V737 Overhead

VRinsight

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1. Introduction

1-1. General

The **V737 Overhead** features B737NG modern jet-liner's forward overhead panel for flight simulation software, Microsoft's Flight Simulator. The **V737 Overhead**'s hardware is made of Flight Control, Electronic, Anti-Ice, Air-System, Fuel Pumps, and Engine and APU panel. Whereas, implemented functions are limited by aircraft type to be used. iFly 737NG & PMDG 737NGX for Microsoft's Flight Simulator is recommended, where as many functions as are presented in real units.

Thank for SDK of iFly 737 NG & PMDG 737 NGX!!!

The V737 Overhead fully implements all function of the forward overhead panel of iFly 737 NG & most function of the forward overhead panel of PMDG 737 NGX

1-2. Features

- Full functional inputs; 70 toggle switches, 9 Rotary switches, 2 Rotary encoders
- All switchable 96-annunciator LEDs.
- 7-Segment display for Flight ALT, Landing ALT, AC/DC Electric variables and duct flow
- Detachable LED light stand for night flight
- Standalone type
- USB 2.0 compliant connection for control interface
- All buttons and dual rotary knobs are close to real overhead.
- It supports Microsoft's Flight Simulator X and 2004*
- It's compatible with Microsoft Windows XP, Vista and Windows 7
- Measurement:
  Width: 36.5cm/ 13.4 inch
  Height: 4cm/ 1.6 inch
  Length: 28cm/ 11 inch
- One year warranty

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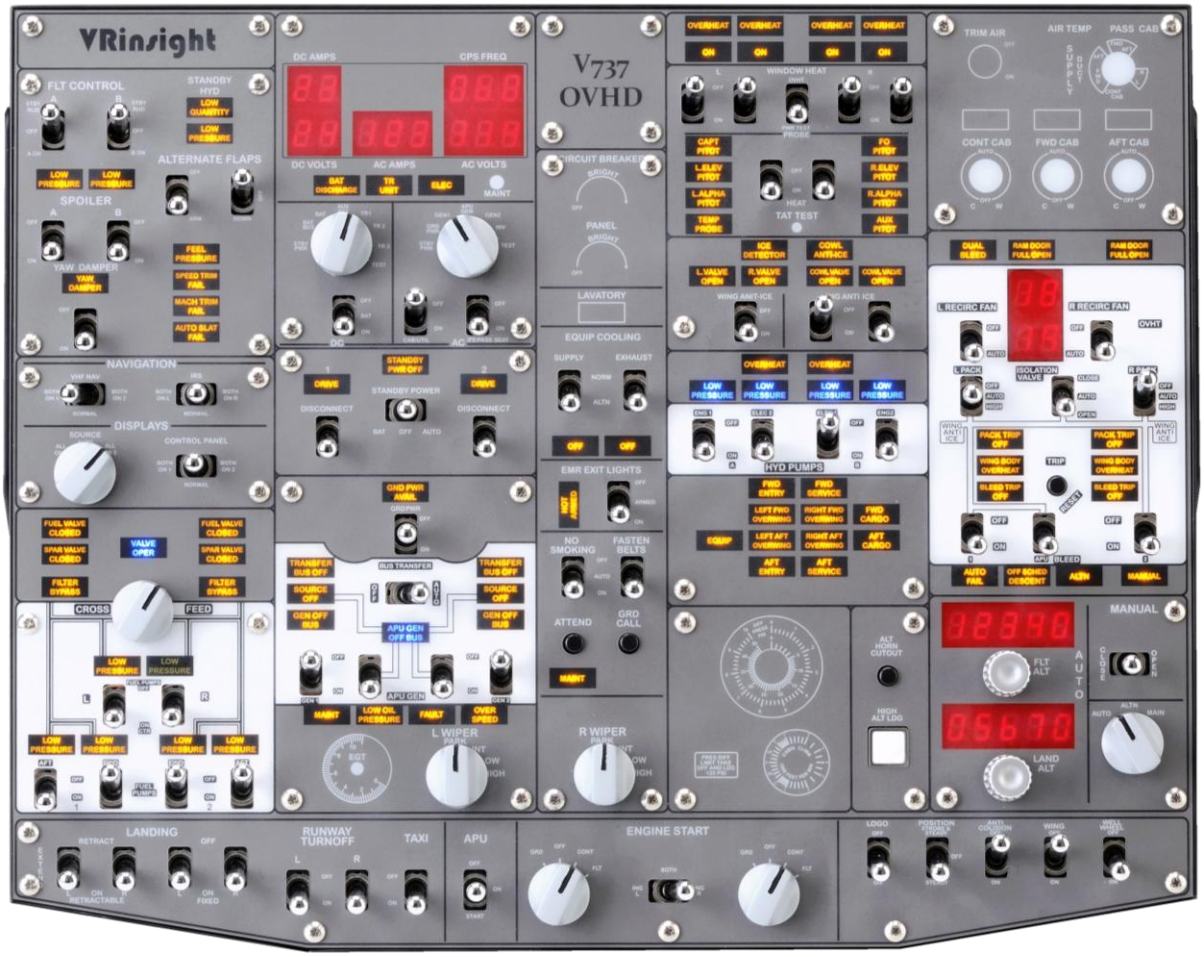
2. Deliverables



V737 Overhead

USB Cable

Adaptor

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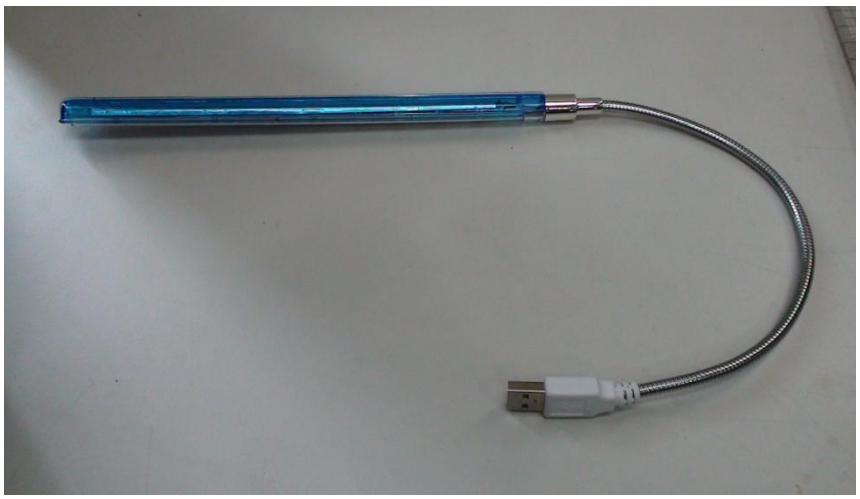
Wing stand (2 EA)



USB Type LED light

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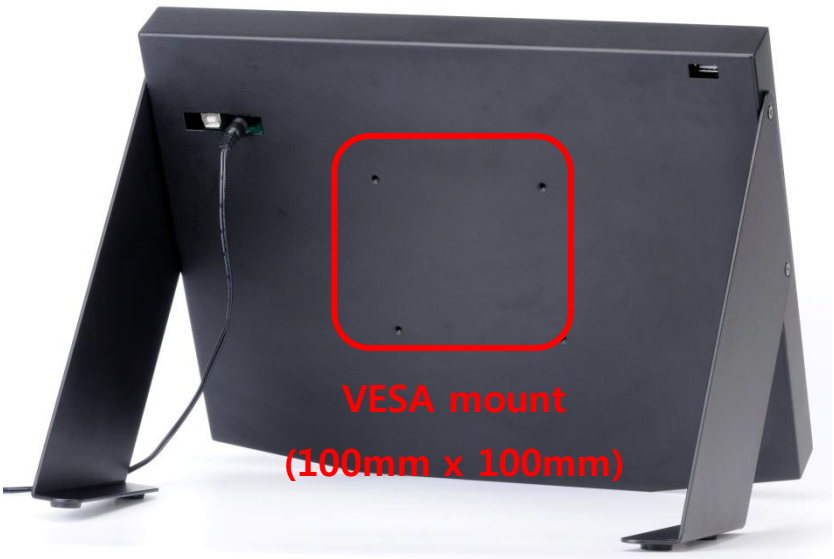
3. Hardware connection

3.1. V737 Overhead and wing stand assembly

*** VESA mount holes (100mm x 100mm)**



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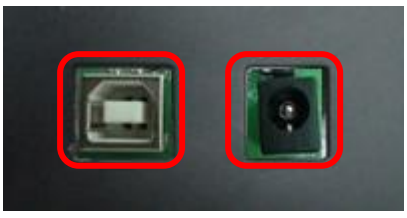
3.2 USB / Power / LED connection

USB Connection:

USB connection is used to interface control inputs of **V737 Overhead** rotary knobs, toggle switches and push buttons to your computer. Plug USB cable into one USB port on your computer. If you want to use a USB hub, be sure that the USB hub must compliant with USB 2.0 standard. Otherwise it may cause a malfunction.

Power Connection:

Power supplying of **V737 Overhead** is done by supplied 5V / 1A free volt Power AC/DC adaptor..



USB port & Power port

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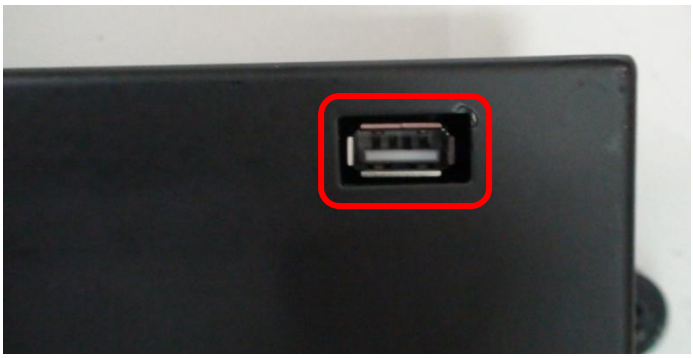
USB type LED light Connection

USB type LED light connection is need to accurate control for night flight.



USB type LED light port

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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 **V737 Overhead** 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 MCP-II Combo module installer can be found in the supplied DVD,
\VRiSim\Install_v737_OVHD.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*

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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 **V737 Overhead**.

***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 founded device(s). Device searching process could be taken several minutes. Following image is showing that two device, **V737 Overhead** and **CDU II** are found and listed by "**VRiSim**" software. "**VRiSim**" manages multiple devices.

