VirtualFly
BY AIRCATGLOBAL

SOLO G1

USER'S MANUAL

Rev. 1.1
February 2021

SOLO-G1

FOR Cessna C172SP Skyhawk, Cessna Skylane II RG R182
and Cessna T206

TABLE OF CONTENTS

1. IDENTIFICATION OF ELEMENTS 4

2. INSTALLATION 5
2.1. CABLE CONNECTION
2.2. INSTALATION OF FILES TO THE COMPUTER OF MFS/P3D. 6
2.3. VF-COMPASS, YOKO & V3RNIO FLIGHT CONTROLS CONFIGURATION

3. START-UP THE SOLO-G1 8

4. SELECTION OF PANEL TYPE 10

5. GLASS-COCKPIT VF-G1000 11
5.1. INTRODUCTION
5.2. PFD/MFD CONTROLS

6. MULTIPLE SOLOFLIGHTPANEL OR MULTIPLE MFS/P3D COMPUTER ON THE SAME NETWORK 14

7. TROUBLESHOOTING
7.1. ANOMALY: The "VFConnect3" pluggin in MFS/P3D computer displays “Connection Status: Searching...” 15
7.2. ANOMALY: Connection goes down, is intermittent or indicators moves sharply 16

8. TECHNICAL FEATURES 17

9. REMOTE ASSISTANCE 18

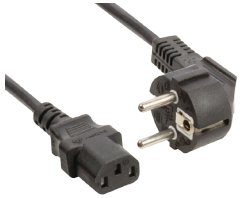
1. IDENTIFICATION OF ELEMENTS

Packaging contents:

1. SOLO-G1 panel (1 unit).
2. SOLO-G1 Electrical power cable (1 unit).
3. SOLO-G1 Network cable (1 unit).
4. YOKO+ “the yoke” USB cable (1 unit) *(male, male A-B)*.
5. V3RNIO “TPM” USB cable (1 unit) *(male, male A-A)*.
6. SOLO-G1 Memory Stick (1unit).
   Content: SOLO-G1_User's Manual, VF-TestCalibrate-S, VFConnect, G1000_Network_Module, Garmin G1000 manual (G1000_CessnaNavIII_PilotsGuide.pdf), FSUIPC, TeamViewer, Aircraft-Flight Models folder.
7. VF-Compass (1 unit).
8. SOLO-G1 Quick Start Guide (1 unit).
9. SOLO-G1 User's Manual (1 unit).
10. Carenado Cessna 182 Invoice license (1 unit).
11. Carenado Cessna 206 Invoice license (1 unit).

It is important to save all parts you are not going to use, in case you need them in the future.

1


2


3


4


5


6


7


8 - 11

2. INSTALLATION

The **SOLO-G1**, has been technologically developed to be fully plug&play. It connects easily to any computer running the “Microsoft Flight Simulator” or “Prepar3D” hereinafter referred to as “**MFS/P3D**”. Still, we’ll give you a series of steps to follow to install your panel.

The user must consider that SOLO-G1 has 5 important modules:

- The panel itself: switches, STBY gauges
- VF-Compass
- YOKO+ “The yoke”.
- V3rnio TPM “Throtlle, propeller,and mixture”
- The G1000 Glass Cockpit

To activate all 5 panel modules, the user must undertake 3 operations:

- Cable connection
- Instalation of files in the computer of MFS/P3D
- VF-Compass, YOKO+ and V3RNIO flight controls configuration.

2.1. CABLE CONNECTION

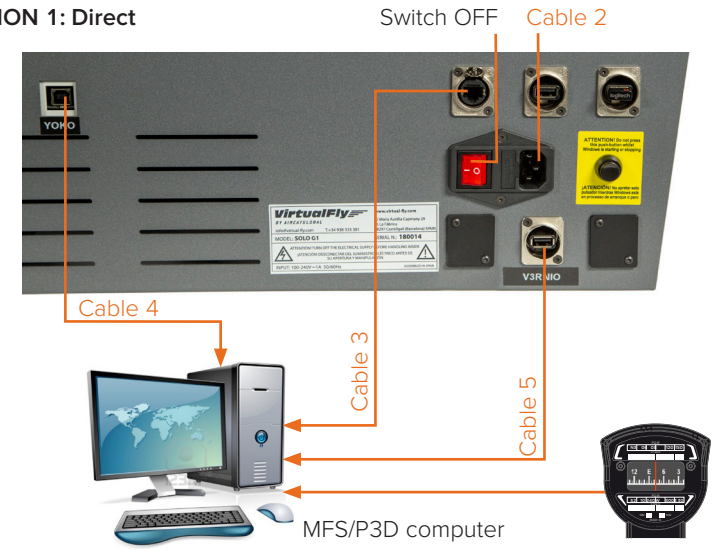
! Attention: before starting, the red back switch must be in off.

! Please, stick the VF-Compass on top of the SOLO-G1 (the foot support has magnets to stick it).

