

Instrument RadioStack



Please read this manual before operating your units and keep it for future reference

VRinsight

Contents

1. Introductions

- 1.1 General
- 1.2 Features
- 1.3 Display & Control Configuration.....

2. Deliverables

3. Hardware Connection

- 3-1. Plug/Connection diagram

4. Software installation

- 4-1. FSUIPC
- 4-2. VRiSim installation
- 4-3. FSX Acceleration installation.....

5. Quick start

Appendix

- FSUIPC
- VRiSim
- X-Plane (V9 / 32bit only, V10 32bit / 64 bit)

1. Introduction

1.1 General

The **Instrument RadioStack** of **VRinsight** is full scaled and real shaped of the radio stack in actual aircrafts. It features various types of aircrafts' panel with full control complement ; default aircrafts of MSFS, most freeware and commercially available add-on aircrafts (Wilco's, PMDG's, Level-D's and PSS's). It is completely interfaced with MSFS9 and MSFSX through add-on software "**VRiSim**" which enables the **Instrument RadioStack** to perform full simulation with simple connecting PC through USB. Package includes a universal power supply adaptor (DC 5V).

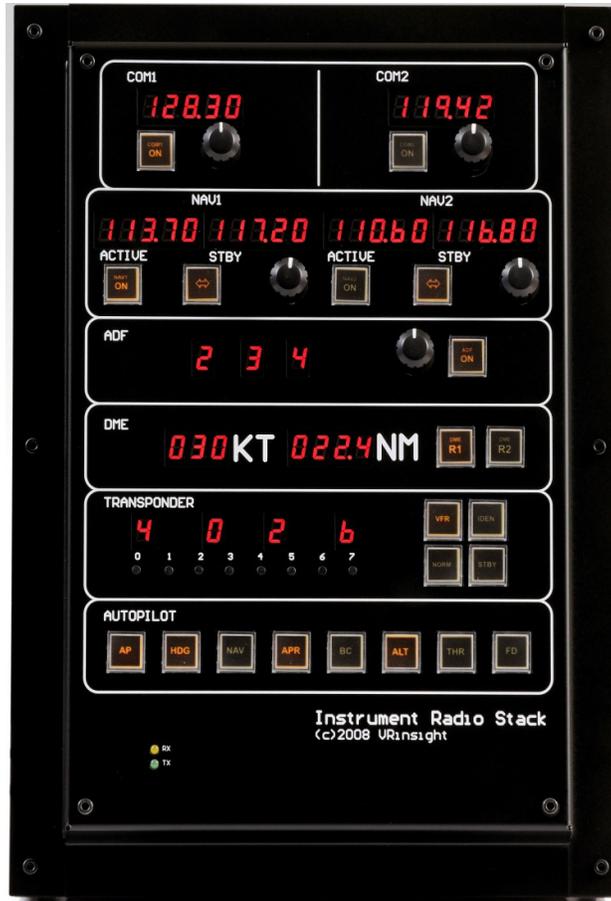
1.2 Features

- Same functionality and externality with real Radio Stack
- Adopting red color 7-segments and tact switches getting close to realistic
- Adopting luminous tact switches confirms the engagement
- Integrated unit with all radio stack units; COM1/2, NAV1/2, ADF, DME, TRANSPONDER, AUTO-PILOT unit
- Realistic concentric radio knobs
- Full metal cases (Metal rack included)
- USB 2.0 compliant connection for control interface
- Power source ; DC 5V
 - D.C 5V adaptor is included in the package
- Compatible with Microsoft's Flight Simulator X & 2004 and X-Plane
- Compatible with Microsoft Windows XP, Vista and Windows 7
- Size & Weight
 - Length: 22.5cm
 - Width: 10.5 cm /
 - Height: 30.5 cm /12.99"
 - Weight: 2.5Kg
- One year warranty

VRinsight Instrument RadioStack

1.3 Display & Controls Configuration

Instrument RadioStack offers the digit information and controls for COM1/2, NAV1/2, ADF, DME, TRANSPONDER, AUTO-PILOT.



VRinsight Instrument RadioStack

COM



: Engages COM1 / COM2



Pushing : Blinks the frequency(MHz : 1MHz unit) / the frequency (KHz : 25KHz unit) to change

Rotating : Changes the frequency



: Displays the frequency information

NAV



: Engages NAV1 / NAV2



: Swaps the standby frequency for active frequency



Pushing once : Blinks the frequency (KHz : 50KHz unit) to change

Pushing twice : Blinks the frequency (MHz : 1MHz unit) to change

Pushing third : Display the bearing between airplane and VOR(OBS)

Rotating : Changes the frequency



: Displays the active frequency and the standby frequency.
Displays the bearing between airplane and VOR

VRinsight Instrument RadioStack

ADF



: Engages ADF



Pushing : Blinks ADF frequency to change

Rotating : Changes the frequency



: Displays the ADF frequency

DME



: Engages DME1 / DME2



: Displays the speed of the airplane and the distance between airplane and VOR

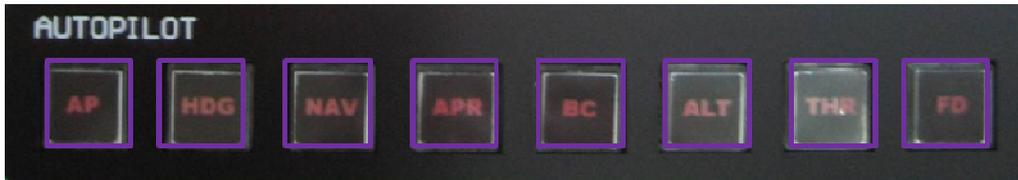
TRANSPONDER



VRinsight Instrument RadioStack

-  : Sets SQ to VFR. Use it to change squawk code.
-  : Sends "IDENT" signal of the airplane to the ATC
-  : Sets transponder mode to "NORM"
-  : Sets transponder mode to "STBY"
-  : Inputs Transponder code
-  : Displays Transponder code

AUTOPILOT



-  : Engages A/P mode
-  : Engages HDG mode
-  : Engages NAV mode
-  : Engages APR mode
-  : Engages Back-Course mode
-  : Engages ALT mode
-  : Engages Auto Throttle
-  : Engages Find Director (FD)

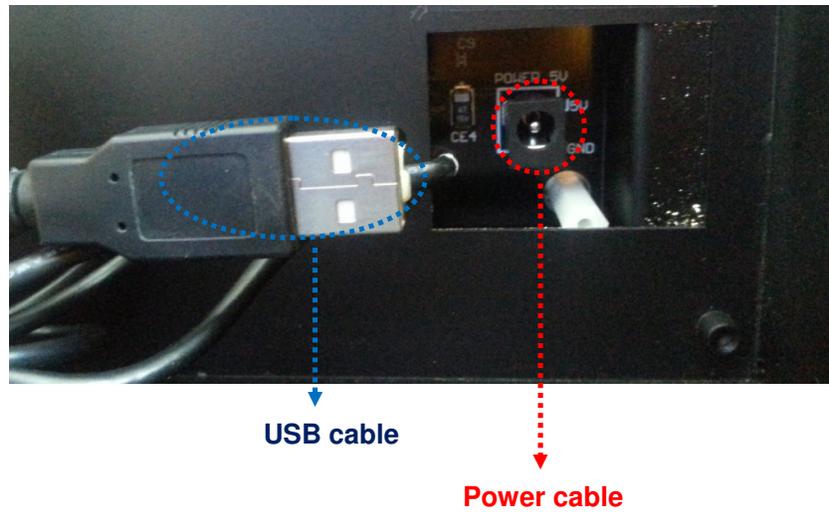
VRinsight
Instrument RadioStack

2. Deliverables



3. Connection

3-1. Plug/Connection Diagram



- Power cable (D.C 12V / 3A) is for power source
- USB cable (A to B type) is for interface

4. Software Installation

4-1. FSUIPC installation

*NOTE : See the **Appendix** for **FSUIPC** part on how to install **FUSIPC**.*

4-2. VRiSim installation

Driver and application software “**VRiSim**” is installed to make **Instrument RadioStack** work in the PC.

VRiSim is application software managing VRInsight's flight simulation hardware panels. Multiple hardware panels can be used with single instance of **VRiSim**. To reduce distributing file size, software installer is supplied as divided package; base-package and device specific module package. The base-package installs only **VRiSim** and Panel Installer utility.

Installer executable is divided into **base package** and **device specific modules**. **VRiSim** is included in the base-package setup installer, "**Install_VRiSim.exe**".

Base-Package Installer:

The base-package installer can be found in the supplied DVD,

\VRiSim\Install_VRiSim.exe

Device Specific Module Package Installer:

The **Instrument RadioStack** module installer can be found in the supplied DVD,

\VRiSim\Install_Radio-Stack.exe

Or downloaded at VRInsight's web-page, http://www.vrinsight.com/devel_shot

***NOTE:** See the **Appendix** for **VRiSim** part on how to install **VRiSim**.*

4-3. FSX Acceleration pack installation

NOTE :** Be sure that **FSX acceleration** pack should be installed for **FSX

5. Quick Start

VRiSim is new software developed for interfacing VRinsight's hardware unit to Microsoft's Flight Simulator. After installation of **VRiSim** software, short-cut icons will be created on your desk-top; **VRiSim**. **VRiSim** is used in replacing with SerialFP2 software for **Instrument RadioStack**.



