SOLO GA1
USER'S MANUAL

Rev. 3.2 - Dec. 2024

For support, contact us at
support@virtual-fly.com

VirtualFly
BY AIRCATGLOBAL

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A 1x

B 1x

C 4x

D 1x

E 1x

F 2x

G

H 1x

I 10x

J 1x

K 1x

L 1x

M 1x
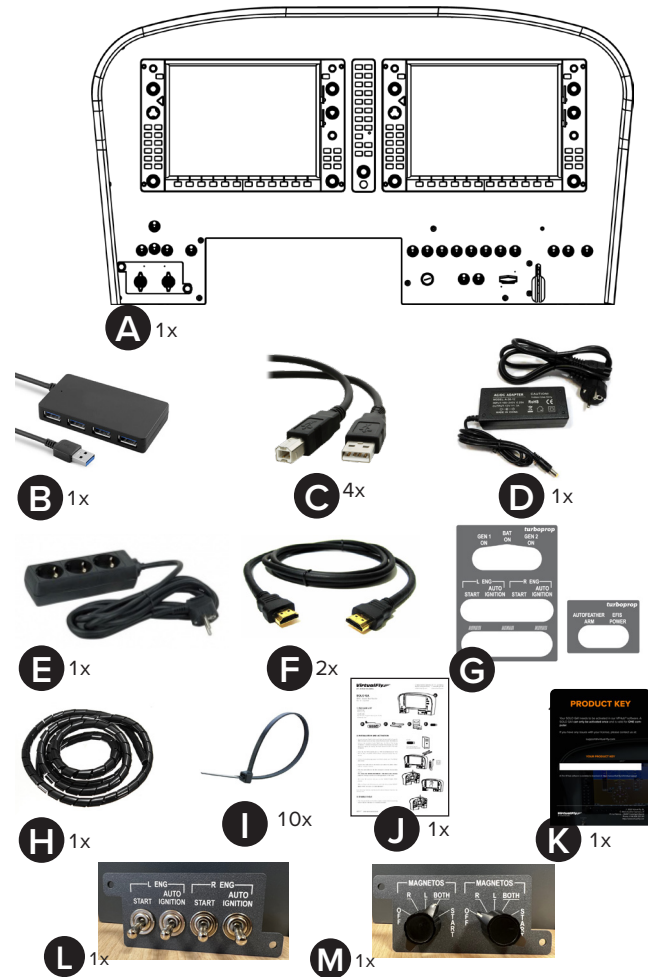
2. HARDWARE SETUP

2.1 CONNECTING TO PC

The SOLO GA1 has been developed to be pluggable to any standard Windows computer that has two free video outputs and one free USB port.

Most of the connections of your SOLO GA1 will come assembled so you have to connect the least amount of cables. Connect the HDMI (F) and USB Hub (B) to your PC, and the power supply to a wall socket. Follow the complete connections schematic displayed in the next diagram. Use the spiral cable wrap (H) to tie and organise the cables.

USB-B (C) USB-B (C) USB-B (C) USB Hub (B)

Power supply 12v (D)

HDMI (F)

HDMI (F)

USB Hub

USB Switches

USB Hub Power

Flood light

Power supply 12v (D)

Flight Simulator computer

Power Strip (E)
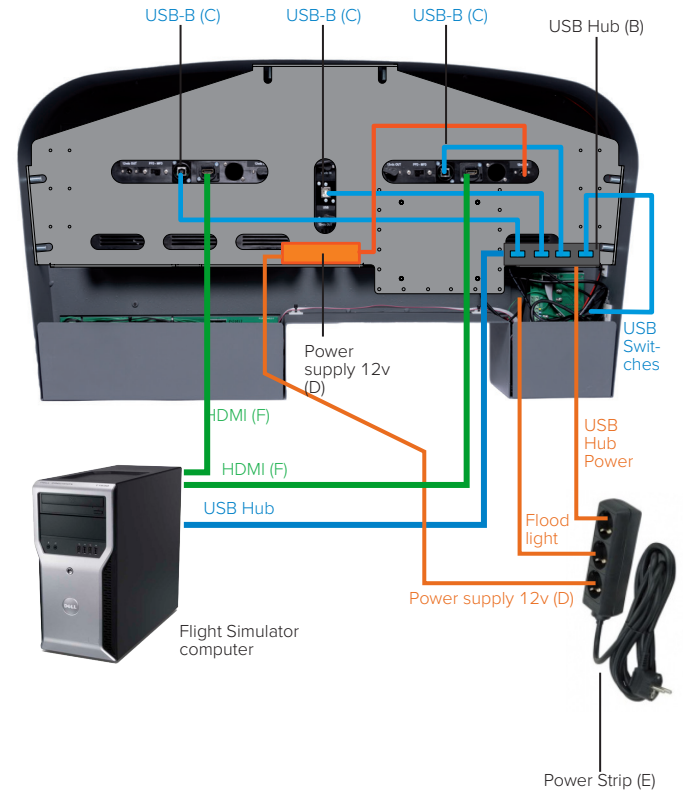
2.2 CHANGING IGNITION SWITCH PANEL

The SOLO GA1 is a multifuncion panel, and some switches change their function depending on whether the selected aircraft is a piston, turbo-prop. or jet.

