



Butterfly Apps

Simulator Interface

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Notes

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1 General Information

This manual describes how to set up an interface between flight simulators and the Butterfly Avionics product line of aviation apps.

A computer in a wireless network running a flight simulator with NMEA interface can be used to send data wirelessly to Butterfly Apps emulating aircraft systems. All functions of apps are available to the simulator pilot.

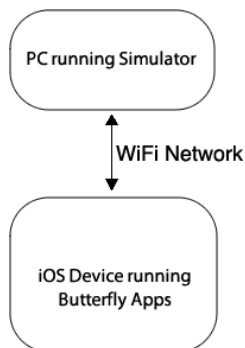


Figure 1: System Diagram

2 System Requirements

2.1 General Requirements

In order to interface Butterfly Apps to a flight simulator running on a computer the following minimum system requirements apply:

- Butterfly Apps, i.e. iGlide, iPilot or FreeFlight in Version 1.8.1 or higher.
- PC with WiFi running Microsoft® Windows®.
- Flight simulator running on PC with serial NMEA Interface
- Both devices, PC and iOS device running the app must be in the same WiFi-Network
- *HW Virtual Serial Port-Software*

2.2 Compatible Flight Simulators (Tested)

- Condor
- Silent-Wings

| *Other Simulators may be compatible as well. Please contact us if you have specific questions.*

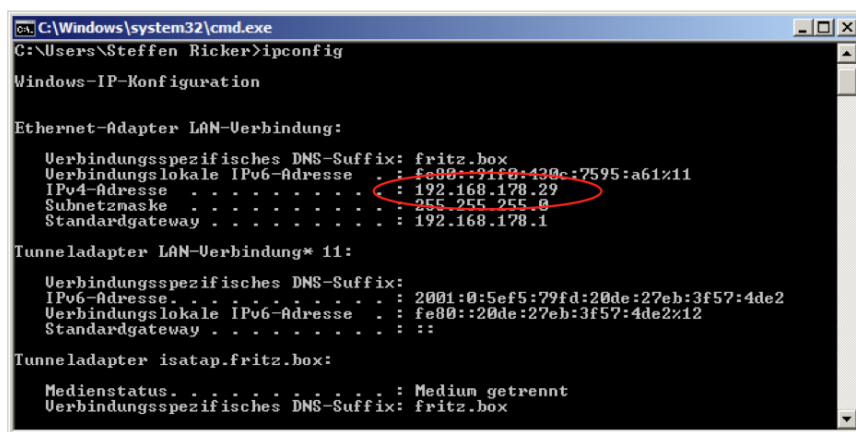
3 Interface setup in iGlide

In order to create a connection from your PC to iGlide you have to find out the IP-address of your PC and enter it into a special iGlide configuration file located in iTunes.

3.1 Find out IP-address of your PC

There are many ways to find out your IP-address on a PC. One way (using the command prompt tool of windows) is described here.

- Click on "START" and then "RUN"
- Type the phrase "CMD" and then execute with *enter*
- In the Command Prompt enter the phrase "ipconfig" and then execute with *enter*
- Read the IP-Address from the screen called *IPv4-Address*



```

C:\Windows\system32\cmd.exe
C:\Users\Steffen Ricker>ipconfig

Windows-IP-Konfiguration

Ethernet-Adapter LAN-Verbindung:

    Verbindungsspezifisches DNS-Suffix: fritz.box
    Verbindungslokale IPv6-Adresse . . : fe80::91f0:430c:7595:a61%11
    IPv4-Adresse . . . . . : 192.168.178.29
    Subnetzmaske . . . . . : 255.255.255.0
    Standardgateway . . . . . : 192.168.178.1

Tunneladapter LAN-Verbindung* 11:

    Verbindungsspezifisches DNS-Suffix:
    IPv6-Adresse . . . . . : 2001:0:5ef5:79fd:20de:27eb:3f57:4de2
    Verbindungslokale IPv6-Adresse . . : fe80::20de:27eb:3f57:4de2%12
    Standardgateway . . . . . : ::

Tunneladapter isatap.fritz.box:

    Medienstatus. . . . . : Medium getrennt
    Verbindungsspezifisches DNS-Suffix: fritz.box
  
```

Figure 2: Command Prompt and IPv4Address

3.2 Enter PC-IP-address in iGlide configuration

- Open the folder of your Butterfly App in iTunes filessharing
- Download the *config.xml*-file to your computer and open it in a text editor
- Look for the *Connections*-Area in the file and change the address in *WIFI HOST* to the IP-Address of your PC you just found out before
- Save the file and upload it back via iTunes Filesharing

Make sure to save and re-set the old value before using iGlide in real flight. Interface devices in your aircraft have different IP-addresses and will no longer work if you leave your PC's IP-address configured in the config.xml-file.