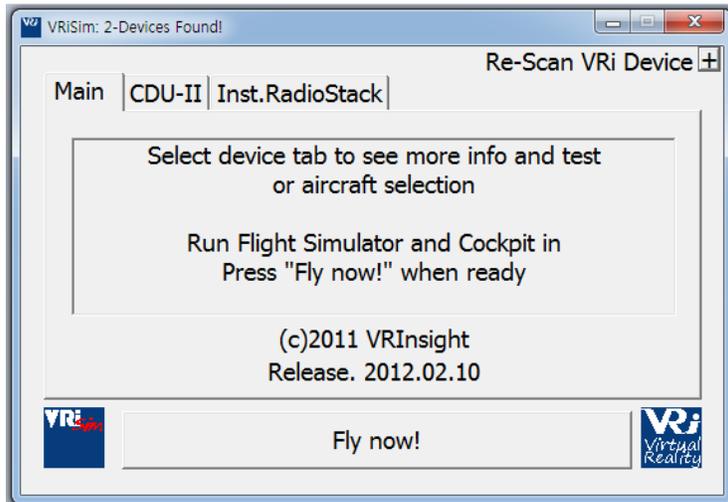
NOTE : *Section 4. Software installation should be done.*

Step 1. Run Flight Simulator 2004 / Microsoft Flight Simulator X

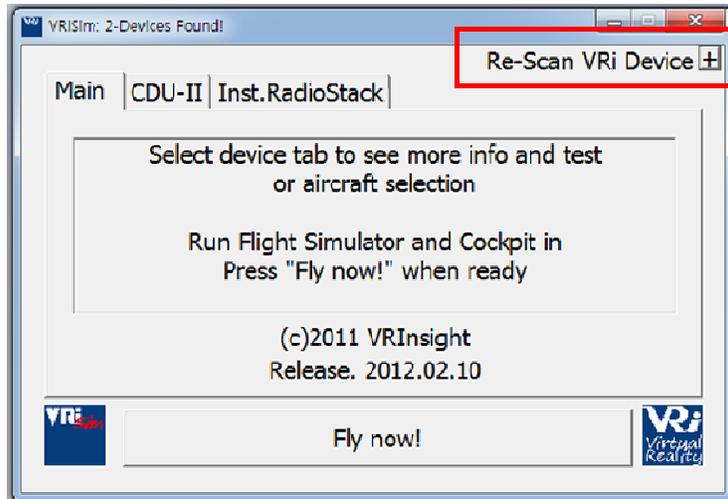
Run Flight Simulator 2004 / Microsoft Flight Simulator X and select an aircraft. Press "FLY NOW".

Step 2. Run VRiSim

Double-click "**VRiSim**" short-cut icon to run. "**VRiSim**" search all VRinsight hardware units and list up found device(s). Device searching process could be taken several minutes. Following image is showing that two device, **CDU II** and **Instrument RadioStack** are found and listed by "**VRiSim**" software. "**VRiSim**" manages multiple devices.



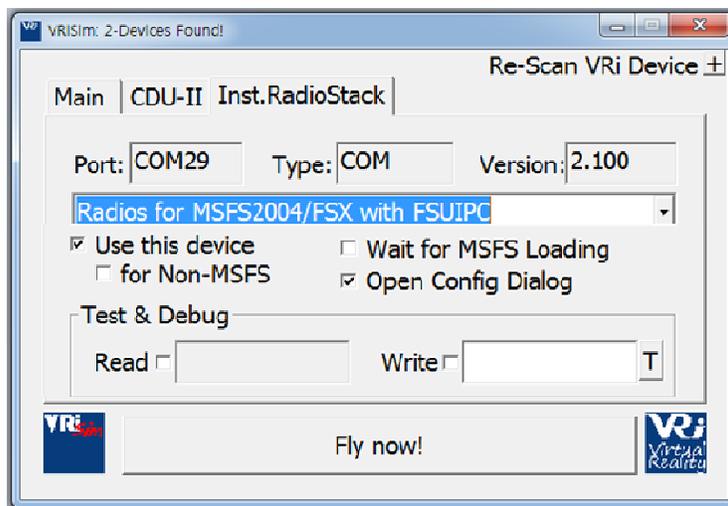
VRinsight Instrument RadioStack



NOTE : Even if your **Instrument RadioStack** is connected to your computer and **VRISim** does not find it, press  in order to find all VRinsight hardware units again.

Step 3. Select Aircraft

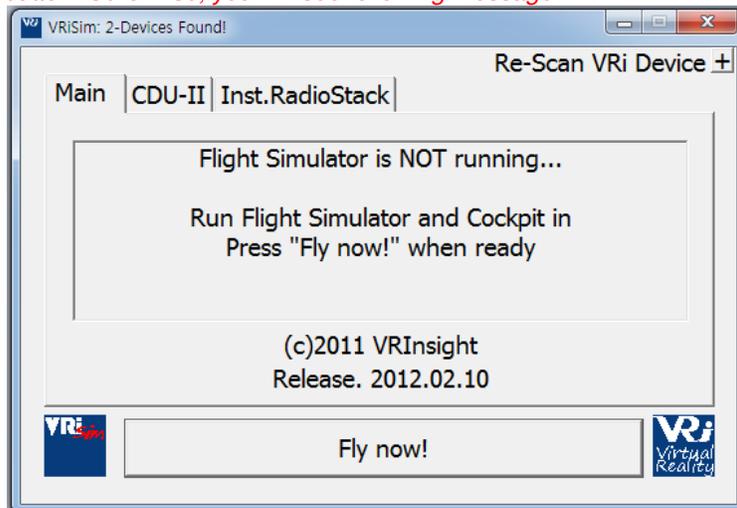
Open device's tab to select "**Radios for MSFS2004/FSX with FSUIPC**".



Step 4. Fly Now!

As the aircrafts are specified to fly with VRi's unit, press **"Fly Now!"** button.

NOTE : Remember that Flight Simulator should be running and you are in-cockpit before pressing this button. Otherwise, you will see following message.



Appendix

FSUIPC
VRiSim
X-Plane

VRinsight, ©2012

FSUIPC

1. FSUIPC Installation

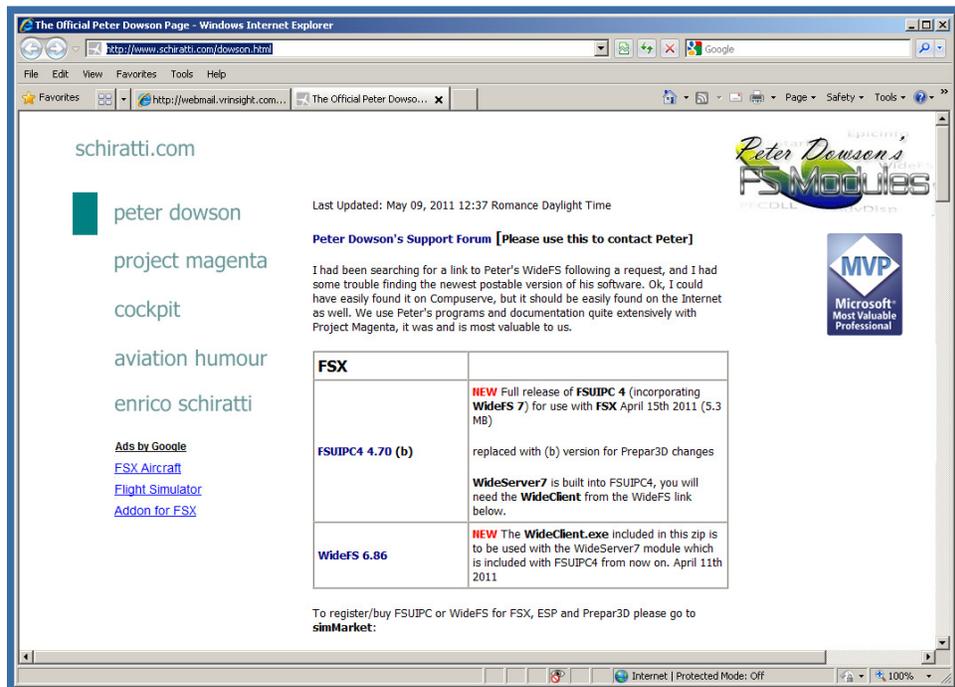
FSUIPC is add-on module for Microsoft's Flight Simulator. VRInsight's hardware panel interacts with Flight Simulator via FSUIPC. **VRiSim** is bridging VRInsight's hardware panel and Flight Simulator via FSUIPC. Actually FSUIPC is pay-ware. **VRiSim** is working with unregistered version of FSUIPC under the API level usage agreement with Pete Dowson. You have the option to pay for additional features in FSUIPC.