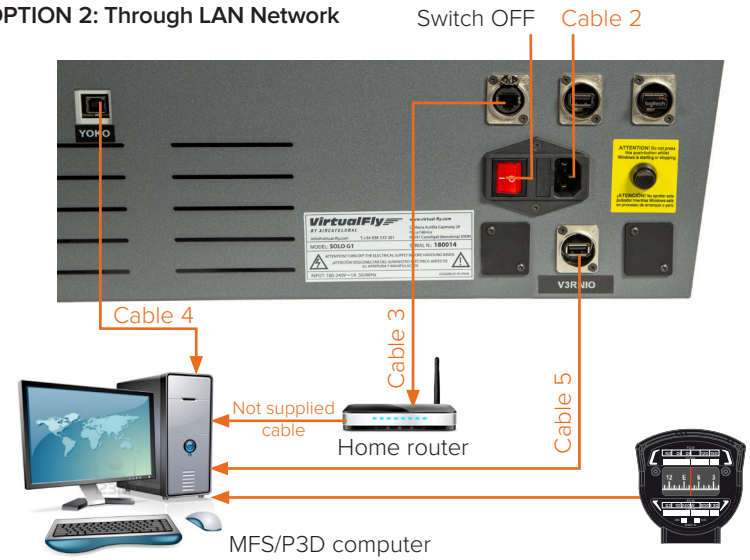
The user has 2 options to connect the network cable:
- Direct (option 1).
- Through lan network (option 2).

Once you finish, your must connect the Cable 2 to a power socket.

OPTION 1: Direct



OPTION 2: Through LAN Network



Once you finish, your must to connect the Cable 2 to a power socket.

2.2. INSTALLATION OF FILES TO THE COMPUTER OF MFS/P3D

FSUIPC Installation

In case you already have FSUIPC installed in your MFS/Prepar3D you can skip this step.

- Go to the “FSUIPC” folder from the memory stick provided with SOLO-G1.
- Execute the setup program according to your MFS version ("FSX-Prepar3D v1-3" or "Prepar3d v4-5").
- When the installer ask about registering, Click on “Not now”.

VFCONNECT Installation

Copy the "VFConnect.exe" file from the Memory Stick provided with SOLO-G1, in the MFS/P3D desktop computer.

!

As "VFConnect” communication module receives input data from MFS/P3D and then send it to SOLO-G1, Keep in mind, that "VFConnect.exe” has to remain ON when you use the SOLO-G1.

“VF-Test&Calibrate-S-S” Control Panel Installation

Copy the “VF-TestCalibrate.exe” file from the Memory Stick provided with SOLO-G1, in the MFS/P3D desktop computer.

G1000 Network Module Installation

In case you have MFS/Prepar3D or others softwares running, you have to close them before the G1000 Network Module installation.

- Go to the memory stick provided with SOLO-G1.
- Execute the G1000_network_module.exe setup program and follow the installation wizard.

AIRCRAFT-FLIGHT MODEL installation

The SOLO-G1 panel can only works with the 3 AIRCRAFT provided in the memory Stick, please see the Aircraft-Flight Models folder. You have to install these 3 aircraft provided in your MFS-Prepar3D computer and load one of them to operate with the SOLO G1 panel.

To install the Aircraft follow these instructions:

- Go to the FSX-Prepar3D installation root folder. Default locations are:
  -"C:\Program Files (x86)\Microsoft Games\Microsoft Flight Simulator X"
  -"C:\Program Files (x86)\Lockheed Martin\Prepar3D v3"
  -"C:\Program Files\Lockheed Martin\Prepar3D v4"
  -"C:\Program Files\Lockheed Martin\Prepar3D v5"
- Enter in "SimObjects" folder and then "Airplanes".
- Place the C172/C182/C206 Aircraft folders from the memory stick inside the "Airplanes" folder.

2.3. VF-COMPASS, YOKO & V3RNIO FLIGHT CONTROLS CONFIGURATION

YOKO

YOKO calibration on Windows (example based on Windows 7)

- Go to control panel, “Devices and printers”.

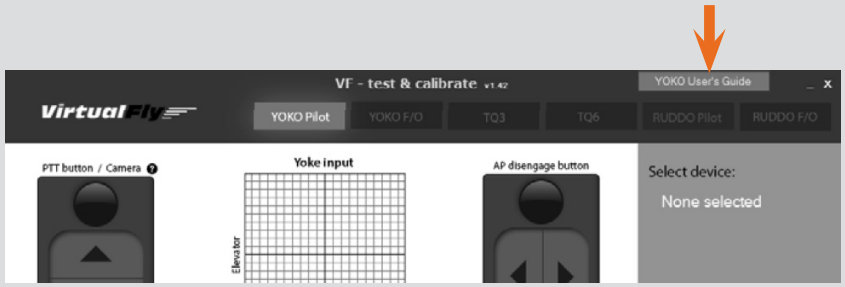
> **!** If you see a YOKO+ instead of a YOKO, you can skip this step and close the "Devices and printers" tab and go directly to **"YOKO Configuration Using VF-Test&Calibrate-S "**.

- In the “Devices and printers”, right click on “VirtualFly - YOKO”.
- From the menu choose “Game controller settings”.
- In the Game controller window, double click on “VirtualFly - YOKO”
- Choose the “Settings” tab.
- Click on “Calibrate”.

- Once calibration is completed, go to the “Test” tab to check the correct operation. Leaving the control in neutral position, the cross should be centered in the box. Check the function of the six buttons as well.
- Click on “Apply”. Click “OK” to exit.

