

FSConny

User Manual

Simply connect MSFS2020 to your Nav-App

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Terms of use:

When you run this software, you accept that:

- The provider does not grant that the software or data is faultless and does not accept any liability for any damages, directly or indirectly resulting from the use of the software, or for damages resulting from possible errors or misprints of the software. The provider does not grant that the software satisfies your demands or that the software works without any difficulties, while used with another software or hardware simultaneously.
- This software is prohibited from decompiling, reverse engineering, modifying, adapting or otherwise changing the software without prior written permission by the author.

1. What is FSConny?

Primarily this software was designed to get familiar with Easy VFR, a great navigation software for the General Aviation. Please have look at <https://easyvfr4.aero>.

MSFS2020 does not provide data that can be used directly by navigation software. This tool connects to the MSFS2020 and converts the MSFS2020 data into corresponding GPS data. This data is then sent over a network UDP connection at 1 second intervals.

So, you can test or get familiar with your navigation software without being airborne.

2. What do you need?

To run this tool, you need:

- Microsoft® Flight Simulator 2020. Previous versions are not supported. If you're still using FSX, you need to use xConn which is available for download at <https://www.pocketfms.com/2-DownUtility.asp>
- .NET Framework Version 4.8 is required to run FSConny

3. How to use it:

The buttons panel



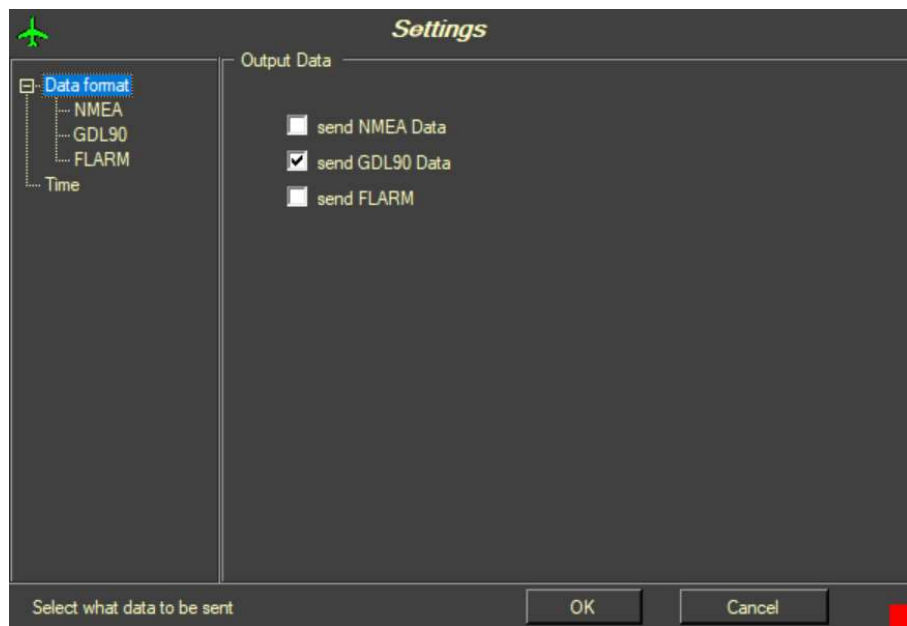
After selecting an action from panel menu, the button turns from gold to light green. Disabled options are greyed out.



3.1 The Settings

3.1.1 Data format:

Select what kind of data is sent. You can choose any combination of data regardless whether that makes sense or not.



(The small red square ■ at the bottom right corner can be used to resize the window)

3.1.1.1 NMEA:

These sentences are commonly used by standard GPS devices.



GSV are dummy sentences only, i.e., always the same satellite constellation.