To change the ignition switch panel, manually unscrew both screws located in the region displayed below and disconnect the cable from behind the switch panel.
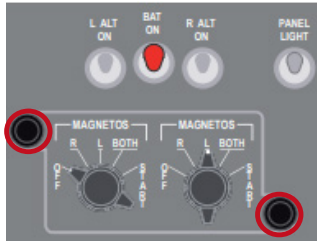

Connect the connector to the back of the other switch panel, place the other switch panel into the SOLO GA1 and screw both screws back in.

2.3 ADJUSTING MAGNETIC LABELS ACCORDING TO AIRCRAFT TYPE

The panel incorporates some magnetic labels, shown below, which allow you to change the designation of each switch and rotary to match the correct functionality. The default designation of the switches and rotaries (without the magnetic labels) is for piston engine aircraft.
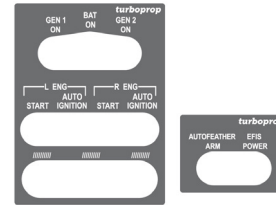
To apply the magnetic labels (D), simply place them over the SOLO GA1 panel in their correct location, as displayed in the image below. The image depicts the SOLO GA1 with the turboprop magnetic labels applied.
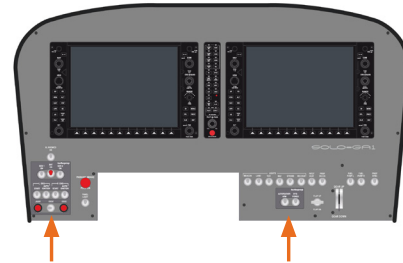
2.3 G1000 BACKLIGHTING CONTROL

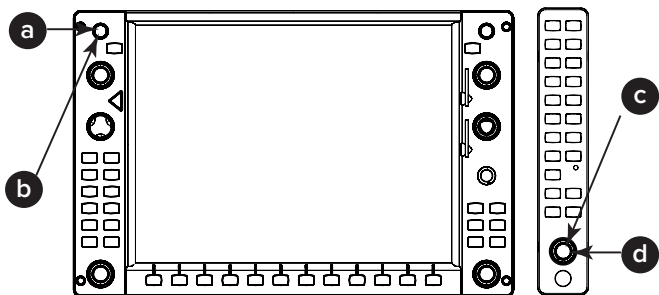You can control the backlighting of the PFD, MFD and Audio panels from the equipment itself.

- Double tap the "VOL PUSH ID" (**a**) to turn ON/OFF the backlighting of PFD/MFD panels.

- Rotate whilst you press the "VOL PUSH ID" (**b**) to adjust the backlighting of PFD/MFD panels.

- Double tap the "PILOT PASS" (**c**) to turn ON/OFF the backlighting of the Audio panel.

- Rotate whilst you press the "PILOT PASS" (**d**) to adjust the backlighting of the Audio panel.

2.4 G1000 OSD CONTROLS

The screens come configurated from factory, but the user can access the screen menus using the rotaries and buttons displayed below.
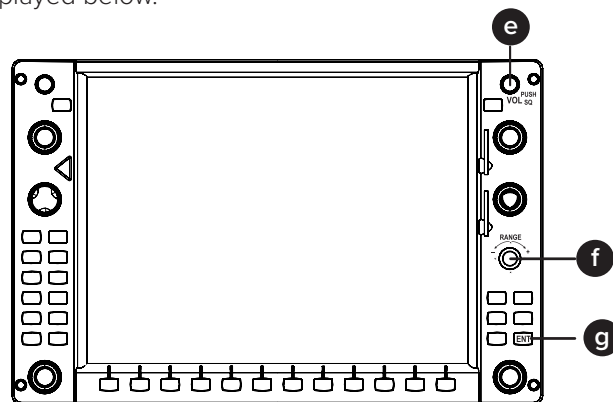
- **MENU:** push "VOL SQ" (**e**) + move the "JOYSTICK RANGE" (**f**) right

- **DOWN:** push "VOL SQ" (**e**) + move JOYSTICK "RANGE" (**f**) down.

- **EXIT:** push "VOL SQ" (**e**) + move JOYSTICK "RANGE" (**f**) left.

- **POWER:** push "VOL SQ" (**e**) + push "ENT" (**g**).

2.5 SOLO GA1 NAKED EDITION

If you have purchased the SOLO GA1 "Naked" Edition, you have received everything described in Section 1 except the VF-G1000's PFD, MFD and Audio panels.

