



VIER IM POTT A320

Software Setup

OVERVIEW

This document describes in detail how to set-up a software environment for your VIER IM POTT A320 cockpit using Prepar3D and ProSimA320.

Please note that projection setup with warping and edge blending is covered by a separate document that can be found in our download area.

PRECONDITIONS

Before you start make sure that your computers have an up-to-date Windows 10 installed and you did all necessary wiring of displays and USB connections (see according instructions).

You will also need a stable internet connection.

Ideally you have all computers be placed at its final position in the room, so you do not need to unplug cables any later again.

STRATEGY

Firstly, we do the basic software installation. Then we configure all software components and at last we calibrate necessary components like flight controls.

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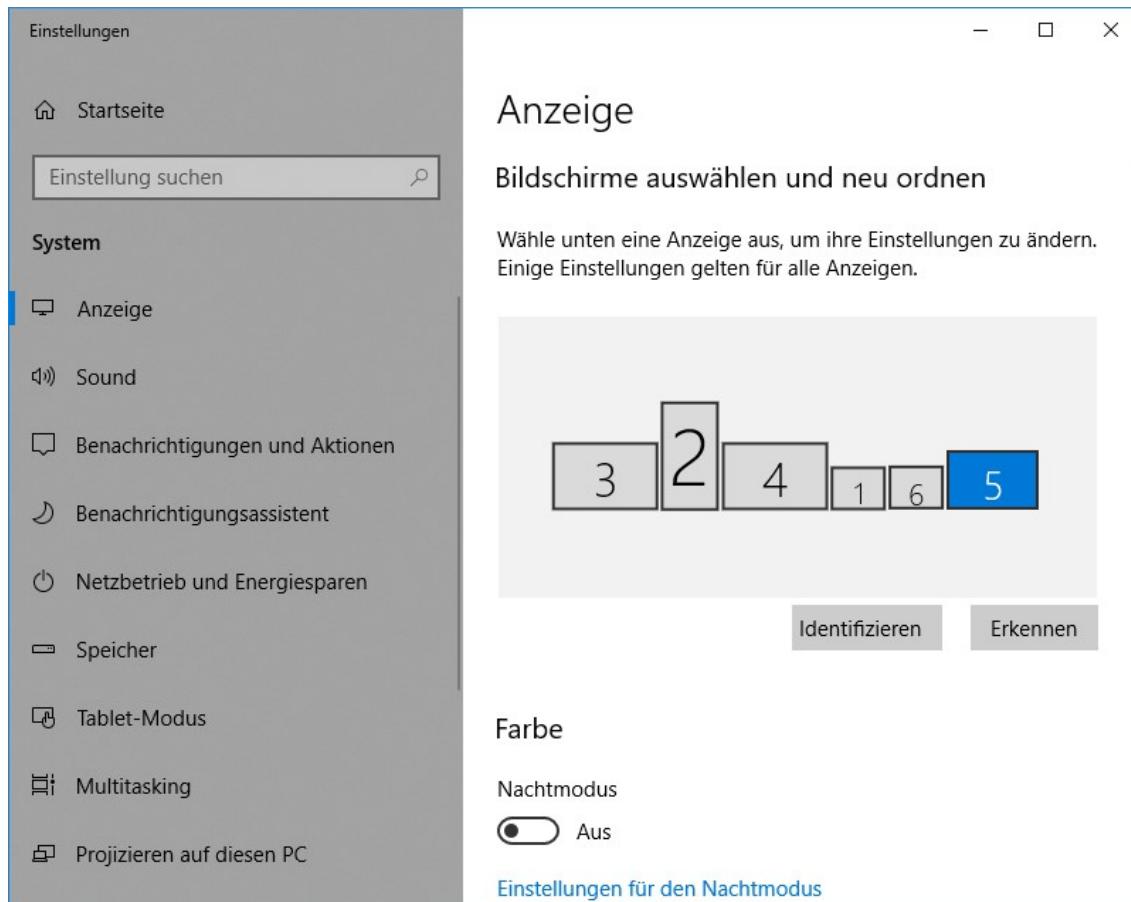
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BASIC SOFTWARE INSTALLATION

DISPLAY SETUP

MIP-PC (Avionics)

Configure display positions according to the screen below. Note that if you want to add a separate maintenance display please do it now (or never). An additional display may mix your display settings.



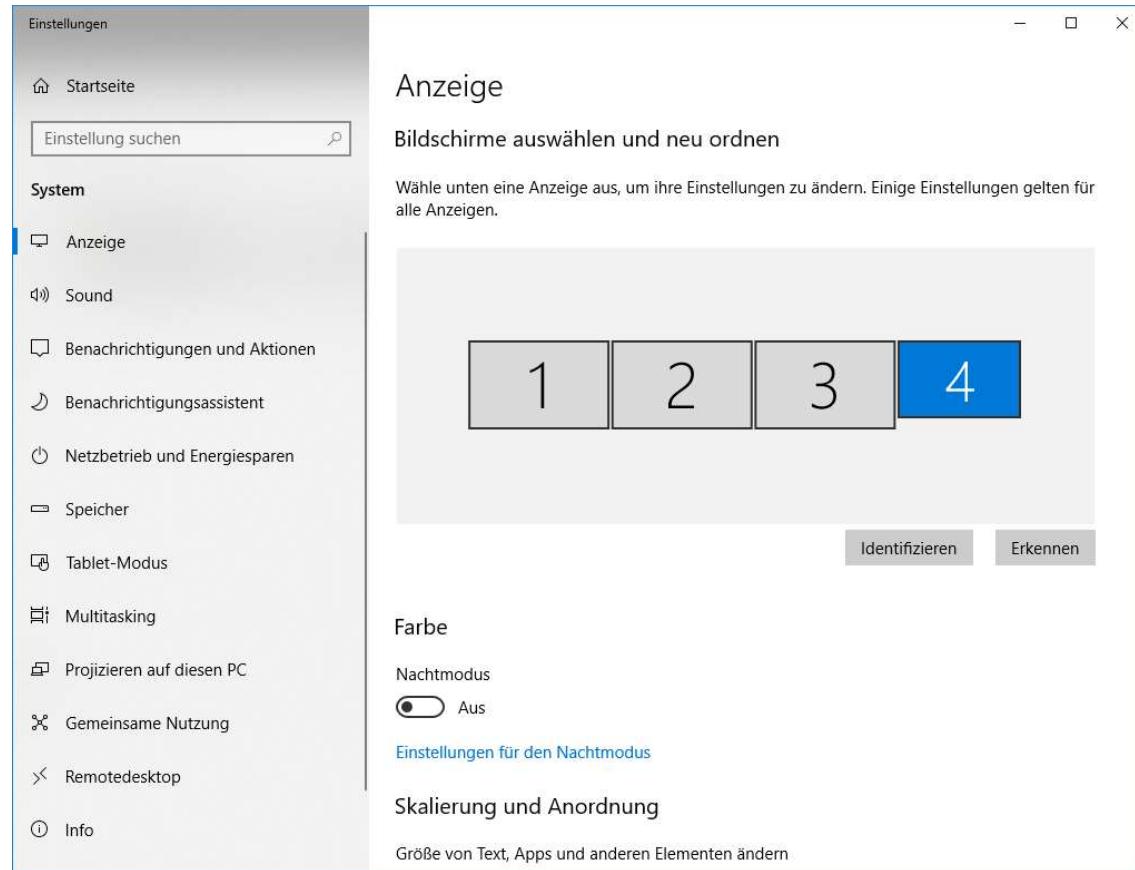
Steps:

- Display 3, 2, 4, 1 and 6 are for the displays.
- Display 5 is the maintenance display.
- Make display 5 your main display.
- Move taskbar to display 5.

Note: the numbers of the screens do not matter.

Main-PC (Visual)

Configure display positions according to the screen below. Note that if you want to add a separate maintenance display please do it now (or never). An additional display may mix your display settings.

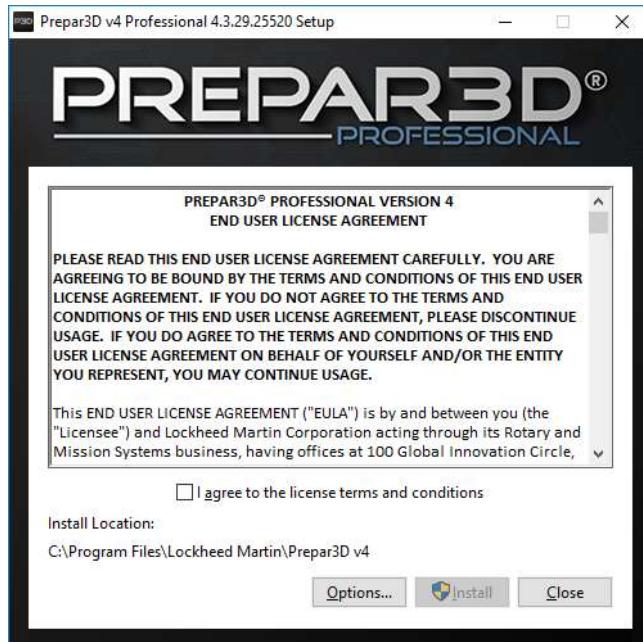


Steps:

- e) Display 1, 2 and 3 are for the projectors,
- f) Display 4 is the maintenance display.
- g) Make display 4 your main display.
- h) Move taskbar to display 4.

PREPAR3D

Download the latest version and install it. Please do not change default installation path.

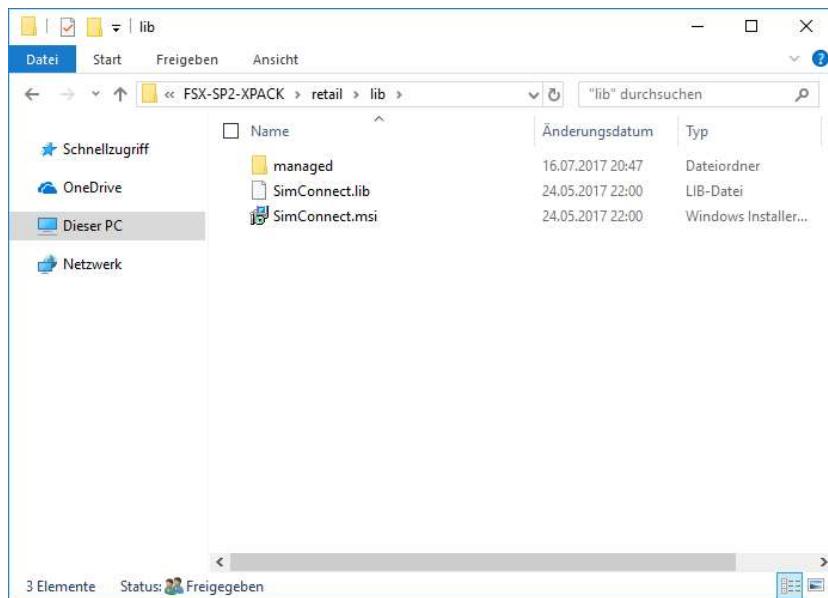


SIMCONNECT

SimConnect is an interface between third party applications and Prepar3D. It's used to enable communication between Prepar3D and ProSimA320 as well as several other modern applications.

You can find the installer package here:

```
C:\Program Files\Lockheed Martin\Prepar3D v4\redist\Interface\FSX-SP2-XPACK\retail\lib
```



Don't worry – SimConnect does not have any dialog. Simply start the installer and the software installation will be executed.