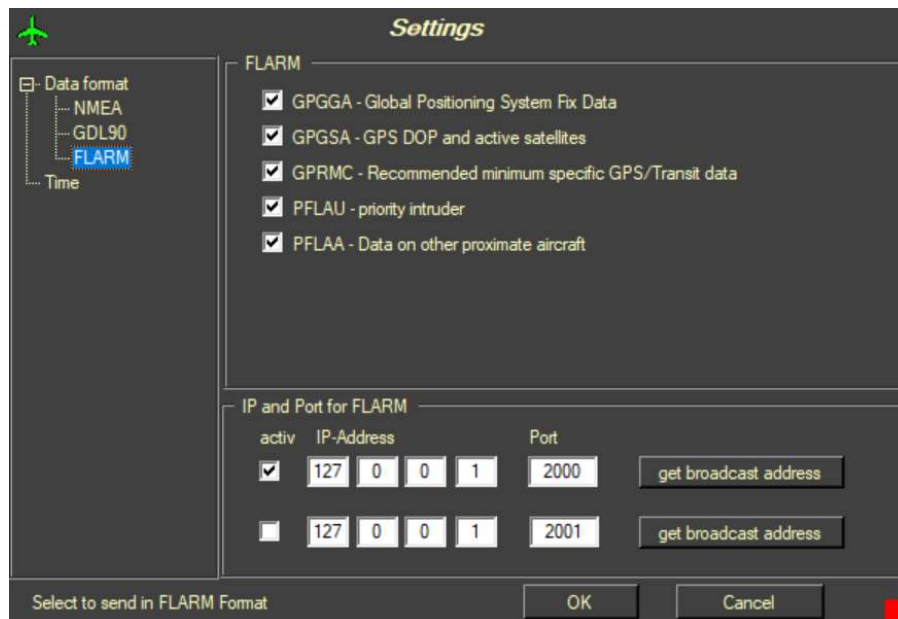
3.1.1.2 GDL90:

These sentences are mostly used by traffic alert devices, like ADS-B transponder. Additionally, they are used by AHRS devices i.e., attitude and heading reference systems. GDL90 provides current position information as well.



3.1.1.3 FLARM:

this is the proprietary data of just another traffic alert system including position data.



3.1.2 Network settings:

Each data format, NMEA, GDL90 and FLARM, can be sent to a different address and port. The data created by FSConny is sent over the network using the User Datagram Protocol (UDP). The IP-address and a port number of the receiving device must be entered accordingly. Don't forget to enable those ports in your firewall.

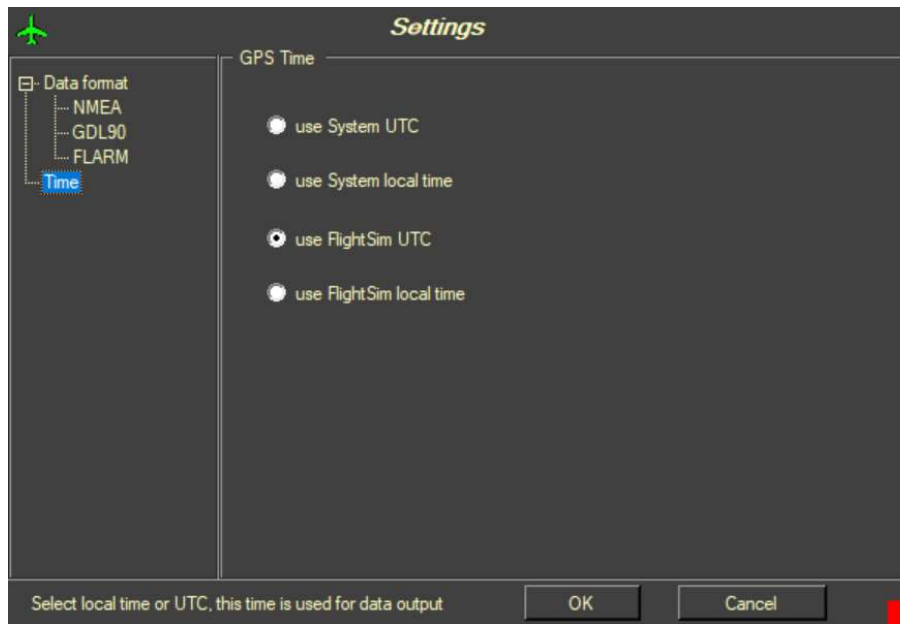
If you use FSConny and your navigation software on the same computer, you can use the IP address 127.0.0.1, the so-called 'local host' address.