Step 1. Getting latest FSUIPC

To download latest version of FSUIPC, visit Pete Dowson's web-page,

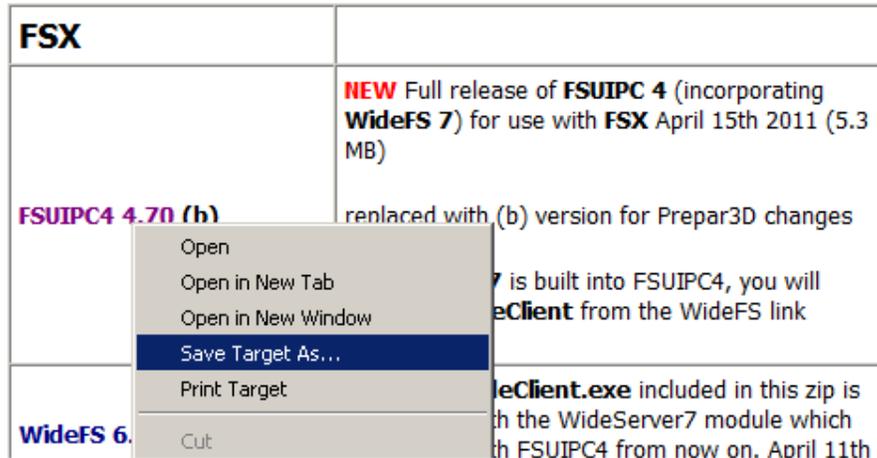
<http://www.schiratti.com/dowson.html>

Web browser will be directed to FSUIPC download page, if "Visit Pete Dowson's FSUIPC page" is checked.

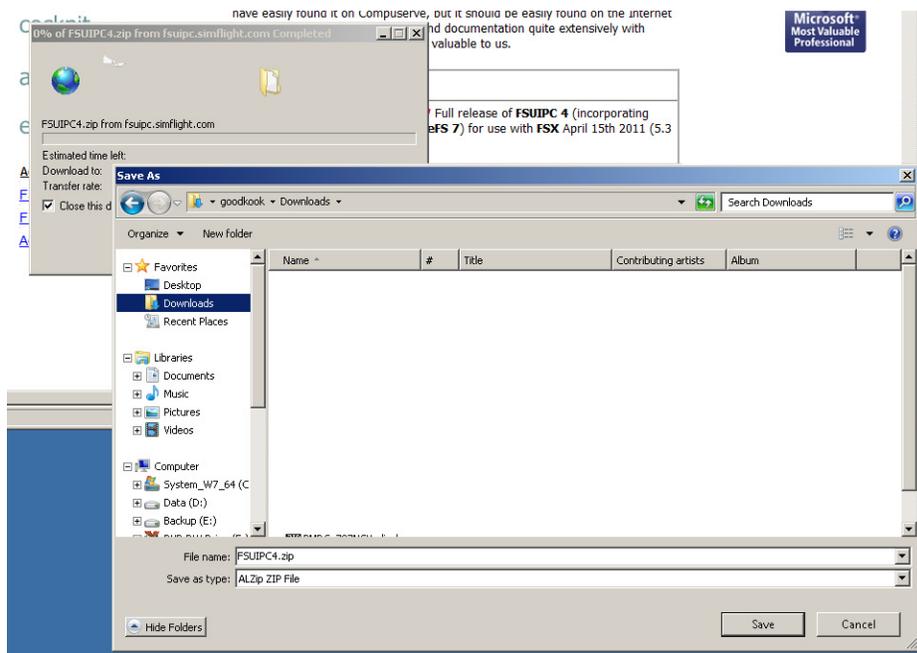


Step 2. Download FSUIPC

Click right-mouse button to FSUIPC4 download link and select "Save Target-As..."



Specify a folder where the FSUIPC4.zip is saved (i.e. "Download"),

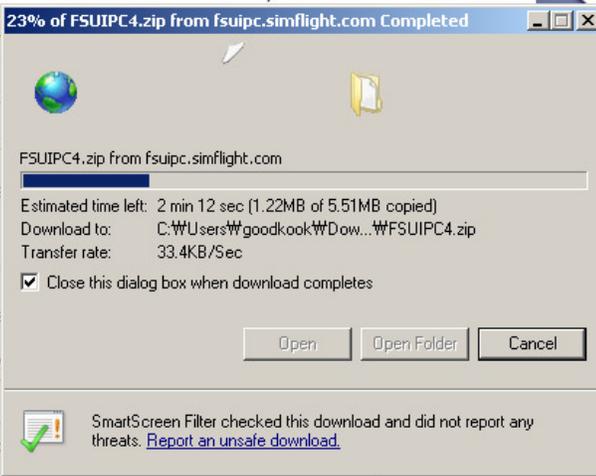


It'll take several minutes depending on internet connection.

Peter Dowson's Support Forum [Please use this to contact Peter]

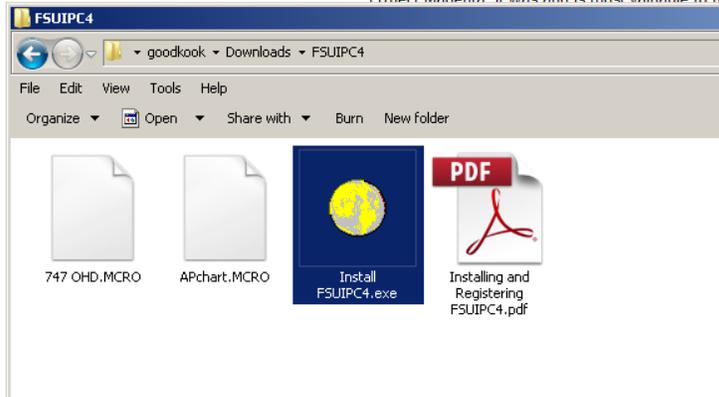
I had been searching for a link to Peter's WideFS following a request, and I had some trouble finding the newest postable version of his software. Ok, I could have easily found it on Compuserve, as well. We use Peter's programs at Project Magenta, it was and is most

FSX	
FSUIPC4 4.70 (b)	NEW Wide MB) repla Wide need below
WideFS 6.86	NEW to be is inc 2011

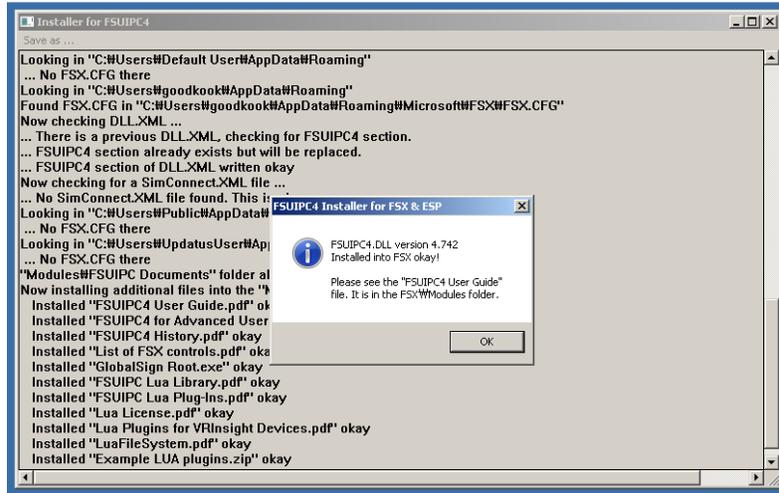


Step 3. Run FSUIPC Installer

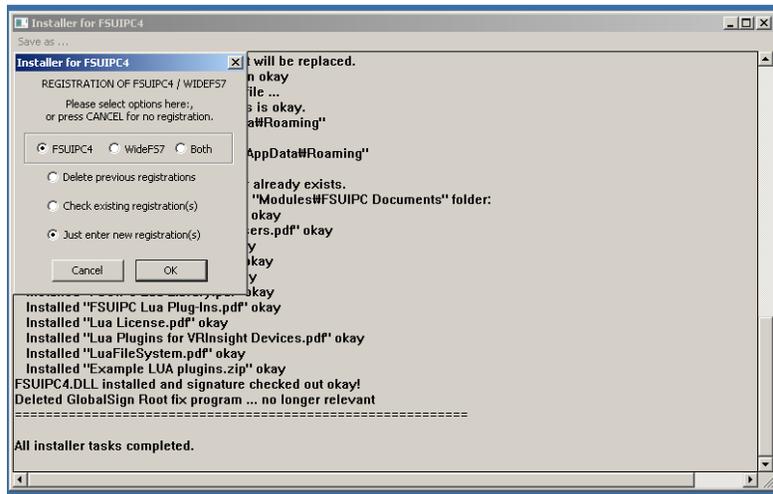
Extract downloaded zip archive "FSUIPC4.zip" and run installer file; "Install FSUIPC4"



Installation success message will be shown as follows;



Finally it'll be prompted for registration of FSUIPC4. Registration code can be entered by pressing "OK" button. Or, select "Cancel" to continue using FSUIPC as unregistered. **VRiSim** is working with FSUIPC as un-registered version of FSUIPC at API-level.



How to know installed FSUIPC version?