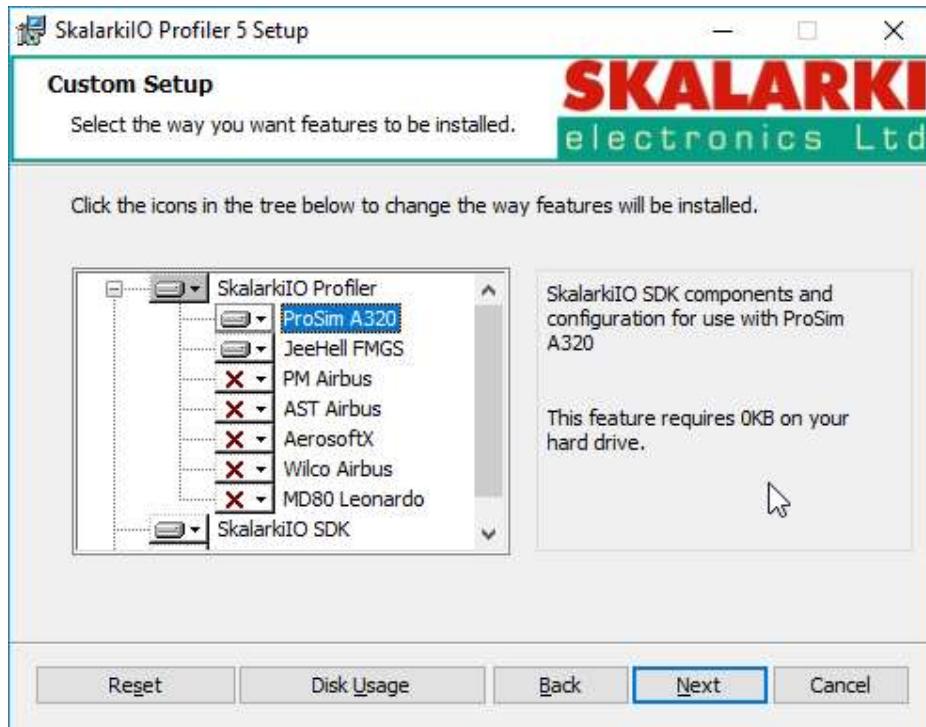
SKALARKI PROFILER

The Skalarki Profiler Software is the interface between your cockpit hardware and software components like ProSimA320. Download profiler software from here:

<https://www.skalarki-electronics.eu/>



Run the installer and select the components according to our screenshot:

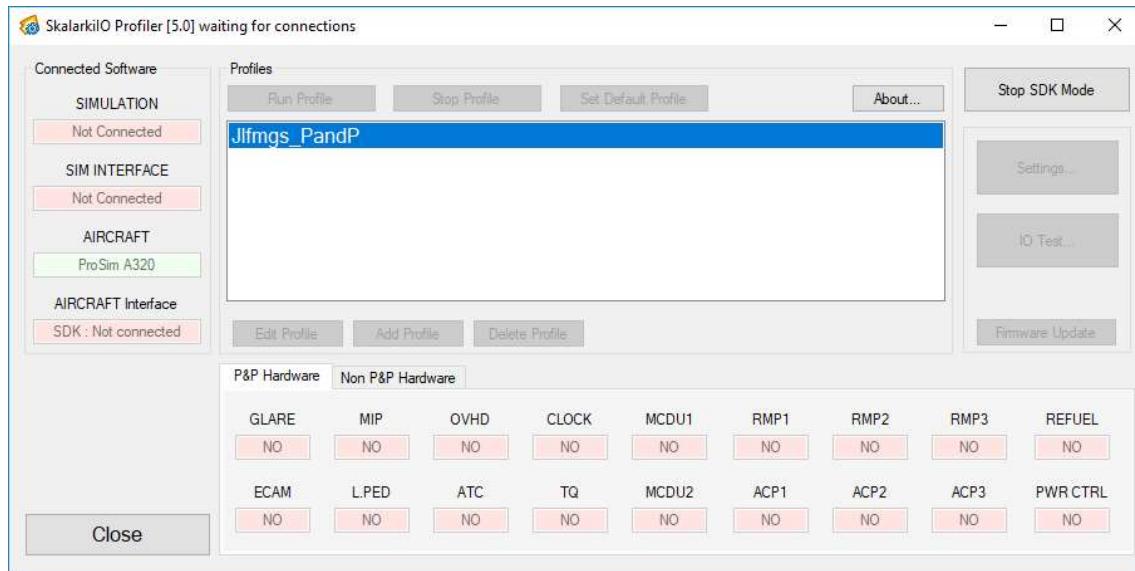


(Please note that JeeHell FMGS is only necessary if you plan to use this software instead of ProSimA320.)

If you run Skalarki Profiler software, please note that it starts minimized in the task bar. You can show it by using a right click on the tray symbol.



If installation was successful you will find a screen approx. like this:

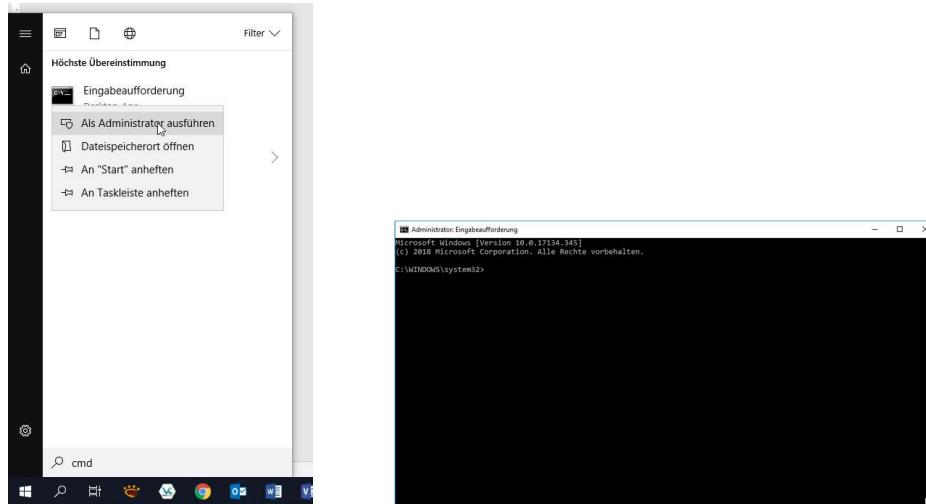


SKALARSKI DRIVERS

In the next step you need to install drivers for the Skalarki hardware. To do so you will need to disable driver signature verification first via the command line.

This is a mandatory procedure – otherwise Skalarki hardware will not work!

Open command line as administrator:

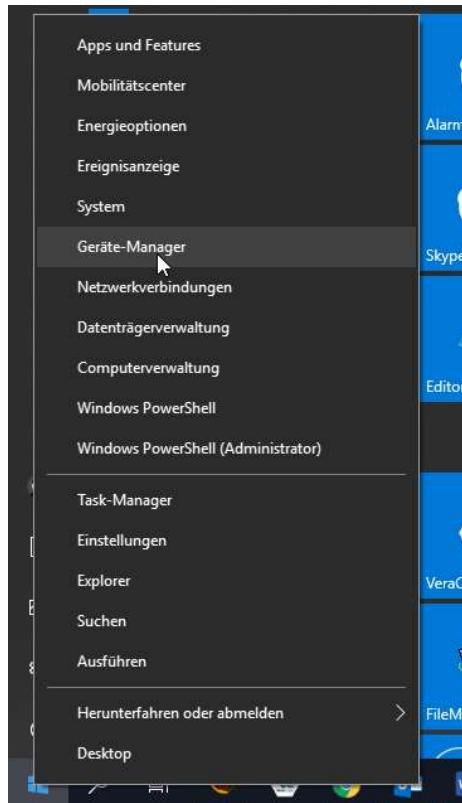


Type in the following commands and press enter:

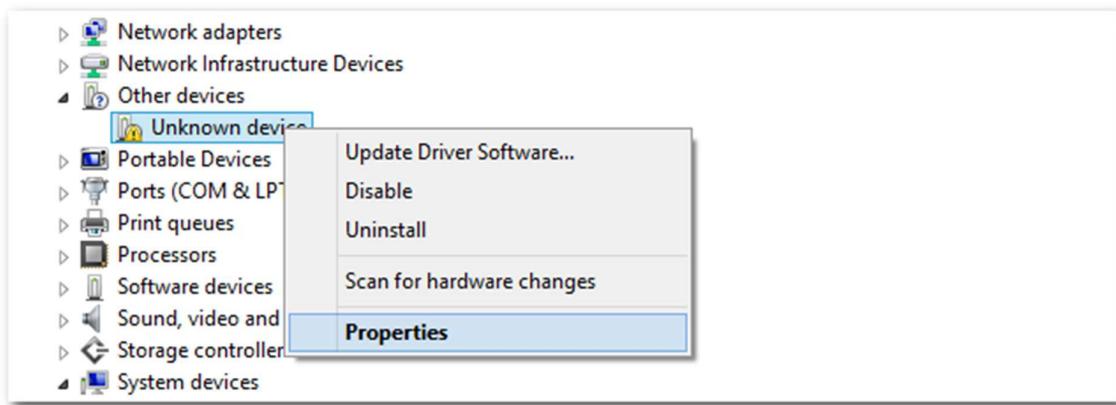
```
bcdedit.exe -set loadoptions DDISABLE_INTEGRITY_CHECKS  
bcdedit.exe -set TESTSIGNING ON  
Reboot your PC.
```

Now you can install hardware drivers.

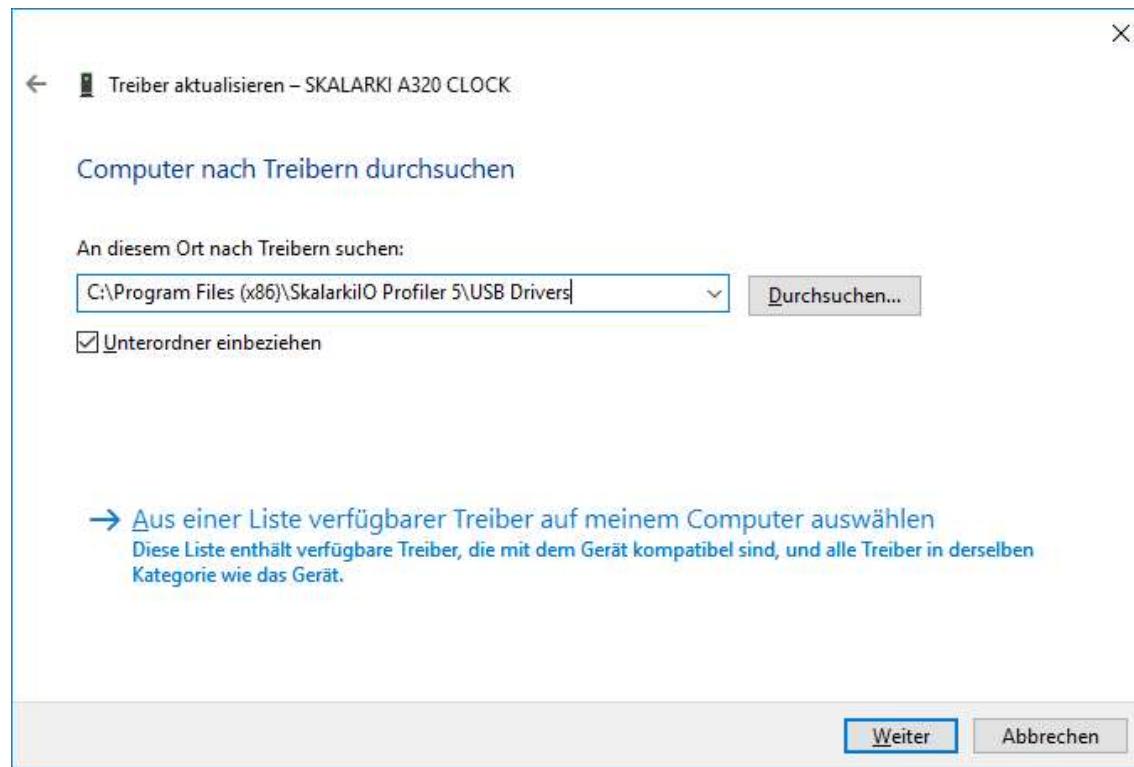
Go to device manager:



