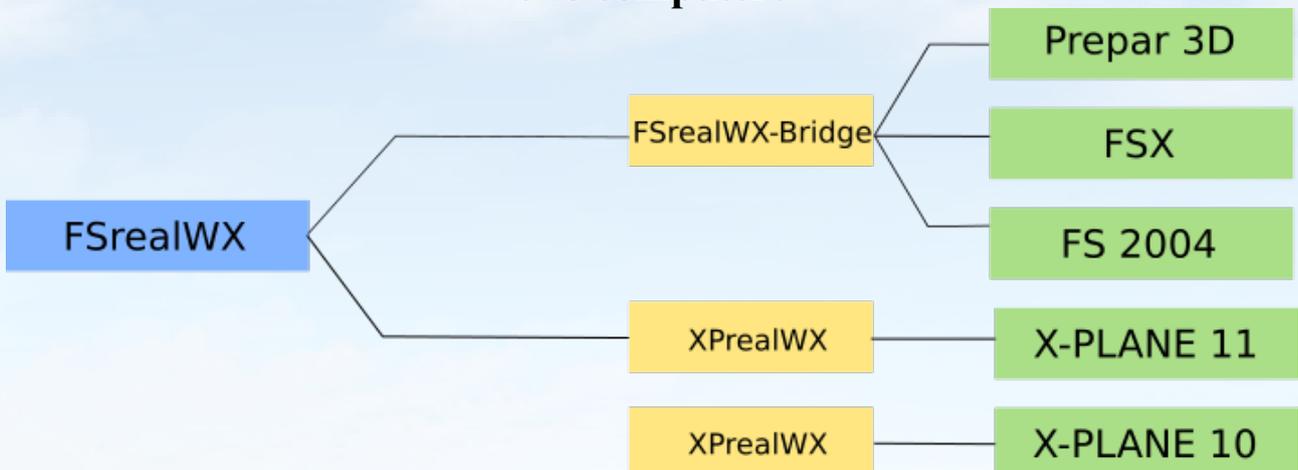
I hope you enjoy FSrealWX and continue to support me.

Thank you

## Overview - Connection FSrealWX to the flight simulator one computer



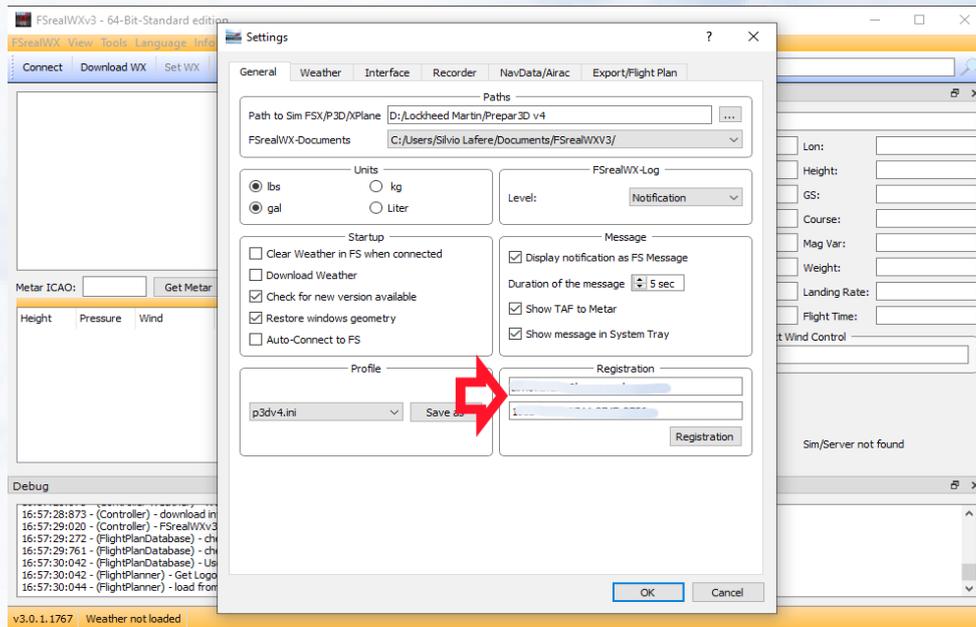
## two computers



# Get and enter Key

Did you FSrealWX downloaded and installed, you can FSrealWX 30-day trial or purchase a key.

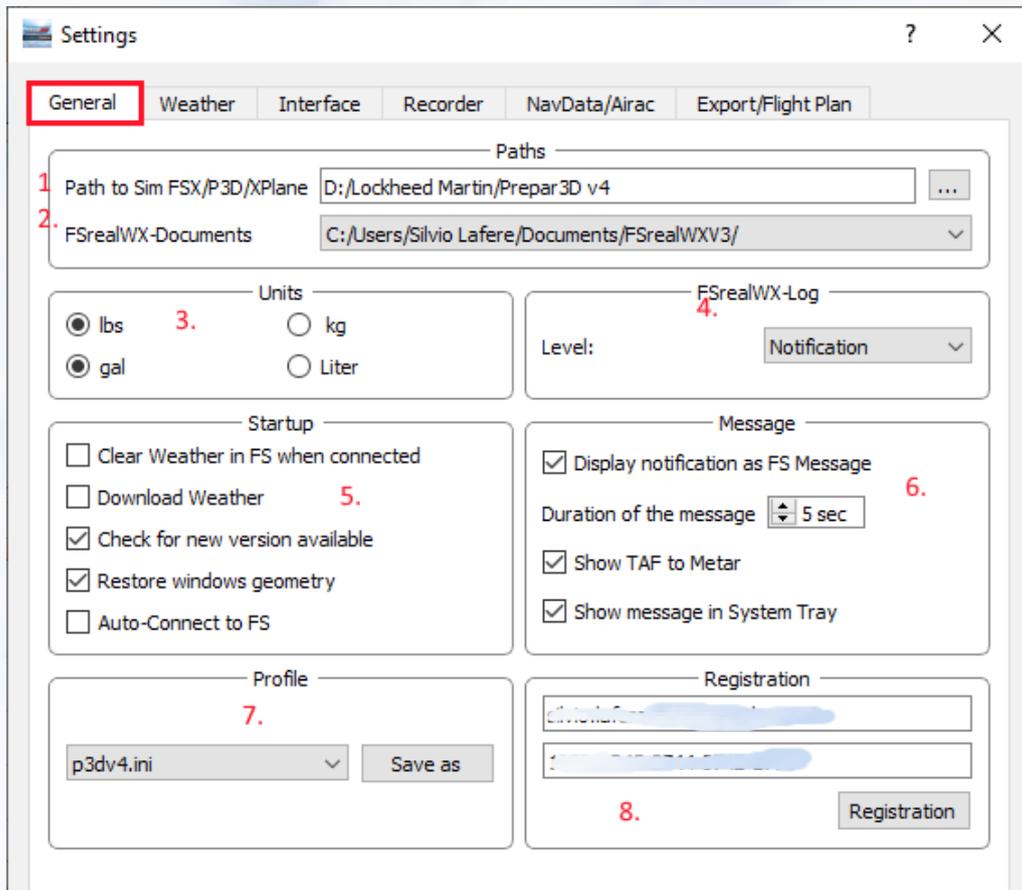
If you received the key, then enter your email and the key there.



After successful registration FSrealWX 3.0 has to be restarted.

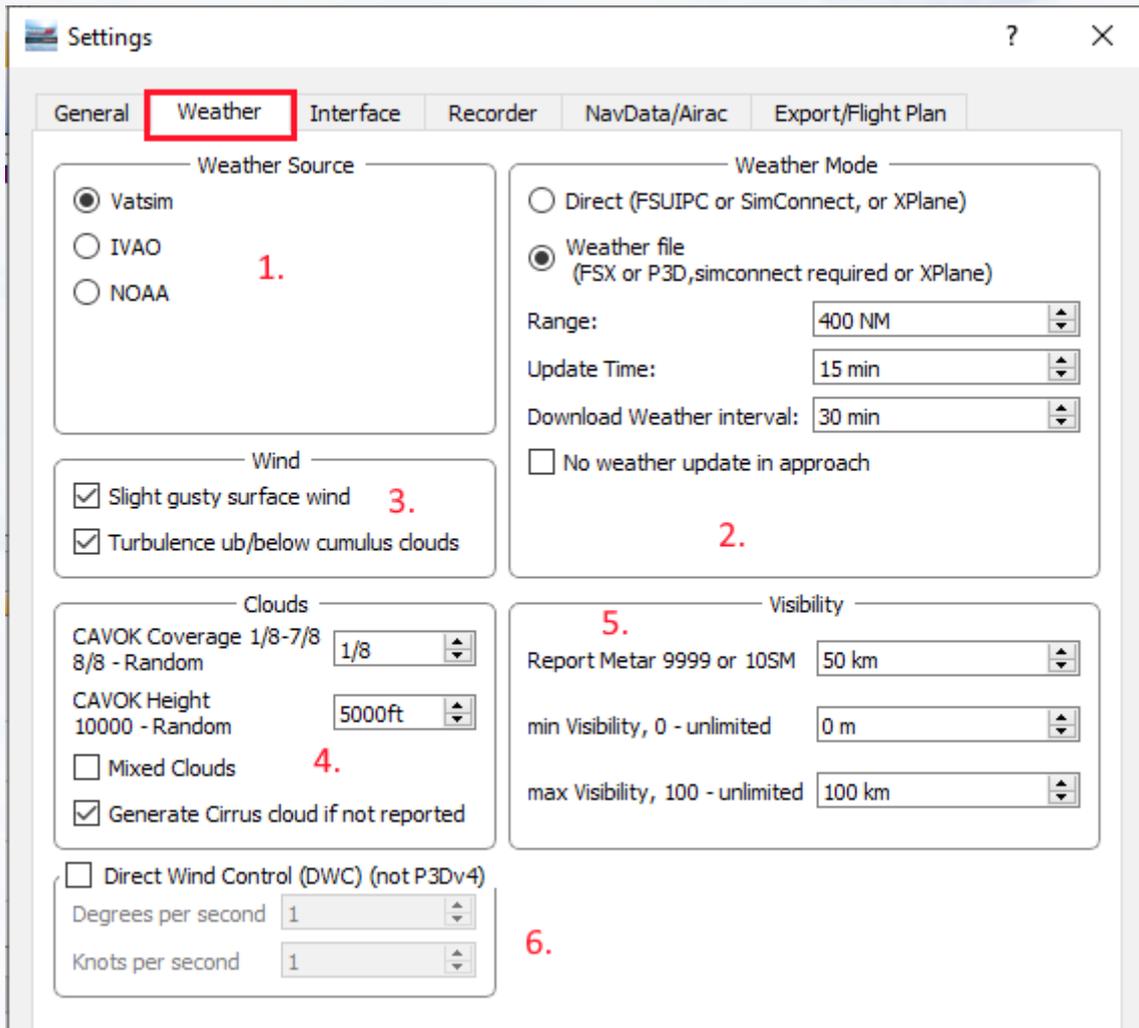
# Settings

## General



1. Enter the path to the flight simulator there. Press the "..." button to select the directory. The path is important so that files can be transferred to the flight simulator. In the network, please share the directory.
2. Various default working directories can be selected for FSrealWX 3.0.
3. Select units. These units are used eg in the load editor or flight planner.
4. FSrealWX - Messages. Different levels can be chosen. These messages are required for troubleshooting. If an error occurs then you can track it at the debug level.
5. Startup. At start of FSrealWX you certain processes are activated.
6. Messages for the flight simulator or system tray
7. Profiles. Various settings can be saved. For example, at different flight simulators or weather settings.
8. Registration of FSrealWX 3.0 if you have purchased a key and you want to unlock FSrealWX 3.0.