FSUIPC is installed in "Modules" folder under MSFS is installed. Full path string would be as follows, if it was standard installation;

FS 2004:
"C:\Program Files\Microsoft Games\Flight Simulator 9\Modules"

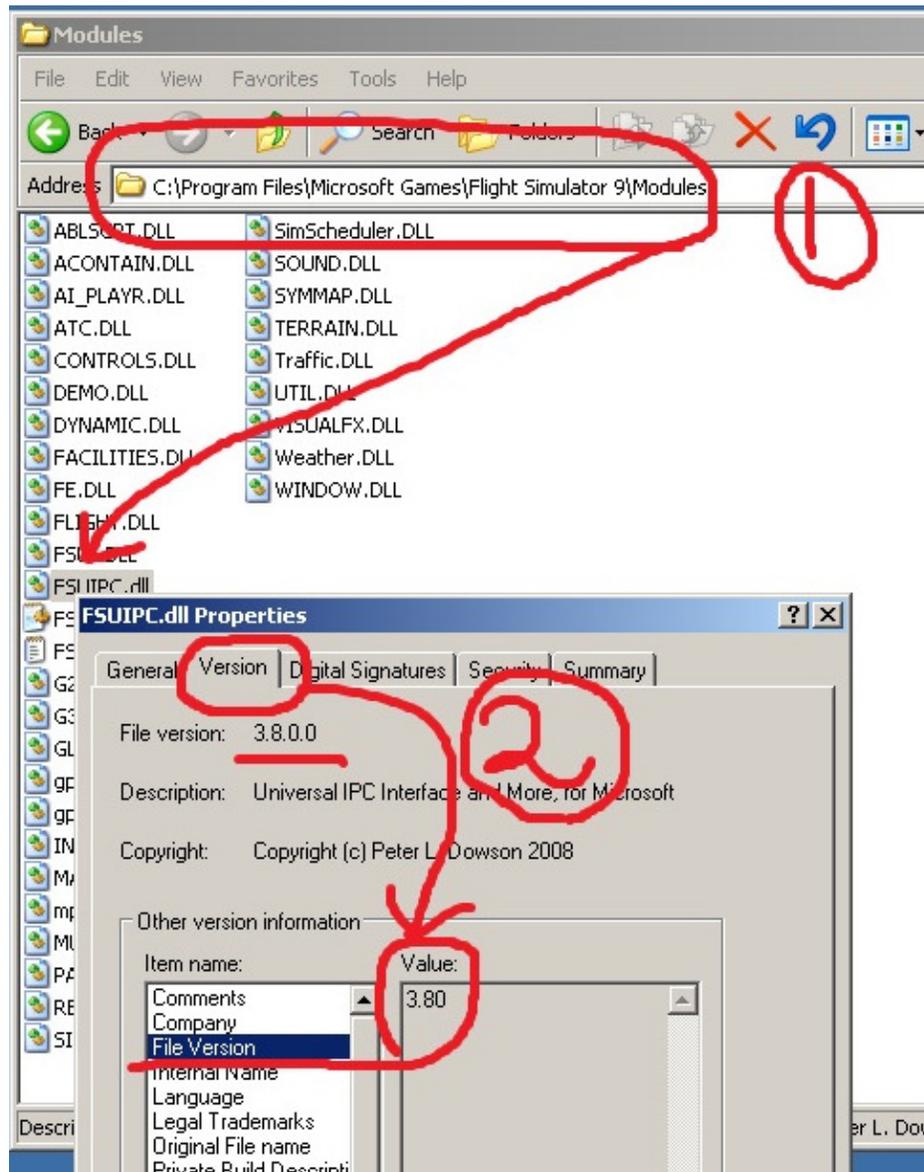
FSX:
"C:\Program Files\Microsoft Games\Flight Simulator X\Modules"

FSUIPC file could be installed without knowing, when you installed add-on aircraft. Verifying installed FSUIPC's version is highly recommended. Major version number of

VRinsight Instrument RadioStack

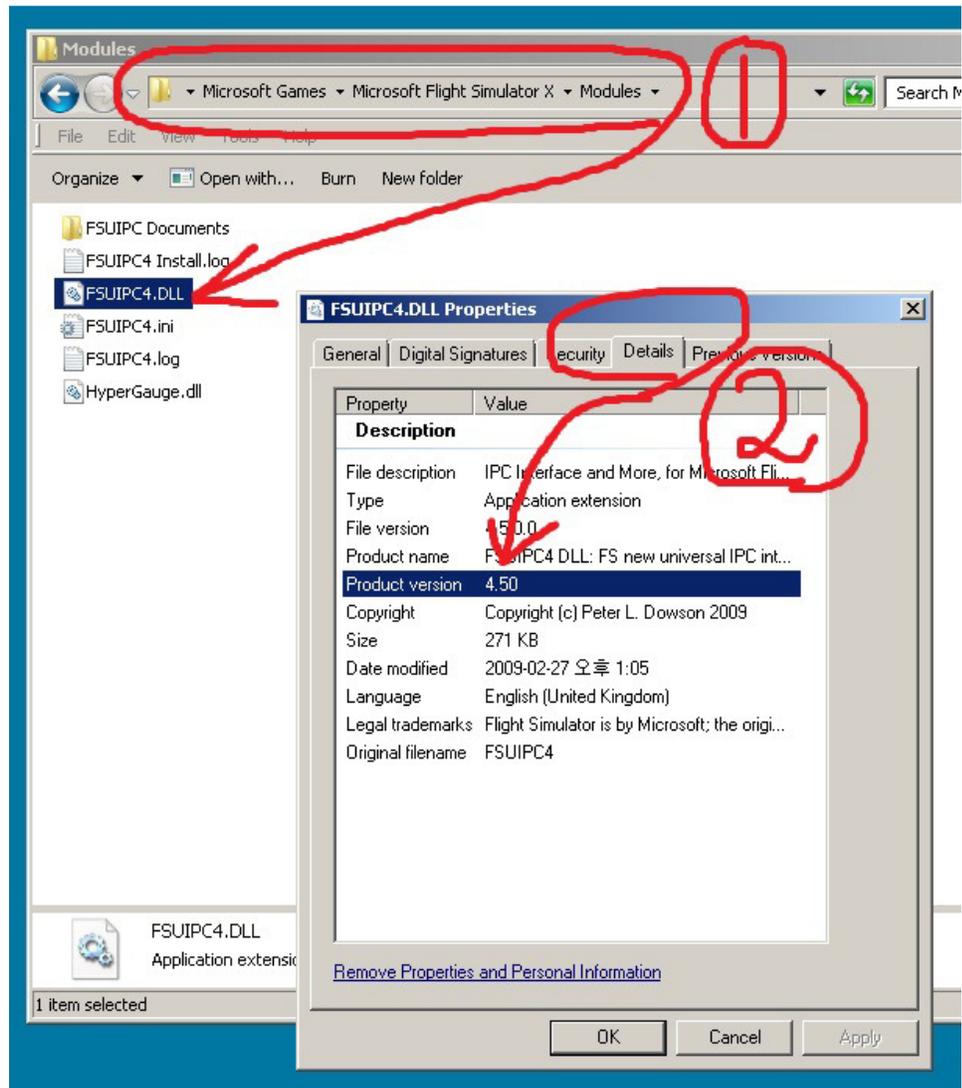
FSUIPC represents which MSFS is for. FSUIPC 3.xx is for FS 2004. FSUIPC 4 is for FSX. To check the version of installed FSUIPC, see relevant number in the screen shot images. Find file "FSUIPC.dll" in the "MSFS" "Modules" folder (1) and see version information of the file properties (2).

Following screen shot image is taken in Windows XP and FS 2004. FSUIPC's version number should be 3.7 or above.



FSUIPC for FS 2004, can be re-installed easily. Download the latest version of FSUIPC 3.XX at Peter Dowson's official home page. Extract "FSUIPC.dll" in the downloaded zip archive and copy into the "Modules" folder (or replace with, if it's exists).

Following screen shot image is taken in Windows 7(Vista) and FSX. FSUIPC's version number should be 4.7 or above.



Installation procedure of FSUIPC4 is a bit different from version 3. It is installing executable. Download latest version of FSUIPC 4 at Peter Dowson's official home page. Extract "Install FSUIPC4.exe" in the downloaded zip archive and run it. Installation procedure will be preceded with finding FSX path and copying "FSUIPC4.dll". Finally, it'll be prompted for registration code input. Then, press "Cancel" button.

VRiSim

1. Introduction

VRiSim is application software managing VRInsight's flight simulation hardware panels. **VRiSim** can be used in replacement of SerialFP2. Multiple hardware panels can be used with single instance of **VRiSim**.

To reduce distributing file size, software installer is supplied as divided package; base-package and device specific module package. The base-package installs only **VRiSim** and **Panel Installer** utility.

VRiSim is applicable for Microsoft's Flight Simulator.

2. VRiSim Installation

Installer executable is divided into base package and device specific modules. **VRiSim** is included in the base-package setup installer, "Install_VRiSim.exe".

The base-package installer can be found in the supplied DVD,

VRiSim\Install_VRiSim.exe

Or downloaded at VRInsight's web-page, http://www.vrinsight.com/devel_shot

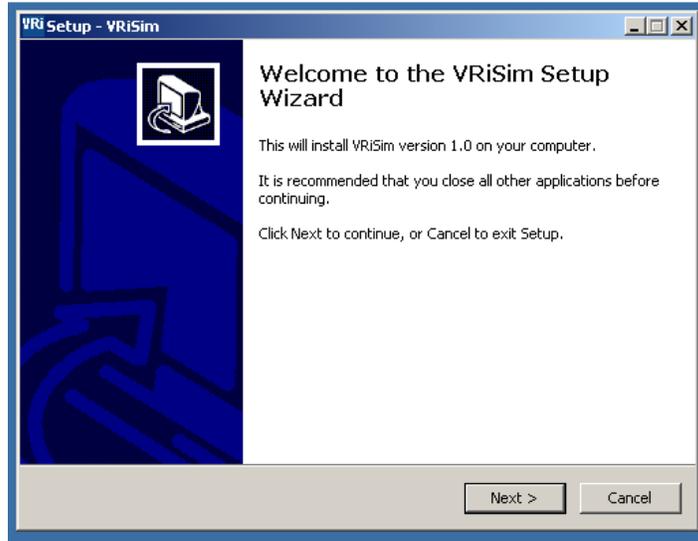
Step 1. Run Base-Package Installer

Run base-package installer "Install_VRiSim.exe" by double clicking.