***NOTE :** In the **VRiSim** software, **v737 FWD Overhead** means **V737 Overhead**.*

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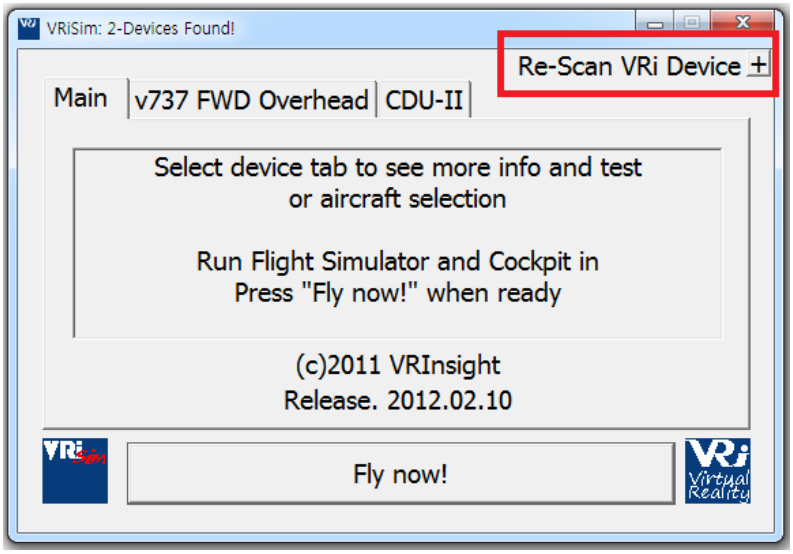
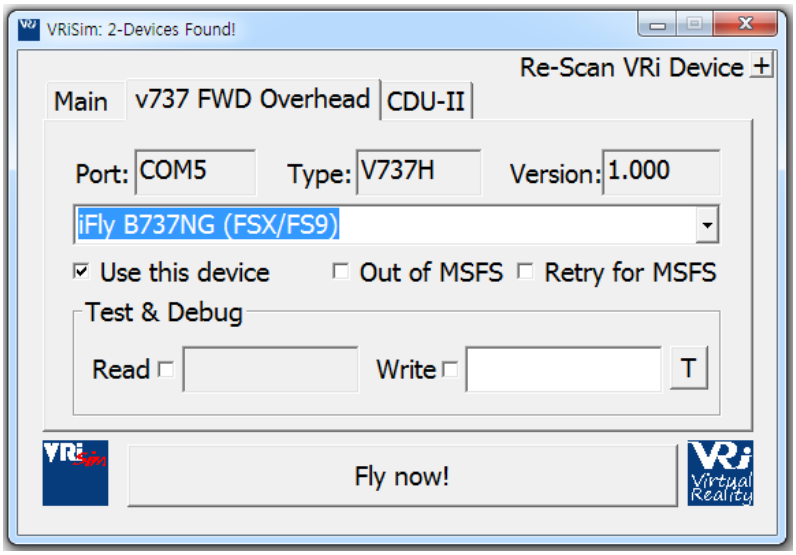


NOTE : *Even if your **V737 Overhead** is connected to your computer and **VRiSim** does not detect it, press* *in order to find all VRinsight hardware units again.*

Step 3. Select Aircraft

Open device's tab to select "Aircraft".



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.*

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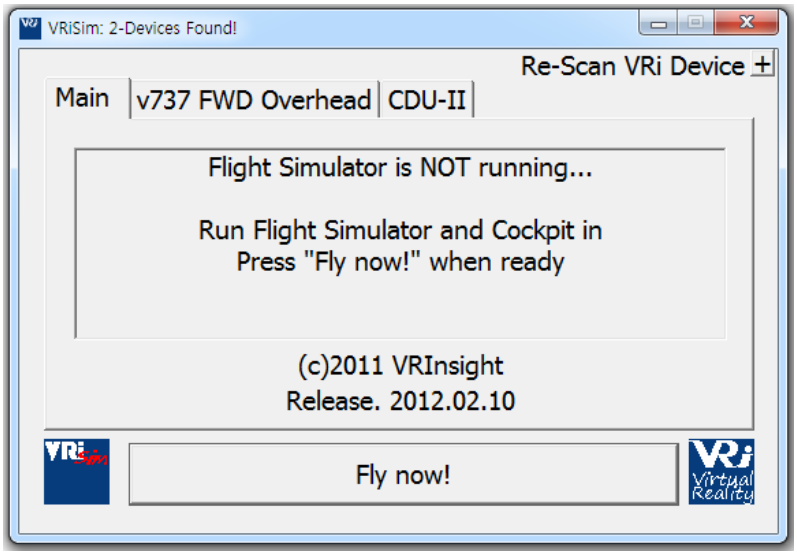

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Appendix

FSUIPC
VRiSim
PMDG 737 NGX
Electrical Power-Up Procedure for iFly B737NG
AFT Overhead Panel Functions
Prosim 737

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FSUIPC

1. FSUIPC Installation

FSUIPC is add-on module for Microsoft's FlightSimulator. 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 PSUIPC page" is checked.

Step 2. Download FSUIPC

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

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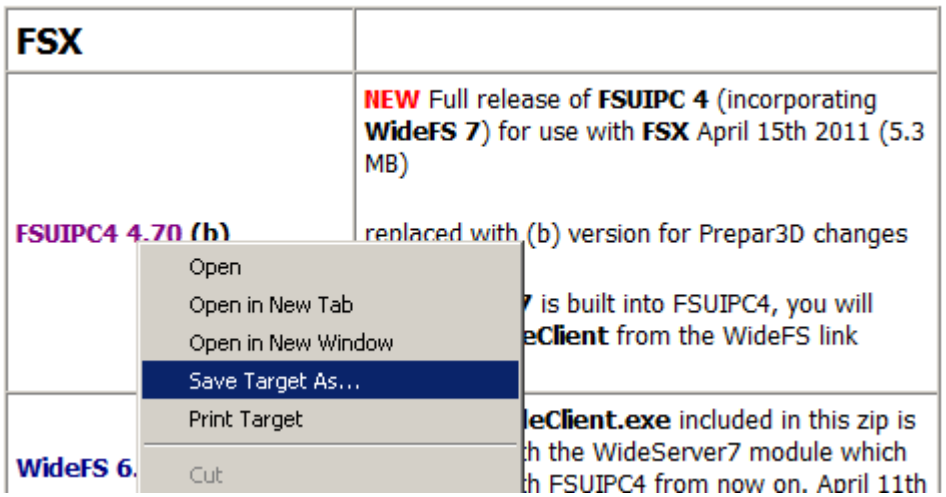
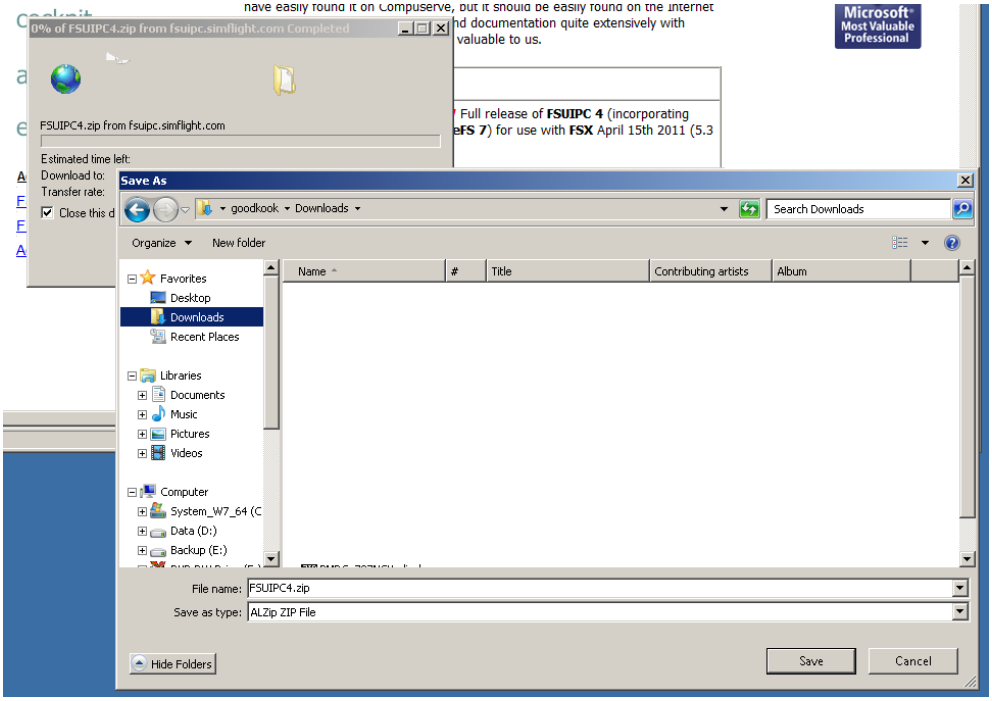


Specify a folder where the FSUIPC4.zip is saved (i.e. “Download”),



It’ll take several minutes depending on internet connection.

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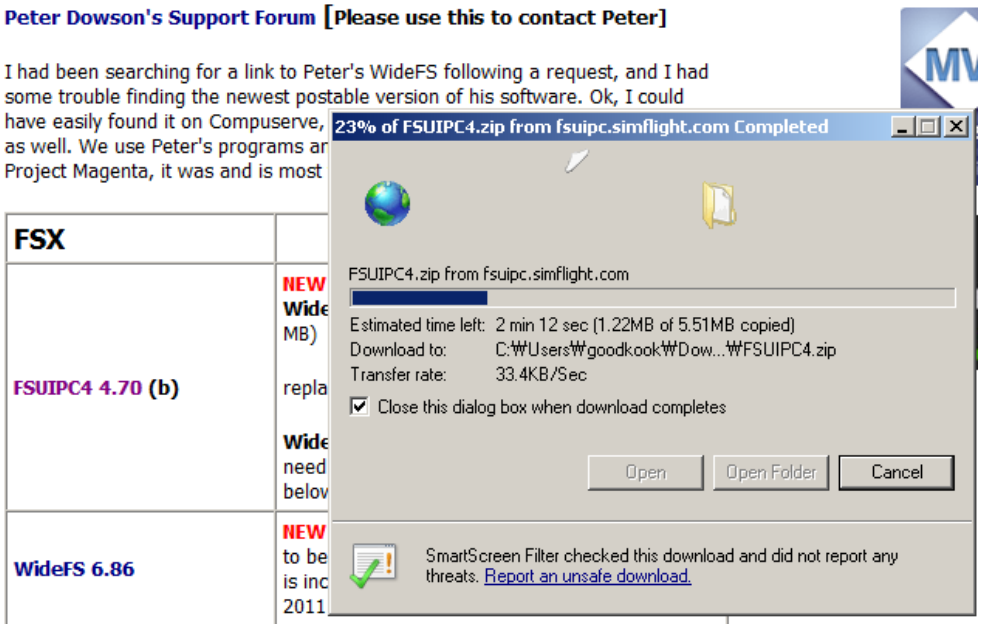
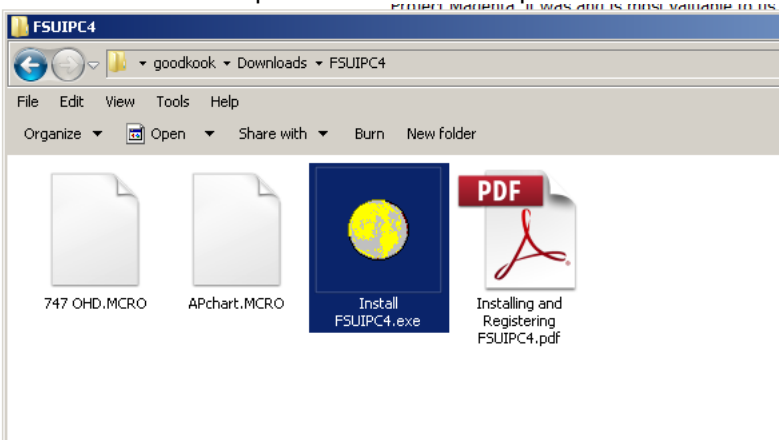