## Weather

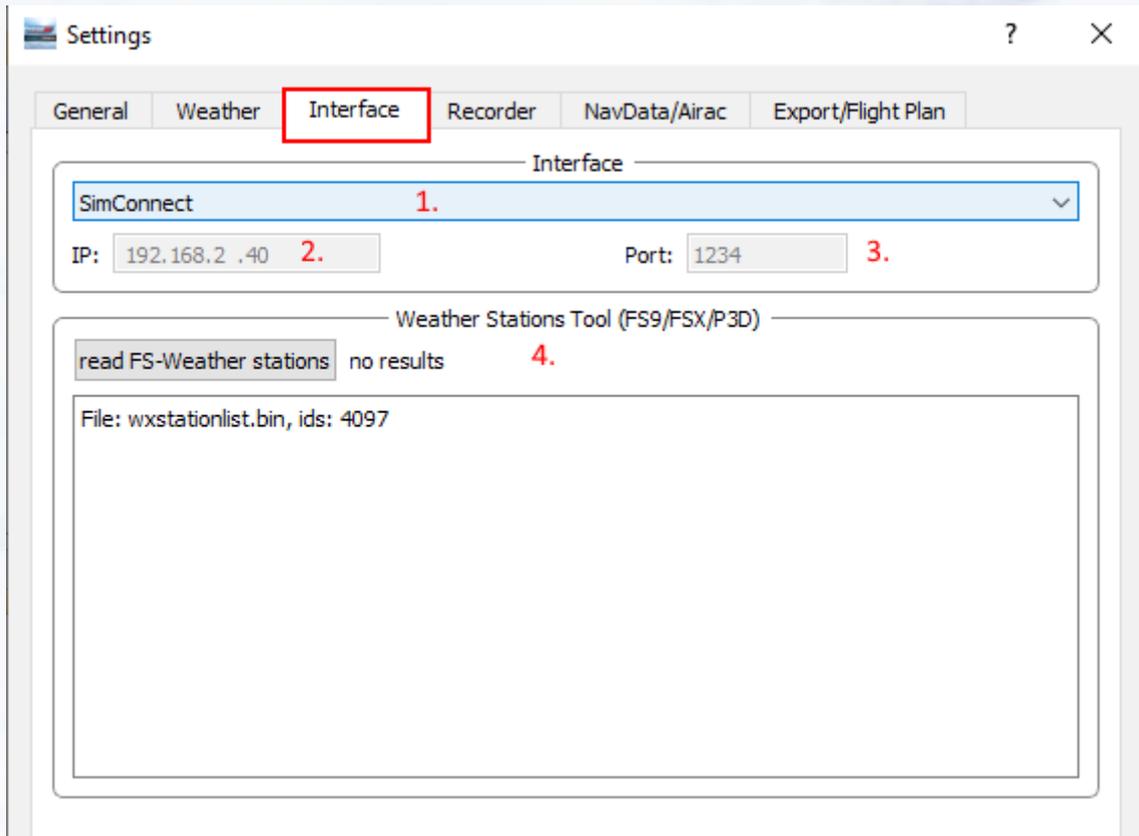


1. **Weather source.** **VATSIM** - Online Network (<https://www.vatsim.net/> ), **IVAO** – Online Network (<https://ivao.aero/> ) and **NOAA** for Offline flights.
2. **Weather – Mode.** **Direct** - The weather is transferred directly to the flight simulator with the previously selected interface. With the FSX and Prepar3D, these options can cause stuttering, as the weather is inadvertently injected. **Weather-File** - The weather is transmitted as a contiguous file to the flight simulator. (FSX, P3D and XPlane only) FS9 does not allow this option. **Range** - The radius in which the weather is to be injected. Large radius, the transmission takes longer, but recommended when using fast aircraft. **Update-Time** - Time interval in which the weather is transmitted to the flight simulator. **Download Weather Interval** - Time after which the weather should be reloaded. **No Weather Update In Approach** - No weather update when the plane is approaching.
3. **Wind - Slight gusty surface wind** - Slightly gusty winds near the ground.

Increases the realism. **Turbulence in clouds** - Turbulent air in cumulus clouds.  
Increases the realism.

4. **Clouds – CAVOK Coverage** , 4. CAVOK or SKC is reported in the METAR when there are few or no clouds. Allows you to set the coverage of the cloud cover. CAVOK - **Cloud and Visibility OK. Mixed Clouds** - Often the cloud layers are provided with different cloud types. These can be set in the flight simulator, but the performance can be reduced. **Generate Cirrus Cloud if not reported**, Usually high clouds or cirrus clouds are not reported in the metar, but sometimes in the synop. If no cirrus cloud is reported, then cirrus clouds are created when activated.
5. **Visibility – Report Metar**, Metars only report visibility up to 10 km. If 9999 is specified in the Metar and no further visibility is reported in the Synop, then the value specified here for the visibility range will be used. **min, max visibility**. Visibility can be limited.
6. **Direct Wind Control (DWC)**, DWC can not be used in Prepar3D. DWC is especially for FS2004 and XPlane. With DWC, the wind is continuously monitored by FSrealWX, recalculated and transmitted to the flight simulator. As a result, strong changes in direction can be avoided.

## *Interface*



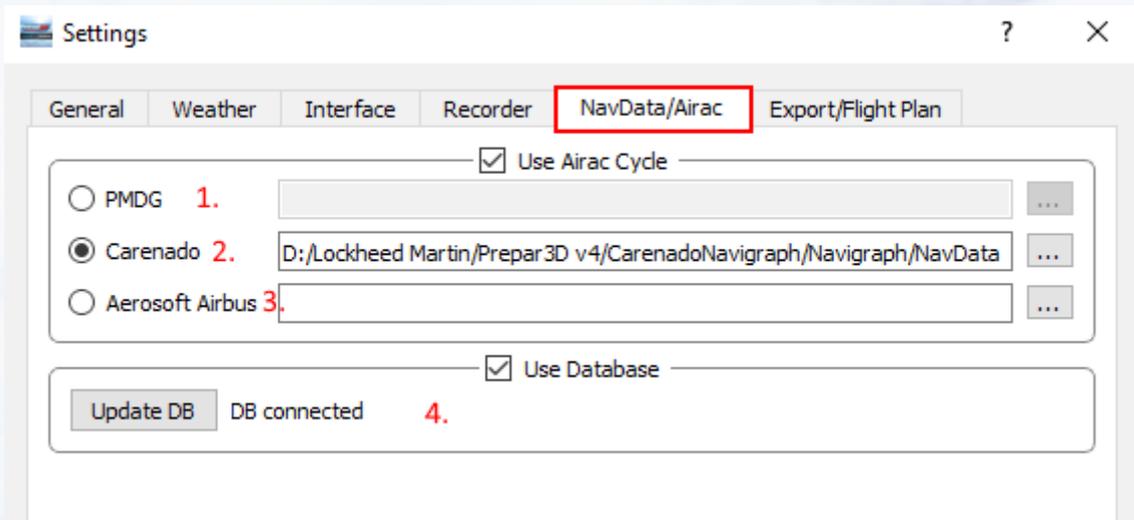
**Interface.** These settings configure the connection to the flight simulator.

1. Choice of the interface. FSUIPC, Simconnect, FSUIPC & Simconnect, FSrealWX-Bridge (Xplane). See overview.
2. **IP** - only needed with FSrealWX-Bridge or XPlane. This value must match FSrealWX-Bridge or XprealWX.
3. **Port** - only needed with FSrealWX-Bridge or XPlane. This value must match FSrealWX-Bridge or XprealWX.
4. **Weather Station Tool** - the available weather stations can be read out and expanded in the flight simulator.

## *Recorder*

Is still being created. Possibly with cooperation of Virtual Airlines.

## NavData/Airac



These settings are required for the flight planner because the flight planner can not fully operate without the Airac.

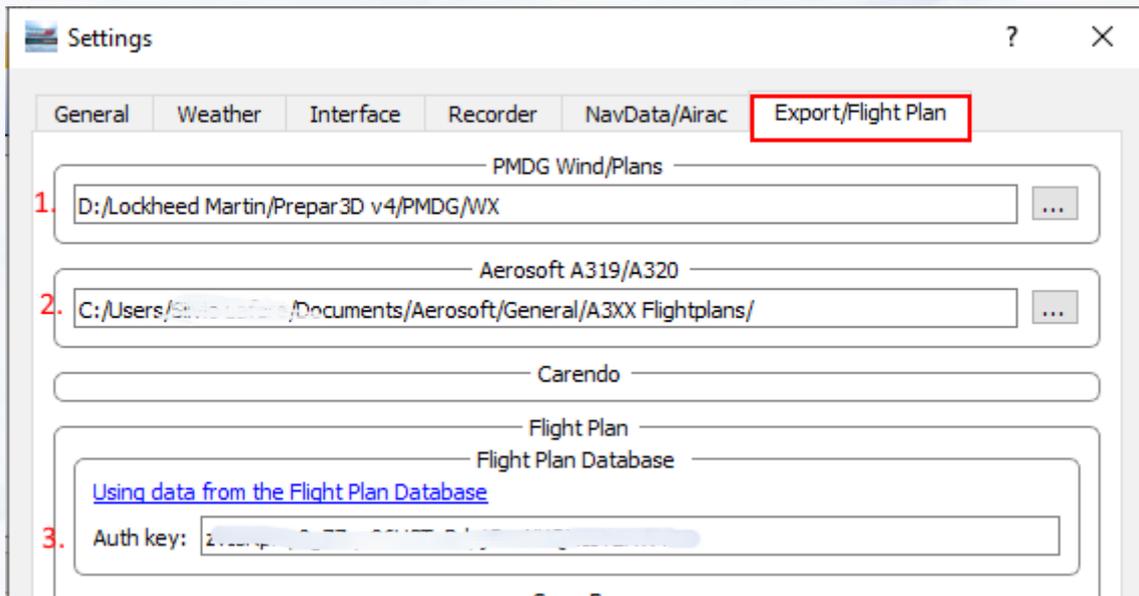
Airac includes the airport and navigation data, eg Intersection, VOR, NDB, Airways.

You can get Airac Cycles from Aerosoft or Navigraph.

As FSrealWX does not yet have its own Airac format, FSrealWX must obtain the data from existing formats. You can choose from PMDG, Carenado, Aerosoft Airbus.

1. Airac Format from PMDG, e.g. D:\Lockheed Martin\Prepar3D v4\PMDG\NavData
2. Airac Format from Carenado e.g. D:\Lockheed Martin\Prepar3D v4\CarenadoNavigraph\Navigraph\NavData
3. Airac Format from Aerosoft Airbus e.g. C:\Users\...\Documents\Aerosoft\General\A3XX NavData
4. Once an Airac has been selected, the data can be imported into the FSrealWX database. The import is not necessary, but increases the performance of FSrealWX. Restart FSrealWX when the settings have been made.

## *Export/Flight plan*



If you have created a flight plan with FSrealWX, you can send it to the flight simulator.

1. Path to the **PMDG**. In this directory the wind data for PMDG and Aerosoft Airbus are stored. These wind data are evaluated by FMC (Boeing) and MCDU (Airbus).
2. Path to the **Aerosoft Airbus**. In this time, the flight plans for the Aerosoft Airbus are deposited. Thus, the flight plans can be loaded directly from the MCDU.
3. **Flight Plan Database**, <https://flightplandatabase.com/> With Flight plan database you can import flight plans created and saved with Flight plan Database into FSrealWX. To do this you must enter the API key. The API-Key you get after successful registration on Flight Plan Database, My Account -> Settings -> API-Key.

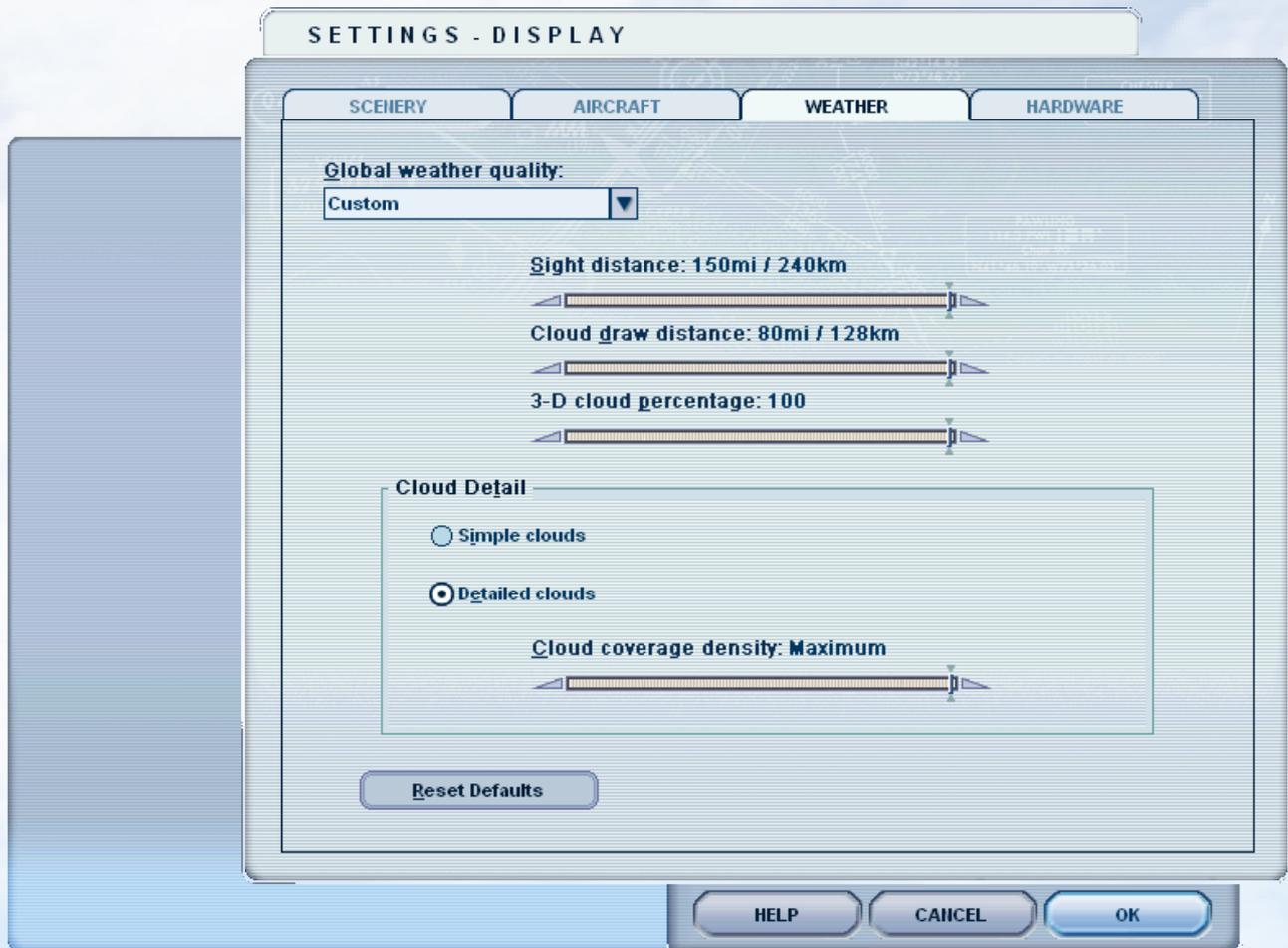
## FSrealWX for FS2004/FS9

The FS9 / FS2004 can only connect to FSrealWX 3.0 with FSUIPC.