And select "update driver software" for every unknown device:

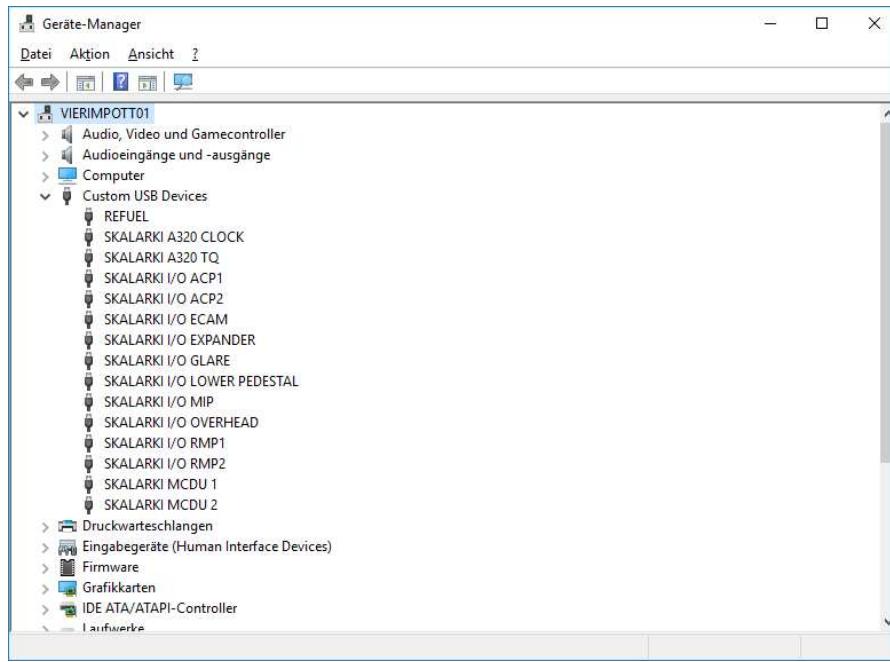


Now select "search computer for driver software" and select "C:\Program Files (x86)\SkalarkiIO Profiler 5\USB Drivers"

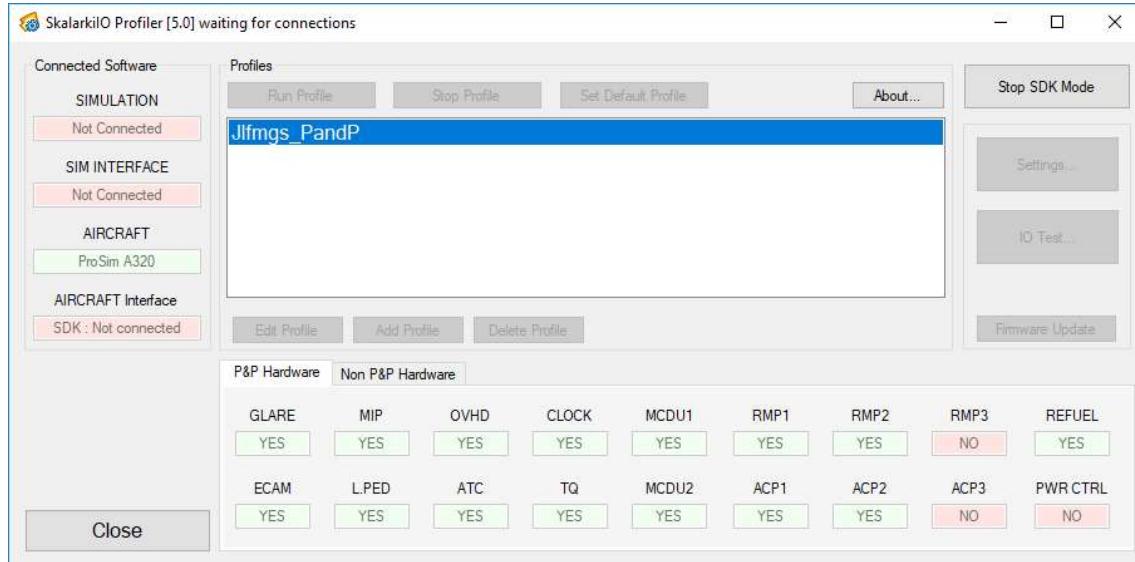


Press "Forward" and accept any red alert message (no worries, this is fine).

Repeat this for any Skalarki hardware you have connected. After installing all drivers your device manager should look like this:



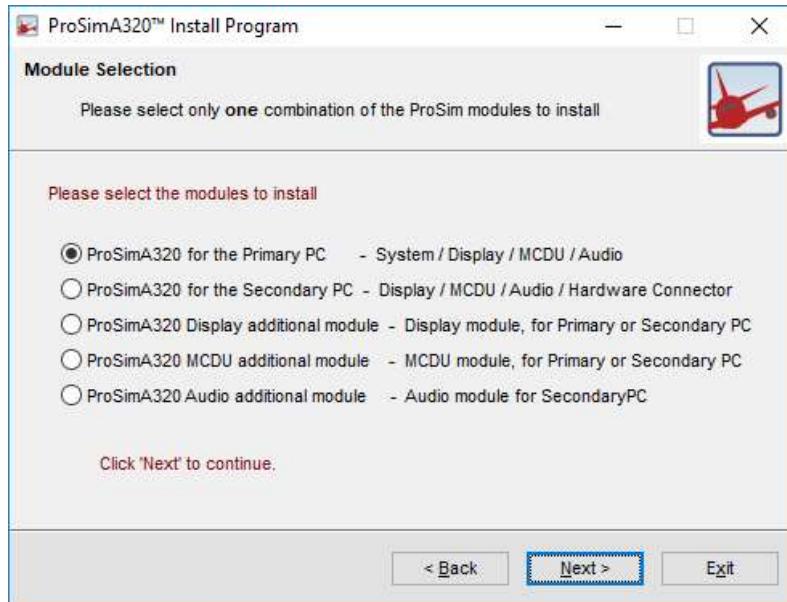
You can double check success by opening Skalarki Profiler. Main screen should now look like this:



If it does not show green "Yes" for a hardware component, you have connected please double check the procedures above.

PROSIM A320

The next step is to install ProSimA320 software.



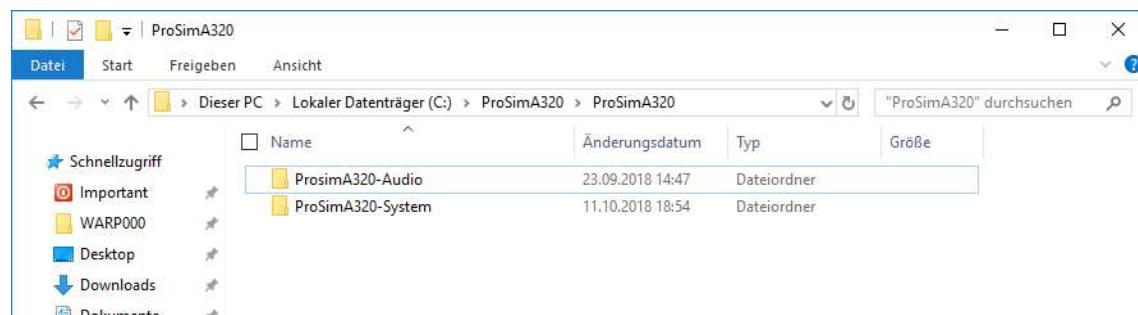
Please note:

- Install the software on both computers
- Select "Primary PC" for the Main-PC
- Select "Secondary PC" for the MIP-PC
- Add other modules according to the list below.

Main-PC

1 x System

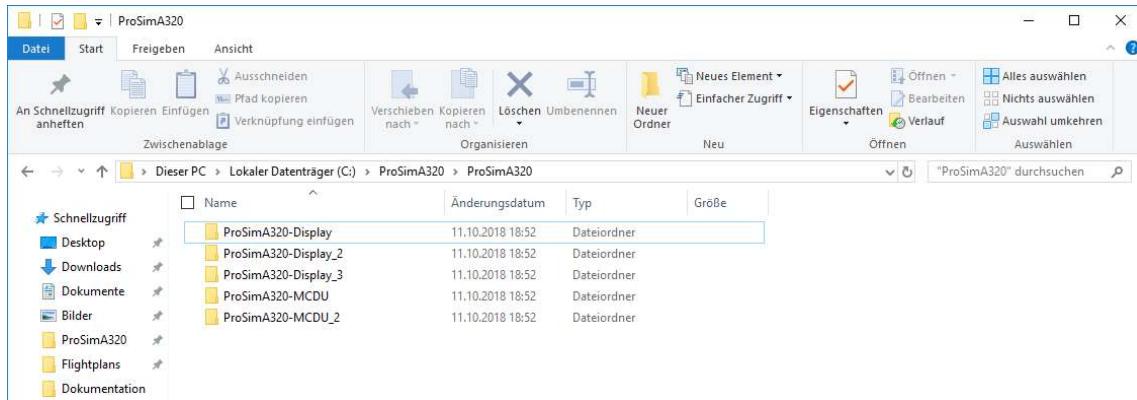
1 x Audio



MIP-PC

3 x Display

2 x MCDU

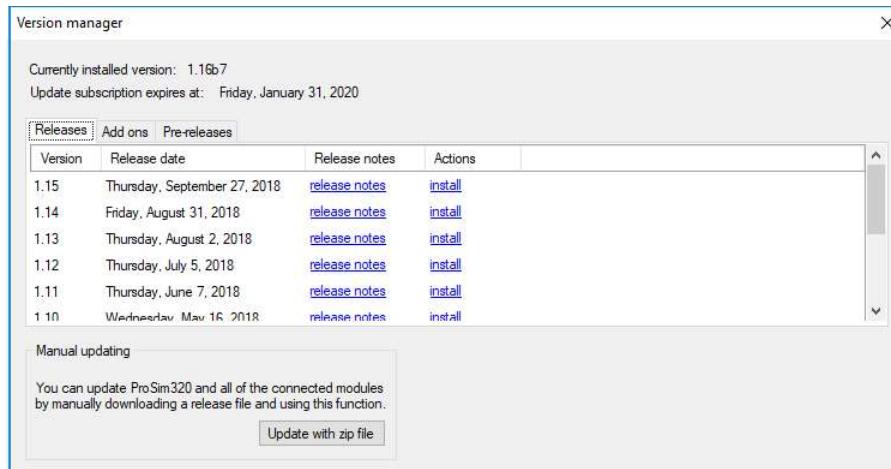


In all folders you will find an executable application. After the installation procedure please add shortcuts of each module to your taskbar for quick access.



UPDATE PROSIMA320

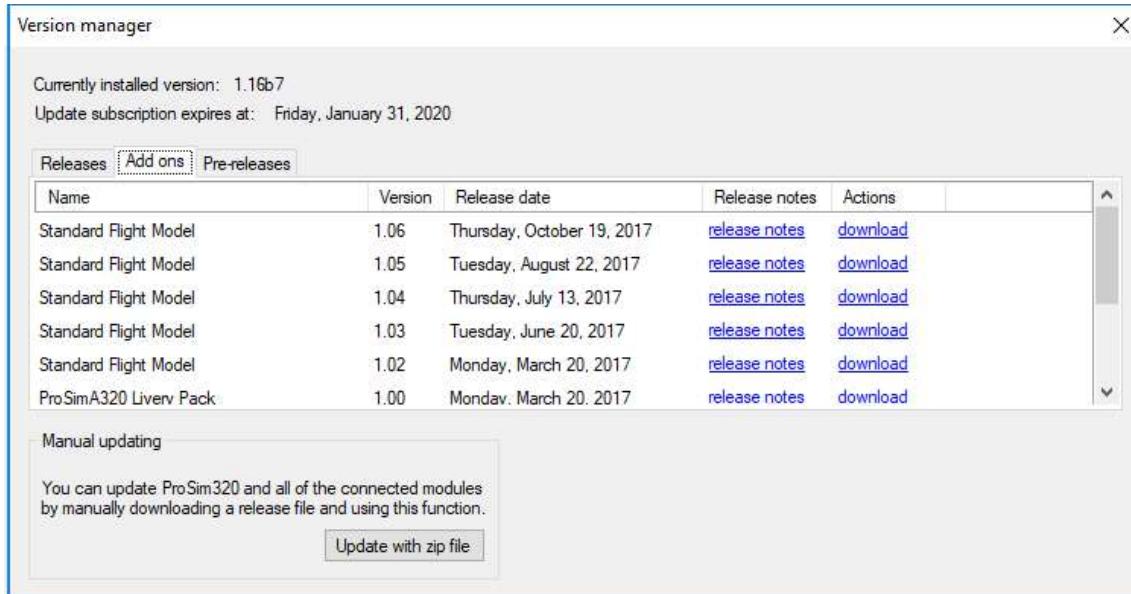
You can update ProSimA320 to the latest version by selecting **Help > Updates**. Then select the lastest version and press **install**. The software will be centrally updated including displays and MCDU on the MIP-PC.