Step 3. Run FSUIPC Installer

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



Installation success message will be shown as follows;

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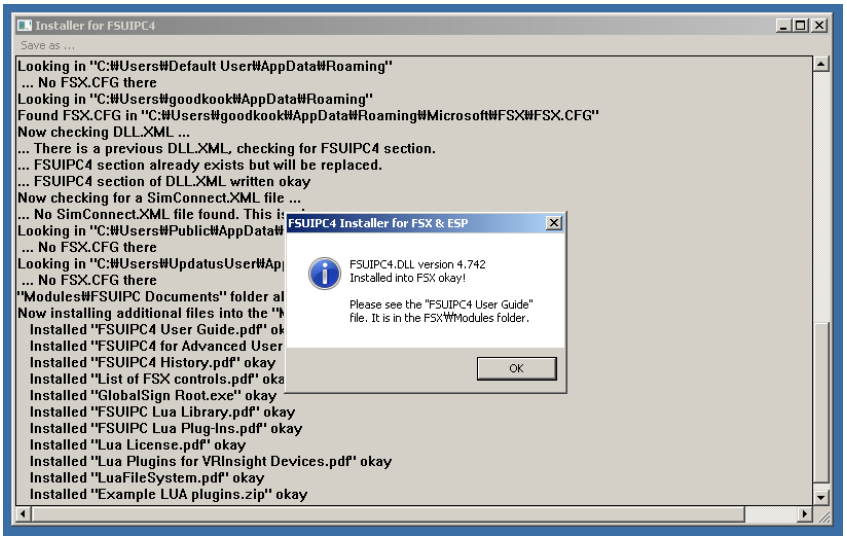
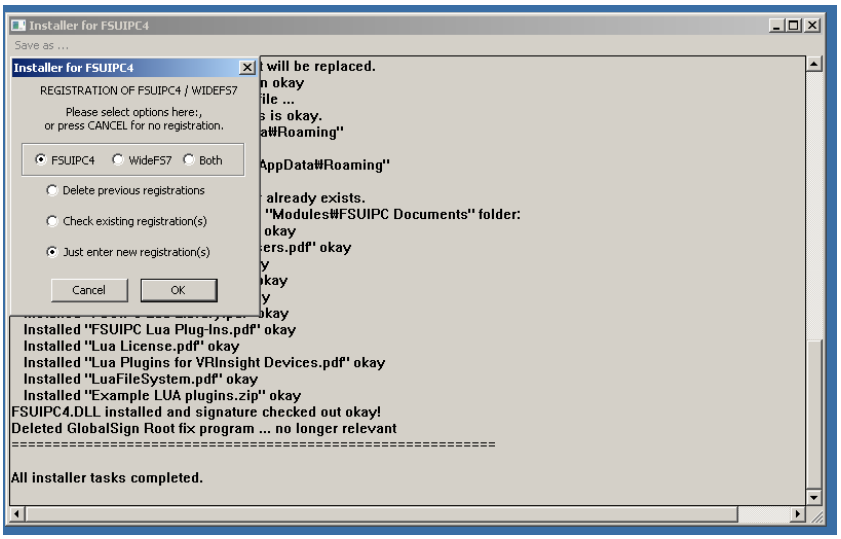


Finally it'll be prompted for registration of FSUIPC4. Registration code can be entered by pressing "OK" button. Or, select "Cancel" to continue using FSUIPC as unregistered. **VRiSim** is working with FSUIPC as un-registered version of FSUIPC at API-level.



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

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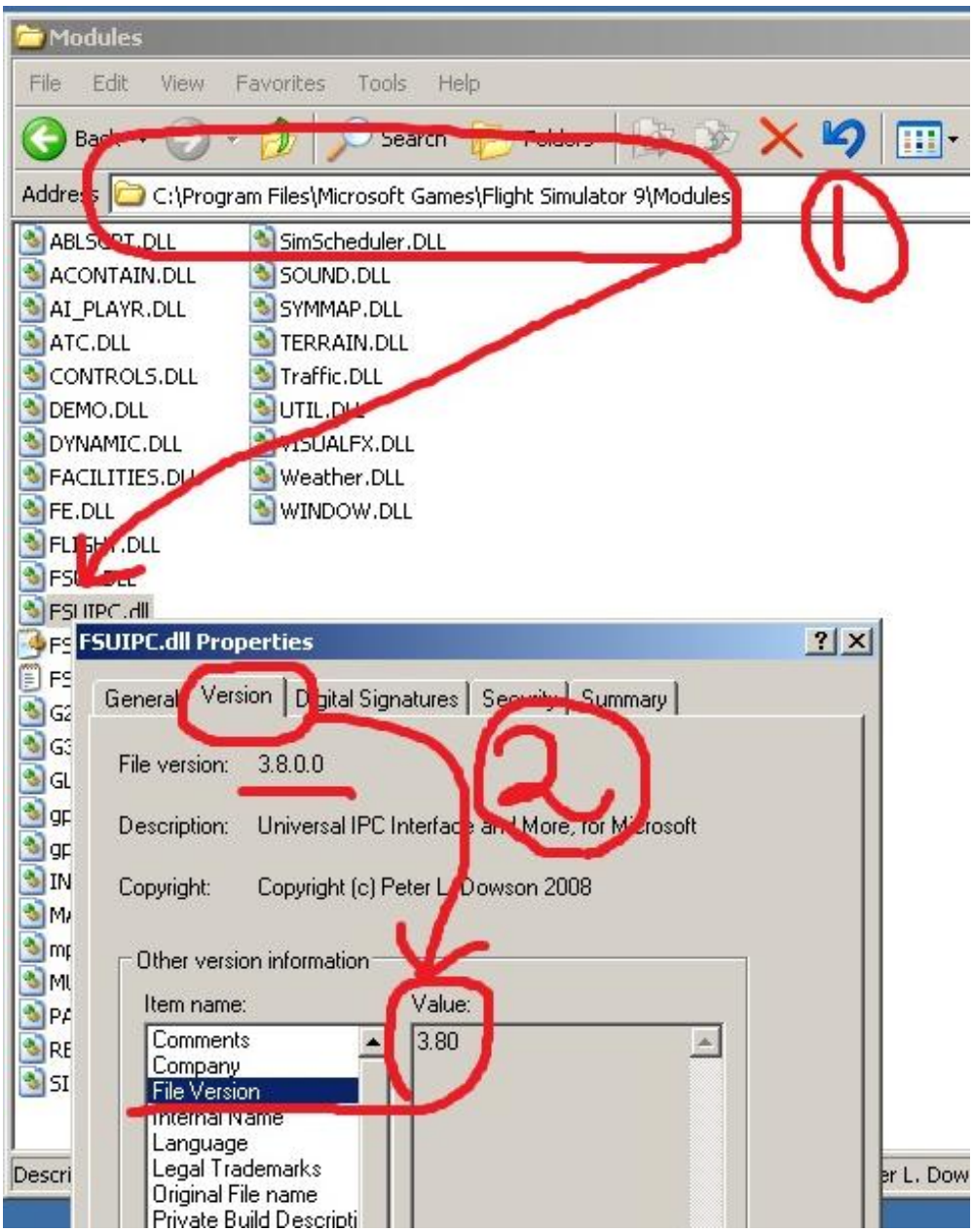
FSUIPC represents which MSFS is for. FSUIPC 3.xx is for FS 2004. FSUIPC 4 is for FSX. To check the version of installed FSUIPC, see relevant number in the screen shot images. Find file “FSUIP.dll” in the “MSFS’ “Modules” folder (1) and see version information of the file properties (2).

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.

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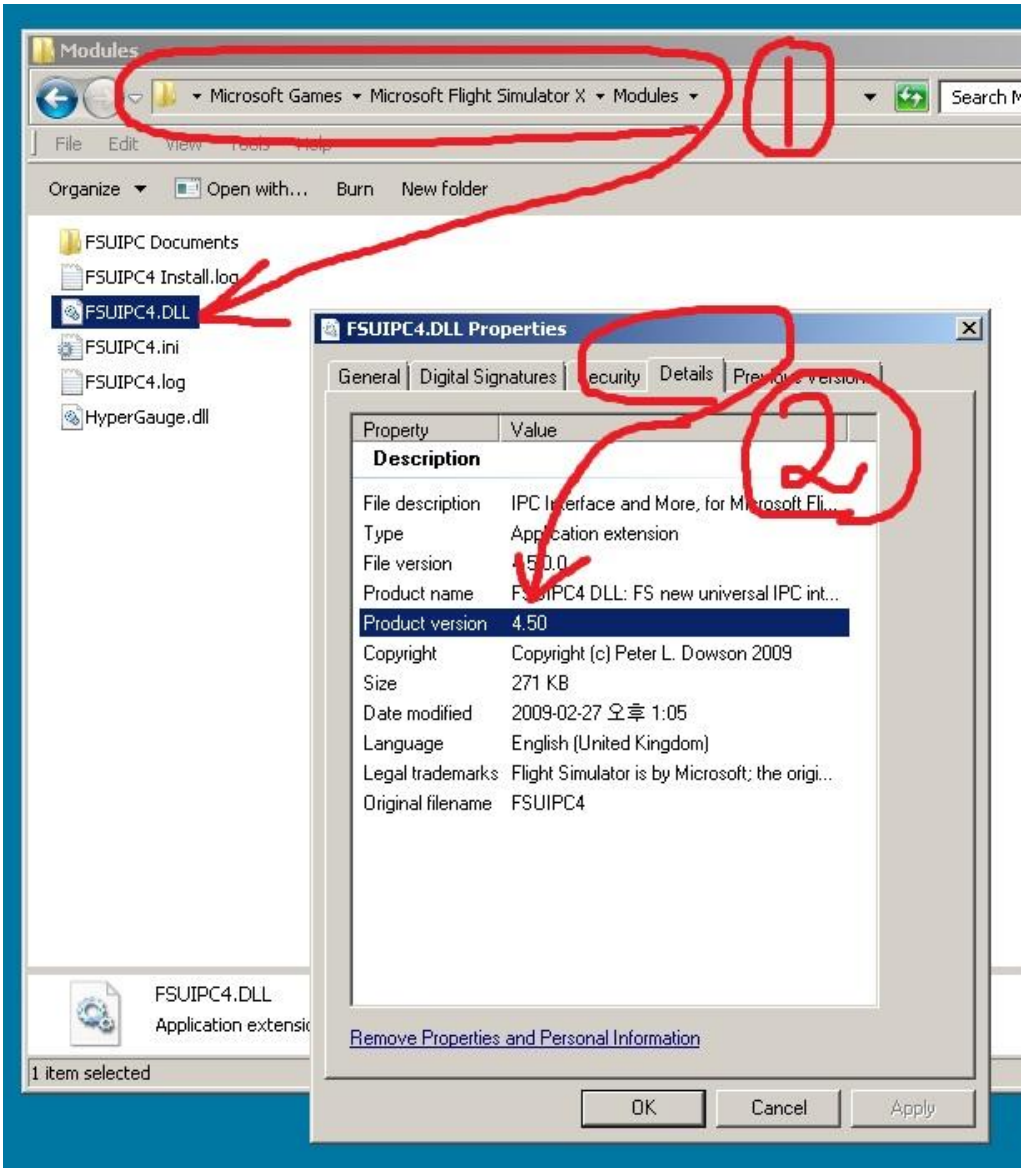