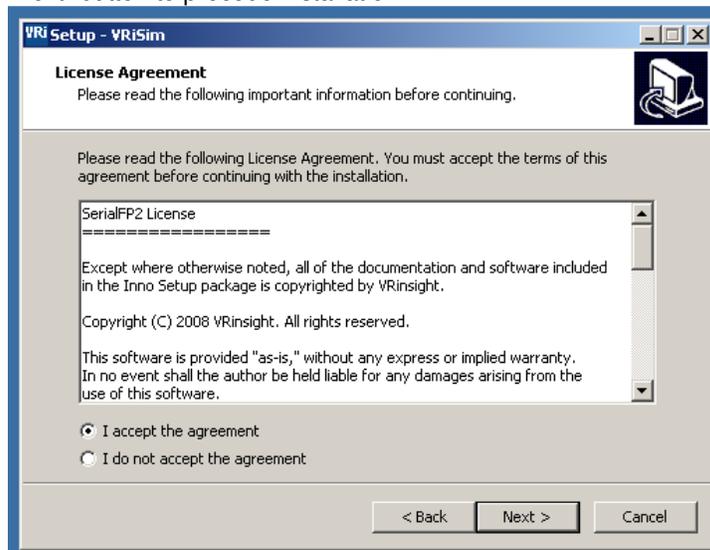
Install_VRiSim.exe

Press Next button on **VRiSim** setup wizard window



Step 2. License Agreement

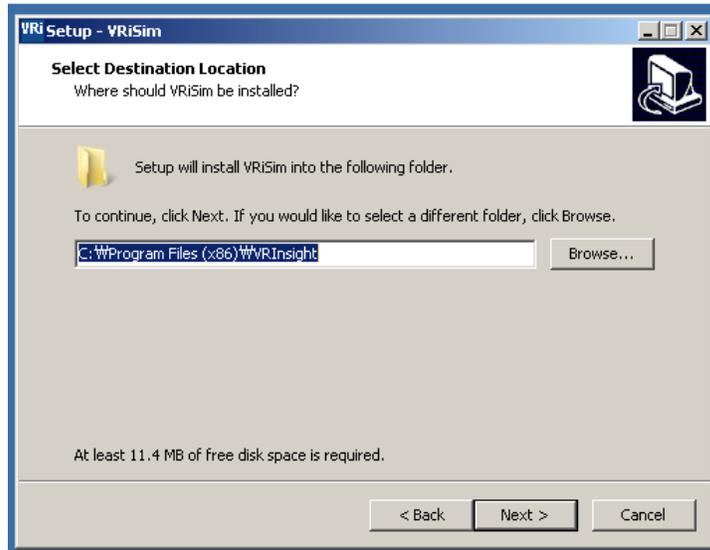
Read License Agreement and check "Accept agreement" radio button. Then press "Next" button to precede installation.



VRinsight Instrument RadioStack

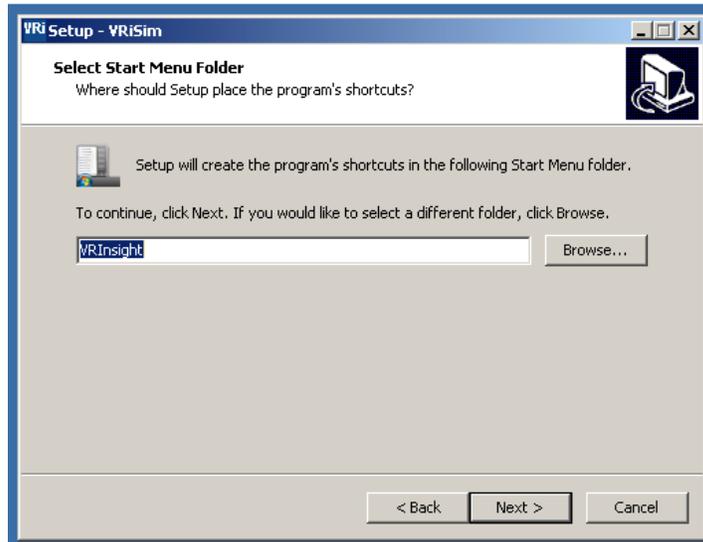
Step 3. Select Destination Location

Keeping default destination location of installed folder is highly recommended. Press “Next” button.



Step 4. Select Menu Folder

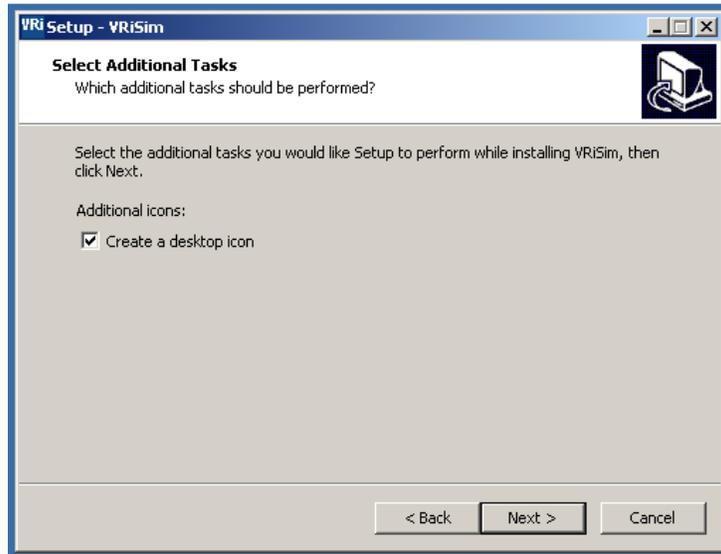
Select Menu folder name as default “VRInsight” and press “Next” button.



VRinsight Instrument RadioStack

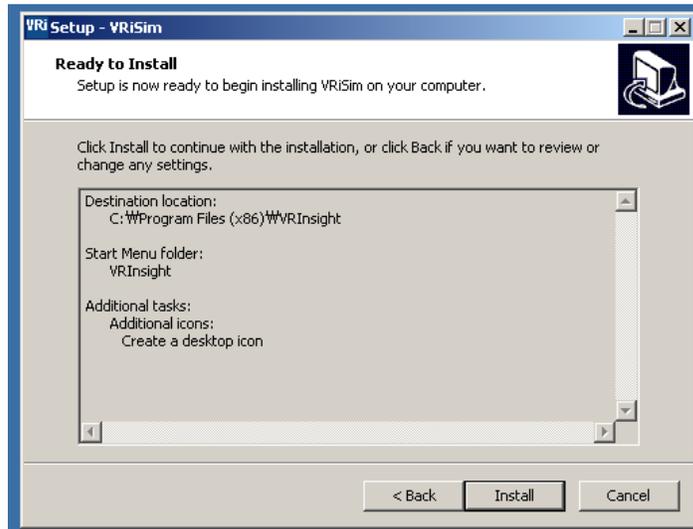
Step 5. Create a desk-top icon

Check “Create a desk-top icon”. **VRiSim** icon will be created after installation. Press “Next”.



Step 6. Ready to install

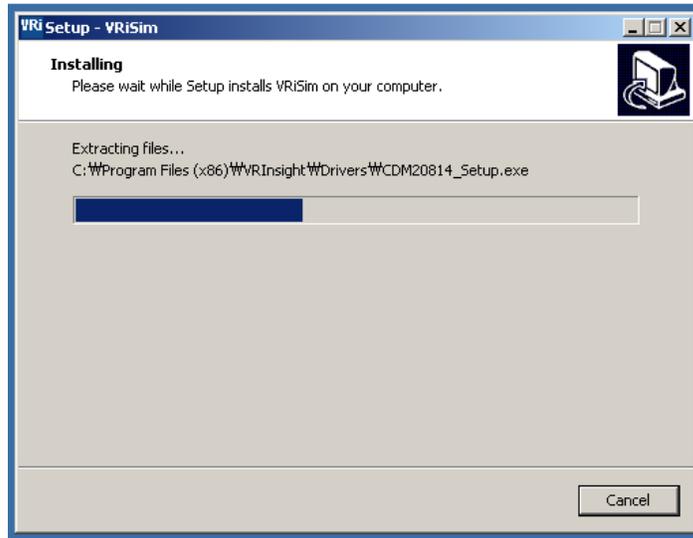
Now ready to install **VRiSim**. Review installation setting and press “Install” button.



VRinsight Instrument RadioStack

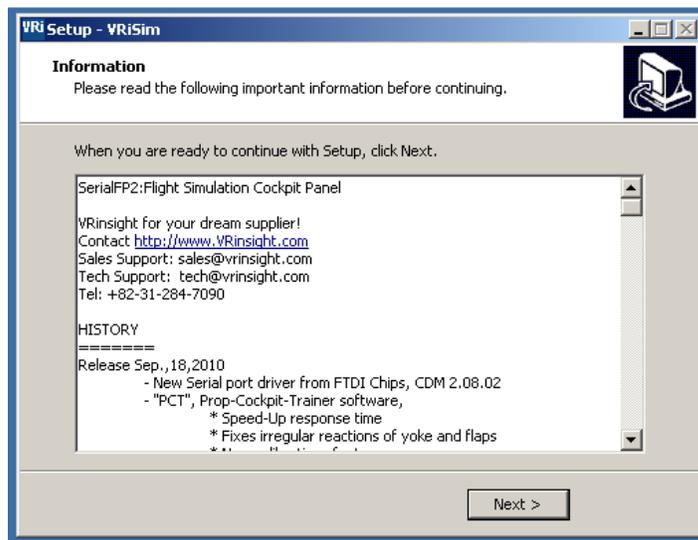
Step 7. Installing

Files are extracted and copied into destination folder during installing step. Animated bar-graph is showing installing process.