FLIGHTMODEL

The Flight Model is delivered via the version manager within ProSimA320 System. Start ProSim A320 systems software. The version manager is accessed by clicking [Help > Updates](#). The Flight Model is listed under the “add-ons” tab.

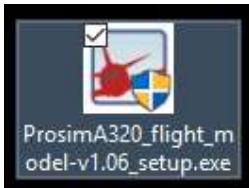
Click ‘download’ for version selected.



Name	Version	Release date	Release notes	Actions
Standard Flight Model	1.06	Thursday, October 19, 2017	release notes	download
Standard Flight Model	1.05	Tuesday, August 22, 2017	release notes	download
Standard Flight Model	1.04	Thursday, July 13, 2017	release notes	download
Standard Flight Model	1.03	Tuesday, June 20, 2017	release notes	download
Standard Flight Model	1.02	Monday, March 20, 2017	release notes	download
ProSimA320 Liverv Pack	1.00	Monav. March 20. 2017	release notes	download

Manual updating
You can update ProSim320 and all of the connected modules by manually downloading a release file and using this function.
[Update with zip file](#)

After the download has completed, execute the program and follow the installer instructions.

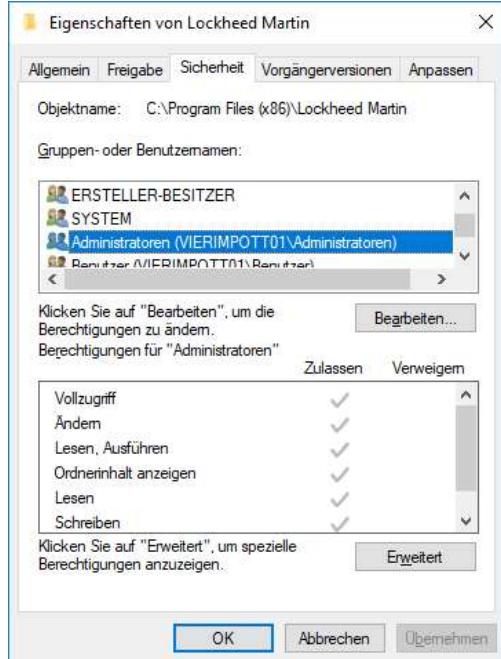


SET USER RIGHTS

In order to ensure proper function of all software components, you will need to add full user rights to the following folders:

- C:\ProSimA320
- C:\Program Files\Lockheed Martin
- C:\Program Files (x86)\ImmersiveDisplayPRO
- C:\Program Files (x86)\SkalarkiIO Profiler 5

Do set full user rights make a right click on the **folder > properties > security** and select full access for your user (admin).



CONFIGURE P3D

REMOVE AXIS AND BUTTONS

Do avoid that P3D is interfering with the fly-by-wire system of the A320 you need to remove axis and buttons. Start P3D and select:

- **Options > Controls > Key Assignments**
- **Options > Controls > Axes Assignments**
- **Options > Controls > Other**

Remove all button assignments.
 Remove all axes assignments
 Deselect "Enable Controller(s)".

Options - Key Assignments

Controller: VIER IM POTT SIDESTICK 2.0 | Show: Name

Note: Joystick Controllers are currently DISABLED.

EVENT	ASSIGNMENT	REPEAT	ON RELEASE
Brake failure - right (on/off)			<input type="checkbox"/>
Brake failure (on/off)			<input type="checkbox"/>
Brakes (apply left)	(ZEHNERTASTATUR)		<input type="checkbox"/>
Brakes (apply right)	- (ZEHNERTASTATUR)		<input type="checkbox"/>
Brakes (apply/release)			<input type="checkbox"/>
Brakes (apply/release)	Button 1	Ctrl + .	<input checked="" type="checkbox"/>
Brakes (set parking)			<input type="checkbox"/>
Brakes anti-skid (on/off)			<input type="checkbox"/>
Cabin alert - No Smoking (on/off)			<input type="checkbox"/>
Cabin alert - Seatbelts (on/off)			<input type="checkbox"/>
Capture Screenshot	V		<input type="checkbox"/>
Capture Video			<input type="checkbox"/>
Carb heat/eng anti-ice (on/off)	H		<input type="checkbox"/>
Center Buoyancy value	Shift + Ctrl + F9		<input type="checkbox"/>
Chase distance (decrease)	Ctrl + -		<input type="checkbox"/>
Chase distance (increase)	Ctrl + +		<input type="checkbox"/>
Chat window (display/hide)	Shift + Ctrl + AKUT		<input type="checkbox"/>

Export... Import... Reset Defaults New... Delete Change... Cancel OK

Options - Other

INPUT METHOD: Raw Input (selected) DirectInput

ENABLE FORCE FEEDBACK:

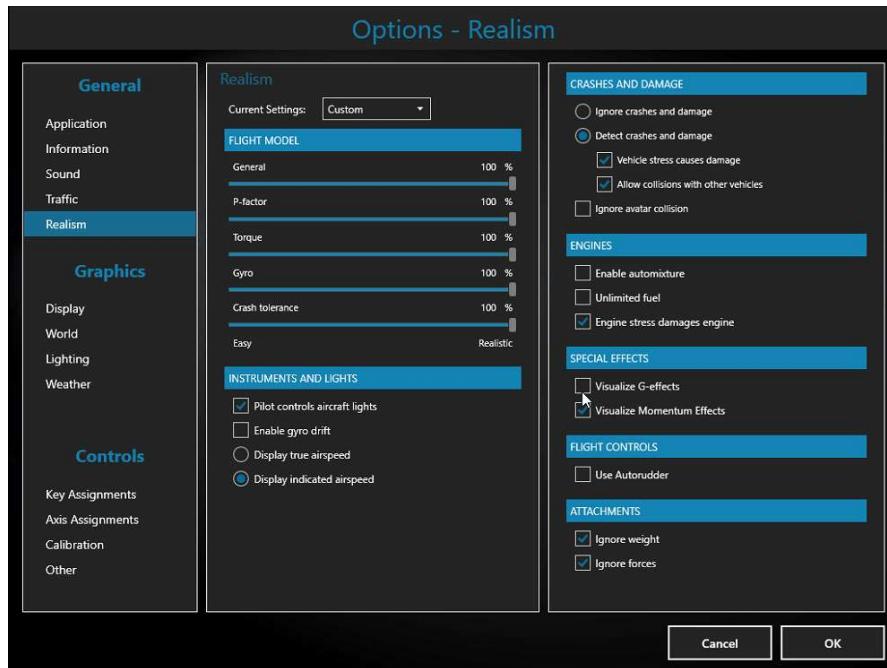
- Control surfaces
- Stick shaker
- Crashes
- Ground surfaces
- Retractable landing gear
- Firing Machineguns

TOUCH: Use Gestures (selected) Use Multi-touch

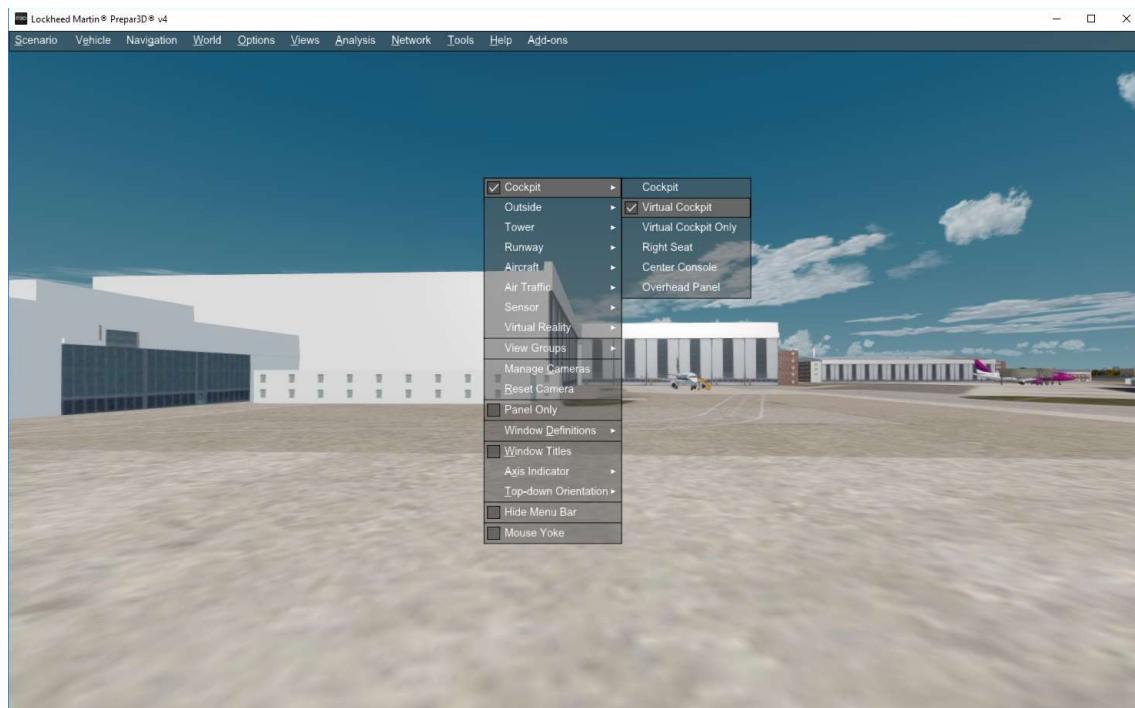
USE CONTROLLERS: Enable Controller(s)

Cancel OK

Also select **World > Realism > Special effects** and disable "G-effect".

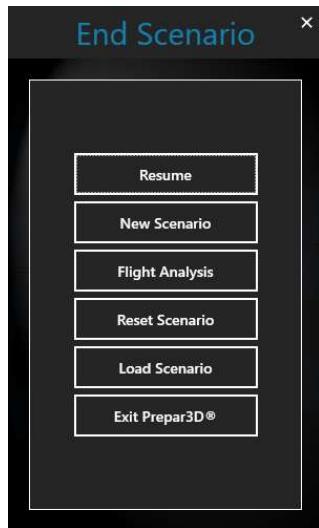


For the landing lights to work click right into the projection **Cockpit** and select "virtual cockpit".