Use the following accessories from the VF-G1000 package to mount the VF-G1000 in the SOLO GA1 Naked:

C) Power Supply

D) EU Power cable

E) US Power cable

F) Jack cables (x2)

G) HDMI cables (x2)

H) USB cable (x2)

I) M4x16 Countersunk screws (x8) and "U" shaped support with spacers and butterfly screws (x2).

The Audio panel must always be mounted using the provided "U"-shaped support and butterfly screws. Use the appropriate number of spacers to ensure adequate tightening.

> **!** Once fixed, bend the "U"-shaped supports, as displayed in the following diagram, to get the best results.
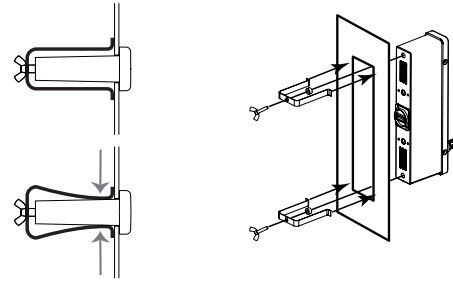
Mount the PFD/MFD panels to the SOLO GA1 Naked from the front with the provided countersunk screws (I) from the VF-G1000 package, as displayed in the diagram below.
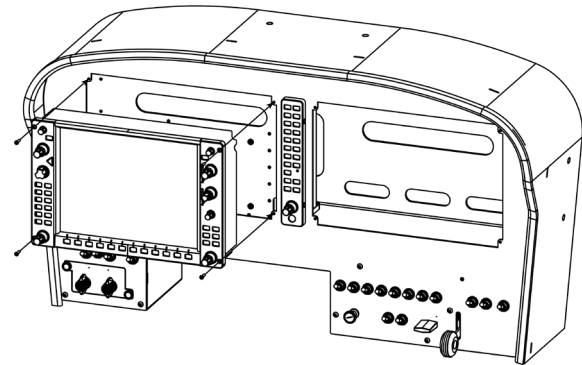
After mounting the PFD, MFD and Audio panels, you must connect these to the SOLO GA1 Naked and flight simulation PC. The cables described below are provided with the VF-G1000 package. You must connect:

• The jack cables (F) from the Audio panel to PFD and MFD panels, as displayed in the following diagram.
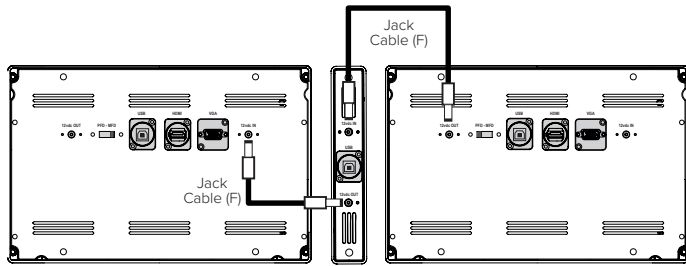
• USB cables (H) from PFD, MFD and Audio Panel to SOLO GA1's USB Hub.

• HDMI cables (G) from PFD and MFD to flight simulation PC.

• Power supply (C) from PFD to Power strip (E).

The schematics of the USB, HDMI and Power supply connections are displayed in the diagram from Section 2.1.

3. SOFTWARE SETUP

3.1 CONFIGURING PFD/MFD DISPLAYS IN WINDOWS

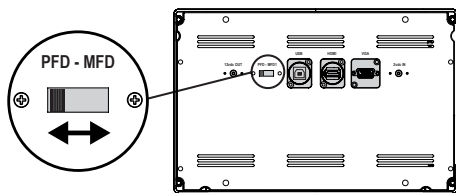SOLO GA1 panel includes a VF-G1000 system with a Primary flight display (PFD), Audio Panel and Multi flight display (MFD). Before configuring the screens:

1. Check the selector mode switch at the back of PFD and MFD displays that is properly set according to the position of PFD/MFD in cockpit.

> **!**
>
> The 12VDC power supply must be disconnected for the change to be applied. Otherwise, the device will remain in the previous state.

2. Turn on the flight simulation computer.

Open "Display Settings" and make sure that the "Display resolution" of both displays is set to 1024x768, as displayed below. We recommend to set up the MFD on the right-hand-side of the PFD panel. On "Display Settings", the PFD and MFD displays must be positioned under the main display, as depicted below.
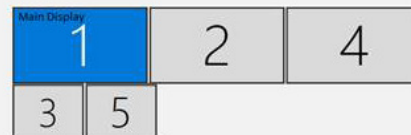
> **!**
>
> If you have **multiple scenenery displays,** you must **set the leftmost scenery display as Main display**.