Step 8. Information

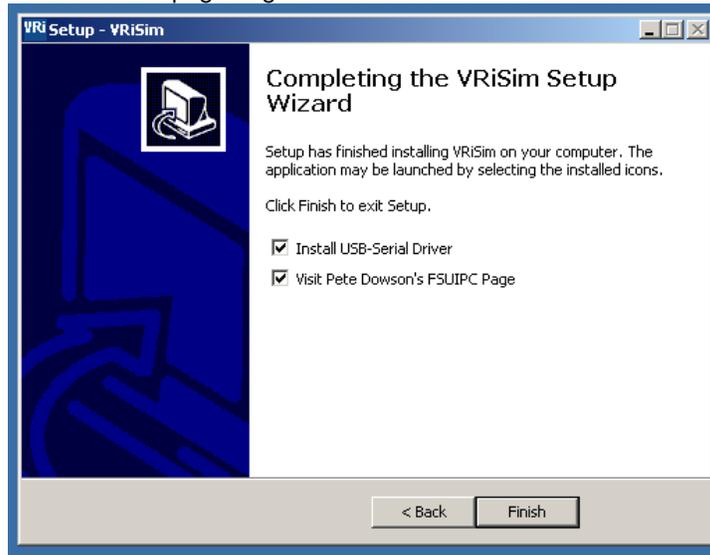
Read this information of sales and tech-support e-mail address, VRinsight's website. Press "Next" button.



Step 9. Install USB-Serial Driver

VRinsight's flight panel is connected to PC's USB port and communicated via serial port. By check "Install USB-Serial Driver", the driver software will be installed automatically at the finishing phase of installation procedure. The USB-Serial Driver

can be installed separately to the **VRiSim** installation. Optionally, visit Pete Dowson's web page to get latest version of FSUIPC modules.



NOTE: Install device specific module

The base-package installer only installs basic utilities; "**VRiSim**" and "**Panel Installer**". Additionally device specific module must be installed. These installers are found in the supplied DVD under the folder named "**VRiSim**". Or downloaded at VRInsight's web-page, http://www.vrinsight.com/devel_shot

3. Instrument RadioStack module Installation

Instrument RadioStack module is included in the "Install_Radio-Stack.exe".

The base-package installer can be found in the supplied DVD,
\\VRiSim\\Install_Radio-Stack.exe

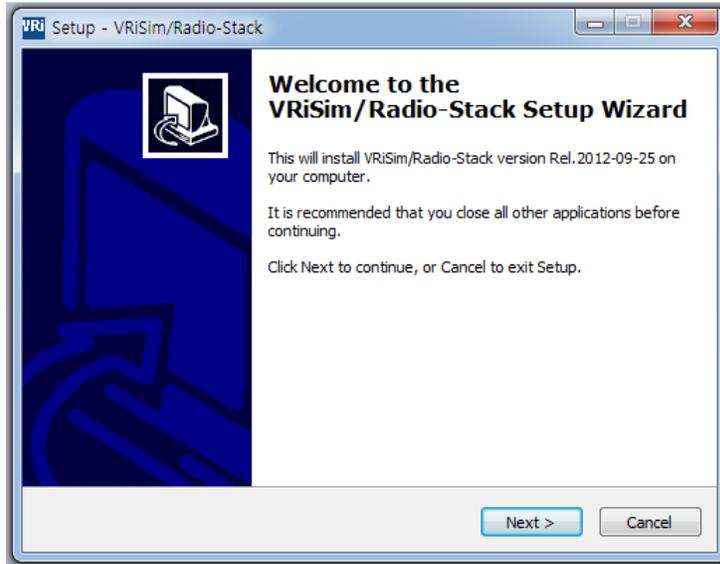
Or downloaded at VRInsight's web-page, http://www.vrinsight.com/devel_shot

Step 1. Run Instrument RadioStack Installer



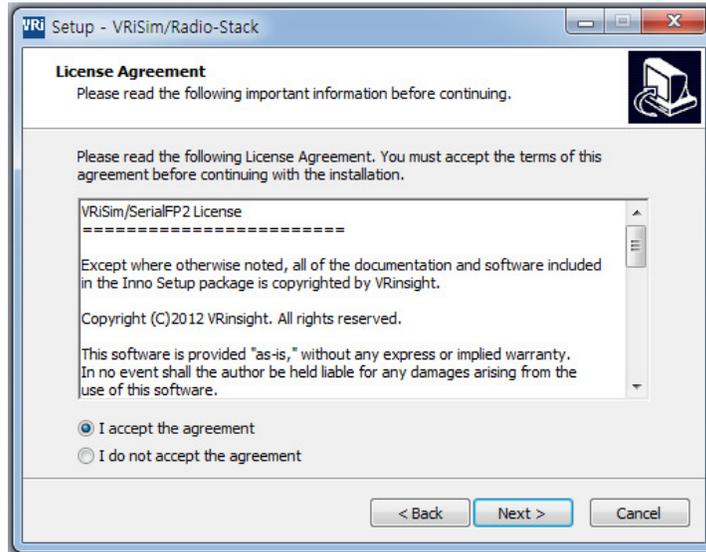
Run "Install_Radio-Stack.exe"
Press Next button on VRiSim/Radio-Stack setup wizard window

VRinsight Instrument RadioStack



Step 2. License Agreement

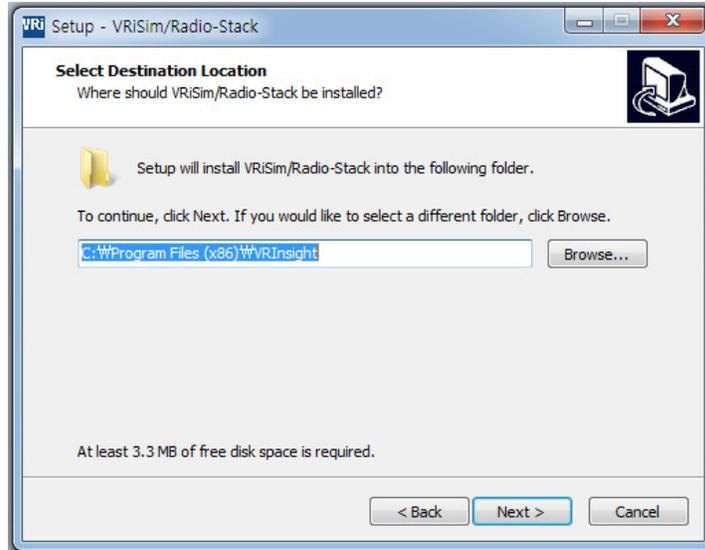
Read License Agreement and check "Accept agreement" radio button. Then press "Next" button to precede installation.



VRinsight Instrument RadioStack

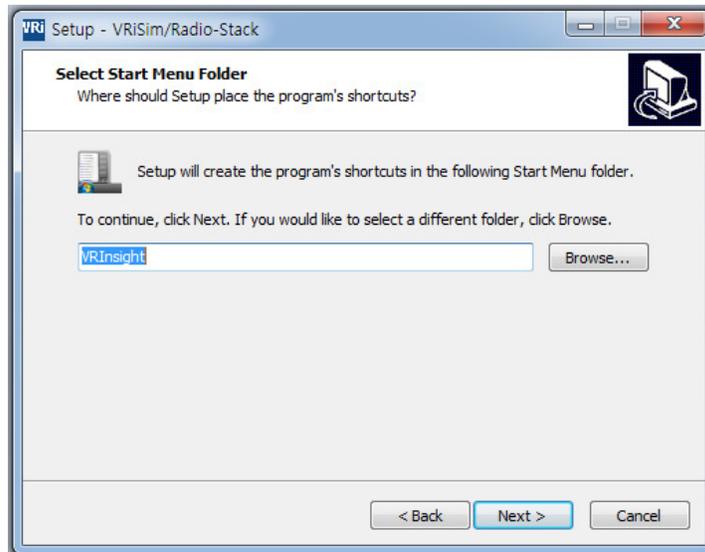
Step 3. Select Destination Location

Keeping default destination location of installed folder is highly recommended. Press "Next" button.