YOKO Configuration Using VF-Test&Calibrate-S

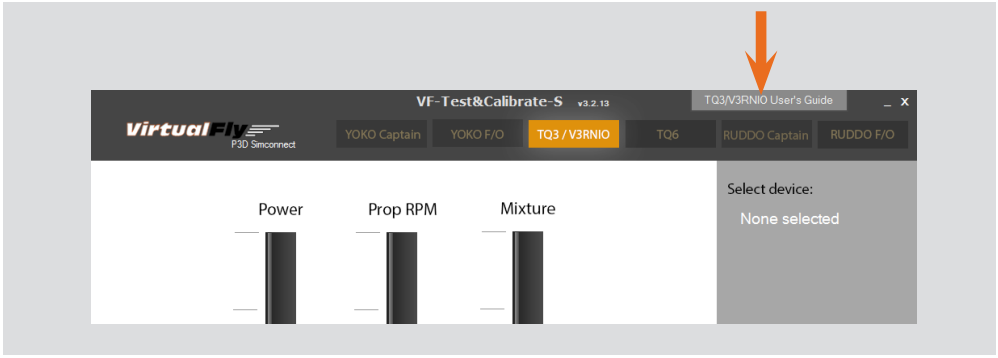
- Disable “Virtual-Fly YOKO” assignments on MFS/P3D “Button and keys” tab and “Axes” tab.
- Just duble click on the “VF-Test&Calibrate-S.exe” file to execute it.
- To configurate the YOKO, you will find “VF-Test&Calibrate-S” user's guide inside the Control Panel. See the arrow in the following figure.
- Click on "Save Current Configuration" button.



V3RNIO

Configuration Using VF-Test&Calibrate-S

- Disable "VirtualFly - TPM V3RNIO" assignments on MFS/P3D "Button and keys" tab and "Axes" tab.
- Just double click on the "VF-Test&Calibrate-S.exe" file to execute it.
- Go to "TQ3/V3RNIO" tab and select the V3RNIO device from the "Select device:" list.
- Click on "Save Current Configuration" button.
- In "TQ3/V3RNIO" tab you can test the device.



VF-COMPASS

Configuration Using VF-Test&Calibrate-S

- Just double click on the "VF-Test&Calibrate.exe" file to execute it.
- Go to "VF-COMPASS" tab and select the VF-COMPASS device from the "Select device:" list.
- Click on "Save Current Configuration" button.
- In "VF-COMPASS" tab you can control the backlight and test the device.

> **!** As "VF-Test&Calibrate-S” Control Panel communicates data from YOKO, V3RNIO and VF-COMPASS with MFS-Prepar3D, Keep in mind, that VF-Test&Calibrate- S Control Panel has to remain ON when you use MFS-Prepar3D.

3. START UP THE SOLO-G1

The SOLO-G1 incorporates a mini-computer that is to be connected to the MFS/P3D computer using the previously mentioned Network cable. **It is important to note that in no case should you access or manage the SOLO-G1 mini-computer.**

- On the MFS/P3D computer activate the MFS/Prepar3D and load your scenario with one of the 3 planes installed from the memory stick.
- On the MFS/P3D computer activate the “VFConnect.exe” and the “VFTest&Calibrate-S.exe”.

! ATTENTION DO NOT EXECUTE "VF-CONNECT3.exe" before MFS/ Prepar3D is completely loaded.

- Activate the red switch on the back of the SOLO-G1. *(Figure 1)*
- Press the black push-button on the back of the SOLO-G1 to activate the operating system. **It is critical that never disconnect the SOLO-G1 while charging programs. Doing so could cause starting problems in the future.**
- Wait about 60 seconds until you see the message "**Connected...**" on the “Client connection status” of the “VFConnect.exe” plugin in the MFS/P3D computer. You must see the STBY gauges and the Glass Cockpit G1000 are shown on SOLO-G1. *(Figure 2)*

FIGURE 1

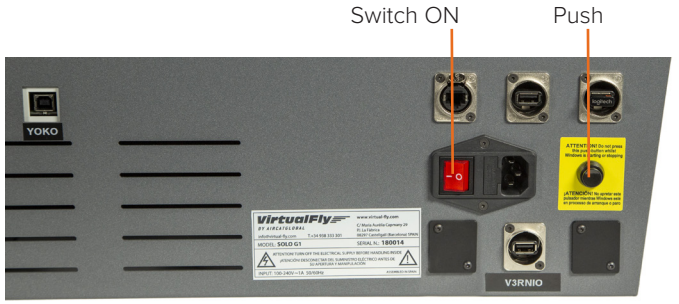


FIGURE 2

- If you have the Windows FireWall activated, a warning permission to communicate with networks appears, you must click "Allow Access".
- Once the connection is established, you should see an image like the second.

In this case the pluggin is **searching** the MFS/P3d and the SOLO-G1

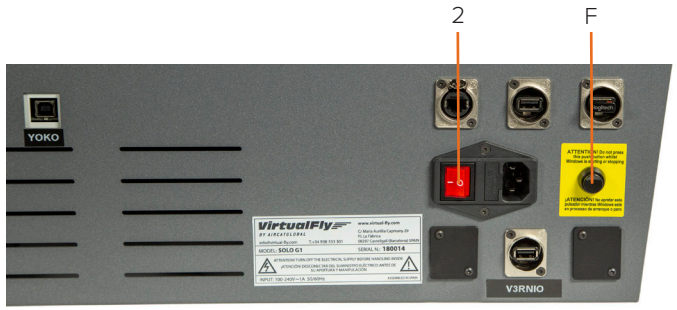
In this case the pluggin is **connected** to MFS/P3d and the SOLO-G1

- At the top “This Computer” indicates if the software MFS/P3d is detected. Only "Connected" will appear when you have initiated MFS/P3d.
- At the bellow “Client Connection Status” indicates the connection with the SOLO-G1.

If you see the message **"Searching..."** on the “Client connection status”, carefully read the Chapter 7 in the "SOLO-G1_User's Manual" found on the memory stick.

DEACTIVATING THE SOLO-G1

- Press the black push-button (F) on the back of the SOLO-G1 to deactivate the operating system. Wait for "Windows" to completely stop.
- Once "Windows " is stopped, disconnect the red switch (2) on the back.