One scenery display

Multiple scenery displays

3.2 INTERFACE WITH FLIGHT SIMULATION SOFTWARE AND PC

Microsoft Flight Simulator **XPLANE**

SOLO GA1 SWITCHES AND BUTTONS

The SOLO GA1 interacts with any computer using our own custom protocol through VFHub, which makes it compatible with MSFS and X-Plane 11. VFHub is the software developed by Virtual Fly to simplify setting up our products. With VFHub, you can fly your favorite flight simulation software without worrying about configuring your Virtual Fly flight controls.

You can download the latest VFHub version from this link: https://www.virtual-fly.com/setup-support. The VFHub installer takes care of installing VFHub and all the required modules. VFHub is compatible with MSFS, Prepar3D$_{V4-V5}$ and X-Plane 11, but Prepar3D is not available for the SOLO GA1.

After installing VFHub, make sure your SOLO GA1 is connected to your computer. Run VFHub, locate the SOLO GA1 section in the Dashboard and select the device's options button (⚙).to access the SOLO GA1 settings screen,
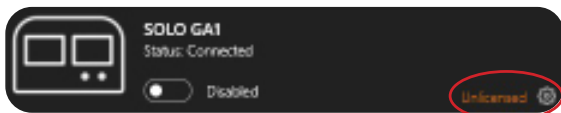
! Inside the SOLO GA1 settings screen, you will need to input the provided registration key (K) and select the COM port to activate your SOLO GA1. For detailed instructions on getting your device running, **check the USER's MANUAL button in the VFHub software.**
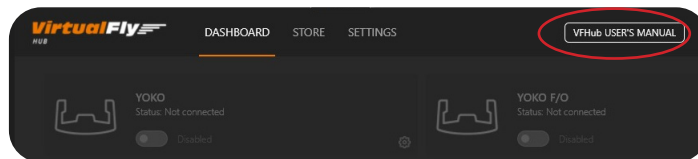
VFHub takes care of making your SOLO GA1 work with MSFS and X-Plane 11/12, so it **must always be running** when you use the SOLO GA1.

! Check out the table from section 8 to see which aircraft you can fly using the SOLO GA1.

VF-G1000

The PFD, MFD and Audio panels of the SOLO GA1 interact with any computer both as a joystick (HID) and with our own custom protocol. This makes it compatible with any flight simulation software. However, we recommend configuring it through VFHub, and only offer support to set it up using this method.

Make sure your SOLO GA1 is connected to your computer. Run VFHub, and verify that the VF-G1000 status displayed in the Dashboard is "Connected":

!
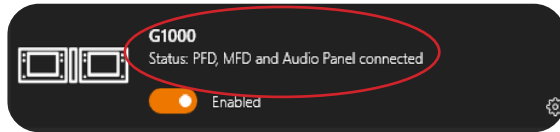
If using X-Plane 11/12, make sure to use **set up a blank profile to the SOLO GA1's Audio Panel in the controls or joystick menu of X-Plane 11**. You can find the detailed steps in: https://downloads.virtual-fly.com/docs/vfhub/latest/setting_up_a_blank_profile.pdf

!

If you want to **customize** how your VF-G1000 works, select the **device's options button** (⚙) in **VFHub's Dashboard**. For detailed instructions on all the tuning and customization possibilities, **check the USER's MANUAL button in the VFHub software.**

IF YOU USE MSFS, YOU MUST READ READ THE INFORMATION BELOW!

!

Inside MSFS Assistance Options, you **must disable the Assisted Landing and Assisted Takeoff functions**, otherwise the Flaps can malfunction. See the following image for guidance.
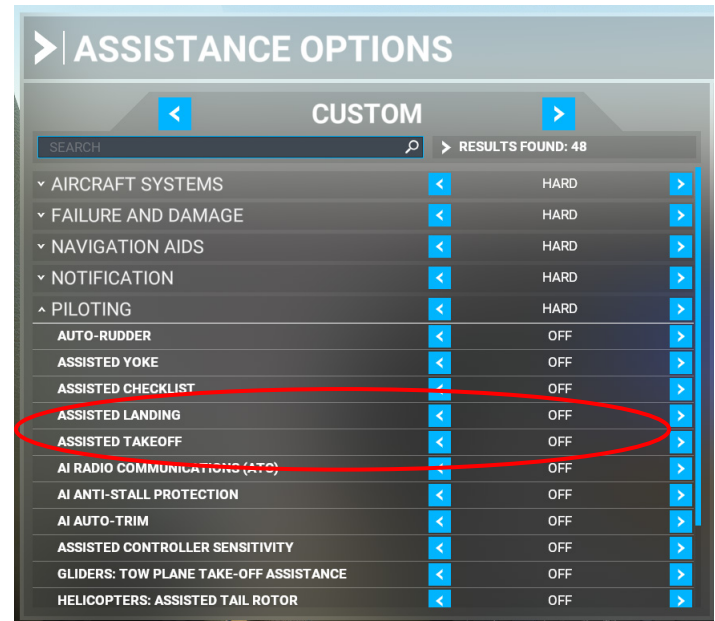
3.3 CONFIGURING G1000 SCREENS INSIDE SIMULATION SOFTWARE