SET YOUR STANDARD SCENERY

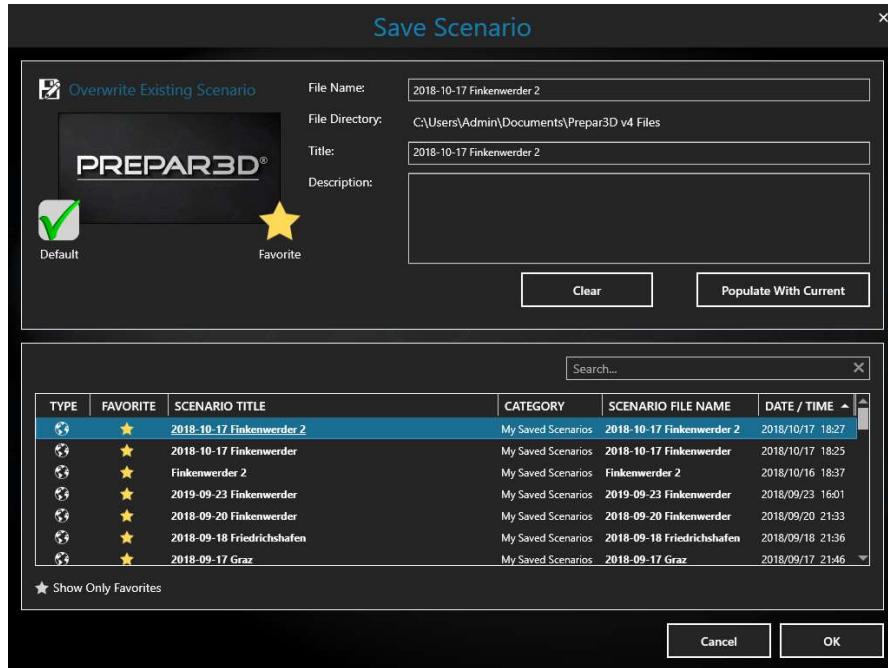
Press ESC.



Select aircraft and location.



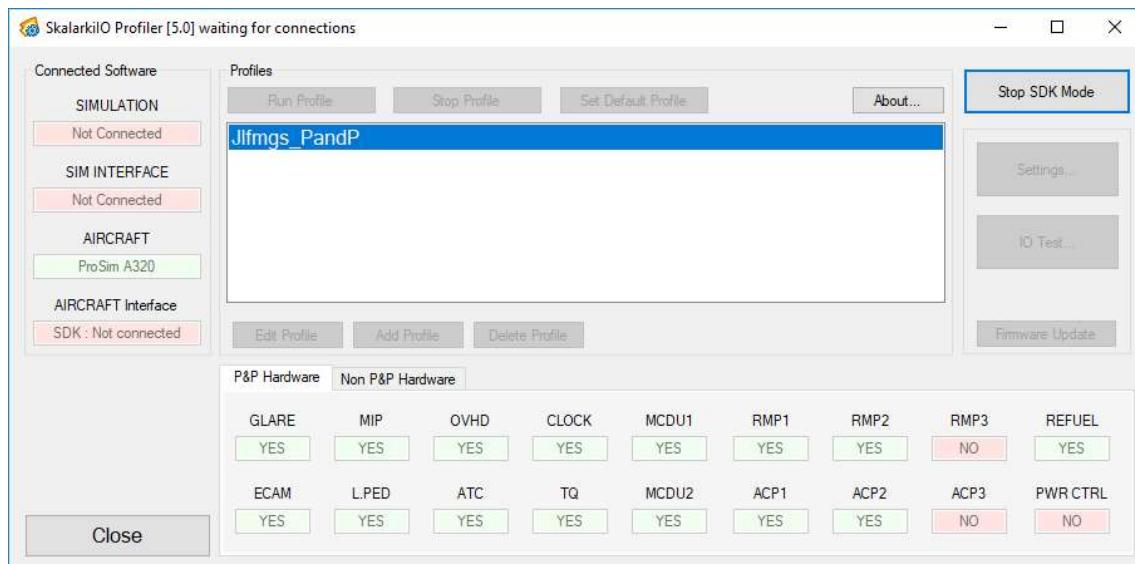
Then save the scenery as standard scenery.



CONFIGURE SKALARKE

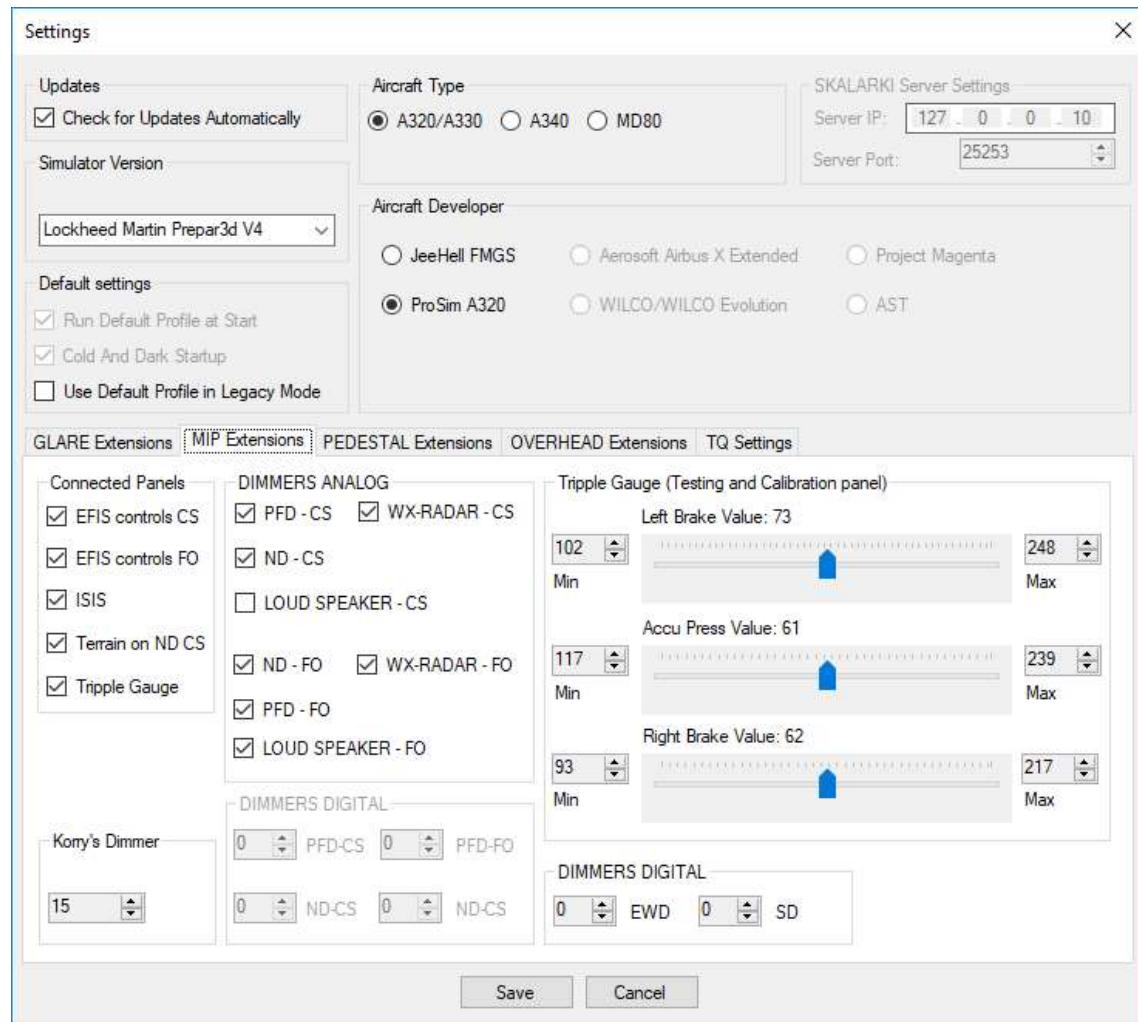
CHECK PROFILER SETUP

Open profile from the taskbar.



CALIBRATE T-GAUGE

Press "Stop SDK Mode" and select "Settings".



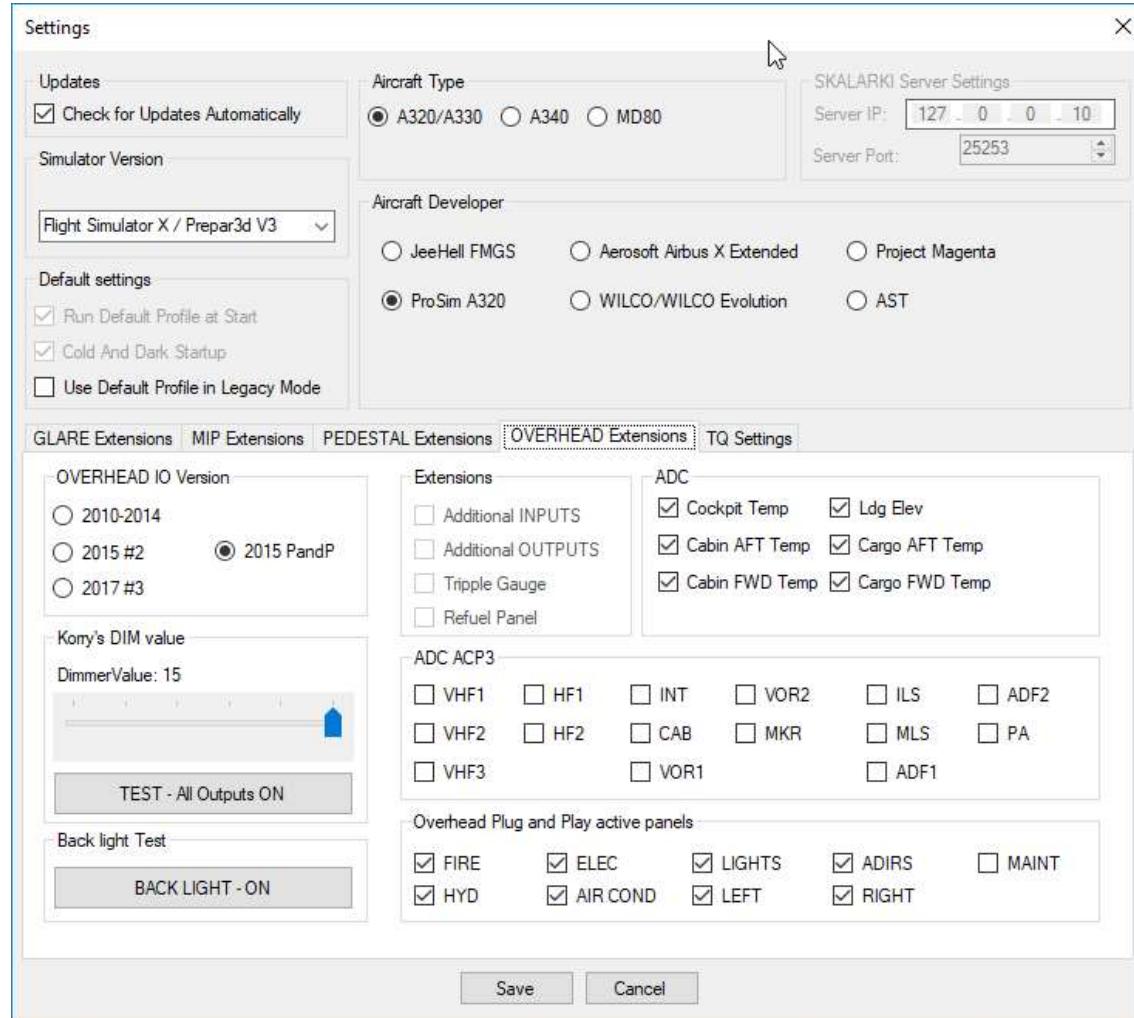
Go through the section and select the appropriate modules.

To calibrate the Triple Gauge use the slider and **Min** and **Max** settings to set values to its end positions.

ACTIVATE MAINT PANEL

Go through the section and select the appropriate modules.

If you have the aft overhead section please select **MAINT**.