Installation procedure of FSUIPC4 is a bit different from version 3. It is installing executable. Download latest version of FSUIPC 4 at Peter Dowson's official home page. Extract "Install FSUIPC4.exe" in the downloaded zip archive and run it. Installation procedure will be preceded with finding FSX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

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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.

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

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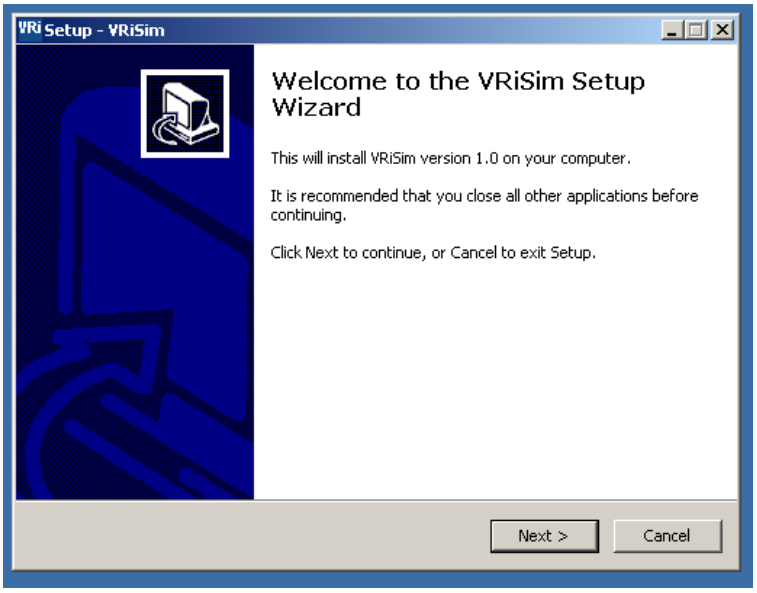
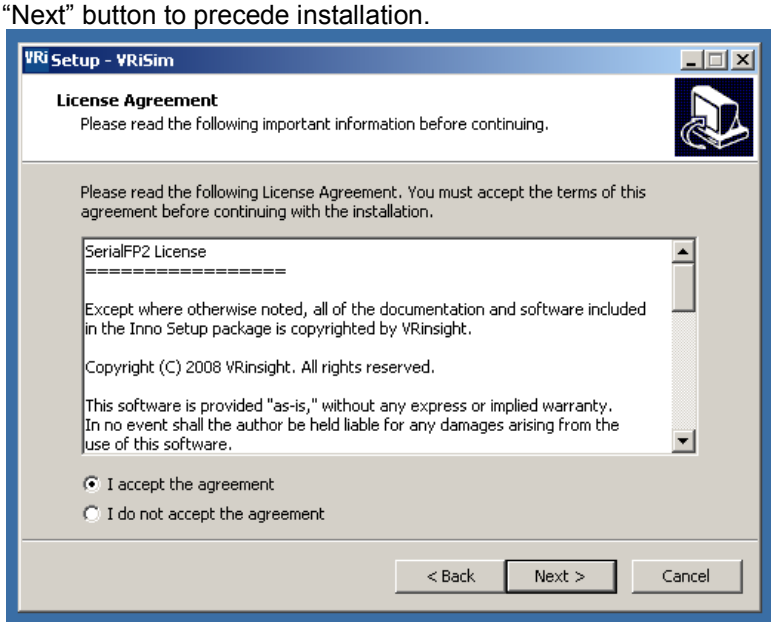


Step 2. License Agreement

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



Step 3. Select Destination Location

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

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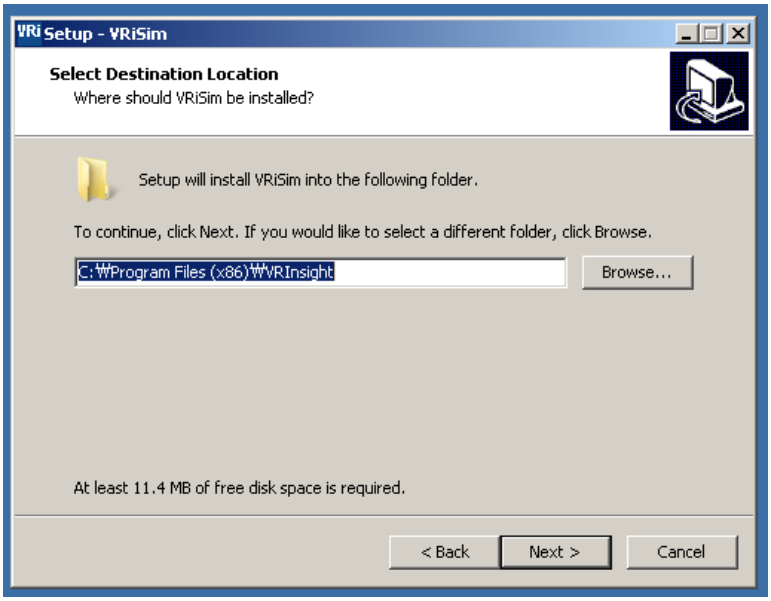
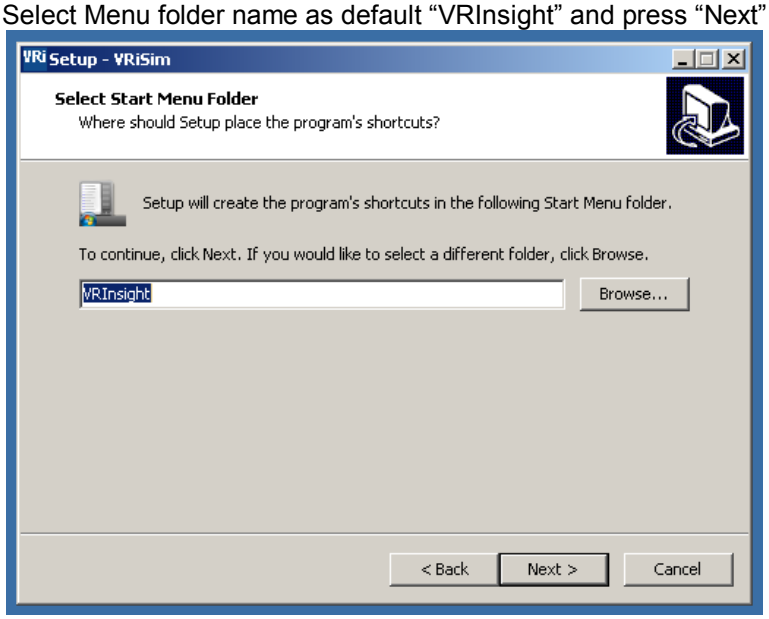


Step 4. Select Menu Folder

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



Step 5. Create a desk-top icon

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

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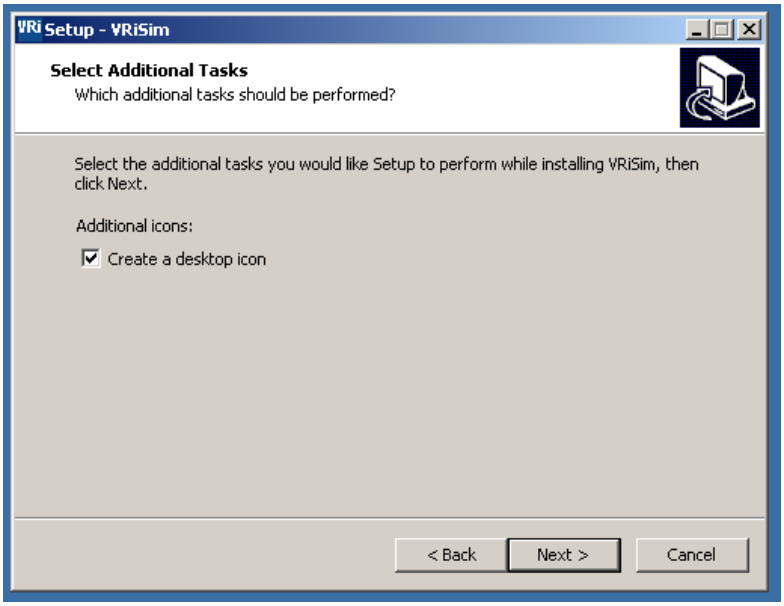
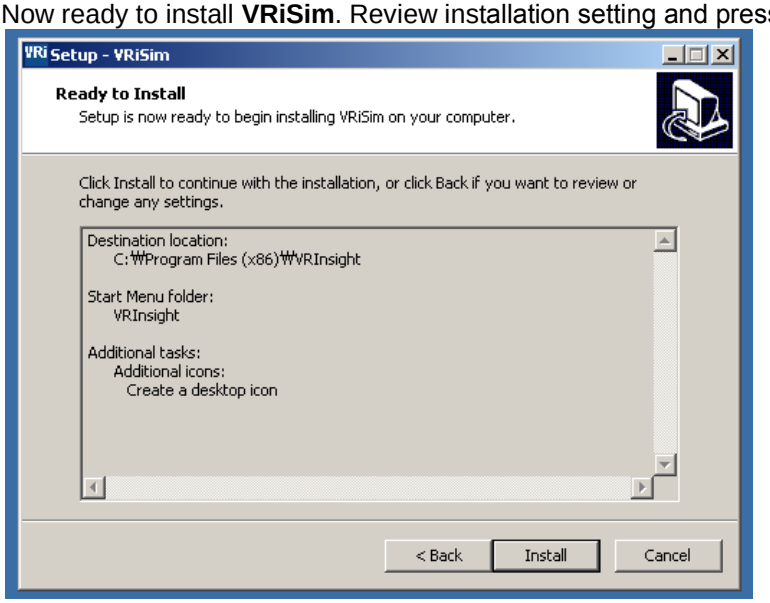