MSFS/MSFS2024

After starting a flight with a G1000 airplane, click on both PFD and MFD screens in the virtual cockpit while you press the "ALT GR" key in your keyboard. This will pop out the two screens combined, as displayed in the following image.
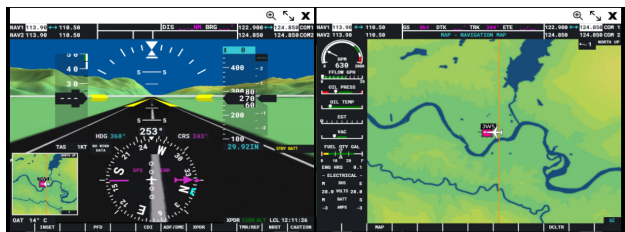

Press the + icon (🔍) on the top corner of one of the images to split the image up into individual screen of the PFD and MFD

Drag one of the screens to its corresponding display of the VF-G1000.

> **!**
> If there is a small black margin between where the screen image begins and the end of the new window that has opened, **use the mouse to resize the pop-up window** so that the **black area disappears**

Then press "ALT" and "ENTER" keys simultaneously to maximise it. Repeat this for the second screen

> **!**
> You will have to redo this every time you reopen MSFS

X-PLANE 11/12

1. Before configuring the screens, you will need to remove the G1000 bezels in X-Plane 11/12. Download the two .png files from the links below, unzip the files and place the .png files in the folder located in *X-Plane 11\Resources\bitmaps\cockpit\ EFIS\G1000.*

• https://downloads.virtual-fly.com/docs/vfg1000/extra/G1000MFD_2d.zip

• https://downloads.virtual-fly.com/docs/vfg1000/extra/G1000PFD_2d.zip

In the "Settings/Graphics" tab of X-Plane, set the PFD and MFD monitors as "Unused", as displayed below.
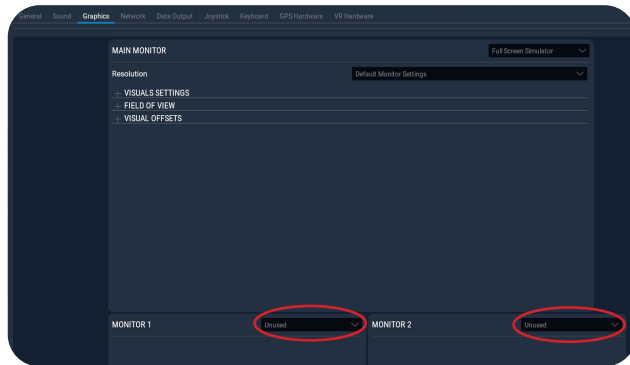
2. Load a flight and, on the virtual cockpit, click on the PFD screen. A pop-out of the PFD will appear on your monitor.

3. Click on the icon on the top-right corner of the pop-out window, displayed below, and the pop-out will be converted to a pop-out window which can be dragged.
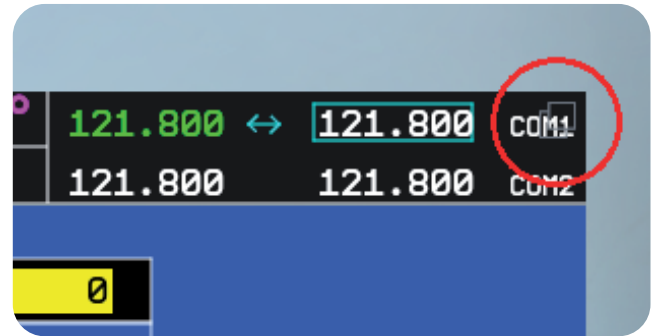
4. Drag the window to the PFD display in your VF-G1000, making sure it is centered. You will see the top windows frame from the dragged PFD and MFD screens at the bottom of your main display as displayed below, but don't worry, once you finish configuring it, it won't be visible.

! If your Windows Taskbar is located at the bottom of your display, you might have problems adjusting your PFD window. In this case, change its location to the top or sides.

5. Repeat the process for the MFD screen.

6. When both windows are properly adjusted to the VF-G1000 displays, click on your main display and the top frame from the PFD and MFD G1000 pop-out windows will be hidden.

4. ENGINE STARTING PROCEDURES

The following procedures are indicated by Virtual Fly to start the aircraft using the SOLO GA1 in the simplest fashion.

> **!** Never use these procedures for pilot training or for real aviation.