4. SELECTION OF PANEL TYPE

(ACCORDING THE FSX/P3D PLANE)

The SOLO-G1 can represent 3 panel types of general aviation aircraft, **Cessna C172SP Skyhawk, Cessna Skylane II RG R182 and Cessna T206**. The SOLO G1 panel will automatically display the corresponding aircraft when you load it in the MFS-P3D computer.

! Remember that the SOLO G1 only works with the AIRCRAFT provided in the memory stick.

5. GLASS-COCKPIT VF-G1000

5.1. INTRODUCTION

The SOLO-G1 can represent 3 panel types of general aviation aircraft, Cessna C172SP Skyhawk, Cessna Skylane II RG R182 and Cessna T206.

Our G1000 simulation training device looks and works like the G1000 in your airplane and is a great training tool.

These G1000 screens and audio panel are not the original from Garmin, both the hardware part and software part are designed to simulate the real one.

The hardware part is made by VirtualFly company, this part is designed following the measures and technical aspects from original one. It's is a whole replica of the original one.

The software part is made by Flight1tech "aviation technologies". Here you can find information about this soft: details, benefits, features, etc..

www.flight1tech.com/consumer/Products/ProductID/1#Vtab1

To operate this replica of Garmin G1000 screens and audio panel we recommend you search some manual from a reliable source, therefore we have added some manual in the provided memory stick named "G1000_CessnaNavIII_PilotsGuide.pdf".

In the following pages there is a basic explanation of the main buttons and indicators.

5.2. PFD/MFD CONTROLS

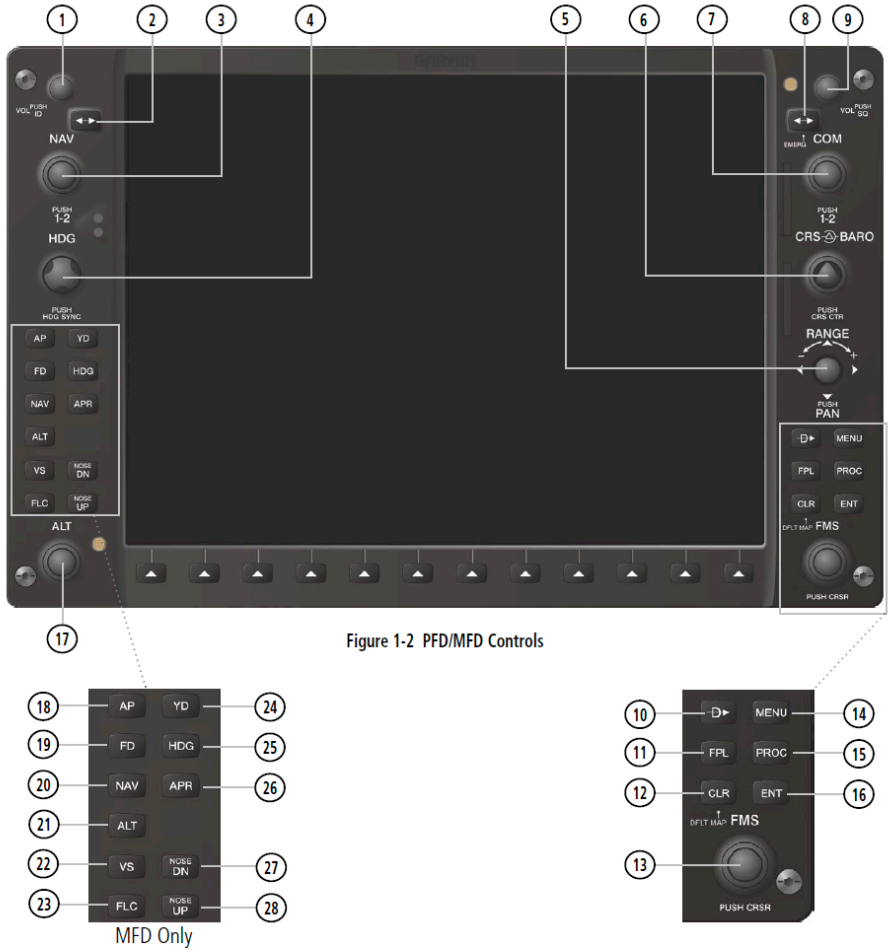


Figure 1-2 PFD/MFD Controls

Functionality of the PFD and MFD controls are the same with the exception of the dedicated autopilot keys located only on the MFD bezel.

(1) NAV VOL/ID Knob – Controls the NAV audio level. Press to toggle the Morse code identifier ON and OFF. Volume level is shown in the field as a percentage.

(2) NAV Frequency Toggle Key – Toggles the standby and active NAV frequencies.

(3) Dual NAV Knob – Tunes the MHz (large knob) and kHz (small knob) standby frequencies for the NAV receiver. Press to toggle the tuning cursor (light blue box) between the NAV1 and NAV2 fields.

(4) Heading Knob – Turn to manually select a heading on the HSI. When pressed, it synchronizes the heading bug with the compass lubber line. Selected Heading provides the heading reference to the Flight Director while operating in Heading Select mode.

(5) Joystick – Changes the map range when rotated. Activates the map pointer when pressed.

(6) CRS/BARO Knob – The **large** knob sets the altimeter barometric pressure and the **small** knob adjusts the course. The course is only adjustable when the HSI is in VOR1, VOR2, or OBS/SUSP mode. Pressing this knob centers the CDI on the currently selected VOR. Selected Course provides course reference to the Flight Director when operating in Navigation and Approach modes.

(7) Dual COM Knob – Tunes the MHz (large knob) and kHz (small knob) standby frequencies for the COM transceiver. Pressing this knob toggles the tuning cursor (light blue box) between the COM1 and COM2 fields.