Step 6. Ready to install

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



Step 7. Installing

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

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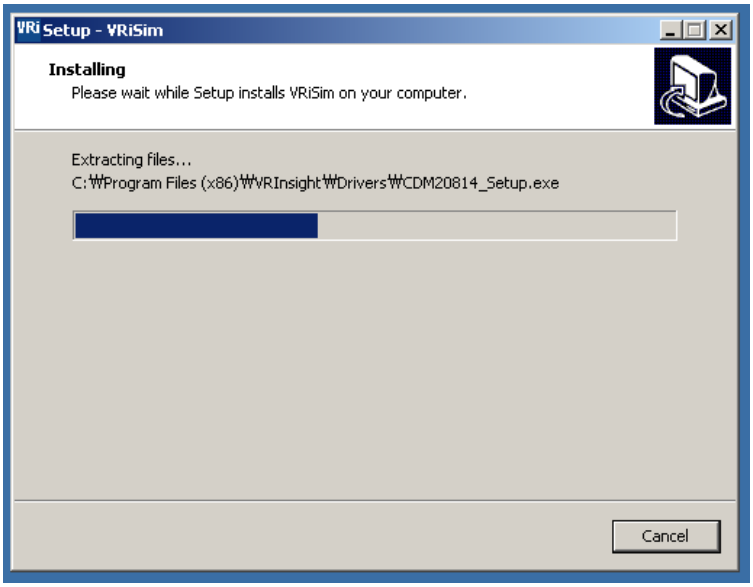
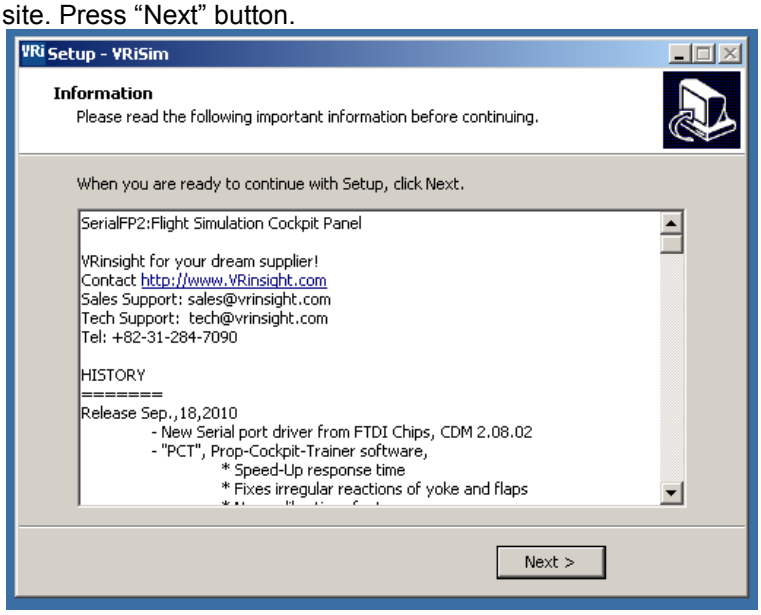


Step 8. Information

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

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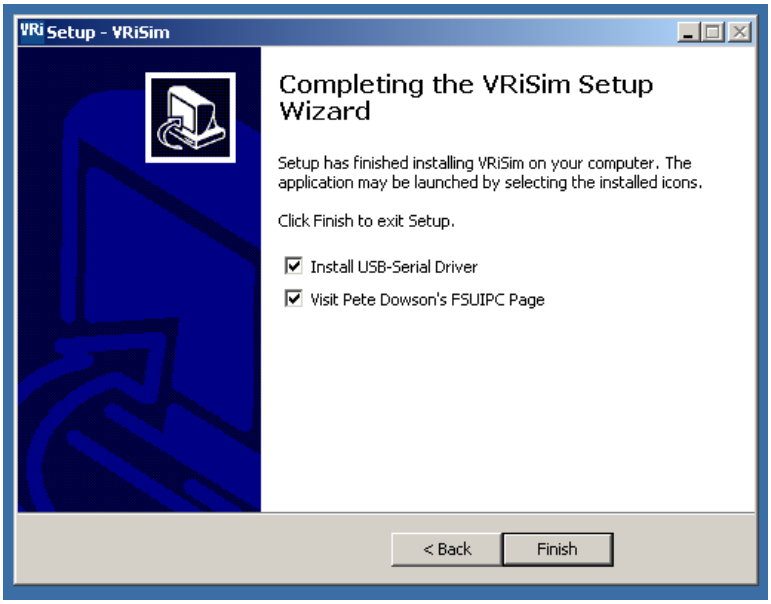


NOTE: Install device specific module

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. V737 Overhead module Installation

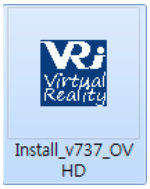
V737 Overhead module is included in the "Install_v737_OVHD.exe".

The base-package installer can be found in the supplied DVD, \VRiSim\Install_v737_OVHD.exe

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

Step 1. Run V737 Overhead Installer

Run "Install_v737_OVHD.exe"



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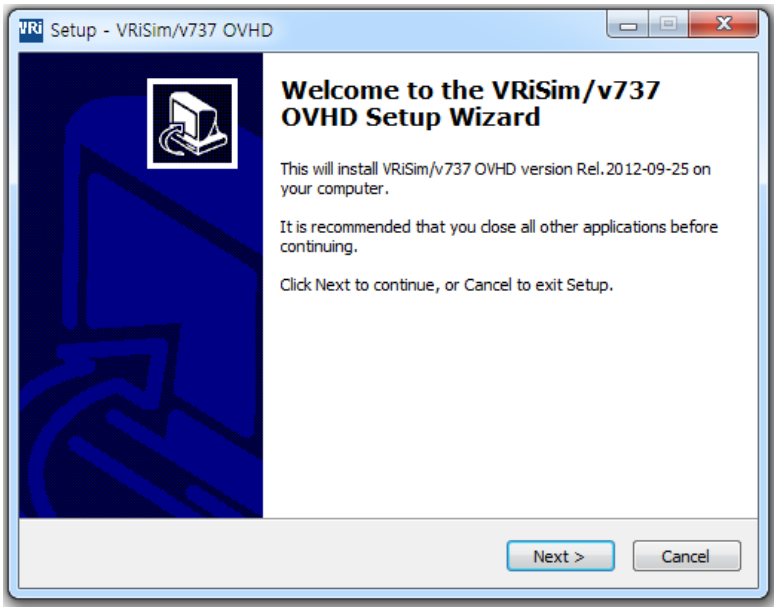
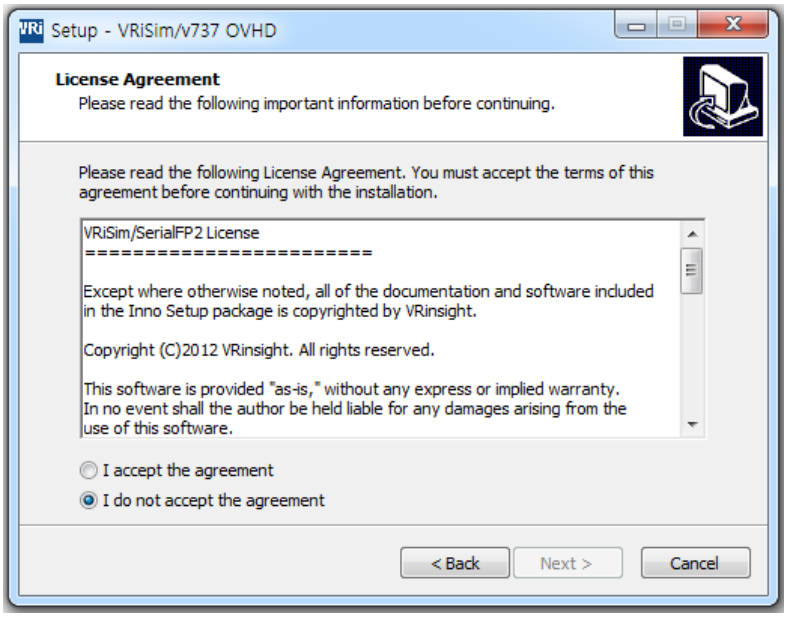
Press Next button on VRiSim/v737OVHD setup wizard window



Step 2. License Agreement

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



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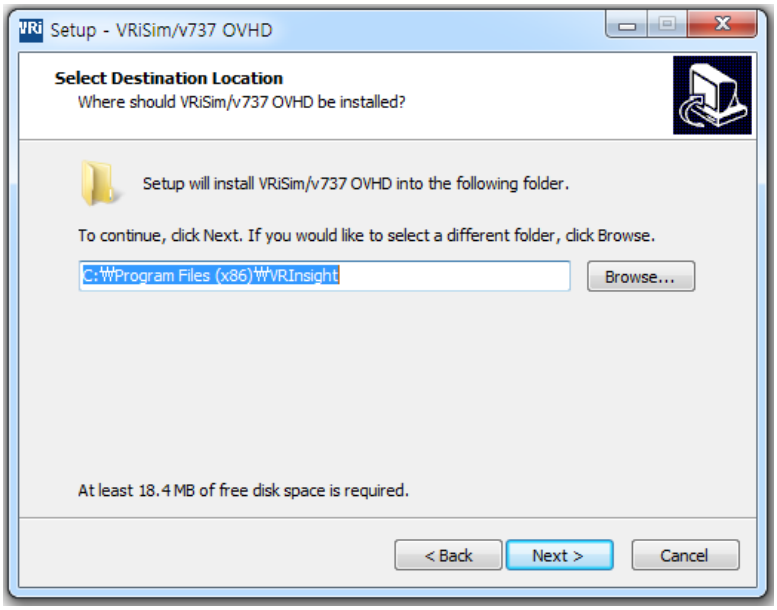
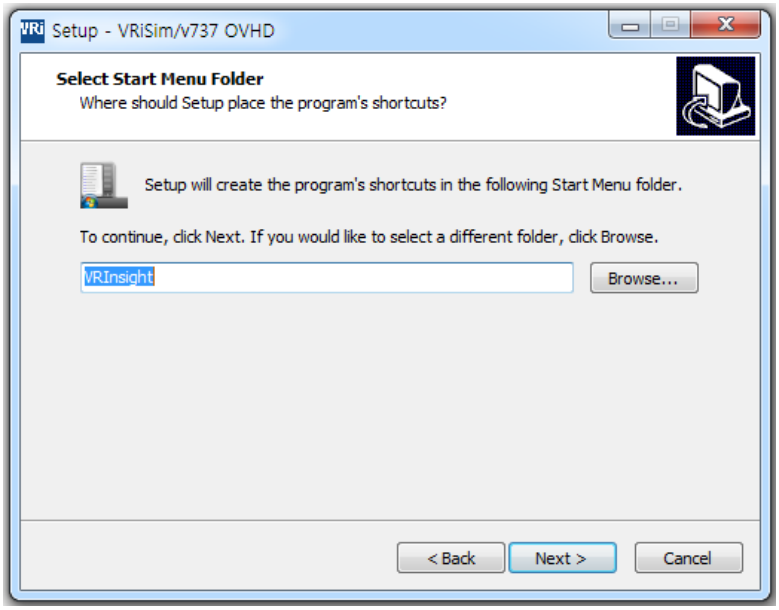
Step 3. Select Destination Location

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.