4.1 START & STOP FOR PISTON ENGINES
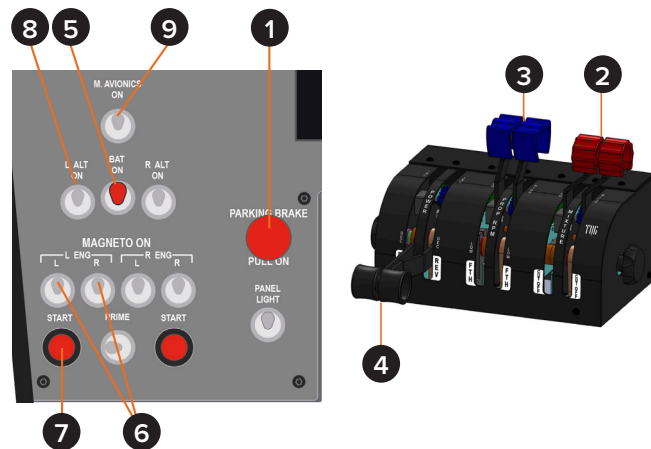
MSFS/MSFS2024: STARTING PISTON ENGINES

1. Pull on the **PARKING BRAKE**.

2. Move the **MIXTURE** lever to **RICH** position.

3. Move the **PROP RPM** lever to **HIGH** position.

4. Move the **POWER** lever to **IDLE** position.

5. Switch on the **BAT** switch.

6. Switch on the two **MAGNETO L ENG "L" and "R"** switches.

7. Push the red **START** button on the left to start the engine.

8. Once engine is running, switch on the left **L ALT** switch to charge the battery.

9. Switch on **M. AVIONICS** switch.

These procedures have started the engine if the selected aircraft is a single-engine, or the left engine if it is a twin-engine aircraft.

> **!** If you are flying a twin-engine aircraft, you must carry out indications 6-8 again for the right engine.

The diagram below shows the position of every switch in the SOLO GA1 along with the step that corresponds to their application when starting the piston engine.

MSFS/MSFS2024: STOPPING PISTON ENGINES

1. Pull on the **PARKING BRAKE**.

2. Move the **MIXTURE** lever to **CUTOFF** position.

3. Switch off **M. AVIONICS** switch.

4. Switch off the **ALT** switch(es).

5. Switch off the **MAGNETO** switch(es).
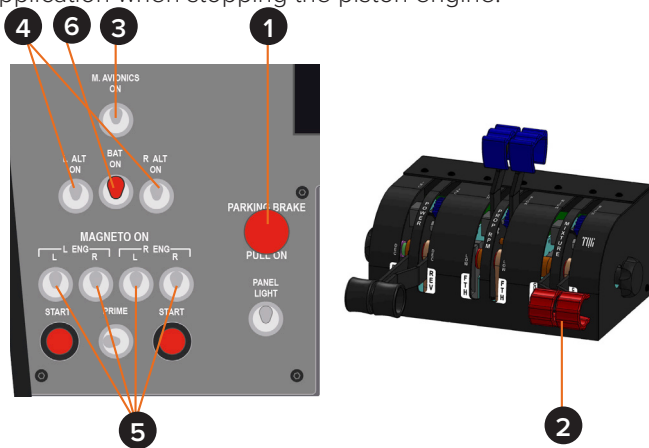
6. Switch off the **BAT** switch.

The diagram below shows the position of every switch in the SOLO GA1 along with the step that corresponds to their application when stopping the piston engine.

X-Plane 11/12: STARTING & STOPPING PISTON ENGINES

To start and stop a piston engine aircraft in X-Plane 11/12, please refer to the selected aircraft's Pilot Operating Manual. This can be found instide the corresponding aircraft's folder within: *X-Plane 11 or 12\Aircraft\Laminar Research*. Once the Pilot Operating Manual of the corresponding aircraft is open, locate the "Checklists" section and follow the detailed instructions for starting and stopping the engines.

4.2 START & STOP FOR TURBOPROP ENGINES

MSFS/MSFS2024: STARTING TURBOPROP ENGINES

1. Pull on the **PARKING BRAKE**.

2. Move the **MIXTURE** lever to **RICH** position.

3. Move the **PROP RPM** lever to **HIGH** position.

4. Move the **POWER** lever to **IDLE** position.

5. Switch on the **BAT** switch.

6. Switch on the **L ENG START** switch..

7. Once the engine is running, switch off the **L ENG START** switch.

8. Switch on the **GEN 1** switch to charge the batteries.

9. Switch on **M. AVIONICS** switch.

These procedures have started the engine if the selected aircraft is a single-engine, or the left engine if it is a twin-engine aircraft.

! Before activating GEN, do not forget to diable START. If you don't, the generator will not charge the batteries.

! If you are flying a twin-engine aircraft, you must carry out indications 6-8 again for the right engine.