(8) COM Frequency Toggle Key – Toggles the standby and active COM frequencies. Pressing and holding this key for two seconds automatically tunes the emergency frequency (121.5 MHz) in the active frequency field.

(9) COM VOL/SQ Knob – Controls COM audio level. Pressing this knob turns the COM automatic squelch ON and OFF. Audio volume level is shown in the field as a percentage.

(10) Direct-to Key – Allows the user to enter a destination waypoint and establish a direct course to the selected destination (specified by the identifier, chosen from the active route, or taken from the map cursor position).

(11) FPL Key – Displays the active Flight Plan Page for creating and editing the active flight plan, or for accessing stored flight plans.

(12) CLR Key (DFLT MAP) – Erases information, cancels an entry, or removes page menus. To display the Navigation Map Page immediately, press and hold **CLR** (MFD only).

(13) Dual FMS Knob – Used to select the page to be viewed (only on the MFD). The **large** knob selects a page group (MAP, WPT, AUX, NRST), while the **small** knob selects a specific page within the page group. Pressing the **small** knob turns the selection cursor ON and OFF. When the cursor is ON, data may be entered in the different windows using the **small** and **large** knobs. The **large** knob is used to move the cursor on the page, while the **small** knob is used to select individual characters for the highlighted cursor location. When the G1000 displays a list that is too long for the display screen, a scroll bar appears along the right side of the display, indicating the availability of additional items within the selected category. Press the **FMS/PUSH CRSR knob** to activate the cursor and turn the **large FMS** knob to scroll through the list.

(14) MENU Key – Displays a context-sensitive list of options. This list allows the user to access additional features, or to make setting changes that relate to certain pages.

(15) PROC Key – Selects approaches, departures and arrivals from the flight plan. If a flight plan is used, available procedures for the departure and/or arrival airport are automatically suggested. If a flight plan is not used, the desired airport and the desired procedure may be selected. This key selects IFR departure procedures (DPs), arrival procedures (STARs) and approaches (IAPs) from the database and loads them into the active flight plan.

(16) ENT Key – Accepts a menu selection or data entry. This key is used to approve an operation or complete data entry. It is also used to confirm selections and information entries.

(17) Dual ALT Knob – Sets the reference altitude in the box located above the Altimeter. The **large** knob selects the thousands, while the **small** knob selects the hundreds. Selected altitude provides an altitude setting for the Altitude Capture/Hold mode, in addition to the standard G1000 altitude alerter function.

(18) AP Key – Engages/disengages the Autopilot and Flight Director in the default vertical and lateral modes.

(19) FD Key – Activates/deactivates the Flight Director only. Pressing the **FD** key turns on the Flight Director in the default vertical and lateral modes. Pressing the **FD** key again deactivates the Flight Director and removes the command bars, unless the Autopilot is engaged. If the Autopilot is engaged, the **FD** key is disabled.

(20) NAV Key – Selects/deselects the Navigation mode.

(21) ALT Key – Selects/deselects the Altitude Hold mode.

(22) VS Key – Selects/deselects the Vertical Speed mode.

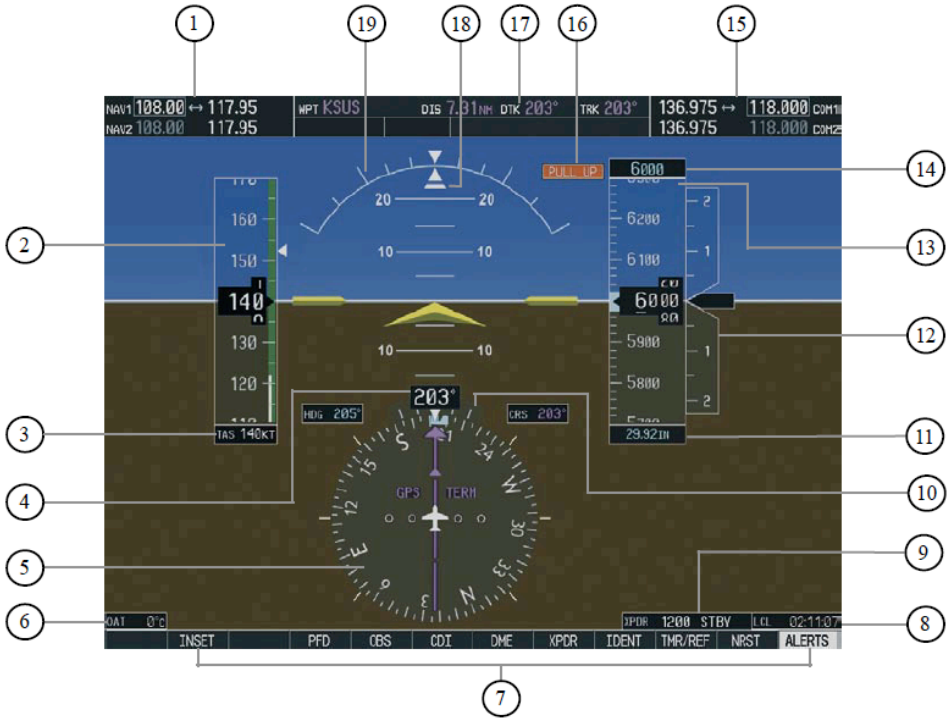
(23) FLC Key – Selects/deselects the Flight Level Change mode.

(24) YD Key – Engages/disengages the Yaw Damper.

(25) HDG Key – Selects/deselects the Heading Select mode.