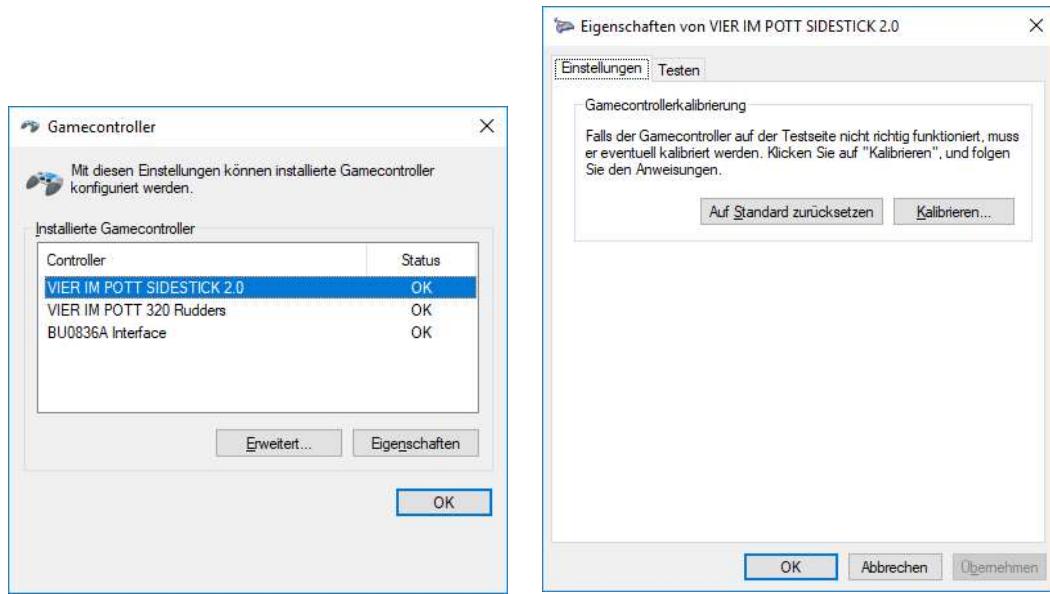


CALIBRATION OF FLIGHT CONTROLS

Joystick input is a generic hardware device which requires to configure all IO element manually. Joysticks should be listed in the Windows Game controllers. (**Windows search: game controller**).

For flight controls (analogue inputs) the first step is to calibrate the joystick in Windows Game Controller, **select properties > settings > calibrate**.

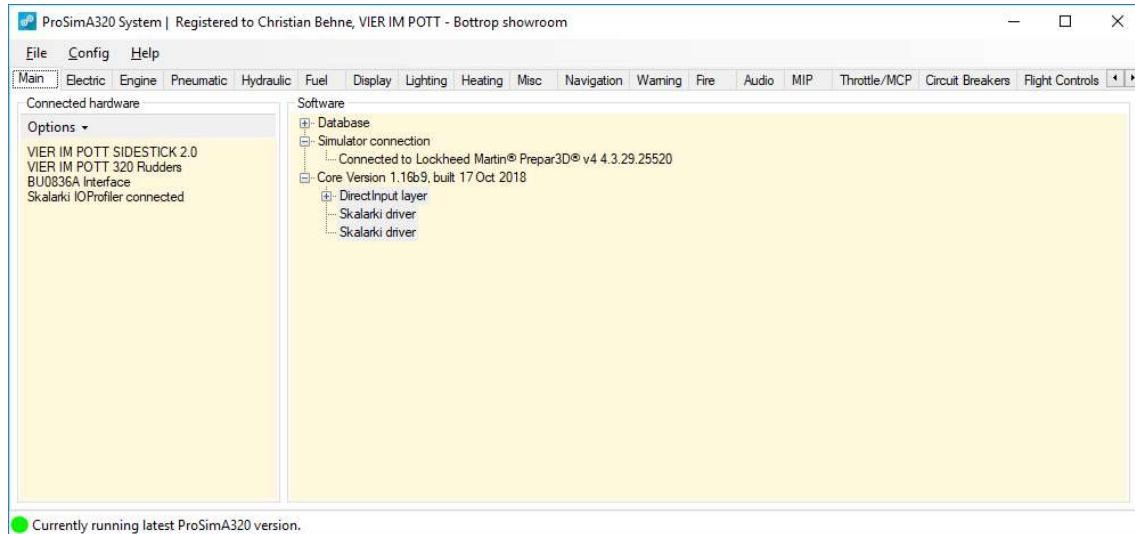
Follow the steps described in the calibration tool:



CONFIGURE PROSIM

Start ProSimA320 System. The interface always displays a horizontal top navigation with the items "File", "Config" and "Help". Below is a horizontal navigation bar dividing the screen in tabs.

GENERAL SETTINGS



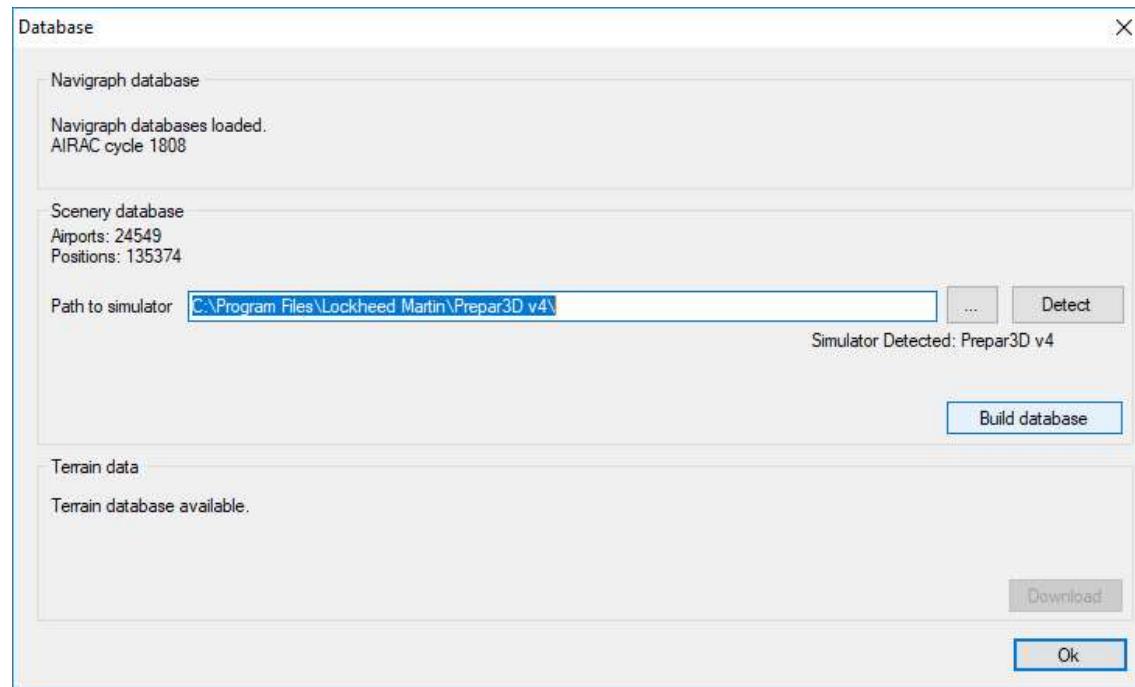
The main tab displays an overview of connected cockpit hardware and software, the other tabs display the current state of cockpit switches, indicators, gauges, gates, etc. **These tabs are not used for making configuration changes**, they are only used to display the current state of elements or to change the value of a switch in the software if no hardware switch for that function is connected.

BUILD NAVIGATION DATABASE

ProSimA320 System requires the installation of navigational data to function correctly. Start by downloading the Navigraph database package from the download page of the ProSimAR website and install. <http://prosimar.com/downloads/>

Open the config > database screen in ProSimA320 System. Verify that the Navigraph database is loaded, by restarting ProSimA320 System.

Select the path to the installation directory from your backend simulator (Lockheed Martin Prepar3D®) under 'Scenery Database' to start extracting scenery navigation data from Prepar3D® to ProSimA320 System. Remember to repeat this step after making changes to your installed scenery.



Note:

You don't need a subscription from Navigraph. Without a subscription the Navdata will be outdated which you need to consider when calculating flight plans with external software.

If you install third-party scenery you will need to rebuild the database after installation to ensure that nav data is synchronized.

DOWNLOAD TERRAIN

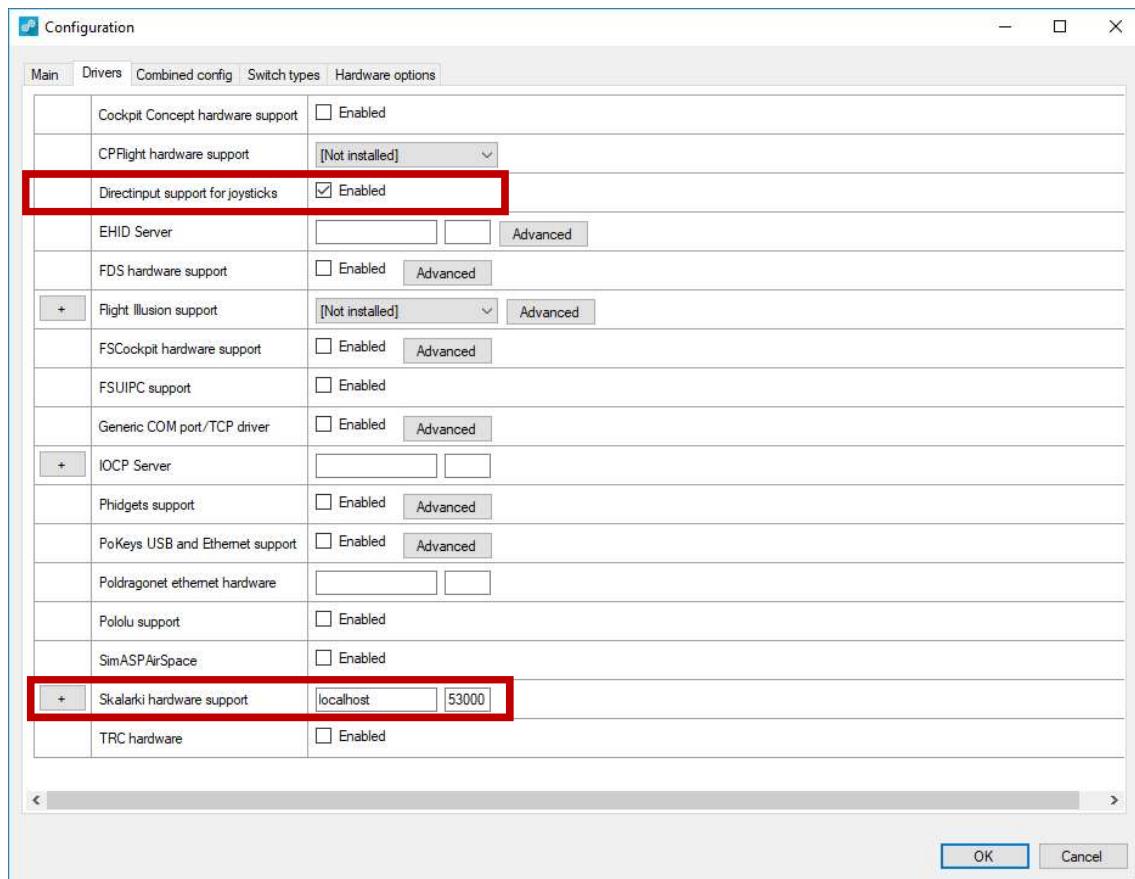
In the terrain data section click download to start and install. Once installed, verify that the terrain database is available by restarting ProSimA320 System.

SETUP JOYSTICK SUPPORT AND SKALARKI HARDWARE SUPPORT

After the Joystick is calibrated in Windows open ProSimA320 System and open the driver tab, "ProSimA320 System > Config > Configuration > Drivers".