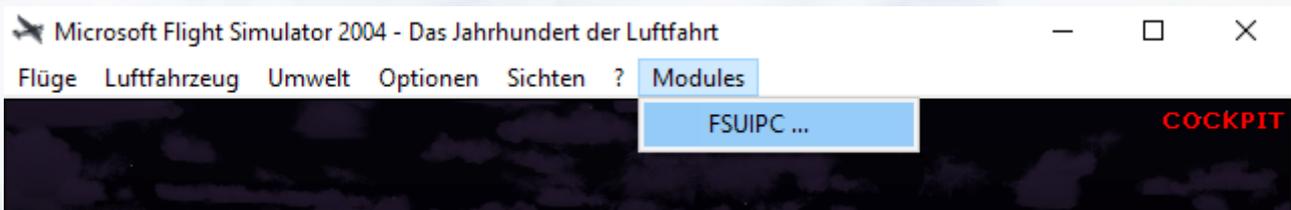
If you are only running the FS9 / FS2004 then you need to install the 32-bit version of FSrealWX 3.0.

Without FSUIPC, FSrealWX 3.0 can not connect to the FS9 and thus can not update the weather.

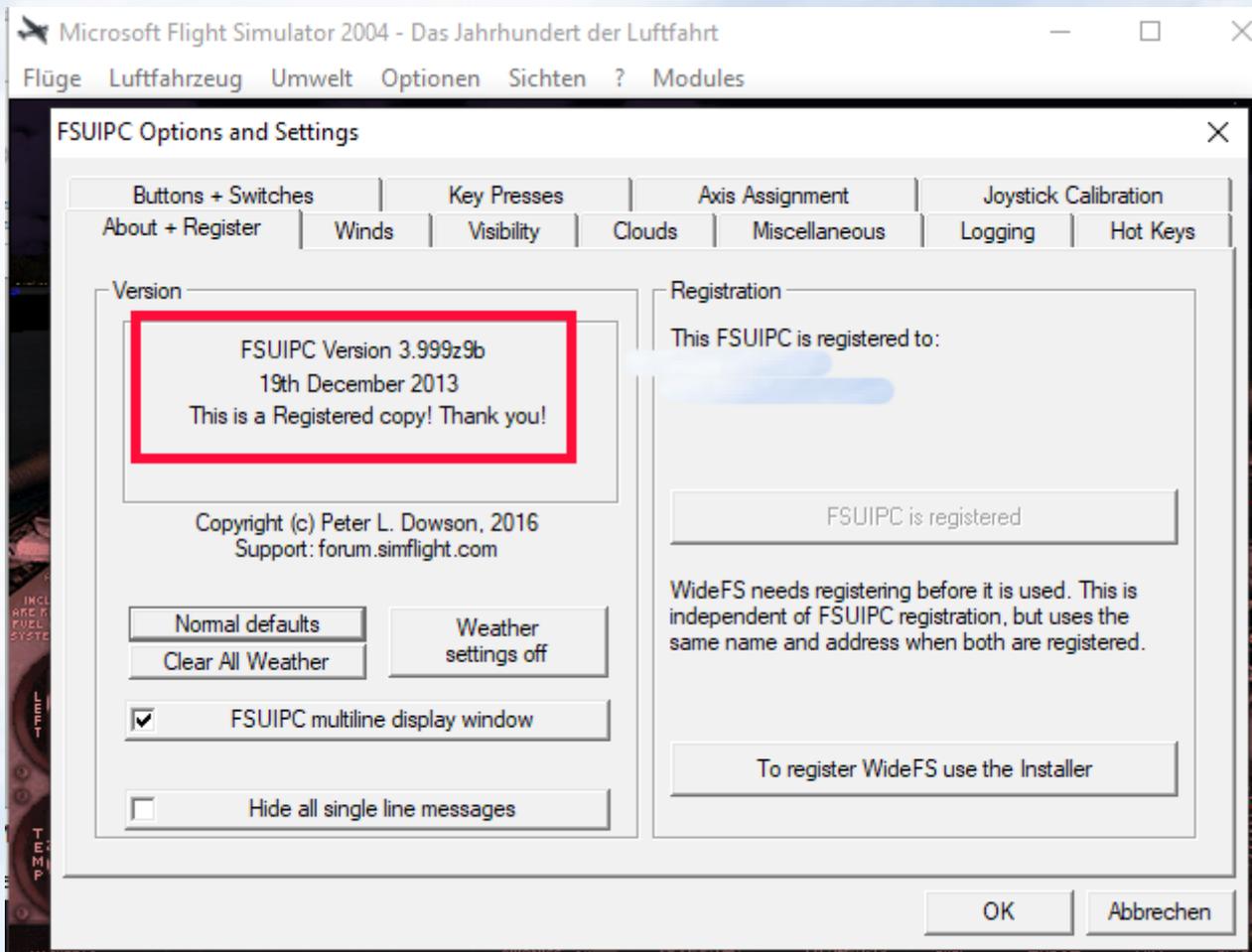
Please set the FS9 weather setting like this.



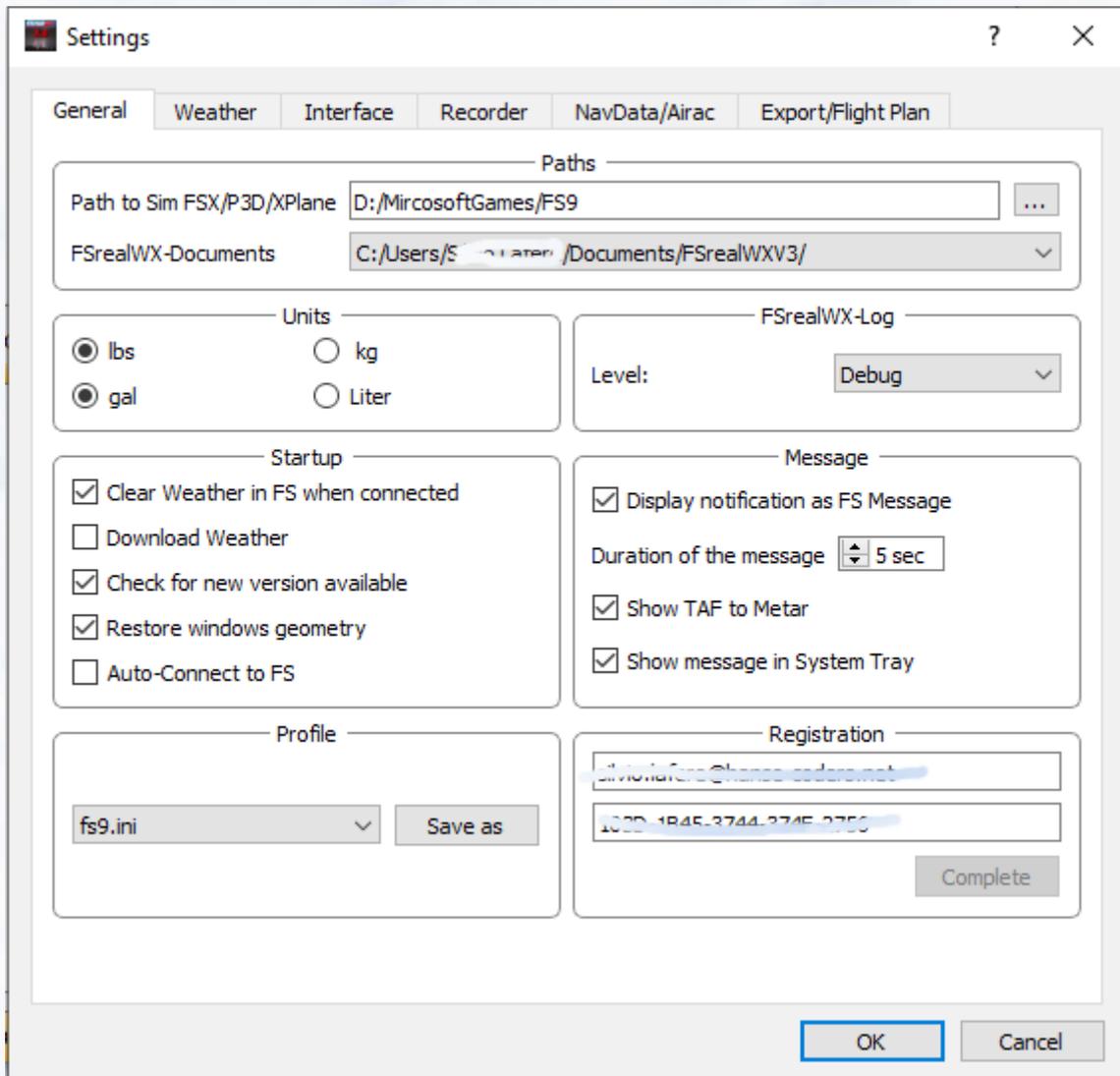
Now check if the current version of FSUIPC is installed.



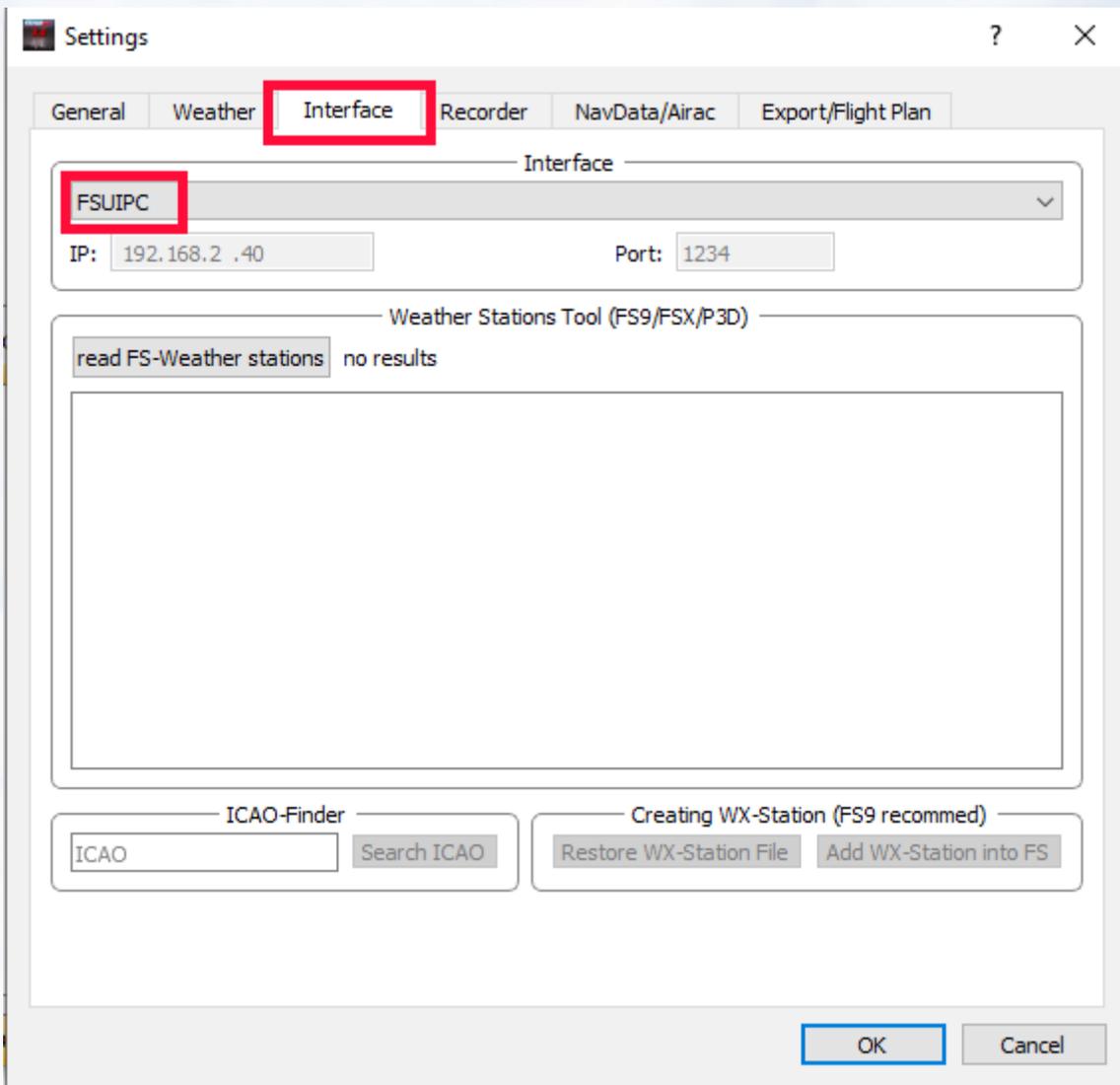
If FSUIPC is installed, then you will find an entry "FSUIPC" in the menu -> Modules.



Now we will make the settings for FSrealWX 3.0.