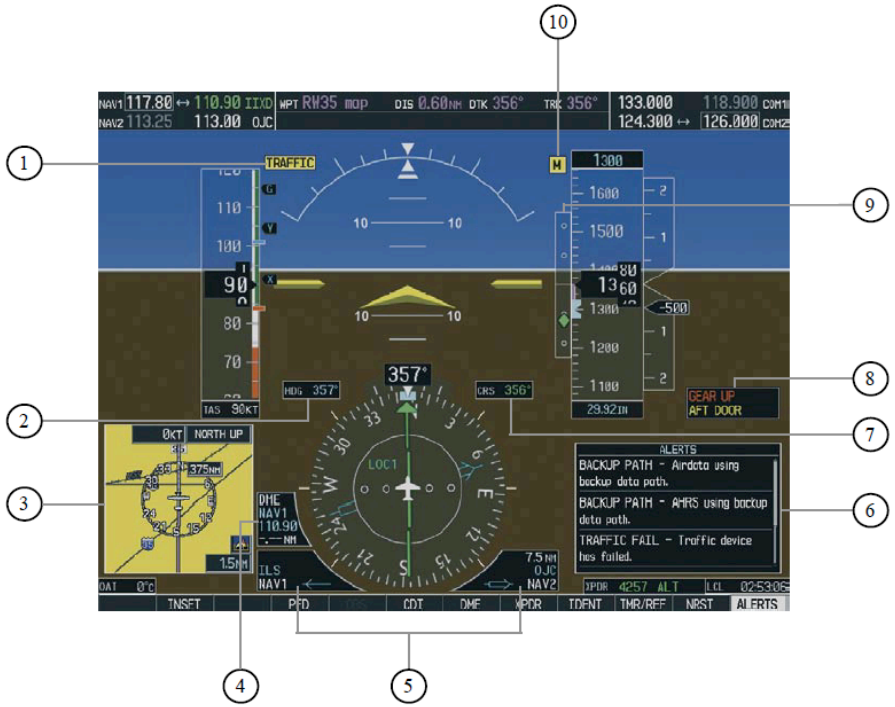
(26) APR Key – Selects/deselects the Approach mode.

(27, 28) NOSE UP/NOSE DN Keys – Controls the active pitch reference for the Pitch Hold, Vertical Speed, and Flight Level Change modes.



1. NAV Frequency Window
2. Airspeed Indicator
3. True Airspeed Box
4. Heading Box
5. Horizontal Situation Indicator
6. Outside Air Temperature Box
7. Softkeys
8. System Time Box
9. Transponder Status Bar
10. Turn Rate Indicator
11. Barometric Setting Box
12. Vertical Speed Indicator
13. Altimeter
14. Selected Altitude Box
15. COM Frequency Window
16. TAWS Alert Annunciation
17. Navigation Status Bar
18. Slip/Skid Indicator
19. Attitude Indicator

Figure 2-1 Default PFD Information



1. Traffic Annunciation
2. Selected Heading Box
3. Inset Map
4. DME Information Window
5. BRG Information Windows
6. Alerts Window
7. Selected Course Box
8. Annunciation Window
9. Vertical Deviation/Glideslope Indicator
10. Marker Beacon Annunciation

Figure 2-2 Additional PFD Information

6. MULTIPLE SOLO-FLIGHTPANEL OR MULTIPLE MFS/P3D COMPUTER IN THE SAME NETWORK

If you connect more than one SOLO-G1 to the same network, you should be aware that to use them simultaneously you should have more than one computer using MFS/P3D connected to the same network and indicate the right "MFS/P3D computer" to each SOLO-G1, as detailed below.

- To connect a "MFS/P3D computer" to one of the SOLO-G1, you just have to turn on the SOLO-G1 which you want to connect. Then, when you execute VFConnect3, it will detect the active SOLO-G1 and will connect it.

- Once the "MFS/P3D computer" and SOLO-G1 are connected, they will remain connected during the session. At this point, if a second SOLO-G1 is turned on and a second "MFS/P3D computer" runs VFConnect3, this will just detect the SOLO-G1 which is free and will connect.

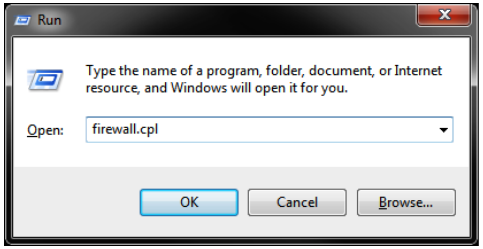
- You should take into account that never a connection between a specific SOLO-G1 and "MFS/P3D computer" is saved, Connections are made automatically when VFConnect3 starts and it finds a SOLO-G1 which is available (free of connection to a "MFS/P3D computer").

- If you want to prevent a SOLO-G1 to connect to another "MFS/P3D computer", or make sure that a SOLO-G1 will always connect to the same "MFS/P3D computer", connect them directly without going via the LAN.

7. TROUBLESHOOTING

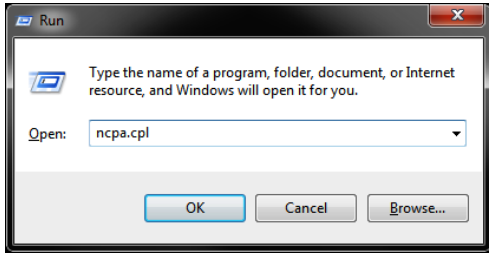
7.1. ANOMALY: The "VFConnect" pluggin in MFS/P3D computer displays “Connection Status: Searching...”