Step 4. Select Menu Folder

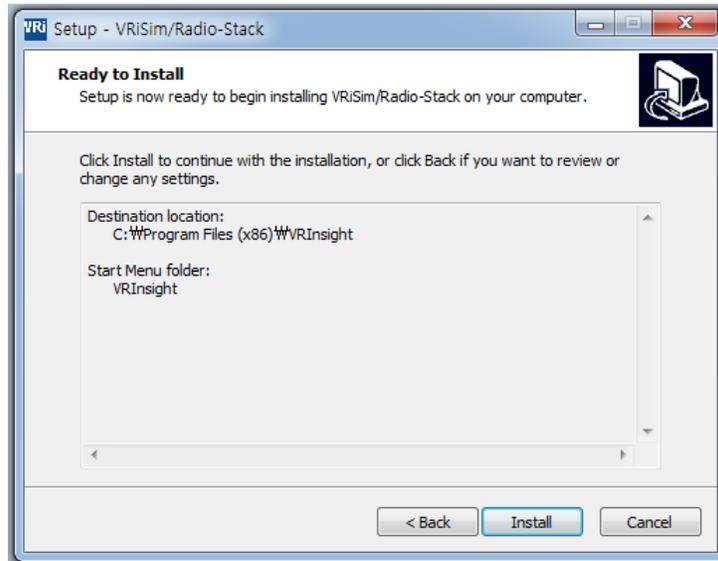
Select Menu folder name as default "VRInsight" and press "Next" button.



VRinsight Instrument RadioStack

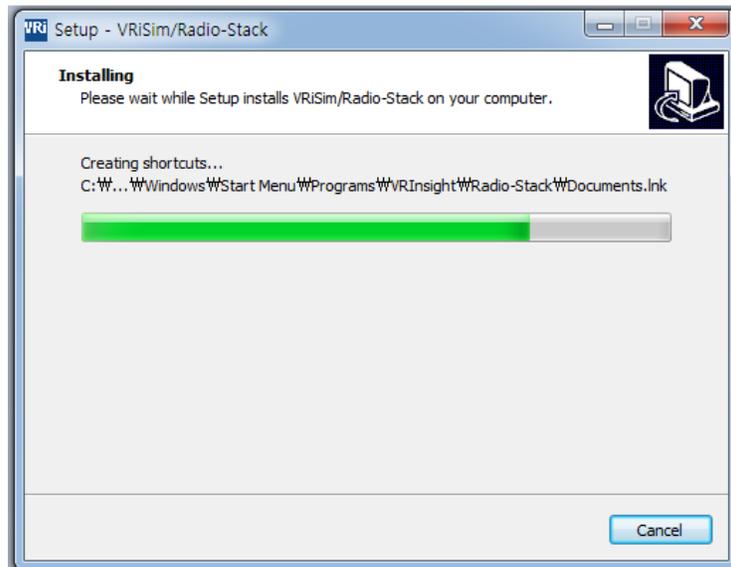
Step 5. Ready to Install

Now ready to install **Instrument RadioStack** module. Review installation setting and press "Install" button.



Step 6. Installing

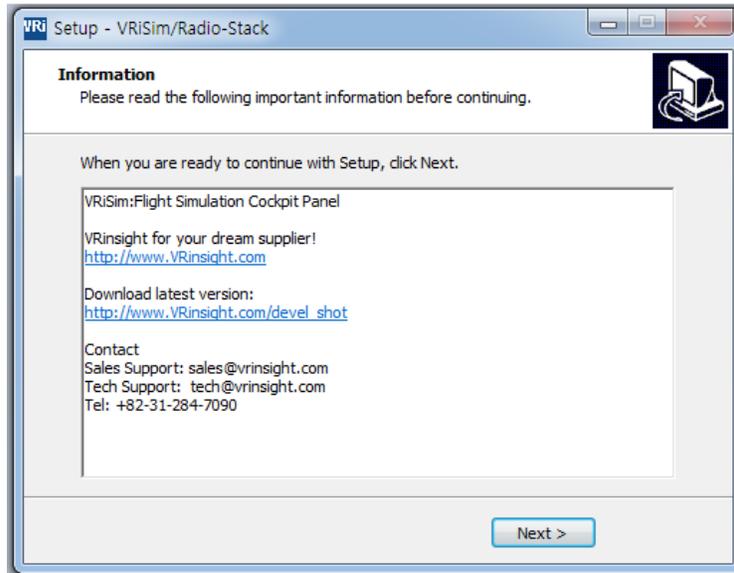
Files are extracted and copied into destination folder during installing step. Animated bar-graph is showing installing process.



VRinsight Instrument RadioStack

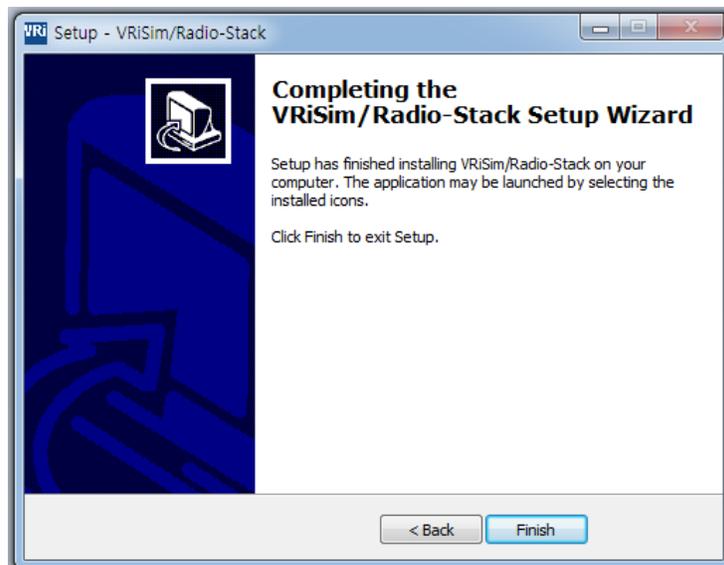
Step 7. Information

Read this information of sales and tech-support e-mail address, VRinsight's web-site. Press "Next" button.



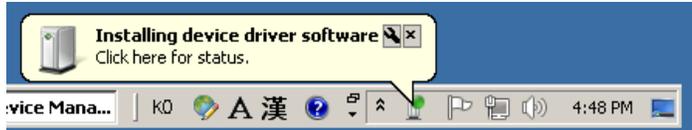
Step 8. Complete Instrument RadioStack module setup

Instrument RadioStack module setup is done. Optionally, run "Panel Installer" to configure the aircraft.



4. Connecting VRInsight's Flight Panel/Re-install driver software

Plug **Instrument RadioStack** USB connector into PC's USB port. As new device is connected to PC, it'll try to install device driver software.



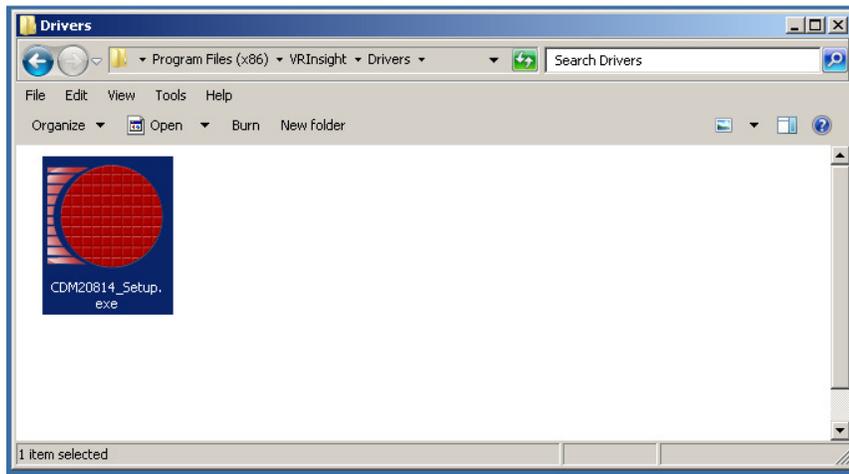
Already the driver software was installed during **VRiSim** software installation, the new device is recognized as "USB Serial Port(COMx)". Following picture is an example of success message for the new VRinsight's flight panel hardware that is recognized as COM3.



When it fail to install driver software, re-install driver software.

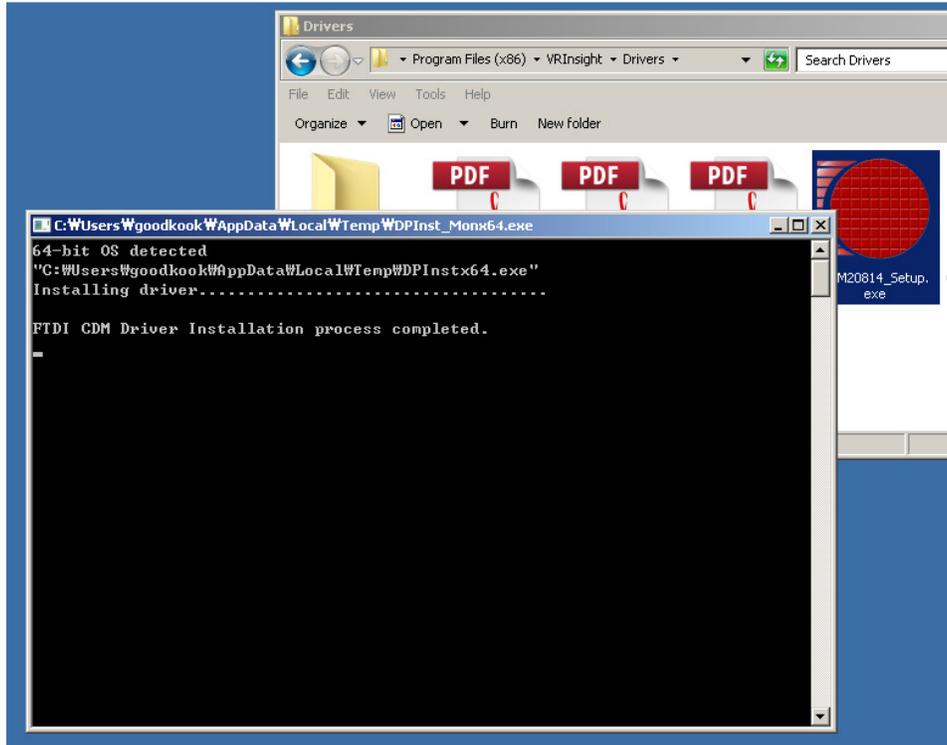


USB-Serial port driver software can be re-installed separately to the **VRiSim** software installation. Driver installer can be found where the **VRiSim** is installed (i.e. C:\Program Files (x86)\VRInsight\Drivers). It is "CDM20XXX_Setup.exe" named with software version.