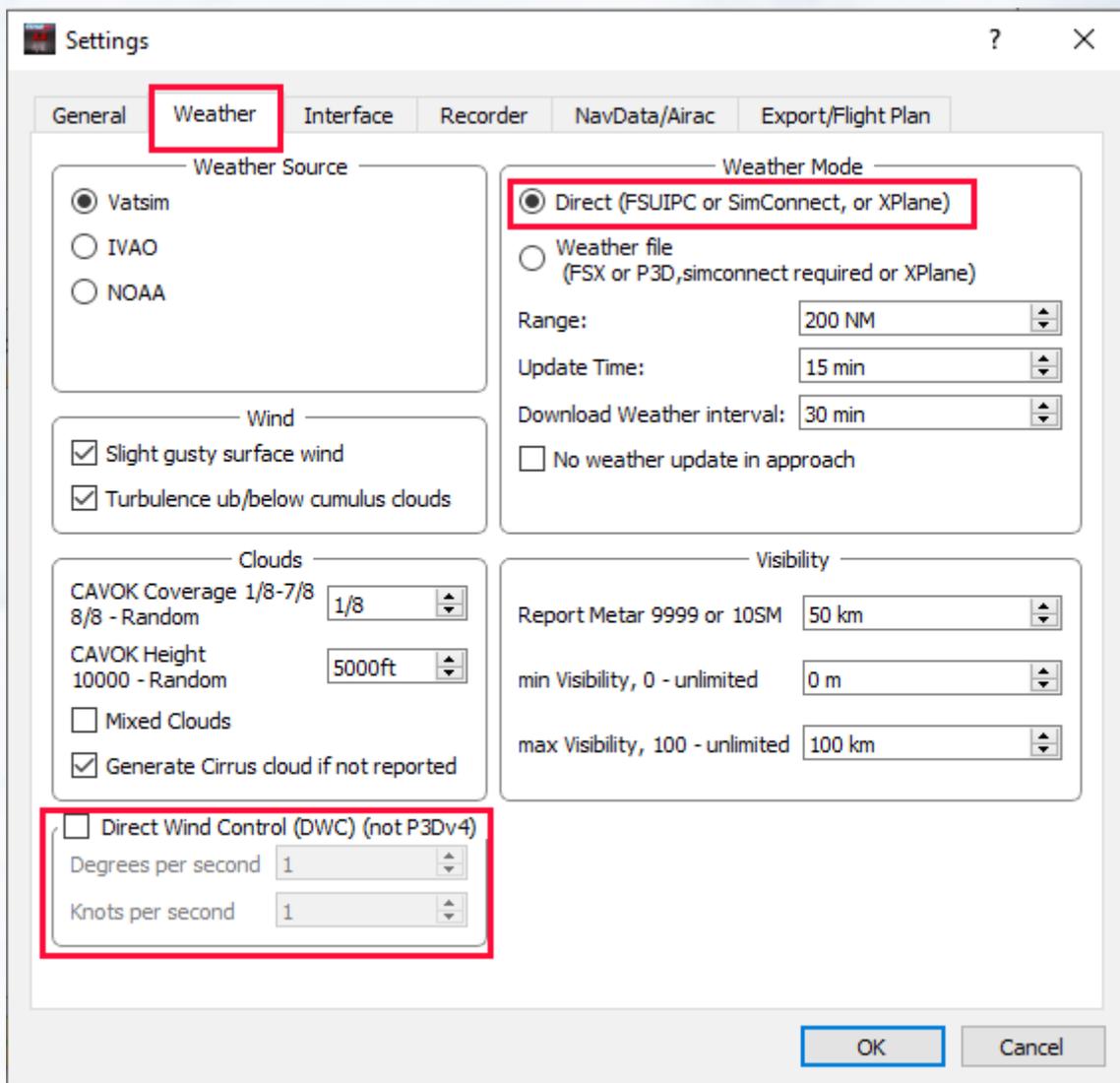


First you set the path to the flight simulator FS9. Then you set the right interface. For FS9 necessarily set FSUIPC.



To "Create WX station" we come later.

Now you set the weather settings in FSrealWX 3.0 for the FS9.

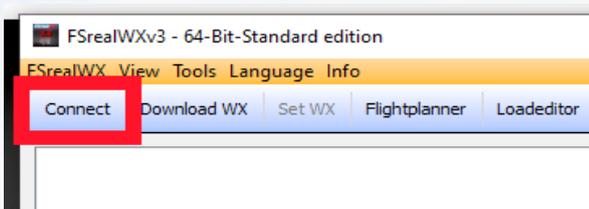


With the FS9, the weather can only be set directly from FSrealWX, i. each weather station is set individually. The more weather stations are present in the FS9 the more weather changes are to be expected in flight.

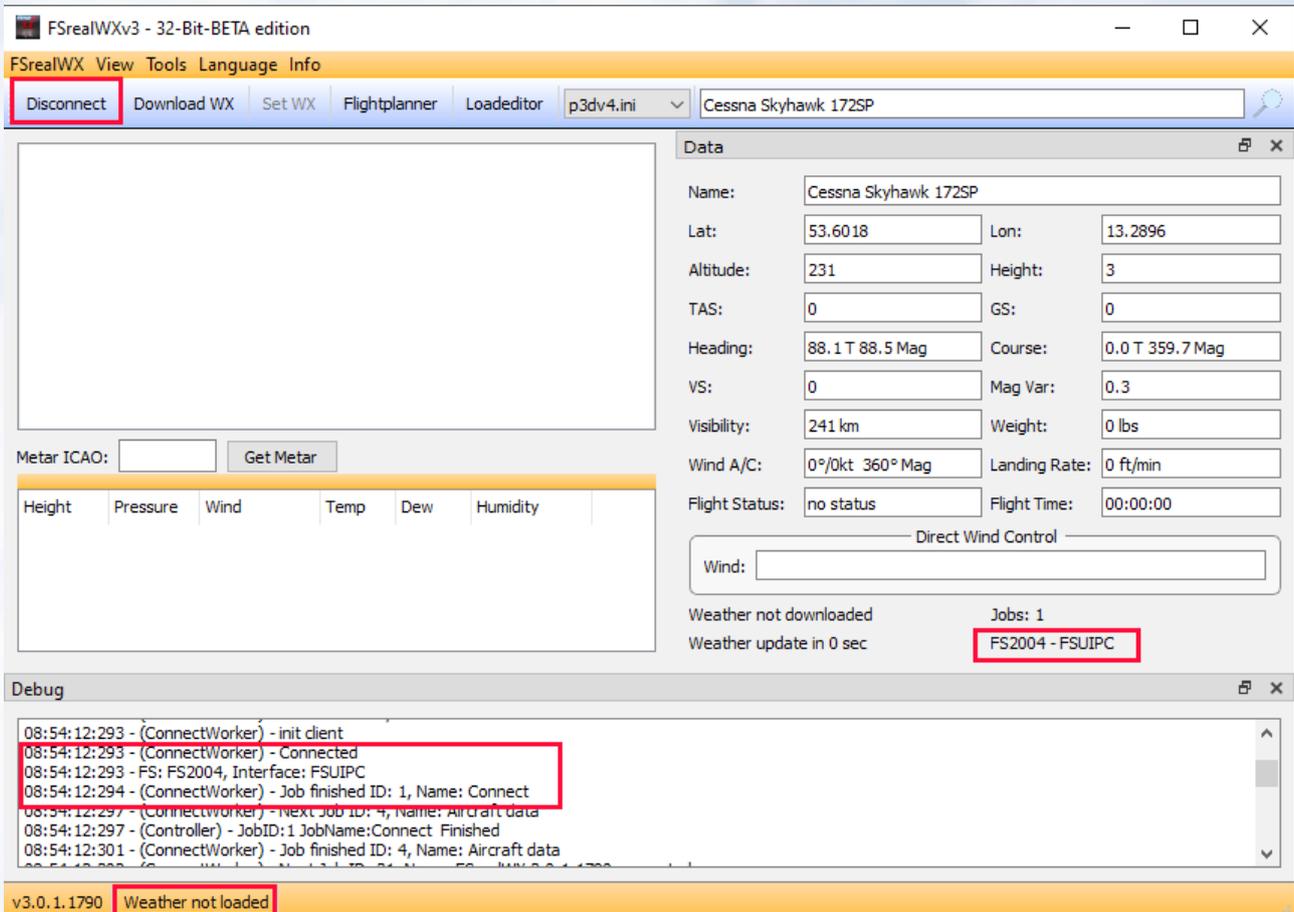
Set "Direct Mode" for "Weather Mode".

If there are strong wind changes in the FS9, then you can activate "Direct Wind Control". With "Direckt Wind Control", the wind in the FS9 is continuously reset. Alternatively you can also activate "Smooth Wind" in FSUIPC. That's it for now with the settings.

Now test the connection to the FS9. First we start the FS9, set an airfield and a plane and stand on the airfield.



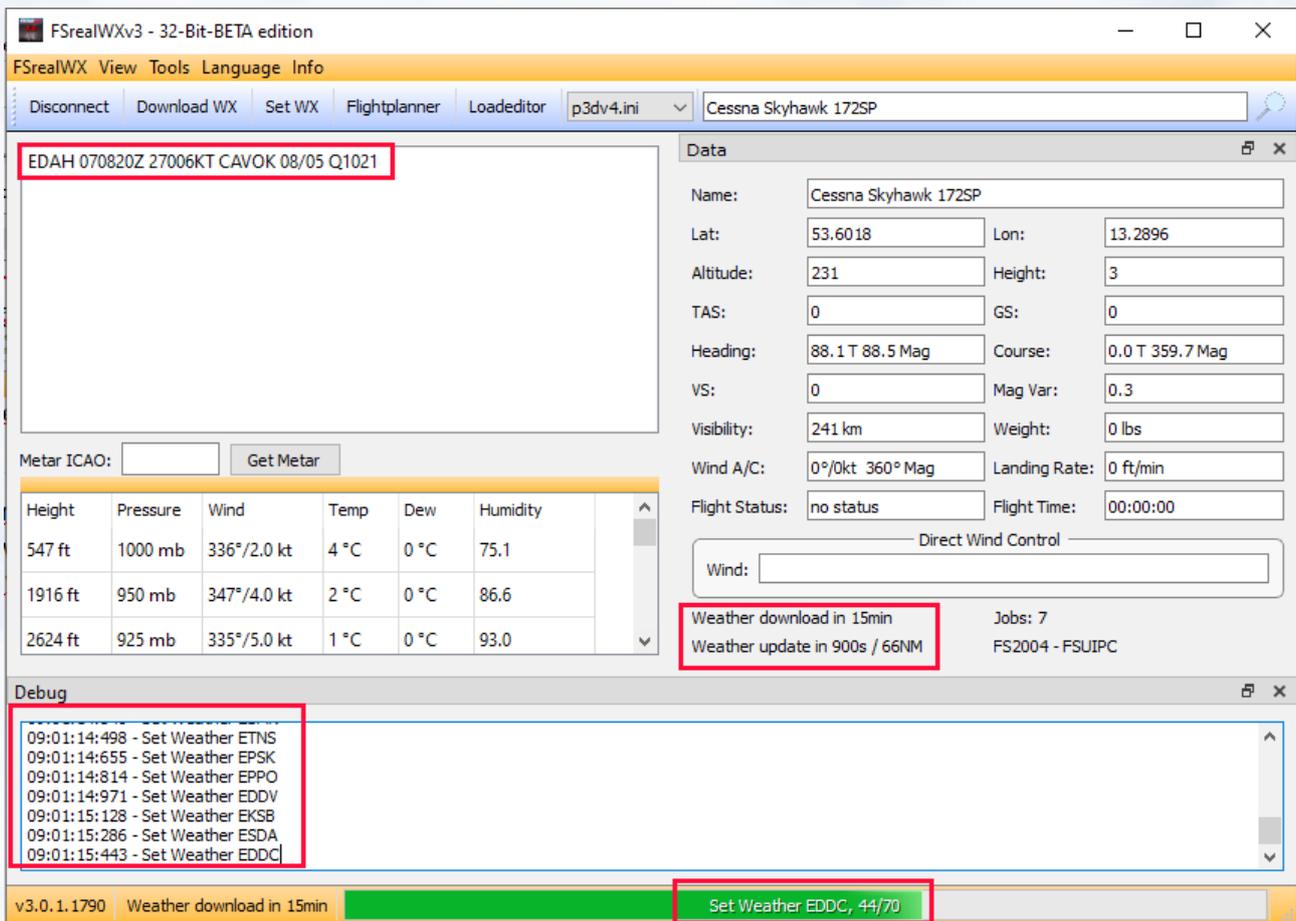
Now press "Connect" in FSrealWX 3.0.



When the connection is made, then you should see the red marked fields like this.

If not, check if the FS9 and FSrealWX was started with administrator rights and turn off the virus scanner.

Now the status bar of FSrealWX says "Weather not loaded". By pressing on "Download WX" we load the weather from the weather server, then the weather is transferred to the FS9.