POSSIBLE CAUSE 1	Network cable nº 3 is not connected.
SOLUTION	Check connection of network cable nº 3 between SOLO-G1 and MFS/P3d PC
POSSIBLE CAUSE 2	MFS/P3D is not running
SOLUTION	Execute MFS/P3D
POSSIBLE CAUSE 3	FSUIPC is not installed
SOLUTION	Install the FSUIPC. See chapter 2
POSSIBLE CAUSE 4	“VFConnect.exe” is not executed
SOLUTION	Execute “VFConnect.exe” on the MFS/P3d PC. Is better to execute “VFConnect.exe” once MFS/P3D is loaded
POSSIBLE CAUSE 5	Windows firewall does not allow communication to SOLO-G1
SOLUTION	You will have to add an exception manually to allow communication. For that, follow the steps below: 1. Press combo key Windows + R 2. Write “firewall.cpl” on the window that has appeared.

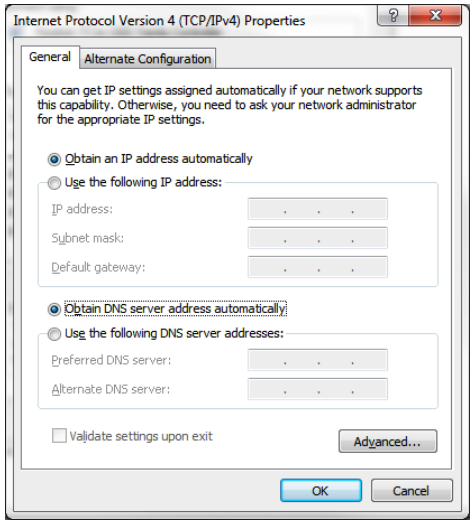


3. A Windows firewall window should appear.
4. Depending on your windows version:
   a. Windows XP: On the exceptions tab, there is a list where you should find VFConnect, check the check box to allow that it connects. If VFConnect is not on the list, press “Add a program” button and explore to the desktop and select “VFConnect.exe” file.
   b. Windows Vista: On the window that has appeared, on the left side press “Allow a program through the Windows Firewall”. Search VFConnect on the list and make sure that the check box on the “Public” column is checked. If VFConnect is not on the list, press “Add a program” button and explore to the desktop and select “VFConnect.exe” file from the desktop.
   c. Windows 7/8/10: On the window that has appeared, on the left side press “Allow a program or a feature through the Windows Firewall”. Search VFConnect on the list and make sure that the check box on the “Public” column is checked. If VFConnect is not on the list, press “Add a program” button and explore to the desktop and select “VFConnect.exe” file from the desktop.

POSSIBLE CAUSE 6	PC has more than one network card
SOLUTION	If you are using a PC which has more than one network card, try one of these options: 1. If you are trying to use one network card to connect to your router and another one to connect directly to SOLO-G1 and it does not work, try connecting SOLO-G1 directly to your router instead of connect to the pc. This way, connection will be established through the network LAN. 2. If you have connected SOLO-G1 directly to your PC and your PC has the other network sockets free, try connecting SOLO-G1 to the PC using another network card.
POSSIBLE CAUSE 7	Network problems
SOLUTION	If you have connected your PC and SOLO-G1 directly (without router), at the beginning you will have to wait some time, even more than a minute, because Windows set IP addresses automatically. If after a few minutes the connection is not established, try the next: Make sure that IP configuration is in DHCP, for that: 1. Press Windows + R key and on the window that will appear, write “ncpa.cpl” and press enter.

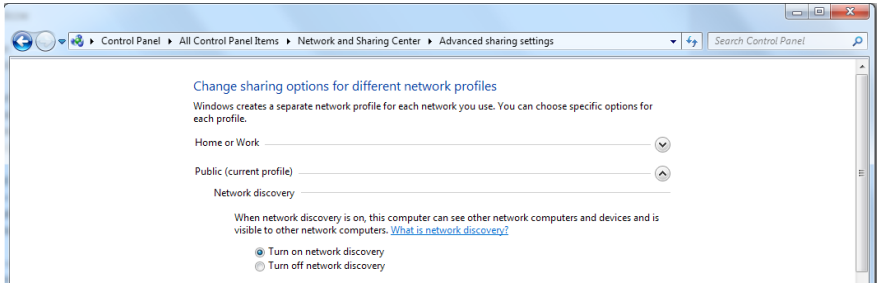


2. A window will appear with the various network connections. If you have more than one, press over which is active (icon has color), by the right button of the mouse ➜ “properties”. A window like this will appear:
3. Search on the list “Internet protocol version 4 (TCP/IPv4)”, select it and press on “properties”. A window like this will appear.



4. Make sure that the options “Obtain an IP address automatically” and “Obtain DNS server address automatically” are chosen.
5. If still there is no connection between SOLO-G1 and your PC after the process, try rebooting SOLO-G1 and your PC.

POSSIBLE CAUSE 8	Network Discovery disabled
SOLUTION	Check that in your current network profile (Public / Home or Work) Network discovery option is turned on. For that, go to: "Control Panel\All Control Panel Items\Network and Sharing Center\Advanced sharing settings" and turn Discovery Network option on for all profiles available.