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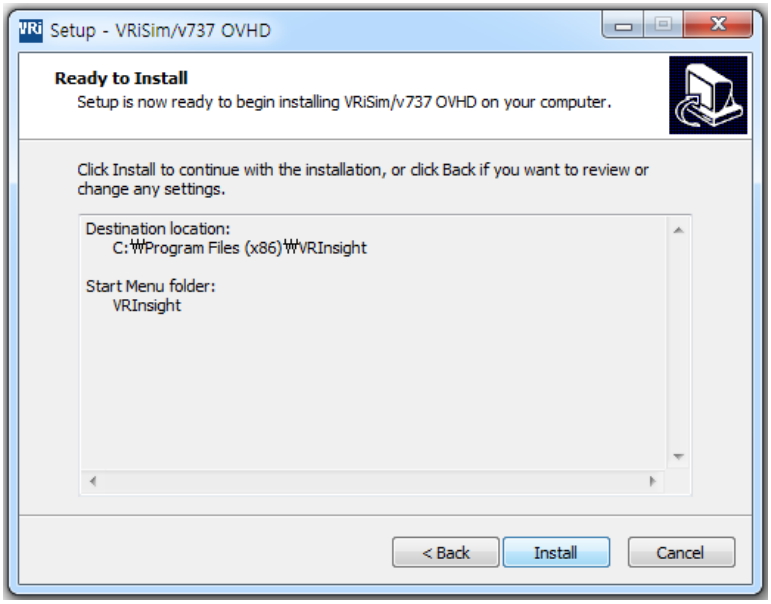
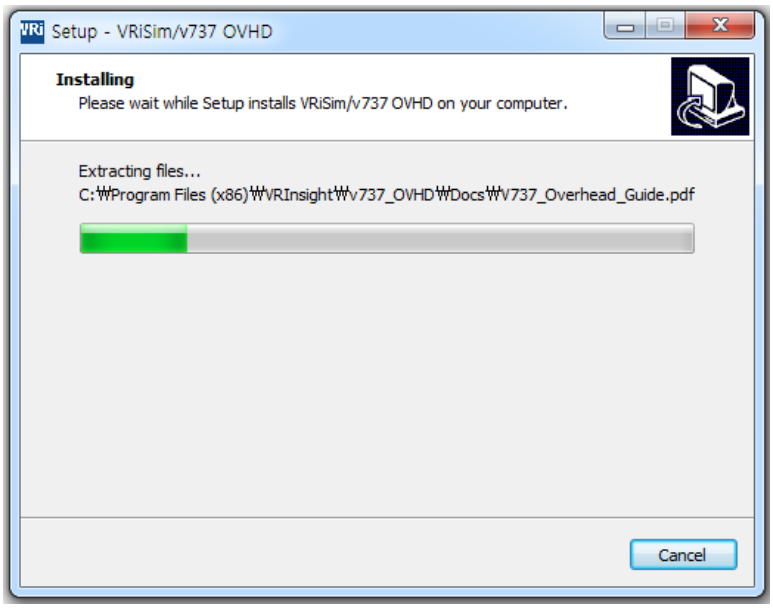
Step 5. Ready to Install

Now ready to install v737 OVHD 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.



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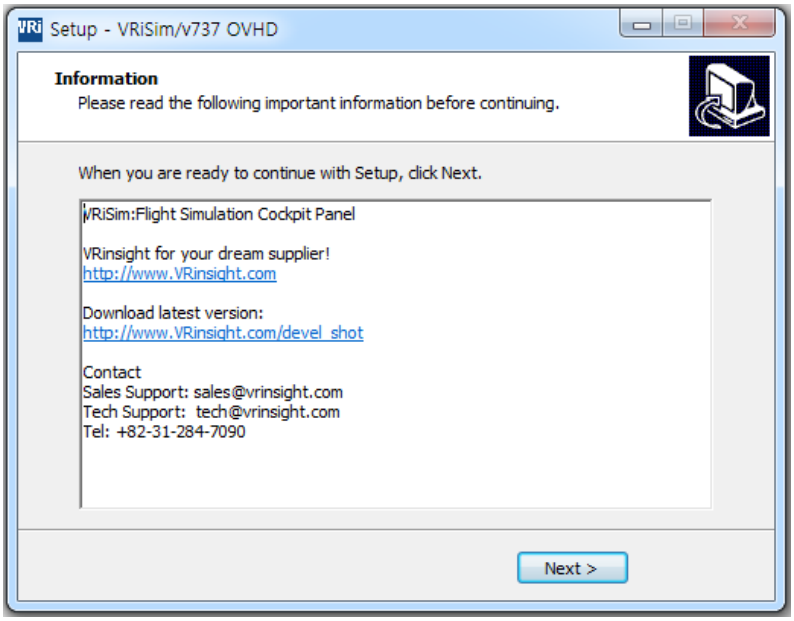
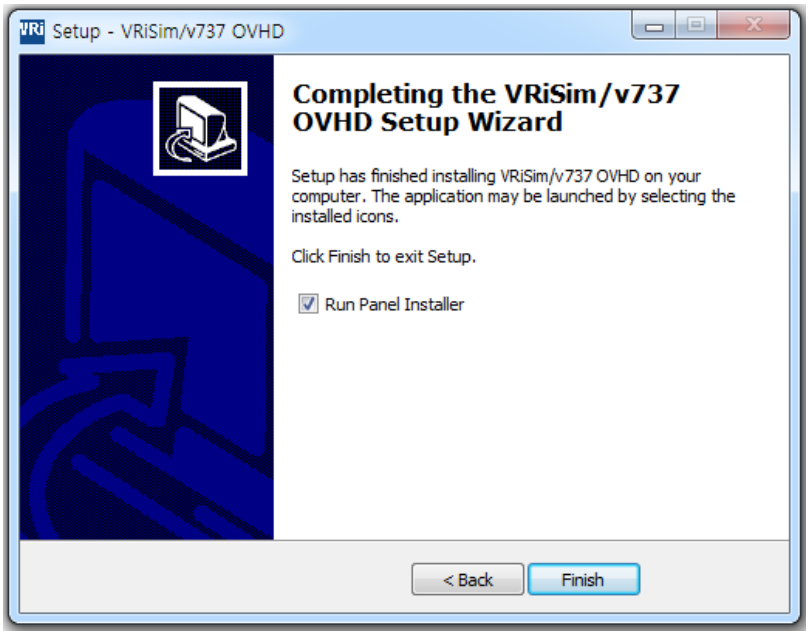
Step 7. Information

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



Step 8. Complete V737 Overhead module setup

V737 Overhead module setup is done. Optionally, run "**Panel Installer**" to configure the aircraft.



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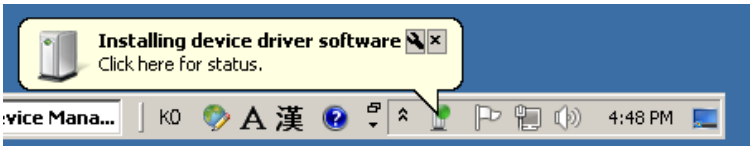
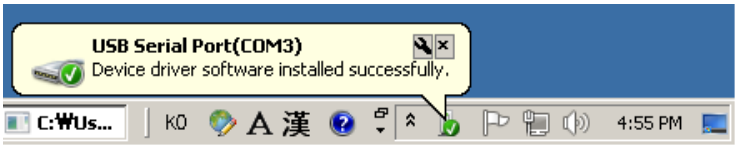
4. Connecting VRInsight's Flight Panel/Re-install driver software

Plug V737 Overhead USB connector into PC's USB port. As new device is connected to PC, it'll try to install device driver software.

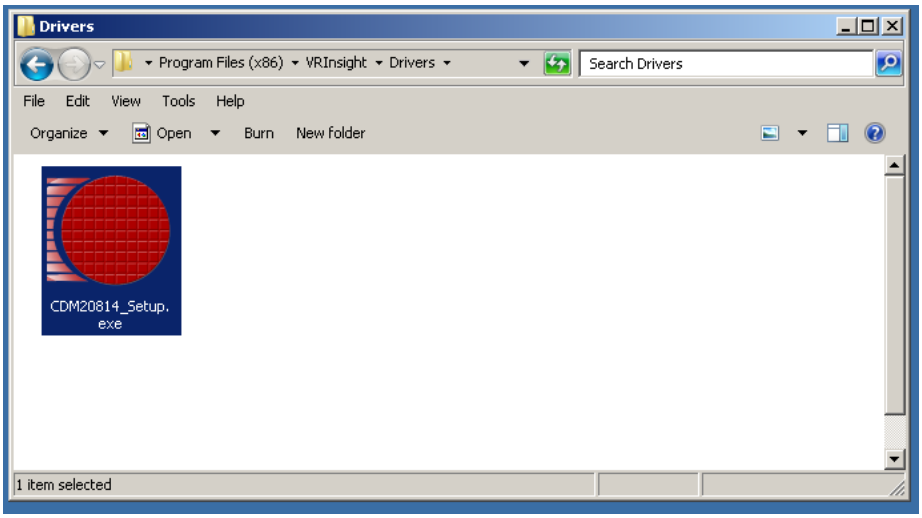


Already the driver software was installed during **VRiSim** software installation, the new device is recognized as "USB Serial Port(COMx)". Following picture is an example of success message for the new VRinsight's flight panel hardware that is recognized as COM3.



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.