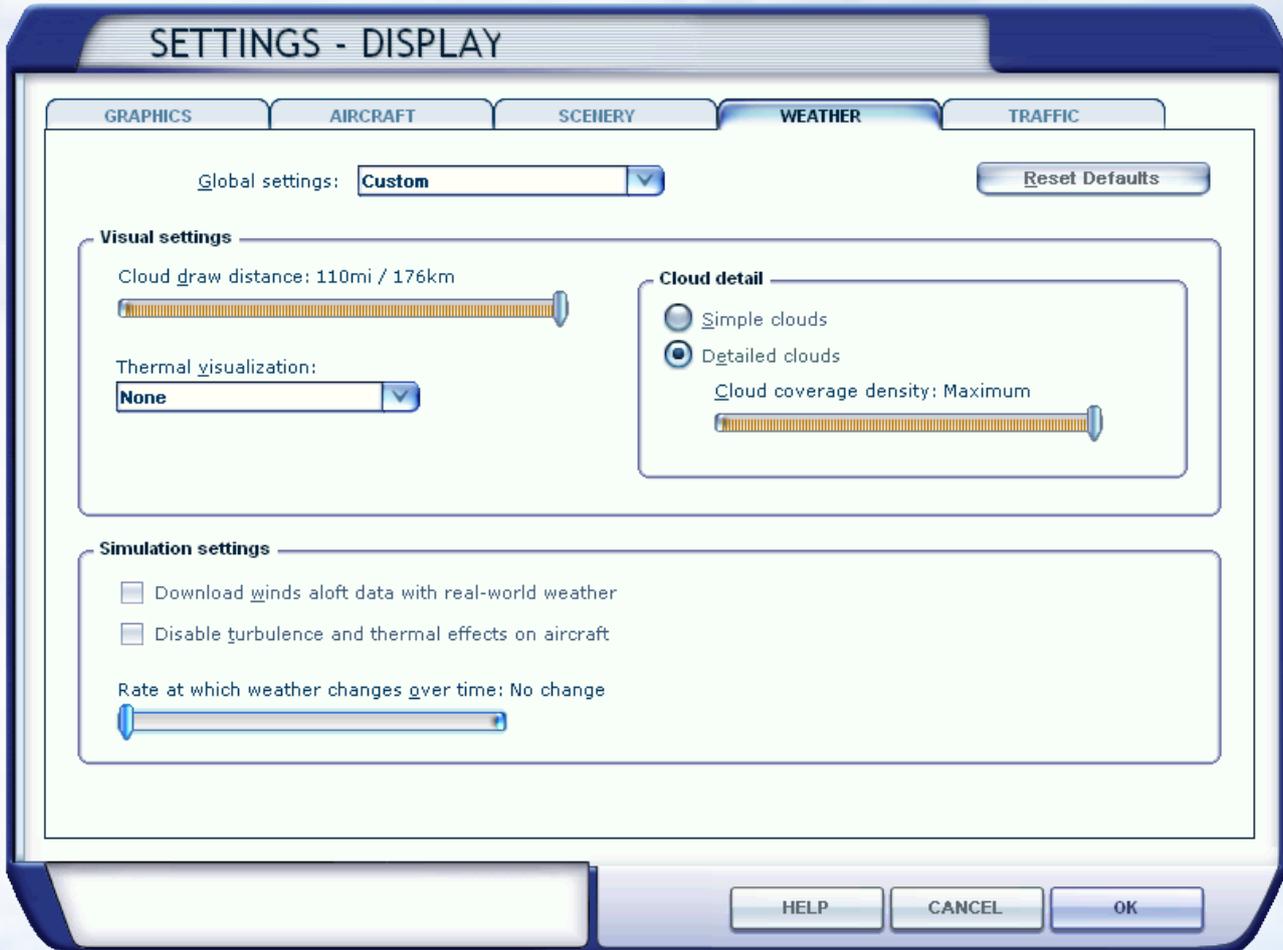
If the weather has been correctly loaded, prepared and sent, FSrealWX 3.0 will point the metar to the nearest airport. In the debug window and in the status bar you will see the progress of preparing the weather and sending.

If you do not see the debug window, then you will find it in the menu of FSrealWX under "View" -> "Windows" – "Debug"

## FSrealWX for FSX

The FSX can establish a connection to FSrealWX 3.0 with FSUIPC and / or Simconnect.

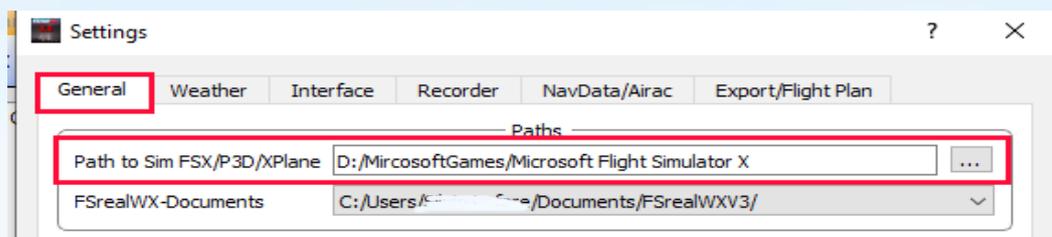
The weather settings in the FSX are similar to the FS9.



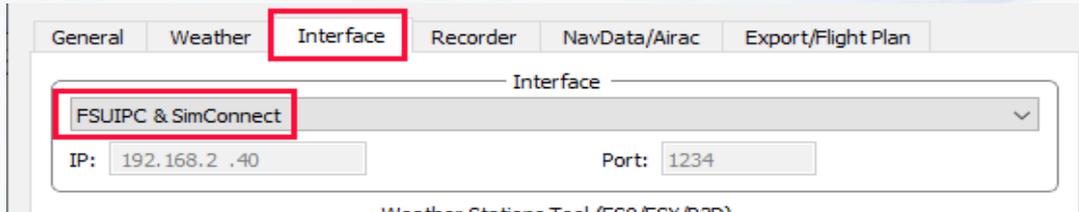
Now we set the weather program FsrealWX.

First, the path to the FSX.

FSrealWX Menu -> FSrealWX -> Settings.



Then the connection settings.



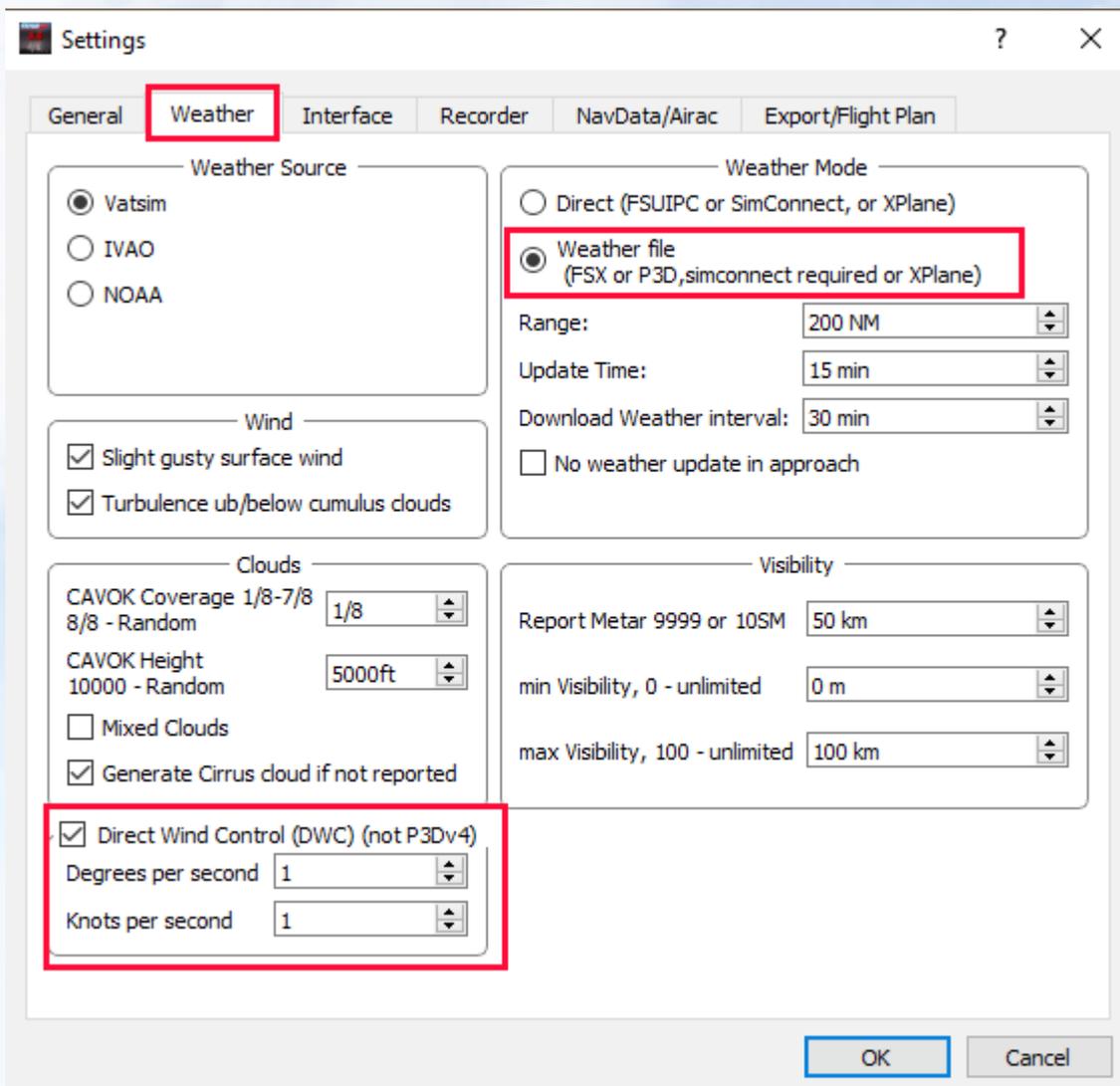
At Interface we choose "FSUIPC & SimConnect".

If you only choose "Simconnect" then "Direct Wind Control" from FSrealWX will not work, but the weather will still be transmitted.

The weather settings in FsrealWX.

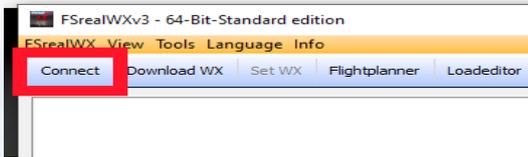
In the "Weather" tab, in the "Weather Mode" block, it is preferable to put "Direct".

Unlike the FS9 we now choose "Weather-Mode" "Weather file". With "Weather File" the weather is transmitted as a file and read by the FSX.

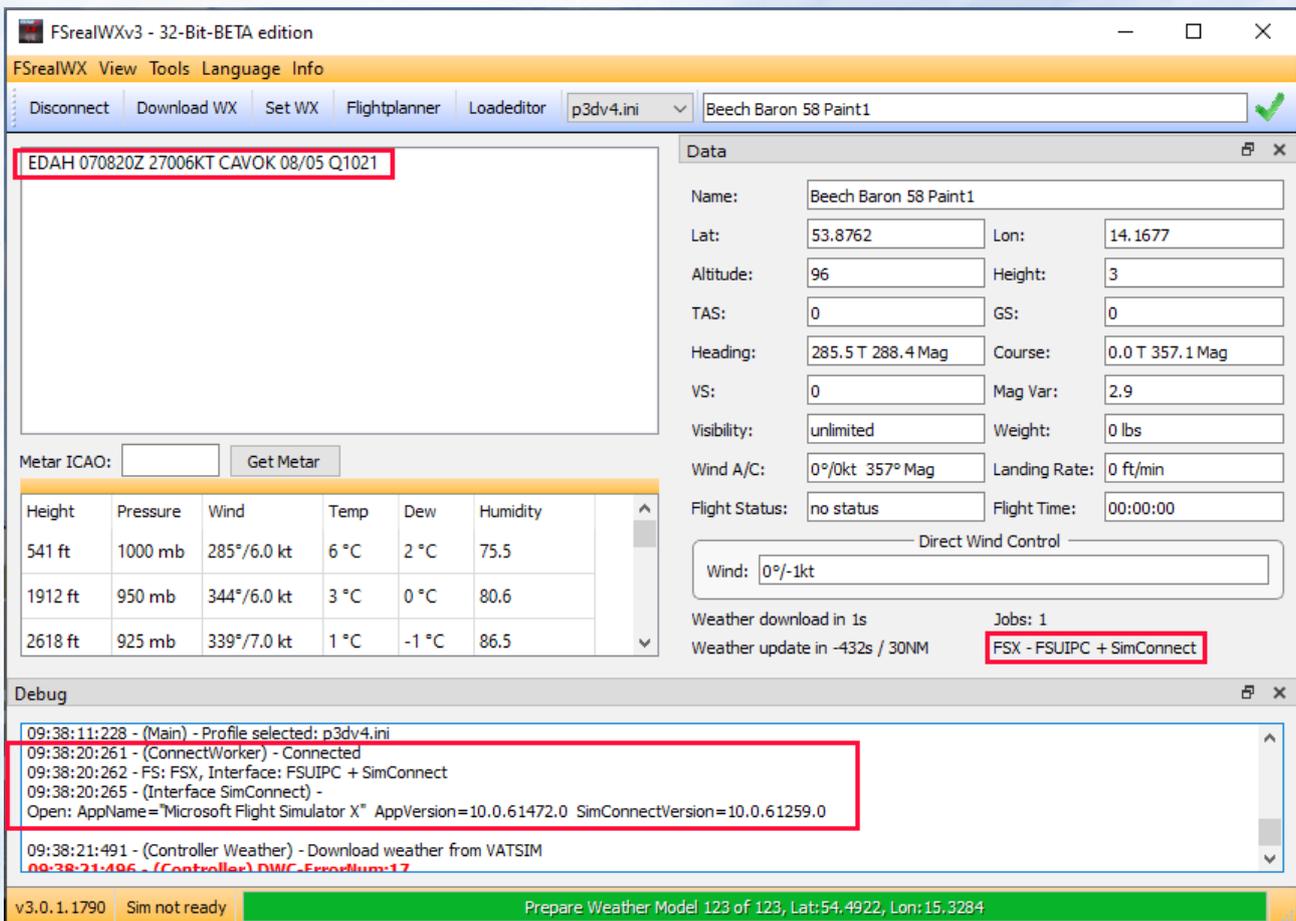


As a result, not every weather station is set individually but the weather in the specified "Range" radius completely set. This reduces the stuttering and wind jumps in the weather transfer.