To enable your flight controls being used by ProSimA320 System you will need to enable "Direct input support for joysticks" and enable "Skalarki hardware support"

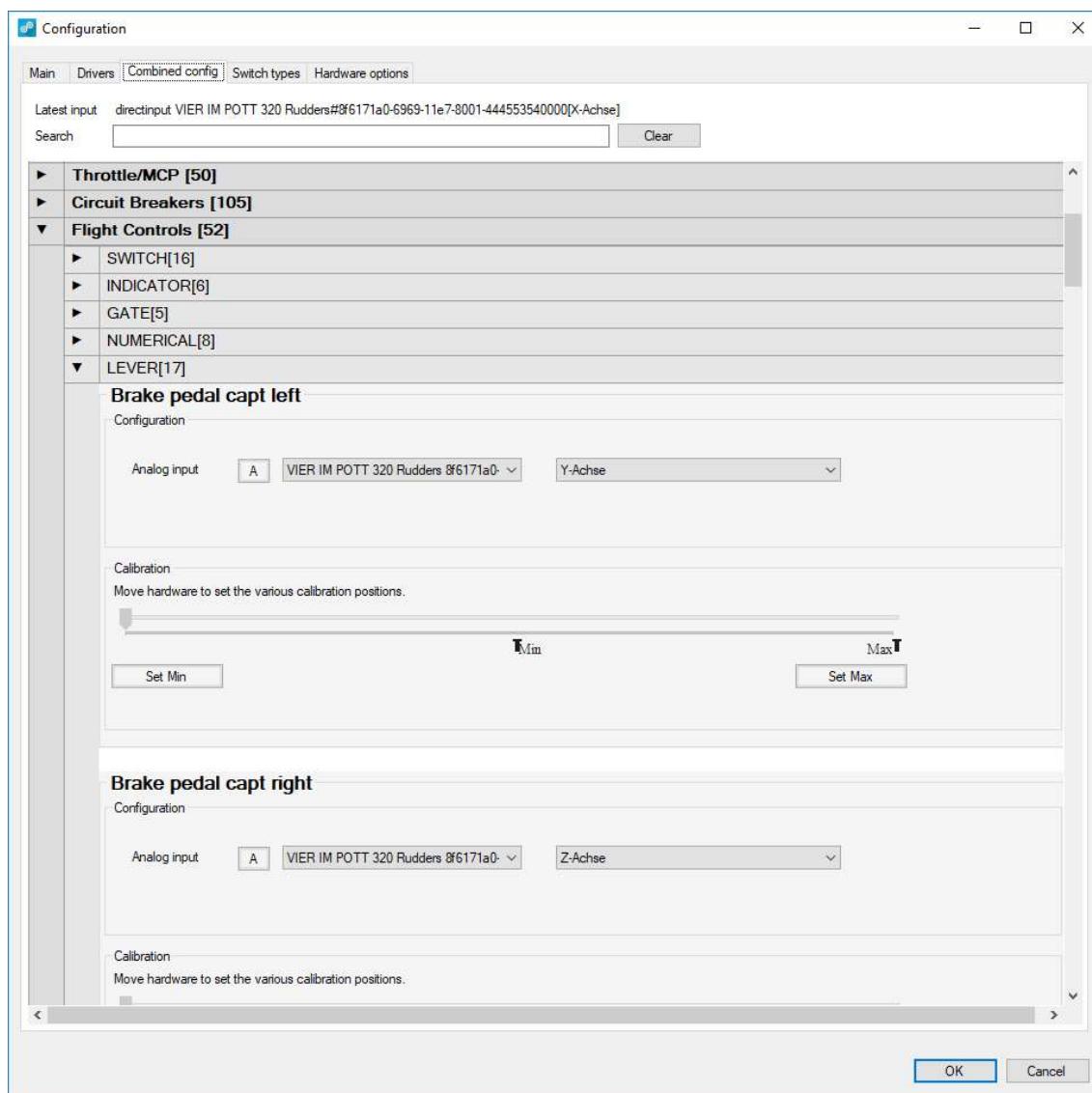
Now restart ProSimA320 System.



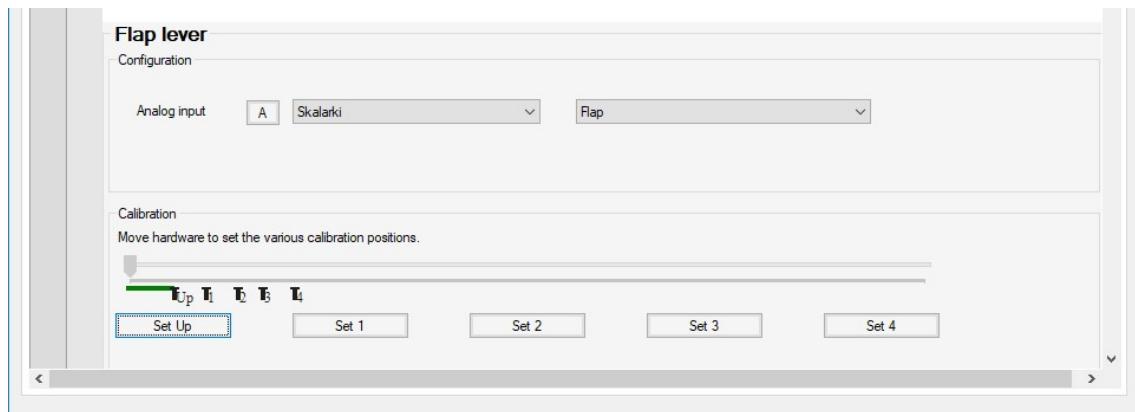
SETTING AND CALIBRATION OF FLIGHT CONTROLS

Important: You must have done Windows game controller calibration for all flight controls first!

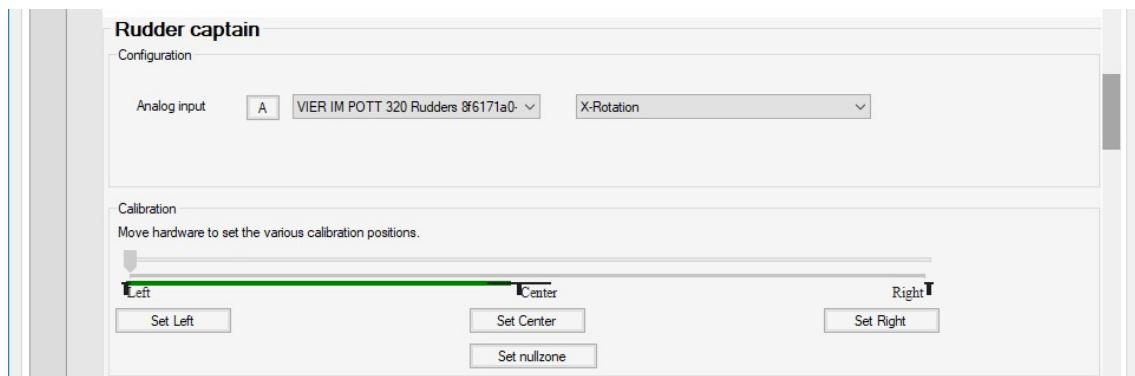
Select **Config > Configuration > Combined Config >Flight Controls > Lever**



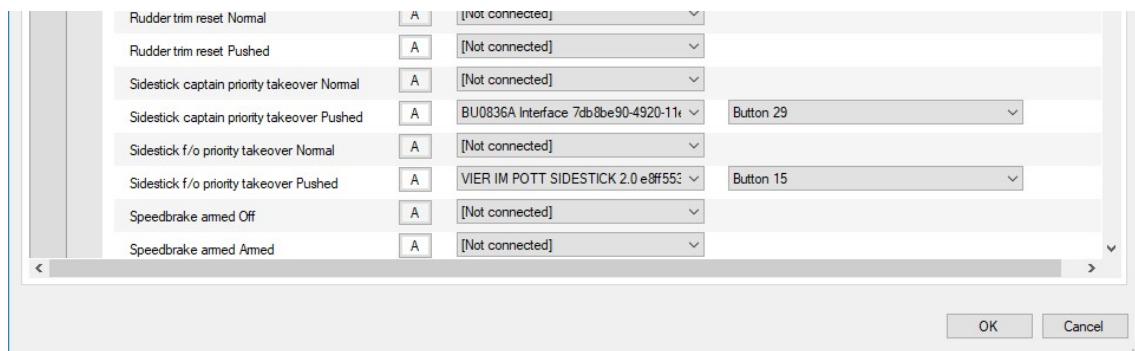
Now select calibrate step by step all axis by selecting the correct analogue input and axis and to the calibration.



Do not forget to set a medium null zone to ensure that neutral position or detent is correctly detected:



To configure buttons, select Flight Controls > Switch



SWITCH TYPES

In case you notice unnormal behaviour of push buttons go to **Config > Configuration > Switch types**.

Configuration

Main	Drivers	Combined config	Switch types	Hardware options
			Name Switch type My hardware type	
AC Ess Feed	Momentary	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	
ADR1	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
ADR2	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
ADR3	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
APU Auto Exting Test	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
APU bleed	Latched	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	
APU Generator	Latched	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	
APU Master	Latched	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	
APU Start	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
Auto/brk LO	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
Auto/brk MAX	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
Auto/brk MED	Momentary	<input type="radio"/> Latched	<input checked="" type="radio"/> Momentary	
Battery 1	Latched	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	
Battery 2	Latched	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	
Blue pump overide	Latched	<input checked="" type="radio"/> Latched	<input type="radio"/> Momentary	

Quick setup

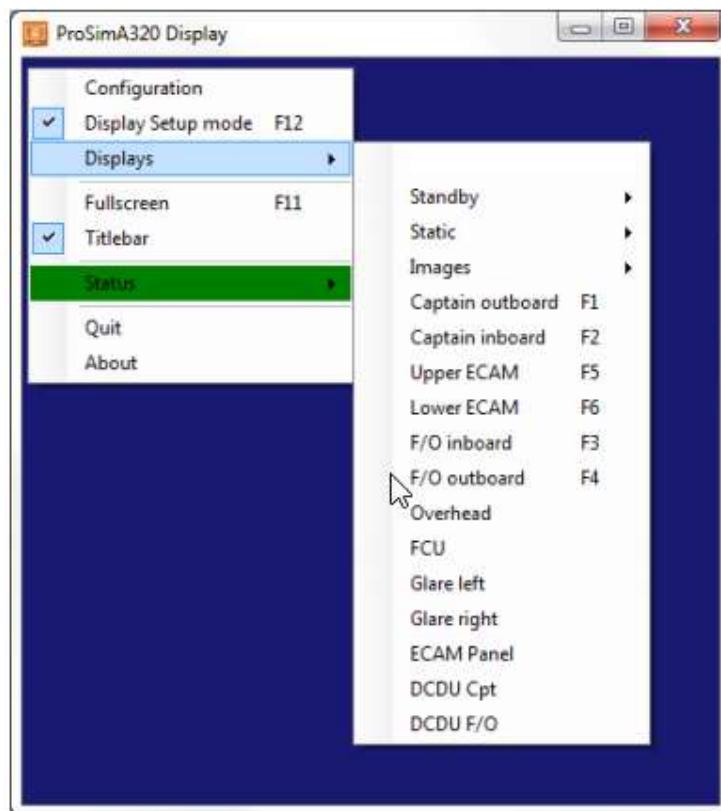
SETTING OF PROSIM MODULES

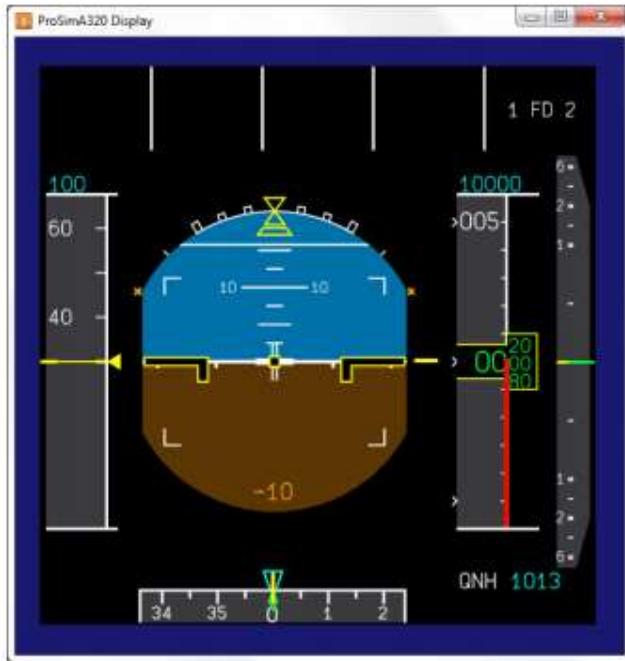
SETTINGS OF DISPLAYS

On first start of each ProSimA320 Display module instance first enter the IP address of the primary computer in the configuration.