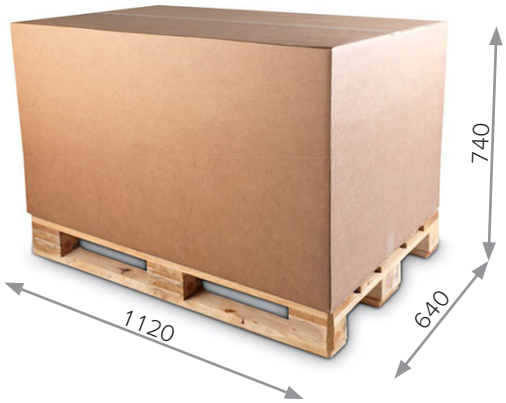
7.2. ANOMALY: Connection goes down, is intermittent or indicators moves sharply

POSSIBLE CAUSE 1	Connection trough Wifi
SOLUTION	If you are using a PC which is connected to your network by Wifi, even SOLO-G1 is connected by cable, It is possible that due to interference, noise or other electromagnetic signal, connection will not be constant. It is so recommendable using always a network cable to connect SOLO-G1 to the router and your PC to the router also, or alternatively a direct cable between your PC and SOLO-G1 to enjoy completely of your SOLO-G1.
POSSIBLE CAUSE 2	Your MFS/P3D PC is executing another program on the background that uses all the bandwidth of the network card.
SOLUTION	To guarantee the best perform of the connection, it is recommendable during the session, to close programs which make an intensive use of the network connection or computer processor.

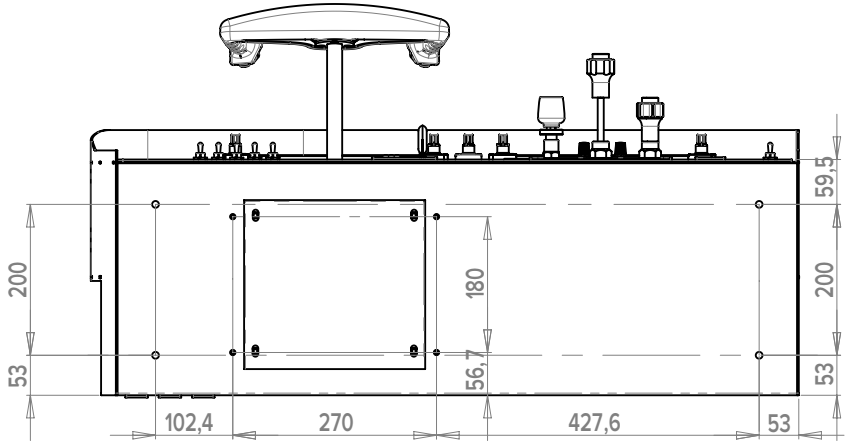
8. TECHNICAL FEATURES

INPUT: 110 – 240Vac ~1Amp. 50/60Hz.

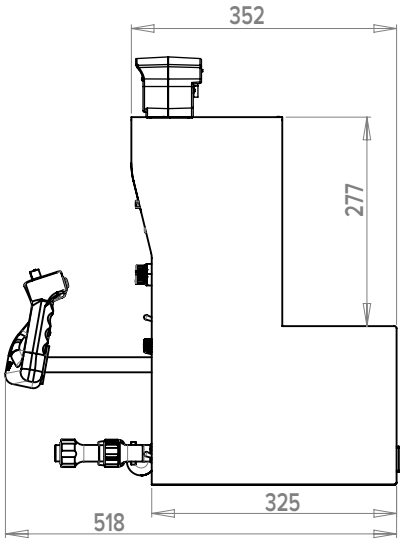
General packaging measures (mm)

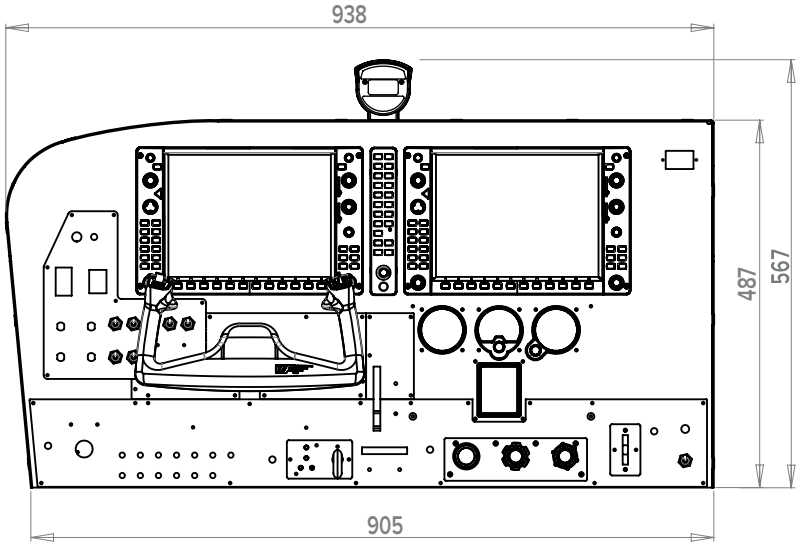


Anchors measures (8 units M6) (mm)



SOLO-G1 general measures (mm)





9. REMOTE ASSISTANCE

In case you need help from VirtualFly technical service, there is the possibility to make a remote connection to your SOLO-G1. For that, you should do the following:

1. Connect a network cable with Internet connection to the (B) connector.

2. On the STBY BAT ARM/TEST switch, please switch 3 consecutive times to the TEST position.

3. Wait until the next tab appears on the screen:

- Take note of the ID code that appear on the screen.

4. Contact with Virtual Fly technical support service (support@.virtual-fly. com) to:
   - Give us “ID” code.
   - Schedule a remote session.

Once Virtual Fly technical support has finished the session, you should reboot your **SOLO-G1.**

VIRTUAL FLY

HEADQUARTERS
c. Morales, 39 bajos
08029 Barcelona (Spain)

R & D CENTER - SHOWROOM
C. Maria Aurèlia Capmany, 29
P. I. La Fàbrica
08297 Castellgalí - Barcelona (Spain)

T. (+34) 93 833 33 01

info@virtual-fly.com
www.virtual-fly.com