Now we have made all settings and test the connection. Please close the Settings window and click on "Connect".



After that, it should look like this in FSrealWX 3.0

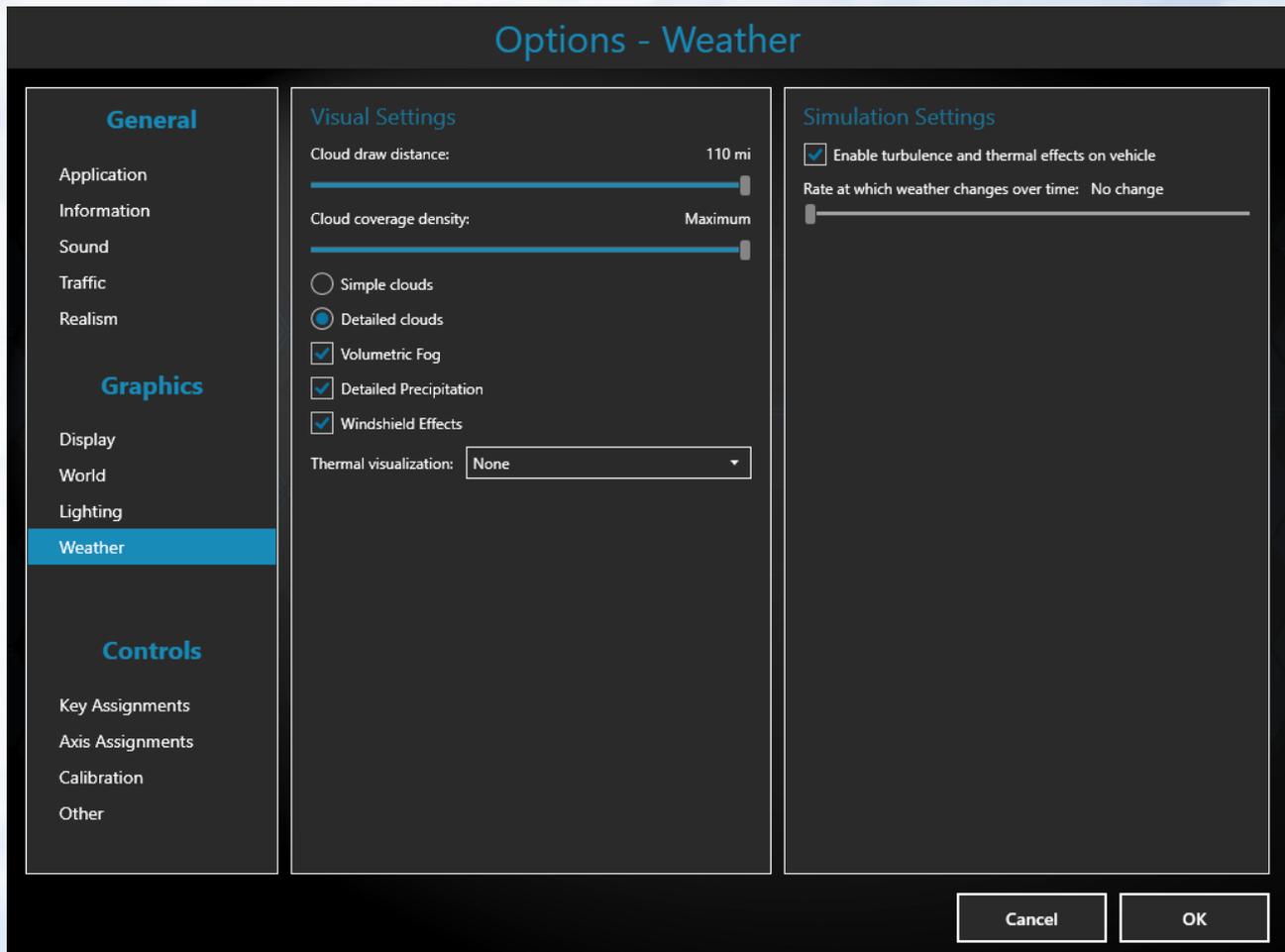


If you now press "Download WX", then the weather is prepared and transferred to the FSX.

## FSrealWX for Prepar3D v4

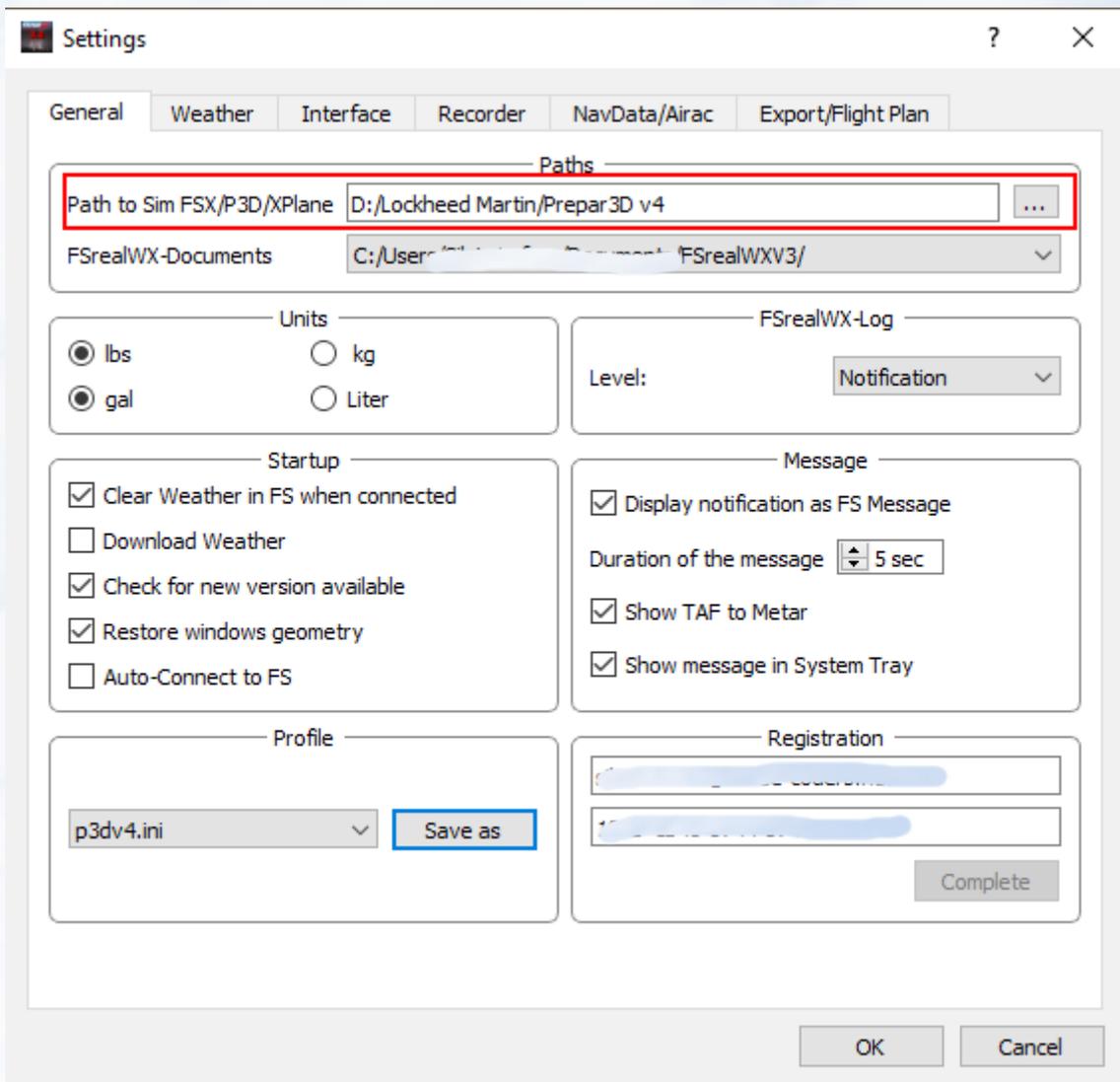
For Prepar3D v4 you only need Simconnect. FSUIPC is not needed because Direct Wind Control does not work with Prepar3Dv4.

### Weather Settings Prepar3D v4

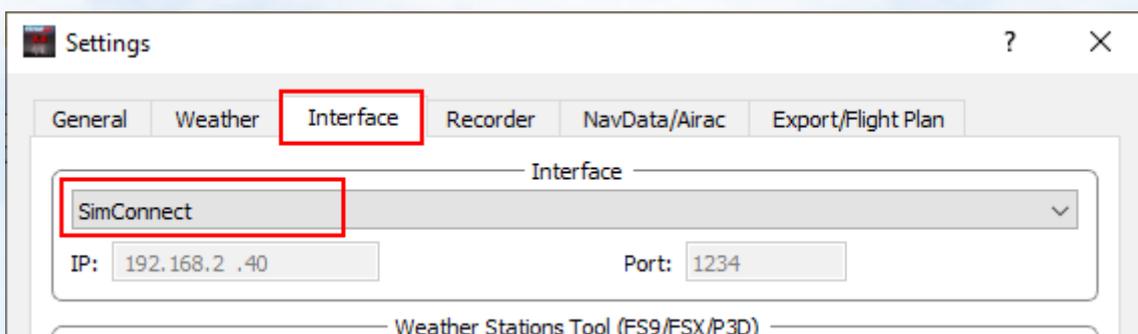


More settings in Prepar3D v4 we do not need to make.

First, set the path of Prepar3D to FSrealWX. To do this, open the settings dialog.  
FsrealWX-Menu → FsrealWX → Settings

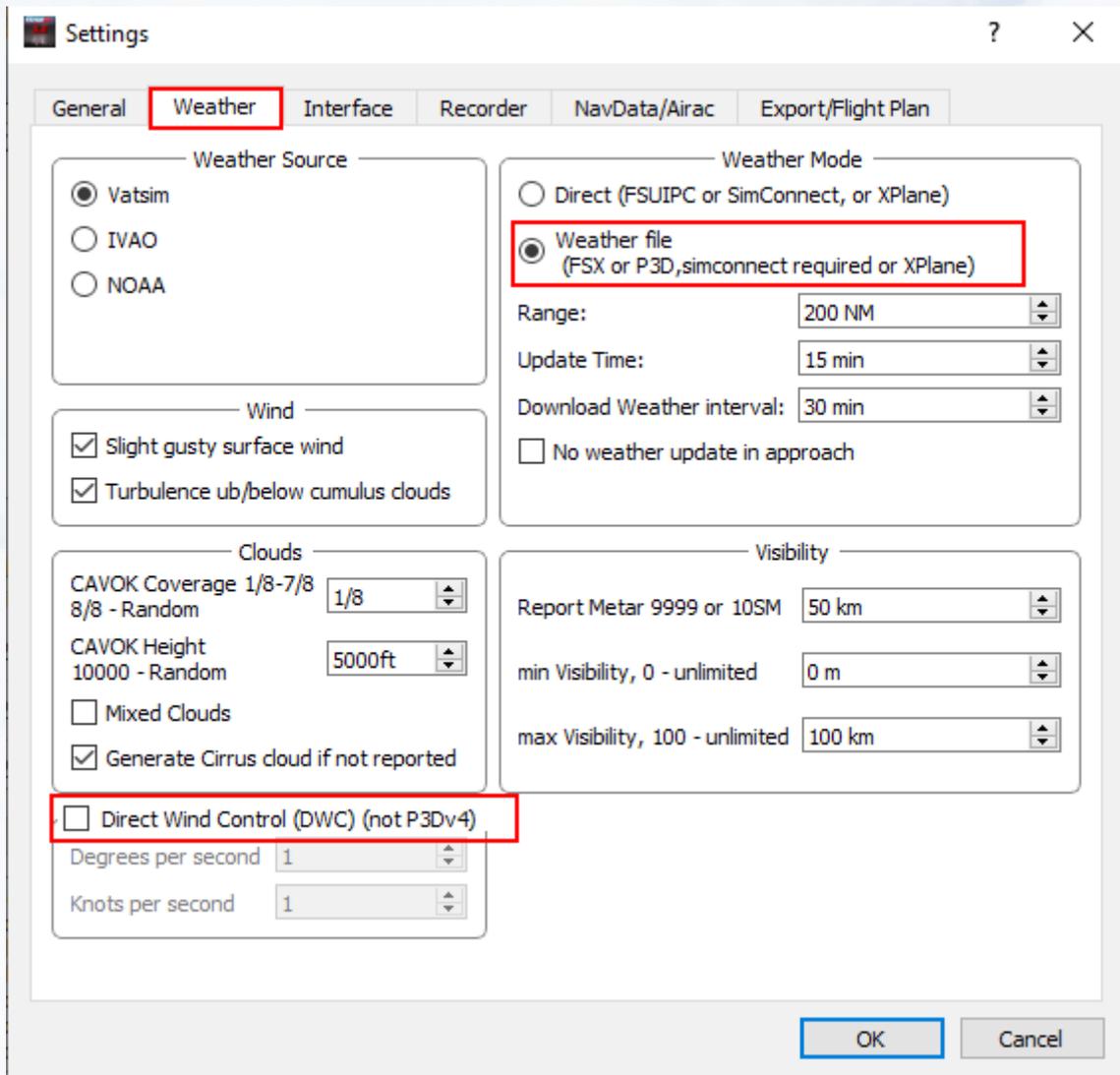


Then you open the interface tab and set the connection settings to the Prepar3D.