The diagram below shows the position of every switch in the SOLO GA1 along with the step that corresponds to their application when starting the turboprop engine.
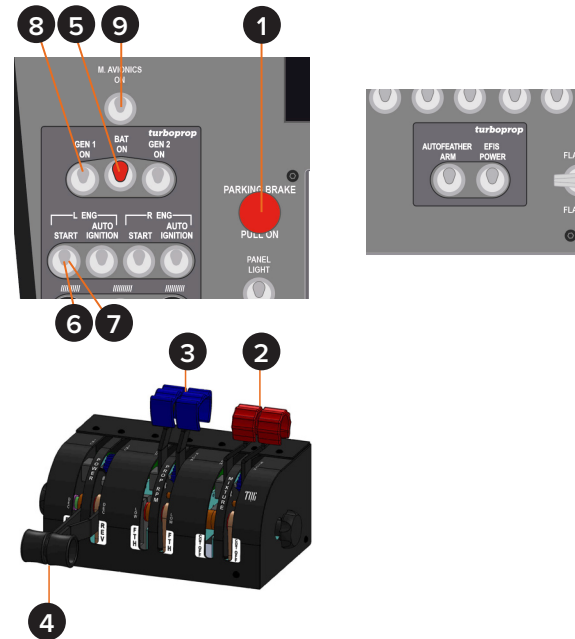
MSFS/MSFS2024: STOPPING TURBOPROP ENGINES

1. Pull on the **PARKING BRAKE**.

2. Move the **MIXTURE** lever to **CUTOFF** position.

3. Switch off **M. AVIONICS** switch.

4. Switch off the **GEN** switch(es).

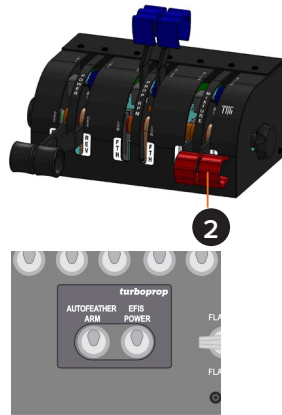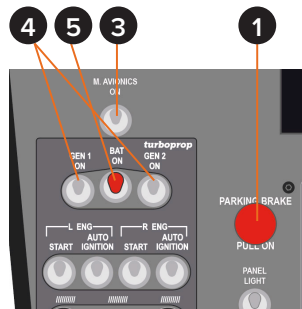**5.** Switch off the **BAT** switch.

The diagram below shows the position of every switch in the SOLO GA1 along with the step that corresponds to their application when stopping the turboprop engine.

X-Plane 11/12: STARTING & STOPPING TURBOPROP ENGINES

To start and stop a turboprop engine aircraft in X-Plane 11/12, please refer to the selected aircraft's Pilot Operating Manual. This can be found instide the corresponding aircraft's folder within: *X-Plane 11\Aircraft\Laminar Research*. Once the Pilot Operating Manual of the corresponding aircraft is open, locate the "Checklists" section and follow the detailed instructions for starting and stopping the engines.

4.3 START & STOP FOR TURBOFAN ENGINES

X-Plane 11/12: STARTING TURBOFAN ENGINES

X-Plane 11/12: STOPPING TURBOFAN ENGINES

5. TROUBLESHOOTING

Anomaly	Possible Cause	Solution
PFD/MFD do not interact with simulation software.	Only one of the PFD/MFD screens is detected by the PC.	Check that each screen has a different selector mode switch value (PFD or MFD) as described in Section 3.1.
	PFD/MFD are not set in the correct mode for the flight simulation software used.	In the device's region inf the VFHub Dashboard, a "No Direct Mode: PFD" or "No Direcct Mode MFD" is present. Change the PFD/MFD screen in "No Direct Mode" to "Direct Mode" by pressing "VS" and "FLC" buttons simultaneously in the device.
	PFD and MFD are not detected by your flight simulator computer.	Make sure SOLO GA1, PFD and MFD receives 12v power. Also check in the Flight simulation computer that "Virtual Fly – PFD DIRECT" and "Virtual Fly – MFD DIRECT" are detected.
	VFHub is not running on flight simulation computer.	Execute VFHub on the flight simulation. and check if PFD and MFD are connected.
Audio Panel's buttons do a double-press when clicking it.	In X-Plane 11/!2, Audio Panel's assignations have not been disabled with a blank profile.	Find the datailed step on how to set up a blank profile in: https://downloads.virtual-fly.com/docs/vfhub/latest/setting_up_a_blank_profile.pdf

6. REMOTE SUPPORT

In case you need help from Virtual Fly's technical team, there is the possibility to schedule a remote connection to your flight simulation computer and SOLO GA1. For that, you should:

1. Ensure your flight simulator computer is connected to the internet.

2. Download and run the following software: https://downloads. virtual-fly.com/software/VirtualFly_Remote_Support_Tool.exe

3. Take note of the code that appears in your PC screen, as displayed below:
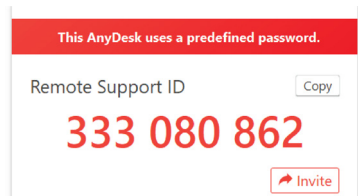

4. Contact Virtual Fly's technical support team at support@ virtual-fly.com to:

- Provide them with Anydesk ID code.