Open ProSimA320 Display, by default a black screen is displayed. For the ease of configuration, it's recommended to select Ground Power in the IOS and set the overhead Ground Power switch to on. If no hardware overhead is present, use **ProSimA320 Display > right mouse click > display > overhead** and select **ground power switch**. Close the display overhead by **right mouse click > close overhead**.

When ground power is selected the captain PFD and ND will be visible. Hit F12 to enter the display setup mode. The display setup mode is only used during configuration, not for normal operation. In display setup mode, a blue background colour is shown, when selecting F12 once more display background colour changes back to black.





Several configuration options are available, mainly regarding performance, open **ProSimA320 Display > right mouse click and select config.**

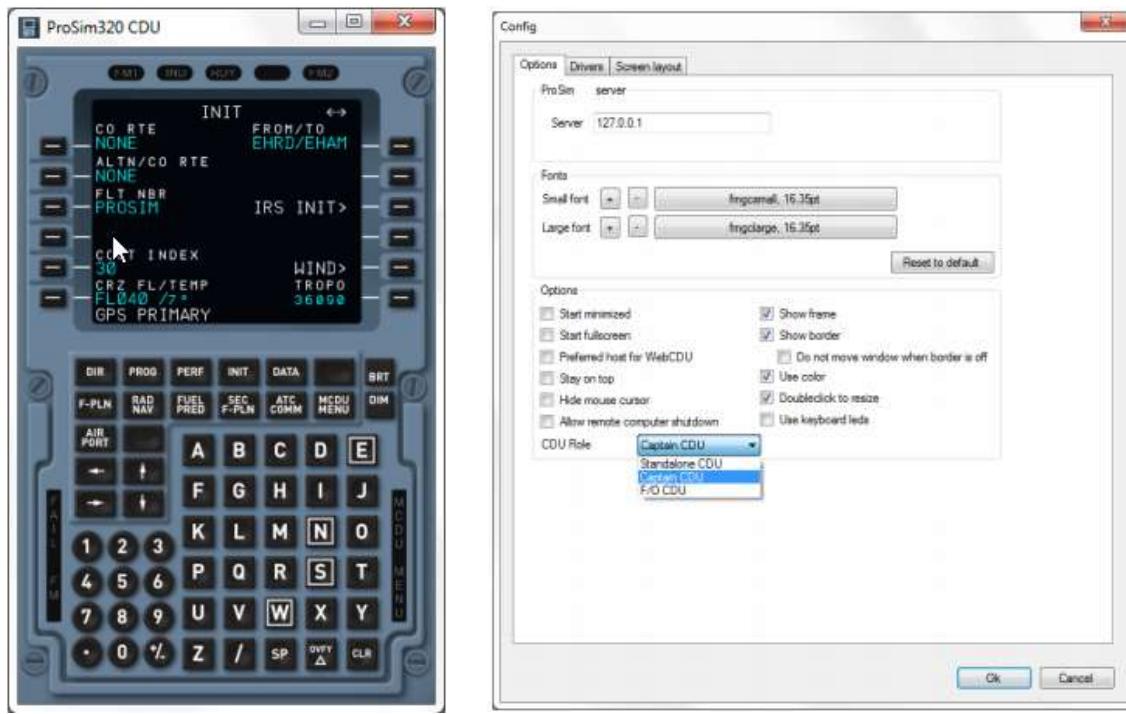
- General Options are options for higher graphical quality, these can be selected based on the computer performance.
- Standby instruments are offered with or without frames around them and as photorealistic.
- Interface stay on top is used to keep the ProSimA320 user interface visible.
- Tuning allows to adjust the data rate and frame rates. Default data rate is **10**, default frame rate is **30**.
- Multicore optimization is used to increase the display performance.
- Show load in title bar is used to constantly display the display load parameters in the Windows title bar.
- '**Allow remote computer shutdown**' is used to remotely shut the computer down using the IOS.



When closing ProSimA320 Display automatically all setting is saved. The information is all stored in a file called config.xml.

SETTINGS OF MCDU

The ProSimA320 MCDU module simulates a full MCDU / FMS system, including an accurate LNAV / VNAV implementation. The configuration of MCDU hardware also is done using the ProSimA320 MCDU module.



Fonts

Font type and size can be adjusted based on own preference. In general, the default setting should be used. To reset to the original font size and type select "**Reset to default**". Fonts can only be adjusted for video cable connected MCDUs.

Options

Start minimized option is used to automatically minimize the ProSimA320 MCDU on startup. This should not be used for VGA/DVI connected MCDUs. Start full screen is used when a full screen is required, most VGA/DVI connected MCDUs require a full screen setup to align all line select switches.

Stay on top is used to keep ProSimA320 MCDU on top on the desktop, even when other programs are running the MCDU will always remain visible.

'Allow remote computer shutdown' is used to remotely shut the computer down using the IOS.

Show frame is an option to toggle between displaying the complete MCDU or the display only. Showing the display only is used for VGA / DVI connected MCDUs.

Show border is an option to remove the Windows border around the MCDU display. Additional option "do not move window when border is off" is available to lock the window position.

The use color option by default is on. ProSimA320 MCDU is using multiple colours to identify the function of specific areas in the MCDU.

Doubleclick to resize option can be deselected when a static display is required. When this option is selected and select doubleclick in the MCDU display the display changed to full screen.

Screen layout for VGA / DVI connected MCDUs When using a VGA / DVI connected MCDU it may be required to align the screen display with the Line Select Keys (LSK).

Before opening the line select option first select a MCDU page which contains a lot of information, see example image. To start aligning the different lines open the line select mode (open ProSimA320 MCDU > right mouse click > line select mode).



The first line (LSKR1) should be lighted in a yellow square box. Align the line by using the following commands:

- Up and Down (computer keyboard entry "U" and "D")
- Left and right (computer keyboard entry "L" and "R")
- Wides and Shorten (computer keyboard entry "W" and "S")

When the first line is configured select the next LSK to perform the configuration again, all until all lines are aligned correctly.

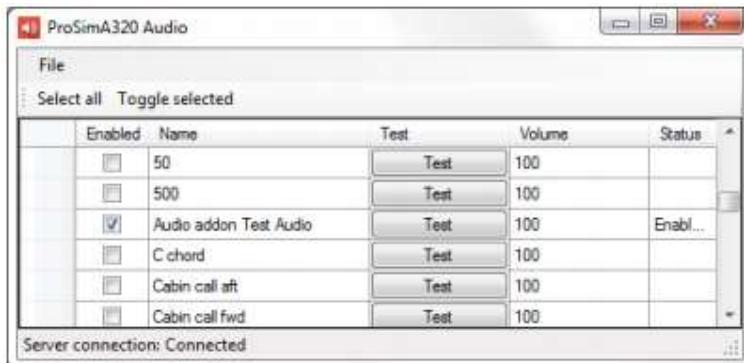


SETTINGS OF SOUND

The ProSimA320 Audio module is managing all in cockpit sounds. The first step is to configure the network settings. When the ProSimA320 Audio module is connected you can use the available cockpit audio sounds. The different sounds can be turned on or off and the individual volume can be adjusted.

For audio channel separation multiple instances of ProSimA320 Audio can be used across multiple computers. **No more than one instance of ProSimA320 Audio is used per computer.**

Volume control can be adjusted by changing the volume value, default 100(%) is selected. To lower the specific sound, change a different value, for example 70%.

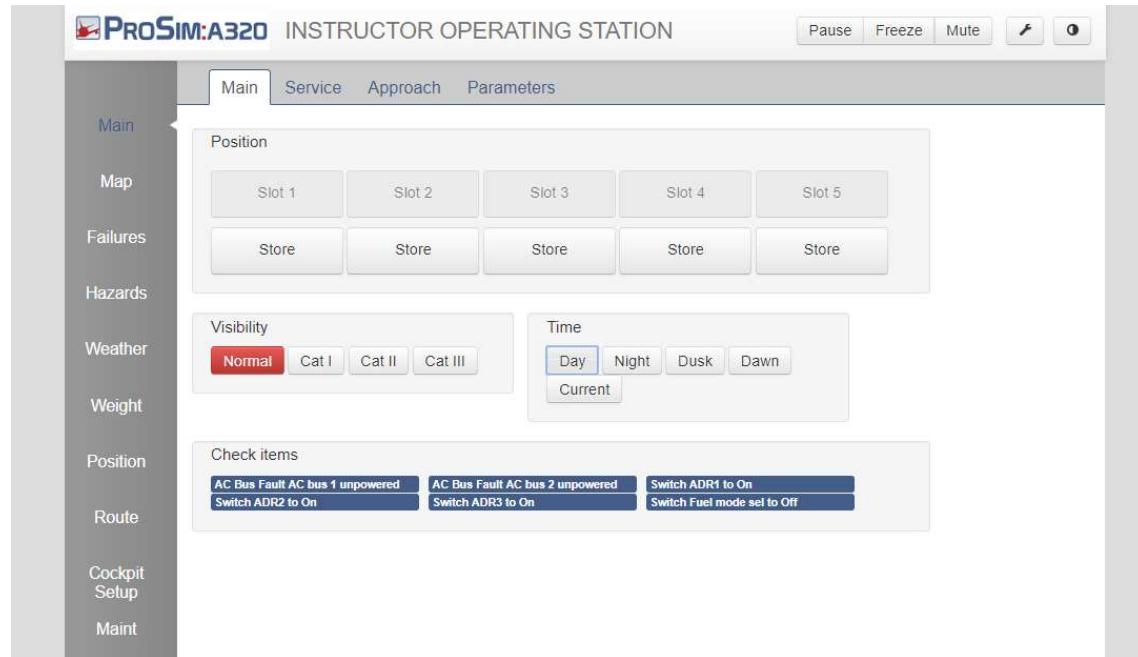


ACCESS TO INSTRUCTOR STATION

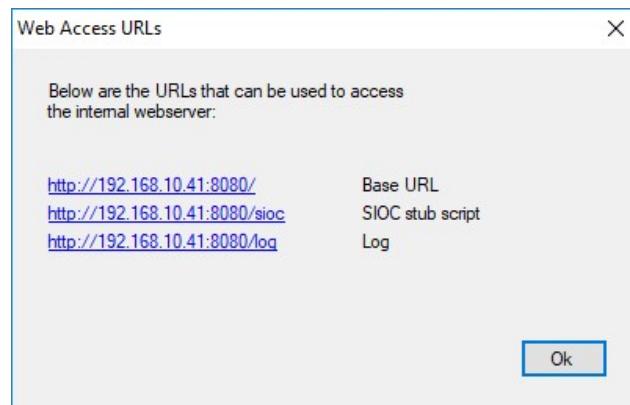
Ensure that ProSimA320 is running.

You can access the instructor station with a simple web browser by any computer that is connected in the router network. If you did no change the IP-address of the main computer (Visual PC) you can access the instructor station here:

<http://192.168.10.10:8080>



In case you cannot access instructor station please go to A320 system and select **Help > Web Access**. Here you can find the URL.



You will find further details around the installation also here:

https://prosim-ar.com/download/ProSimA320_user_manual_1.0.pdf



TIPPS

In case you cannot successfully start the engines please set focus on P3D and press **E+1** and **E+2**.

FURTHER QUESTIONS?

In case you need further help with assembly please write an email with a clear explanation and descriptive photos to our support desk: **support@vier-im-pott.com**