To broadcast to multiple devices simultaneously, set the fourth segment of your network IP address to 255. The broadcast address is determined automatically when you click 'Get Broadcast Address'.



3.1.3 Time:

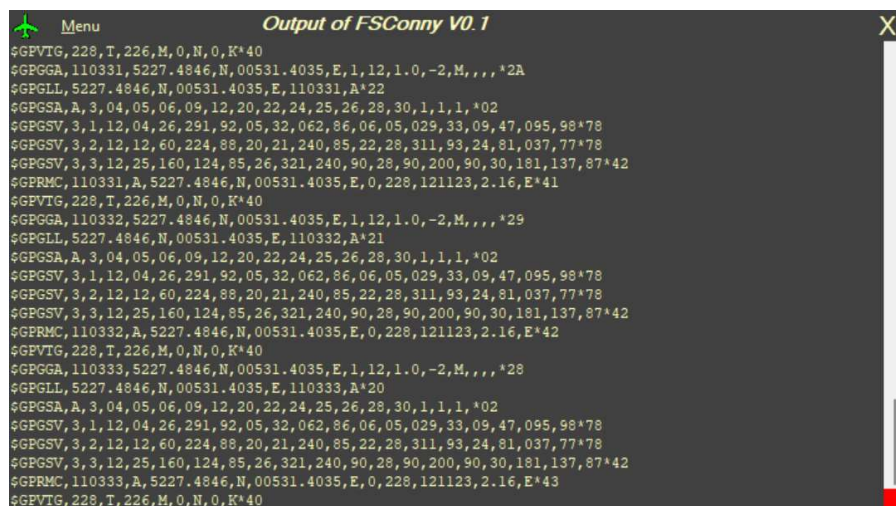


Select what time shall be used for NMEA, GDL90 and FLARM data.



3.2 Monitor FSConny out put

Output data can be monitored in a separate window. Additionally, you can save the data to a file for later usage, pause the output to this window or clear the displayed data.