- Schedule a remote session.

7. WiFi Activation

In order to recive REMOTE SUPPORT, it is neccessary to have Internet connection in to the main panel, you will need to do the following configurations in the SOLO GA1.

Access to the Control Panel, and click on "Network and Sharing Content".
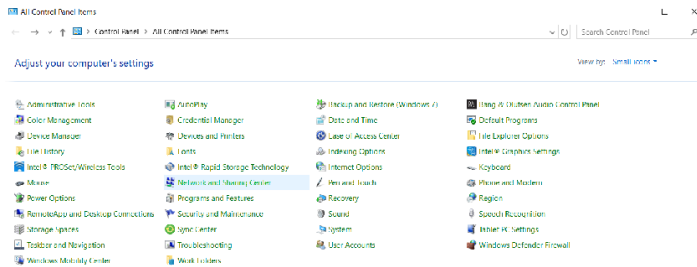
From this point, you will be able to see all the available networks and identify the type of adapter you are currently using. Simply select your local WiFi network, and you will be ready to receive REMOTE SUPPORT.

Alternatively, you can also access "Settings" via Windows. Then, navigate to "Status" where you will be able to see all available networks to connect, select your local WiFi.

8. TECHNICAL SPECIFICATIONS

Power Supply: 100-240 VAC, mono, 50-60 Hz
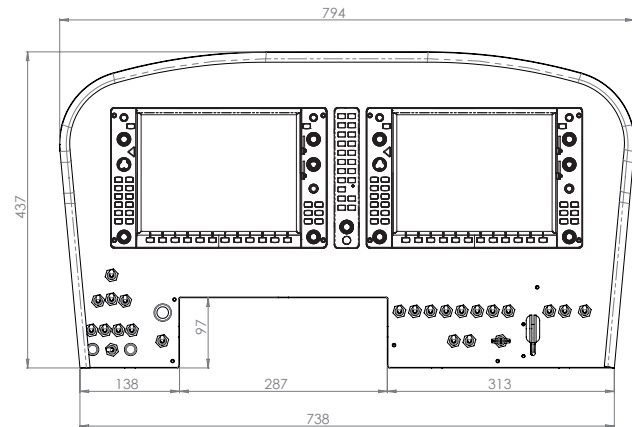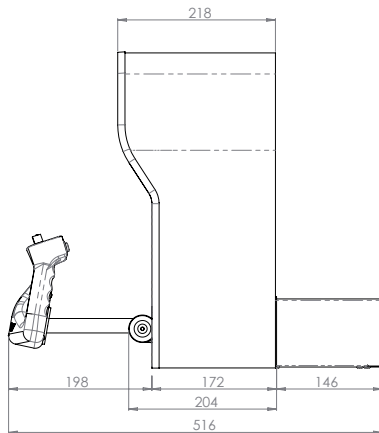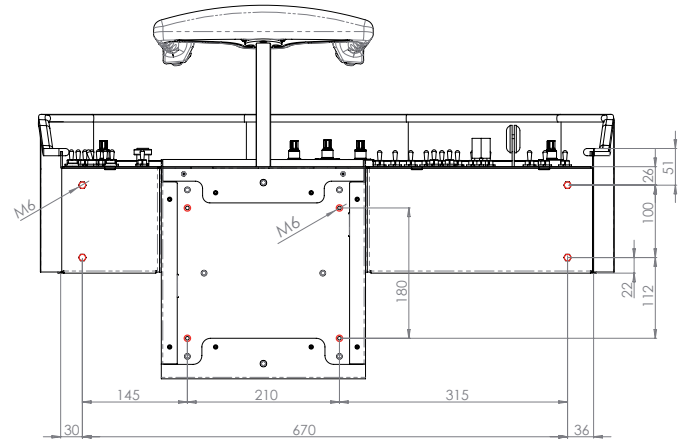
Nominal intensity: 0,75 A

Weight: 15 kg

Height: 43,5 cm

Depth: 21,5 cm

Width: 80 cm

Compatibility: MSFS and X-Plane 11

9. AIRCRAFT COMPATIBILITY

The SOLO GA1 is compatible with the following aircraft in MSFS/MSFS2024 and X-Plane 11/12:

MSFS/MSFS2024	X-Plane 11/12
Cirrus SR22	Cessna Skyhawk (G1000)
Diamond Aircraft DA40NG	Cirrus Vision SF50
Diamond Aircraft DA62	Beechcraft Baron 58 (G1000) - Free MOD from X-Plane Forums
Pilatus PC-6	Any plane fitted with default X-Plane G1000 (May have limited compatibility)
Textron Aviation Beechcraft Baron G58	
Textron Aviation Beechcraft Bonanza G36	
Textron Aviation Cessna 172 Skyhawk (G1000)	
Textron Aviation Cessna 208B Grand Caravan EX	