You select "Simconnect" as an interface.  
Other connection settings are not required.

Next, open the weather settings. Open the weather tab.



Important settings for this. **Weather-File**, so that the weather data is transmitted to the simulator. And disable **Direct Wind Control**, as Prepar3D can not work with Direct Wind.

That's all you have to do in FsrealWX. Close the settings window with "Ok".

Now you start the Prepar3D Simulator and get your plane ready.

If your plane is on the apron or elsewhere, press "Connect" in FsrealWX.

The "Connect" button is at the top left of the FSrealWX toolbar.

If FSrealWX is connected to the Prepar3D, then you can press "Download WX"

So it should look FsrealWX.

The screenshot displays the FSrealWXv3 application interface. The main window is titled "FSrealWXv3 - 64-Bit-Standard edition" and features a menu bar with "View", "Tools", "Language", and "Info". Below the menu bar is a toolbar with buttons for "Disconnect", "Download WX", "Set WX", "Flightplanner", "Loadeditor", and a file selector showing "p3dv4.ini".

The central area shows a flight plan for "EDAH 191220Z 18007KT 150V210 CAVOK 13/10 Q1010". Below this is a "Metar ICAO:" field and a "Get Metar" button. A table displays weather data for various altitudes:

Height	Pressure	Wind	Temp	Dew	Humidity
9760 ft	700 mb	227°/31.0 kt	-4 °C	-16 °C	38.7
13668 ft	600 mb	224°/31.0 kt	-14 °C	-14 °C	100.0
18143 ft	500 mb	226°/51.0 kt	-21 °C	-21 °C	100.0
23451 ft	400 mb	231°/71.0 kt	-30 °C	-30 °C	100.0

The bottom status bar shows "v3.0.1.1791", "Weather download in 13min", and "Weather update in 828s/66NM".

On the right side, a "Data" panel contains fields for aircraft information: Name (Carenado A36 Bonanza White), Lat (53.8762), Lon (14.1675), Altitude (97), Height (4), TAS (0), GS (0), Heading (282.7 T 285.5 Mag), Course (0.0 T 357.1 Mag), VS (0), Mag Var (2.9), Visibility (55 km), Weight (0 lbs), Wind A/C (204°/7kt 201° Mag), Landing Rate (0 ft/min), Flight Status (Parking), and Flight Time (00:00:00). A "Direct Wind Control" field is also present.

Below the Data panel, a status bar indicates "Weather download in 13min", "Jobs: 1", and "Weather update in 828s / 66NM". A red box highlights the text "Lockheed Martin® Prepar3D® v4 - SimConnect".

At the bottom, a "Debug" window shows a log of system events. A red box highlights the following log entries:

```
13:19:55:589 - (ConnectWorker) - Connected
13:19:55:590 - FS: Lockheed Martin® Prepar3D® v4, Interface: SimConnect
13:19:55:595 - (Interface SimConnect) -
Open: AppName="Lockheed Martin® Prepar3D® v4" AppVersion=4.5.13.32097 SimConnectVersion=4.5.0.0
```

Another red box highlights a larger block of log entries:

```
13:20:09:472 - (Controller Weather) - Download weather from VATSIM
13:20:10:354 - (Downloader) - Weather download finished
13:20:10:354 - (WeatherManager) Initialize weather data
13:20:10:440 - (WeatherManager) - metar initialization completed: 5067
13:20:10:469 - (WeatherManager) - TAF initialization completed: 7077
13:20:11:320 - (WeatherManager) - additional weather data initialization completed: 13730
13:20:16:972 - (WeatherManager) finished initialization of weather data: 5067 Metars, additional WX:8869
13:20:17:978 - (WeatherManager) Download Grib, position: 53.88, 14.17
13:20:18:313 - (Controller Weather) Decoding Grib
13:20:18:344 - (WeatherManager) Grib decoded
13:20:24:184 - (WeatherManager) Weather Model File created
13:20:24:185 - (ConnectWorker) - Set Weather Theme. File: D:/Lockheed Martin/Prepar3D v4/Weather/themes/fsrealwx.WTB
```

Now you can start your flight. FSrealWX automatically updates the weather.

## FSrealWX for Xplane

For Xplane10 / 11 is still another plugin necessary because Xplane works differently than FSX / P3D.

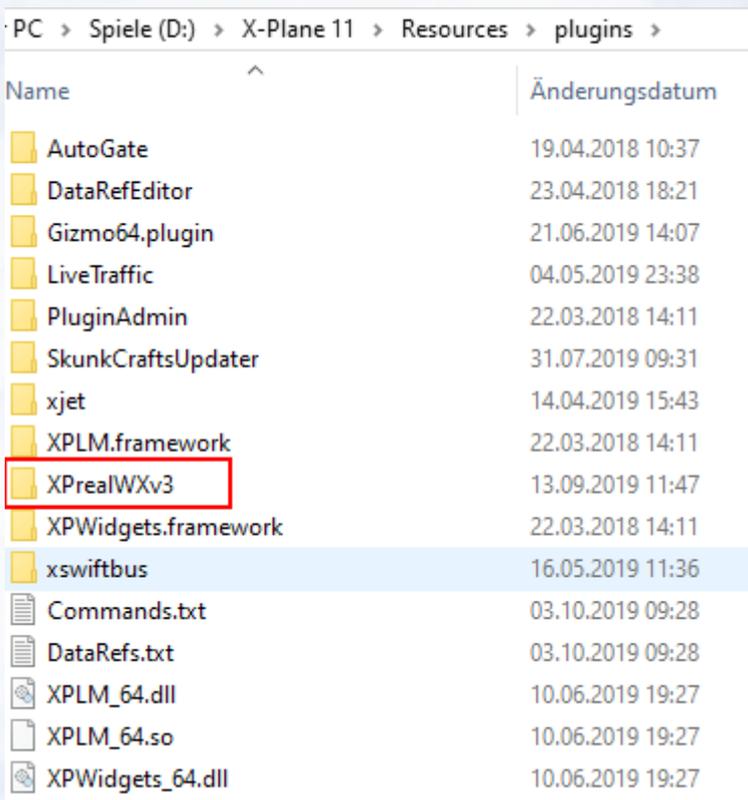
You can find the plugin "XprealWX v3" under the following link.

<https://www.fsrealwx.de/index.php/downloads/fsrealwx-3-0>

Download "XPrealWX v3" plugin for Xplane10 or Xplane11. Pay attention to the XPlane version.

Unzip the plugin into the following directory of Xplane.

*X-Plane 11\Resources\plugins*



If you have already installed FSrealWX, then pay attention to the right version of FSrealWX.

There are three different versions of FSrealWX 3.0. If you also have FSX or Prepar3D installed, then you can also use this FSrealWX version. If you only have XPlane and / or FS2004 installed, then use FSrealWX 3.0 for FS9 / Xplane.

Otherwise you will get an error message when starting FSrealWX because the "Simconnect.dll" file is missing.

You have to put in Xplane and in FSrealWX the IP and the port of your computer. With XPlane you can also run FSrealWX on another computer, just specify the correct IP and port.

First, you have to find out the IP from the computer running on the Xplane.

If XPlane and FSrealWX run on only one computer, then you can also use the following IP.

### 127.0.0.1

If needed, Windows can also enter a static IP.

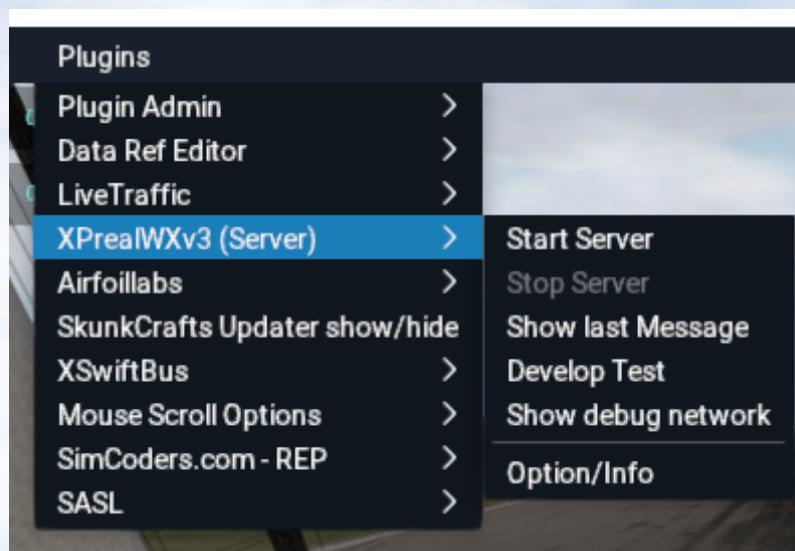
<https://stevessmarthomeguide.com/setting-up-static-ip-address-windows-10/>

A static IP is required if you use two computers.

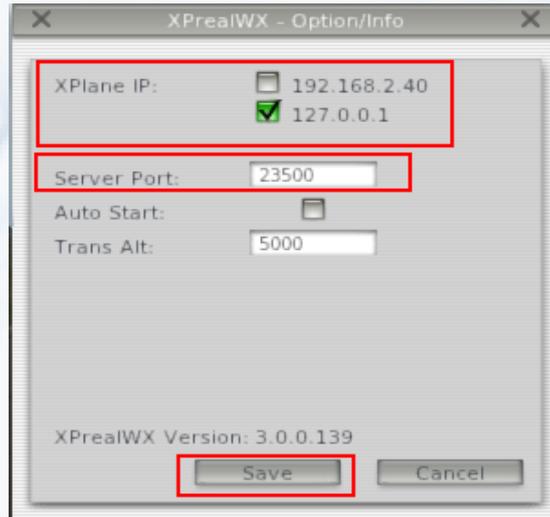
Start Xplane and FSrealWX 3.0 now.

Your plane should be on the apron so you can adjust the settings.

Now open the Xplane menu and select "XprealWX v3 (Server)".

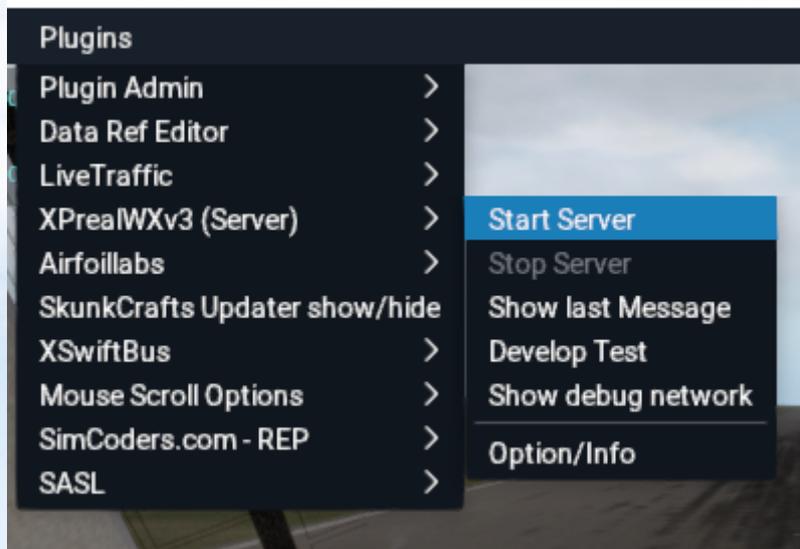


Then "Options / info"

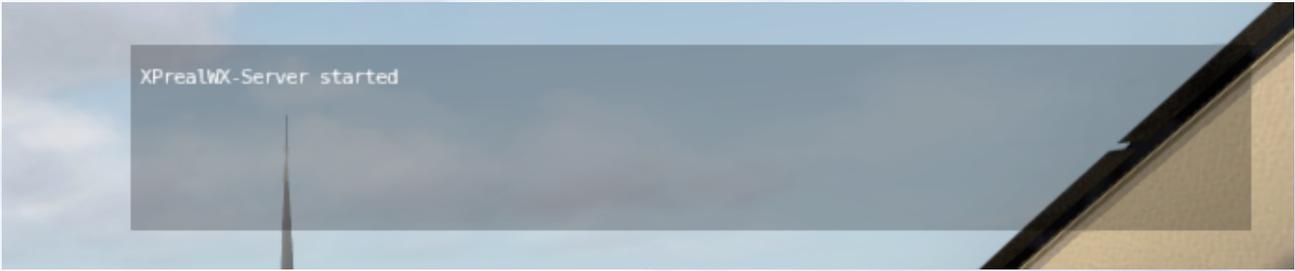


The available IPs are displayed. Now choose the right IP and enter a free port. You have to enter these two values (IP and port) in FSrealWX 3.0 so that FSrealWX can connect to Xplane. Now click on "Save" when you're done.