This is a sample of NMEA 0183 output data. FLARM data looks similar.

```

Menu      Output of FSConny V0.1
TR 7E 14 01 FF F4 32 25 34 C5 03 77 FD 04 FB 0B 09 DF F3 BD 03 53 58 53 37 32 32 20 20 00 A9 41 7E
TR 7E 14 01 FF F4 35 25 1D 30 03 C5 2A 1B 0B 0C 09 70 01 03 03 4B 4C 4D 31 38 35 36 20 00 FE 56 7E
TR 7E 14 01 FF F4 37 25 26 3D 04 4E 4D 25 8B 0B 08 B0 00 C3 03 4B 4C 43 31 32 37 32 20 00 CC 11 7E
HB 7E 00 81 01 04 9E 00 00 0F 32 7E
OS 7E 0A 01 12 AB CD 25 4D C8 03 ED BD 02 8B 09 00 40 00 D3 01 00 00 00 00 00 00 00 00 00 44 AB 7E
TR 7E 14 01 FF F3 17 25 4C 08 03 E2 B8 23 3B 0C 13 B0 00 3C 03 4B 4C 43 31 37 38 30 20 00 87 74 7E
TR 7E 14 01 FF F3 45 25 36 92 03 AC 8B 0D 6B 0B 09 DF F3 BD 03 4B 4C 43 31 35 34 36 20 00 06 0E 7E
TR 7E 14 01 FF F3 46 25 33 0D 03 73 E6 31 9B 0A 0F C0 0D 41 03 4E 53 5A 33 39 39 30 20 00 5F 28 7E
TR 7E 14 01 FF F3 48 25 3C 9B 04 65 BE 2A 9B 0A 13 4F F9 68 03 4C 4F 54 32 36 33 20 20 00 C3 1C 7E
TR 7E 14 01 FF F4 19 25 34 85 03 70 A4 03 CB 0B 09 DF F4 BD 03 54 52 41 36 38 32 30 20 00 18 25 7E
TR 7E 14 01 FF F4 32 25 34 C3 03 77 C7 04 EB 0B 09 DF F3 BD 03 53 58 53 37 32 32 20 20 00 AC 57 7E
TR 7E 14 01 FF F4 35 25 1D 50 03 C5 2E 1B 0B 0D 09 C0 00 04 03 4B 4C 4D 31 38 35 36 20 00 82 9A 7E
TR 7E 14 01 FF F4 37 25 26 40 04 4E 1C 25 8B 0B 09 10 00 C3 03 4B 4C 43 31 32 37 32 20 00 C2 A1 7E
HB 7E 00 81 01 05 9E 00 00 3E 01 7E
OS 7E 0A 01 12 AB CD 25 4D C9 03 ED BB 02 8B 0F 00 50 00 D1 01 00 00 00 00 00 00 00 00 00 D1 A9 7E
TR 7E 14 01 FF F3 17 25 4C 12 03 E3 2A 23 3B 08 13 B0 00 39 03 4B 4C 43 31 37 38 30 20 00 6A 71 7E
TR 7E 14 01 FF F3 45 25 36 90 03 AC 52 0D 6B 0B 09 DF F3 BD 03 4B 4C 43 31 35 34 36 20 00 EB BC 7E
TR 7E 14 01 FF F3 46 25 32 FB 03 73 90 31 AB 0A 10 20 0C B1 03 4E 53 5A 33 39 39 30 20 00 F0 A4 7E
TR 7E 14 01 FF F3 48 25 3C 64 04 66 01 2A 9B 0D 13 AF F9 64 03 4C 4F 54 32 36 33 20 20 00 F6 88 7E
TR 7E 14 01 FF F4 19 25 34 83 03 70 6B 03 BB 0B 09 DF F4 BD 03 54 52 41 36 38 32 30 20 00 DC 4C 7E
TR 7E 14 01 FF F4 32 25 34 C1 03 77 8E 04 EB 0B 09 DF F3 BD 03 53 58 53 37 32 32 20 20 00 3A CE 7E
TR 7E 14 01 FF F4 35 25 1D 73 03 C5 34 1B 0B 0F 0A 2F FE 05 03 4B 4C 4D 31 38 35 36 20 00 D3 70 7E
TR 7E 14 01 FF F4 37 25 26 42 04 4D E6 25 8B 0B 09 70 00 C3 03 4B 4C 43 31 32 37 32 20 00 FF 62 7E
HB 7E 00 81 01 06 9E 00 00 6D 54 7E
OS 7E 0A 01 12 AB CD 25 4D C9 03 ED B9 02 8B 0C 00 70 00 CF 01 00 00 00 00 00 00 00 00 00 EE AC 7E

```

This is an example of GDL90 output data. OS is position and speed data, TR is traffic information, AH is attitude and heading data and HB is heartbeat data. All transmitted data starts and ends with 7E. The characters OS, TR, AH and HB are not transmitted. Note that GDL data is sent in binary code. In the output window the bytes are converted to their text equivalent for better readability.



3.3 Connect to Simulator



Once the simulator is started, click on CON button to link FSConny to the simulator



The connection is established and FSConny transmits the selected data. You can disconnect and re-connect any time.