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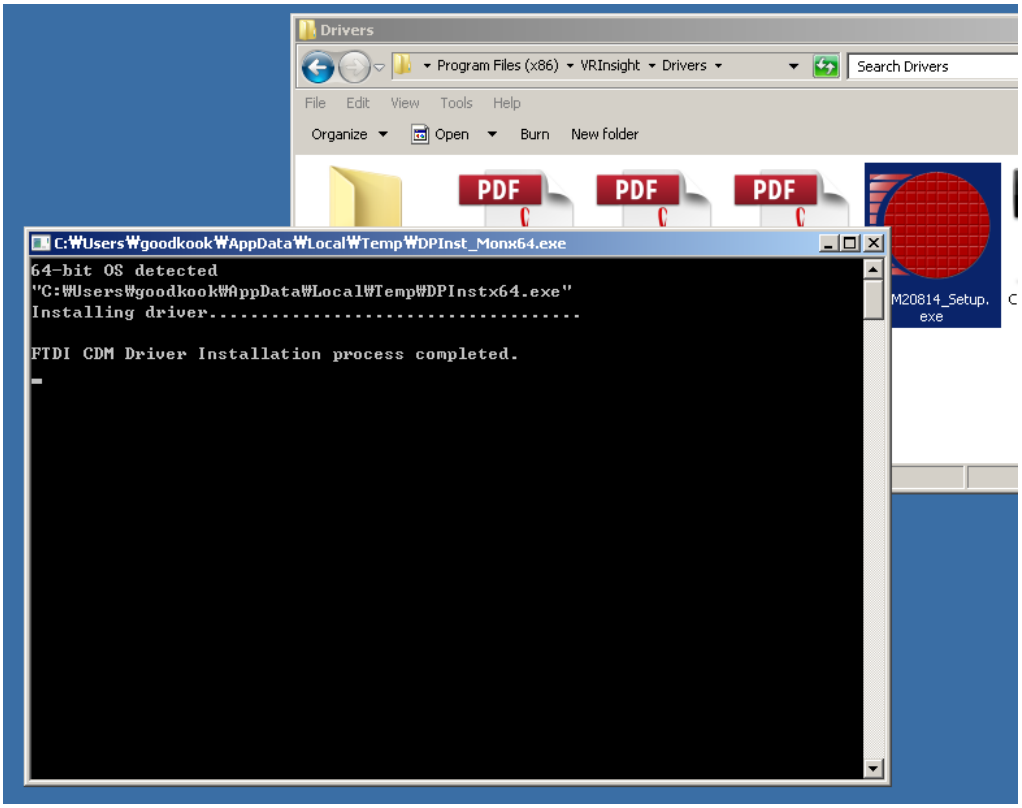
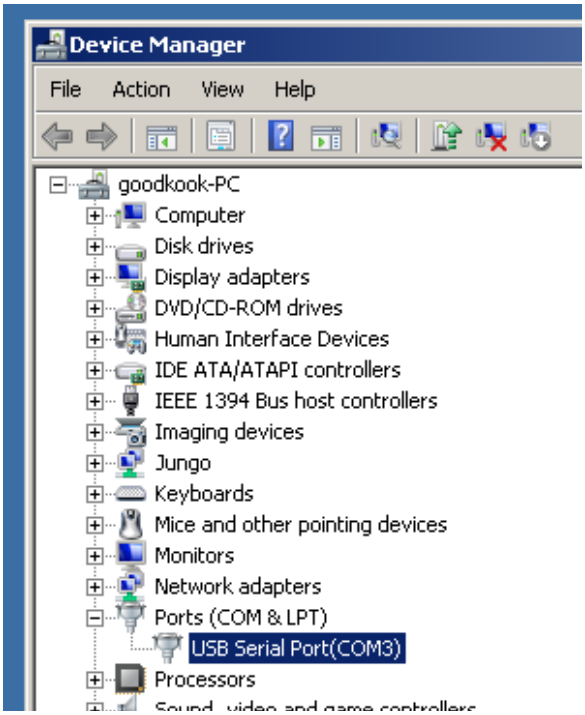


As the driver software installation is done, connect VRinsight's panel to PC's USB port. The VRi panel will be recognized successfully as Serial Port(COMx). Serial port's COM number would be varied to the PC's hardware configurations. Recognized serial port and its COM number for the panel can be confirmed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



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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.

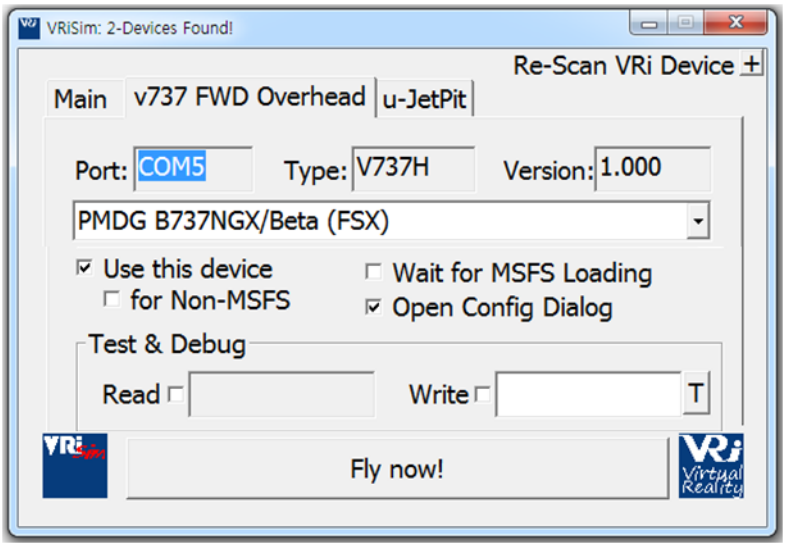
Run **VRiSim** by double-clicking the icon on desk-top.

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.

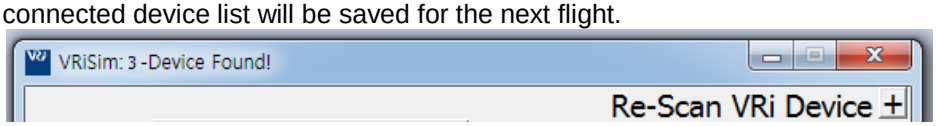
Following message would be displayed as any device is found and connected successfully,

Following picture is showing 2 devices, V737 Overhead and u-JetPit, are founded and connected to **VRiSim**. Each device is listed as separated tab.

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



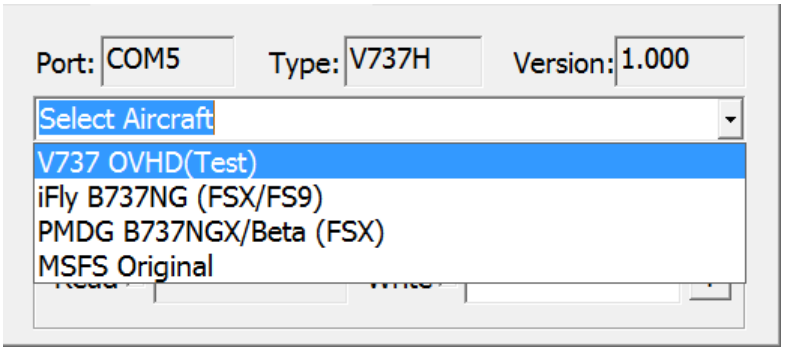
When any of devices that is already connected to PC's USB port and is not listed with device tab, try re-scan VRi device. This re-scan procedure would take several minutes. Founded and connected device list will be saved for the next flight.



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 an aircraft to fly with a flight panel listed.



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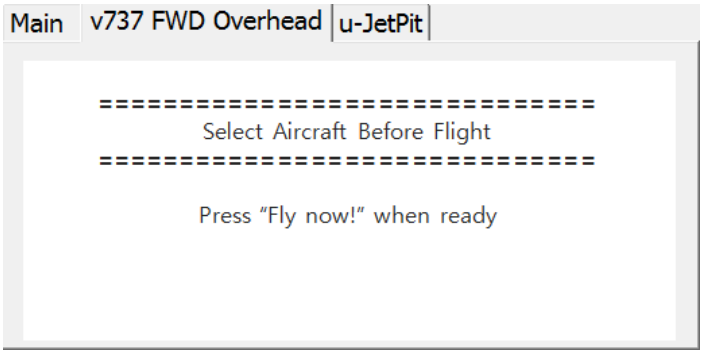
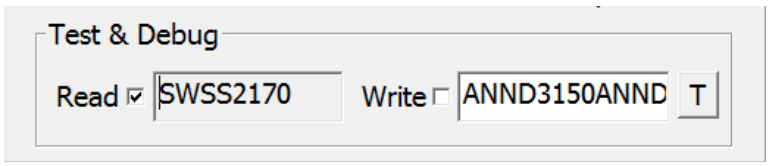
Aircraft must be selected in the each device tab. Then, press “Fly now!” button. When aircraft is NOT selected for the device, following message is displayed in the Main tab. Once aircraft is selected, selection is saved for the next flight.



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.

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.
To do this, fly a configured aircraft by the **Panel Installer** in “Flight Simulator 2004” / “Microsoft Flight Simulator X” and run **VRiSim**.



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PMDG 737NGX

To use PMDG 737NGX with V737 Overhead, carefully read below **SDK Document** by PMDG.

ENABLING DATA OUTPUT

The PMDG 737NGX is already set up to listen for control events that may originate from an external application. However, since providing state data to third party applications does consume a small amount of processor attention, **we have disabled this communication output by default** since the vast majority of our users will not be using SDK driven applications.

To enable the data communication output, you will need to open the file **737NGX_Options.ini** that is located in the folder <FSX ROOT>\PMDG\PMDG 737 NGX

Once this folder is open, add the following two lines to the bottom of the file:

[SDK]
EnableDataBroadcast=1

When you release your product to customers, it will be necessary for your application installation to set this parameter on the customer's installation, else they will not see data connectivity between your application and the PMDG 737NGX.