Now you can already start the XprealWX server. The server will wait for the connection.

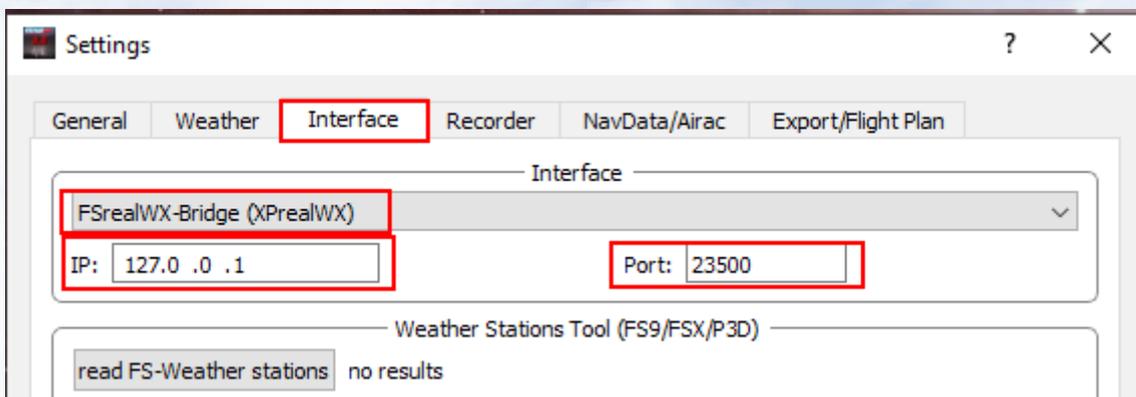


If the server is started, the following message is displayed in Xplane. The message box of XPrealWX can also be moved as long as it is displayed.



Now you have the settings in FSrealWX.

First, the IP and the port.

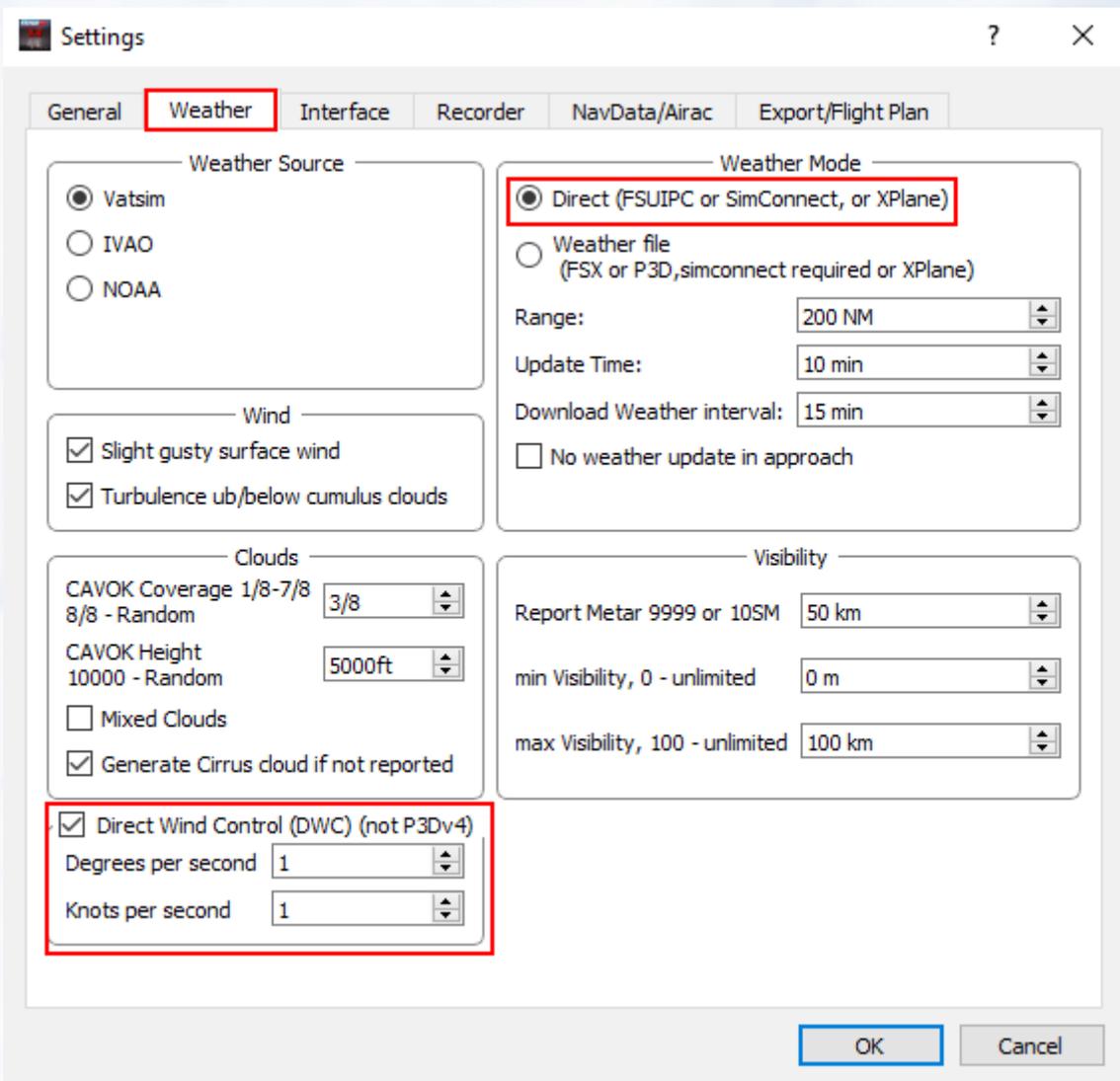


Open the settings window of FSrealWX. FSrealWX -> Options. Then you select the "Interface" tab.

As interface you choose "FSrealWX-Bridge (XPrealWX)".

As you can see, the same values are entered here.

Now the weather settings. Select the "Weather" tab.

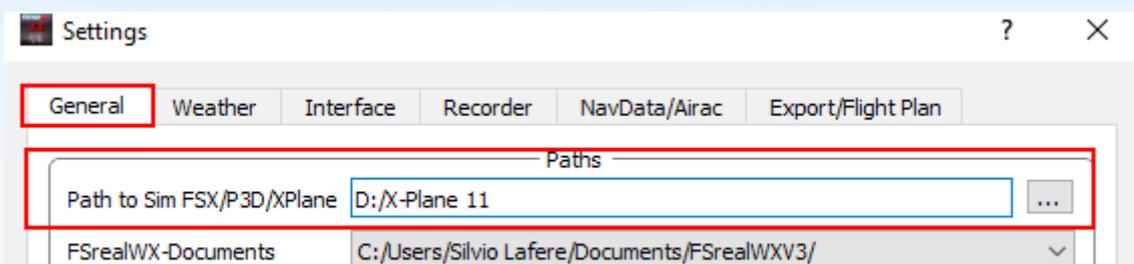


The "Weather-Mode" you put on "**Direct**".

You can test "**Weather-File**" later, because this option requires different procedures. With "**Weather-File**" the weather files are written in Xplane and loaded by XPlane, but this deactivates "**Direct Wind Control**". I like the "**Direct**" option.

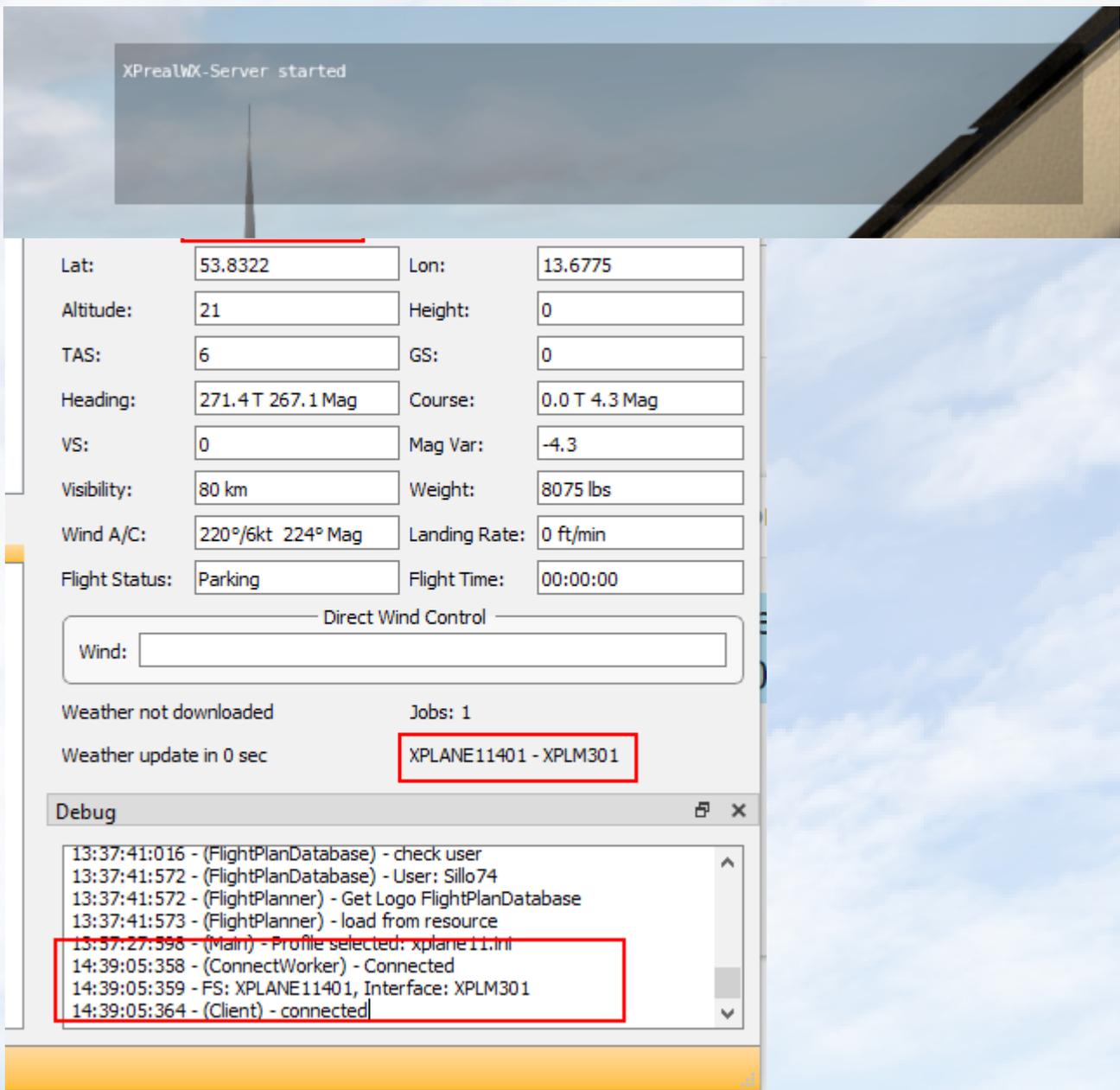
Next, activate the "**Direct Wind Control**". With **DWC**, the winds are constantly being reset. Without **DWC**, Xplane can only use three high-altitude winds.

Then you set the path of Xplane.

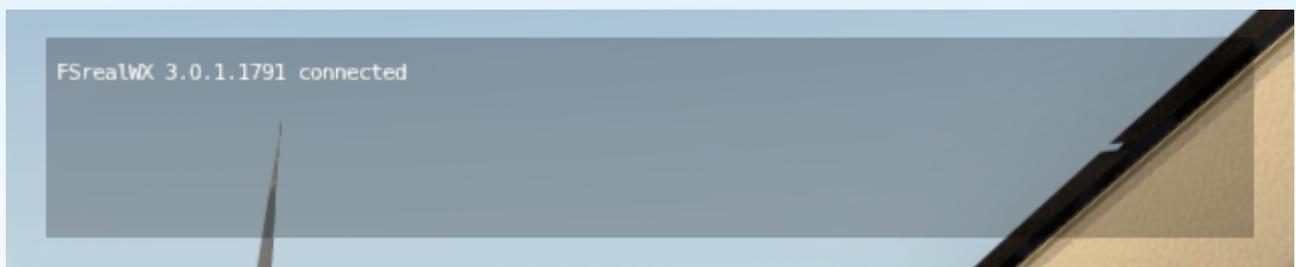


That's all. Now close the settings window with "Ok".

Are you ready? Then click on "Connect" in FSrealWX 3.0 top left.



## FsrealWX



## Xplane

If FSrealWX 3.0 and Xplane are connected, then click on "Download WX" in FSrealWX. The weather is loaded into FSrealWX, edited and sent to XPlane. Further steps are not necessary as FSrealWX continuously updates the weather.

## **Troubleshoot**

If no connection is made then try the following steps.

- Check if the FS and FSrealWX was started with admin rights.
- Currently version of FSUIPC / Simconnect is installed.
- The correct connection type has been set.
- Flight simulator ready to start
- Anti Virus the flight simulator and FSrealWX 3.0 was not blocked.