3.4 Traffic

Traffic Objects												
TailNumb	Distance	Latitude	Longitude	Altitude_ft	VerticalSl	TrueHeac	GroundVe	Squak	Hex	RelativeN	RelativeE	RelativeB
D-AMHZ	56.034...	52.281...	6.2962...	3933	-753	277	158	5247	FFF255	10.60812	-28.372...	110
G-QQMA	56.227...	51.986...	5.2250...	5099	-474	83	107	5501	FFF325	28.33689	10.97956	201
PH-VPG	56.976...	52.934...	5.8330...	3042	-567	47	124	1115	FFF361	-28.6514	-11.286...	21
PH-BGZ	62.247...	51.898...	5.5456...	6049	-549	340	124	7666	FFF310	33.63161	-0.8266...	179
F-PLPK	62.351...	52.958...	5.9416...	5022	-593	60	124	4622	FFF342	-30.057...	-15.239...	27
PH-NJC	62.891...	52.965...	5.9345...	161	0	48	250	4522	FFF368	-30.512...	-14.980...	26
G-DELW	66.156...	52.486...	6.4988...	190	0	96	176	6226	FFF302	-1.6910...	-35.7232	87
F-MFVY	67.367...	51.907...	5.1113...	164	0	220	124	0167	FFF367	33.09518	15.18075	205
PH-VWD	67.432...	51.929...	6.0069...	3034	-576	37	130	3114	FFF280	31.78997	-17.824...	151
PH-FCB	68.027...	52.283...	6.4836...	4894	-829	156	176	6532	FFF308	10.48235	-35.247...	106
PH-EEM	70.486...	52.291...	4.5212...	2191	-763	262	158	7533	FFF272	9.992745	36.76919	255
D-ASEB	70.935...	53.095...	5.4849...	157	0	87	107	5425	FFF252	-38.312...	1.390667	358
OO-DHN	71.201...	52.532...	6.5678...	7048	-552	50	124	1425	FFF269	-4.4662	-38.229...	83
PH-BLX	71.582...	52.918...	4.7811...	12	0	213	0	0000	FFF249	-27.675...	27.039	316
PH-BFK	71.826...	52.924...	4.7858...	12	0	70	0	0000	FFF248	-28.027...	26.86534	317
EC-BDF	71.861...	52.924...	4.7846...	18	0	250	0	0000	FFF270	-28.012...	26.90812	316

This window shows details of current traffic objects. Objects with the status "on ground" are ignored. The traffic details provided by the simulator, whether AI traffic or real-time traffic, are not very reliable.

Right-clicking on the grid opens a menu to select which columns to display, and you can copy the contents of the grid to the clipboard.

WARNING when using MSFS AI Traffic! A large number of traffic objects causes huge traffic data. This may lead to an unresponsive output window and can also affect the simulator performance. It's unlikely to happen when using MSFS Real Traffic.

4. Running FSConny on a remote computer

Before running FSConny on a separate computer two files are required. **In both files replace the address 1.2.3.4** with the IP-address of your MSFS2020 computer. Backup any existing files with same name.

On your client computer create a file named **simconnect.cfg** in “my documents” folder.

```
[SimConnect]
Protocol=IPv4
Address=1.2.3.4
Port=2048
```

On your MSFS2020 computer create a file named **simconnect.xml**. Depending on MSFS source the file is in:

From Microsoft Store:

C:\Users\<user_name>\AppData\Local\Packages\Microsoft.FlightSimulator_8wekyb3d8bbwe\LocalCache\

From Steam:

C:\Users\<user_name>\AppData\Roaming\Microsoft Flight Simulator\

```
<?xml version="1.0" encoding="Windows-1252"?>
<SimBase.Document Type="SimConnect" version="1,0">
  <Descr>SimConnect</Descr>
  <Filename>SimConnect.xml</Filename>
  <Disabled>False</Disabled>
  <SimConnect.Comm>
    <Disabled>False</Disabled>
    <Protocol>IPv4</Protocol>
    <Scope>global</Scope>
    <Address>1.2.3.4</Address>
    <MaxClients>64</MaxClients>
    <Port>2048</Port>
    <MaxRecvSize>4096</MaxRecvSize>
    <DisableNagle>False</DisableNagle>
  </SimConnect.Comm>
</SimBase.Document>
```

The firewall on your MSFS2020 computer must accept incoming network traffic from FSConny that is running on the client computer.