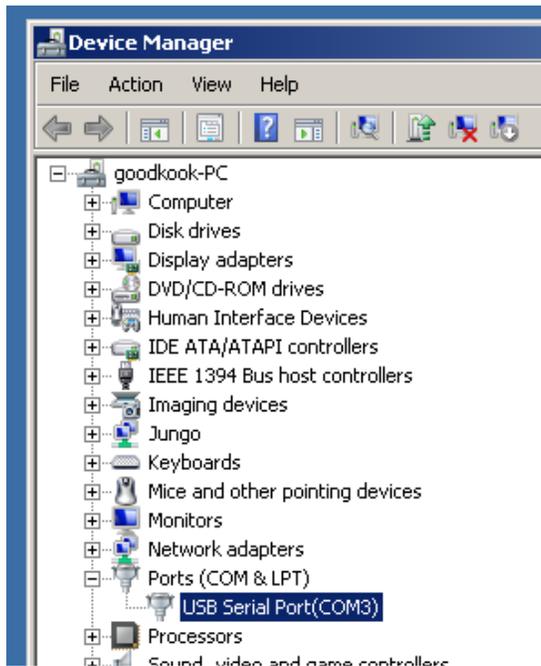


Re-installation of USB-Serial driver is simply to run this installer. Disconnect all VRInsight's flight panel from the PC before running the driver software installer. Temporarily a window is prompted showing "Installing driver....." and ended with completion message. This prompted window will be closed as its completion.

VRinsight Instrument RadioStack



As the driver software installation is done, connect VRinsight's panel to PC's USB port. The VRi panel will be recognized successfully as Serial Port(COMx). Serial port's COM number would be varied to the PC's hardware configurations. Recognized serial port and its COM number for the panel can be confirmed via "Device Manager".



When it's listed as unknown device or exclamation mark on the USB serial port device, re-install the driver software.

5.Run VRiSim Software

VRiSim is managing software for VRinsight's Flight panel application. It interfaces between flight panel hardware and Microsoft's Flight Simulator.

Run **VRiSim** by double-clicking the icon on desk-top.



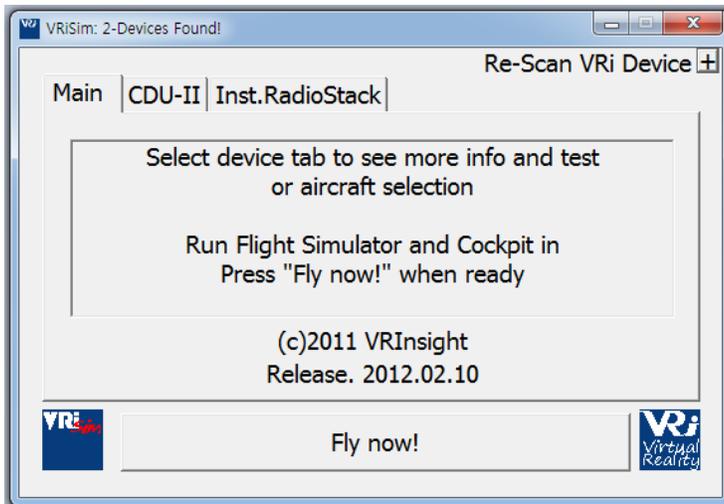
Multiple VRi's flight panel hardware can be managed with single **VRiSim** instance. When **VRiSim** is launched for the first time, it tries to find all VRinsight's devices connected. Searching procedure could take several minutes.



Following message would be displayed as any device is found and connected successfully,

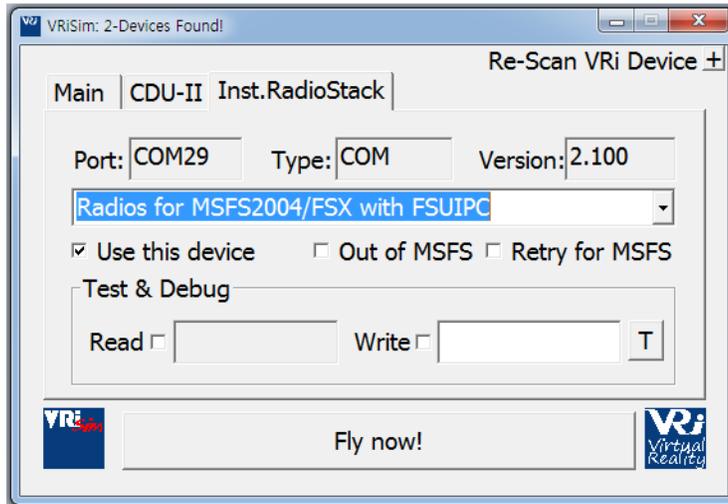


Following picture is showing 2 devices, **CDU II** and **Instrument RadioStack**, are found and connected to **VRiSim**. Each device is listed as separated tab.



VRinsight Instrument RadioStack

By clicking device tab, VRi Flight Panel's connected information can be checked.



When any of devices that is already connected to PC's USB port and is not listed with device tab, try re-scan VRi device. This re-scan procedure would take several minutes. Found and connected device list will be saved for the next flight.



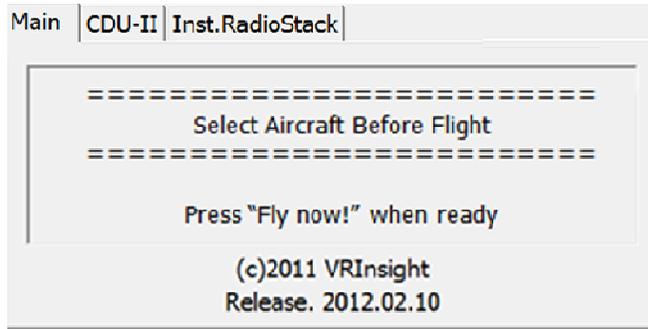
The base-package installer has only **VRiSim**. If additional device specific module is NOT installed, aircraft selection box will be blanked as showing message "NO AIRCRAFT LISTED".



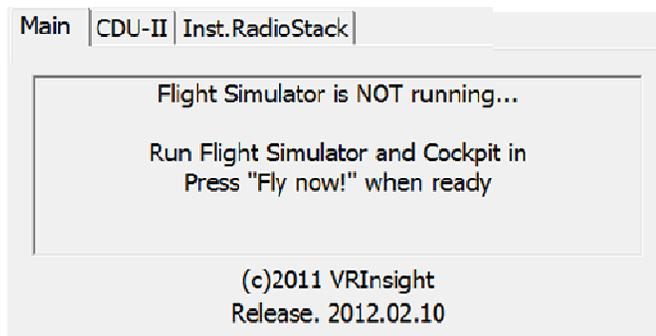
Additionally device specific module should be installed. Then, supported aircrafts are listed in the aircraft selection box. Device specific module installer is supplied with DVD or can be downloaded at the VRInsight's web-page.

Drop down aircraft selection box to select "**Radio for MSFS2004/FSX with FSUIPC**" to fly. Then, press "Fly now!" button. When aircraft is NOT selected for the device, following message is displayed in the Main tab. Once "**Radio for MSFS2004/FSX with FSUIPC**" is selected, selection is saved for the next flight.

VRinsight Instrument RadioStack



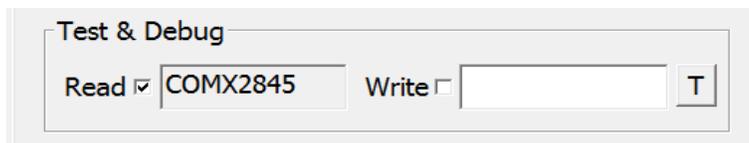
Microsoft's Flight Simulator must be running before pressing **VRiSim**'s "Fly Now!" button. Otherwise, following message will be displayed in the Main tab.



To exclude a device to fly with the aircraft, un-check the box titled "Use this device" in the device tab. This box is un-checked if device specific module software is not installed and no aircrafts are listed.

Use this device

By checking and/or un-checking the boxes in the "Test & Debug", commands and messages between **VRiSim** software and the panel hardware are monitored as debugging purpose.



X-Plane (v9 / 32bit only & v10 32 bit / 64 bit)

To use your instrument radiostack with X-Plane v9 / v10, you need to follow the below instruction

1. Visit the below web-site and download XPUIPC which supports X-Plane v9 (32 bit only) & for X-Plane v10 (32 bit & 63 bit)

<http://www.tosi-online.de/XPUIPC/XPUIPC.html>

2. Follow the instruction included in readme.txt file in order to install XPUIPC to X-Plane.

3. Run X-Plane

4. Run VRiSim. Go to the RadioStack tab and select "X-Plane Original Aircraft (XPUIPC)" in the "Select Aircraft" list.