Visit [Apple.com/support](https://apple.com/support) for more details on iTunes Filesharing

```
248 <CONNECTIONS>
249   <SIMULATOR_ENABLE>TRUE</SIMULATOR_ENABLE>
250   <WIFI_ENABLE>FALSE</WIFI_ENABLE>
251   <WIFI_HOST>169.254.1.1</WIFI_HOST>
252   <WIFI_PORT>2000</WIFI_PORT>
253   <WIFI_PASSWORD></WIFI_PASSWORD>
254   <WIFI_USEWIND>FALSE</WIFI_USEWIND>
255   <WIFI_USECLIMBRATE>FALSE</WIFI_USECLIMBRATE>
256   <WIFI_USEGLIDEPARAMETERS>FALSE</WIFI_USEGLIDEPARAMETERS>
257 </CONNECTIONS>
258
```

Figure 3: Part of CONFIG.XML where the IP-address should be entered

3.3 Activate WiFi Interface in iGlide

- In iGlide, go to *Menu* then *Settings* and *Interfaces and Sensors* and activate the *WiFi Interface*

To activate the WiFi-Interface, a password (anything with more than 4 charcters) must be entered, e.g. the word SIMULATOR

4 Preparing the interface on your PC

4.1 Download and install HW Virtual Serial Port Software

- Visit this Website and download the software: http://www.hw-group.com/products/hw_vsp/index.en.html
- Install the software on your PC

5 Setting Up HW Virtual Serial Port

- Run the software on your PC
- Click on *Login* with the standard password *admin*
- Go to the *Settings*-Tab and set up all items like in the figure underneath

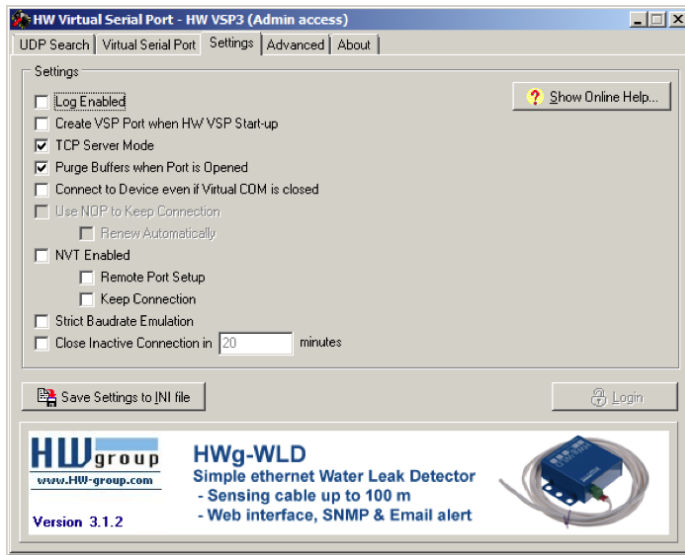


Figure 4: Settings in Settings-Tab of HW Virtual Serial Port Software

- Go to the *Virtual Serial Port*-Tab and select a COM-port that does not yet exist on your PC (e.g. COM5)
- Enter "2000" into the *Port*-field

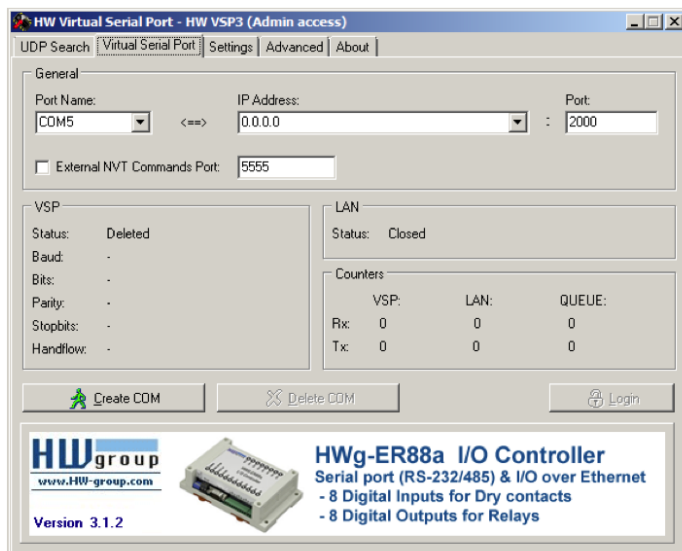


Figure 5: Settings in Virtual Serial Port-Tab of HW Virtual Serial Port Software

- Click on *Create Com*-field

6 Preparing Your Simulator

- Select the just created COM-Port (e.g. COM5) in your Simulators NMEA-Output Settings (In Condor go to *Options, NMEA-Output*)

Always start HW Virtual Serial Port-Software and click on Create Com before starting your simulator

Notes