NOTE : *Before installation, carefully read "**PMDG SDK EULA**" & "**ENABLING DATA OUTPUT**" and follow all instructions of **PMDG.***
You can download them at http://www.vrinsight.com/devel_shot/

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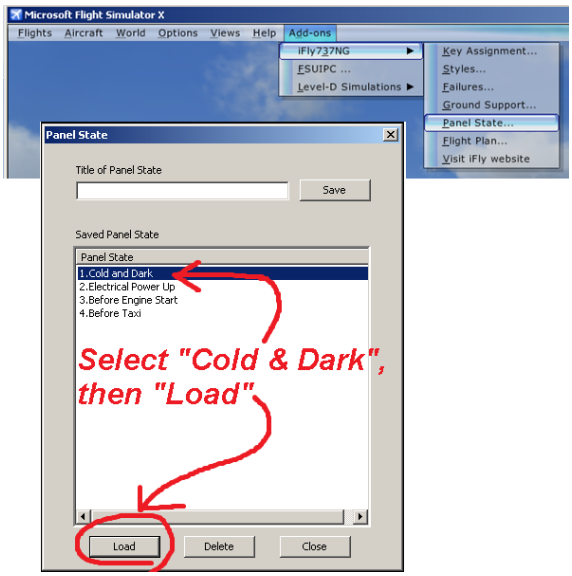
Electrical Power-Up Procedure for iFly B737NG

Preparation

1. **Set "Panel State" as "Cold & Dark"**



2. **Set switches and knobs position as "Cold & Dark" state**

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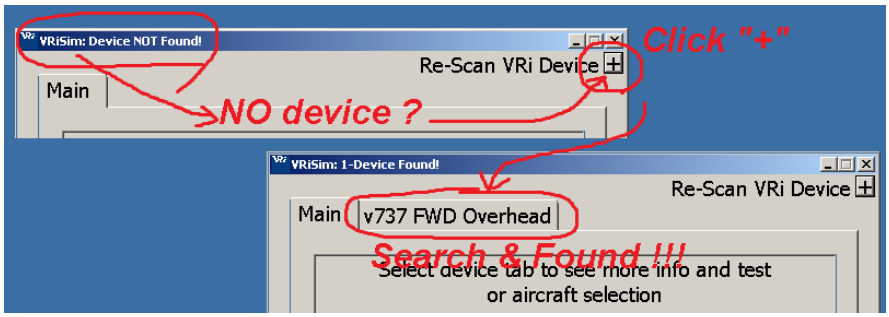
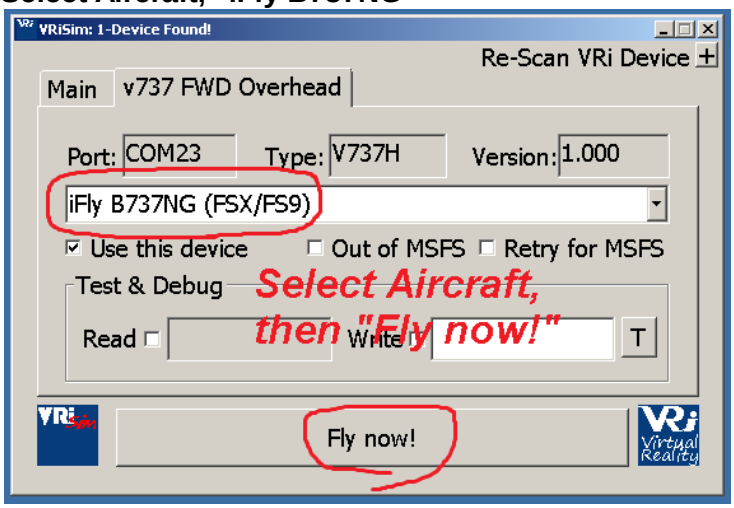
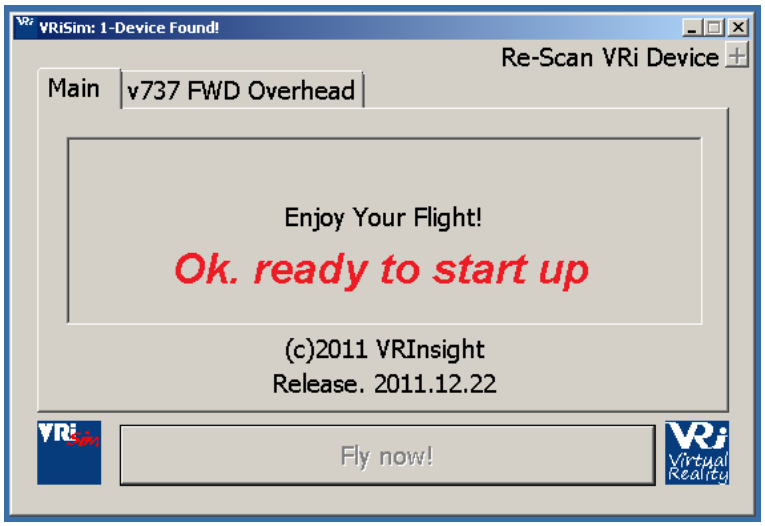
3. **Run "VRiSim": Search and Found for VRi unit "v737 Overhead"**



4. **Select Aircraft, "iFly B737NG"**



5. **Ready to start**



The v737 OVHD panel is connected and resetted by VRiSim:

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Electrical Power-Up Procedure

1. **Battery “ON”**

2. **Set STANDBY PWR to “AUTO” and check “STANFBY PWR OFF” light is NOT illuminated. Electric Power gauges are on.**

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3. **"BUS TRANSFER" to AUTO**

Now the panels are powered by battery for a short time. Go on for ground power or APU power. Battery will be discharged if any exterior power is not supplied.

Don't let the battery discharged.

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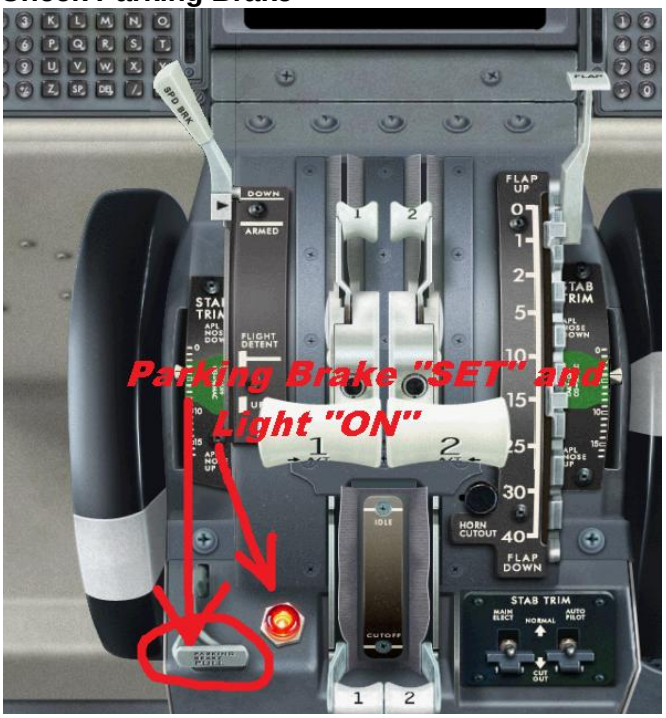
4. **Before requesting ground power, check Flight Controls and Wiper knobs and Hydraulic pumps are at correct position.**

Landing geae lever down position:
Is it ALL GREEN" ?

Check Parking Brake



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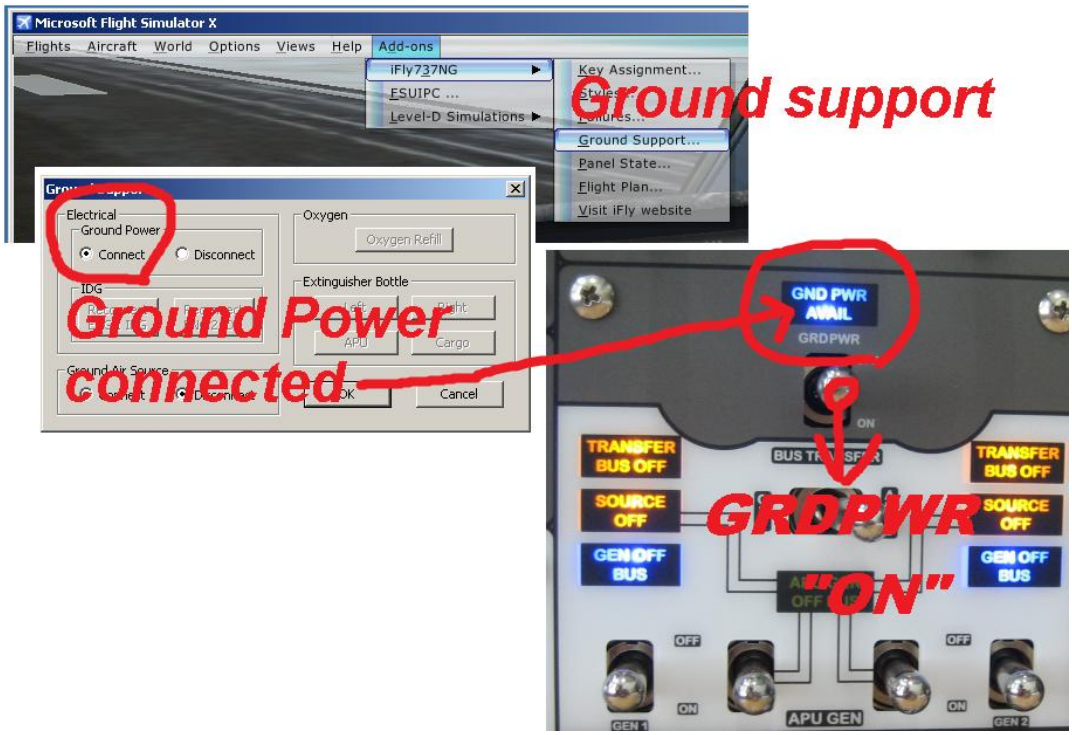
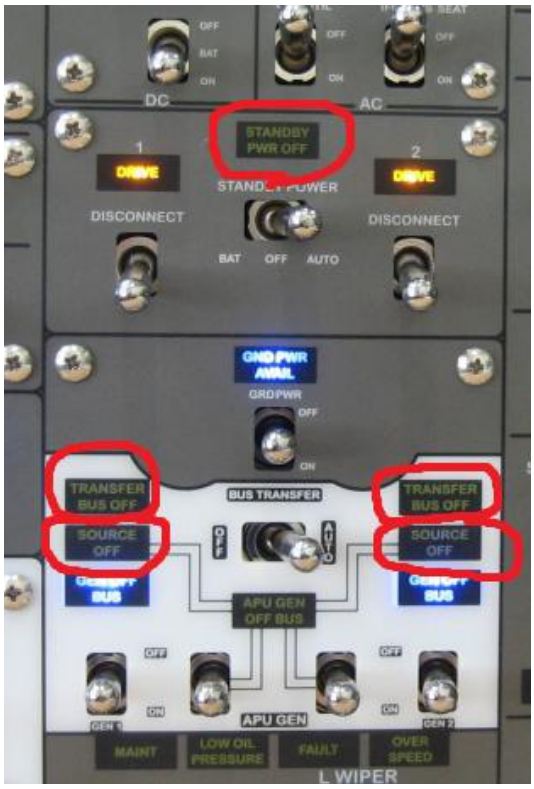
5. **Request Ground Power" service**



When "GND PWR AVAIL" is on, pull down "GRD PWR" switch. Verify STANDBY PWR OFF, TRANSFER BUS OFF, SOURCE OFF lights are extinguished.



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6. **Before starting APU, test Overheat and engine extinguisher for the safety.**

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7. **APU EGT and FUEL Temp gauges for v737 OVHD**

   Monitoring APU EGT is important. By positioning AC meter selector knob to 8th position (blanked), electrical gauge will display Fuel Temp and APU EGT.

8. **Start APU by pulling down the APU START switch. During APU start process, LOW OIL PRESSURE will be lighted on.**

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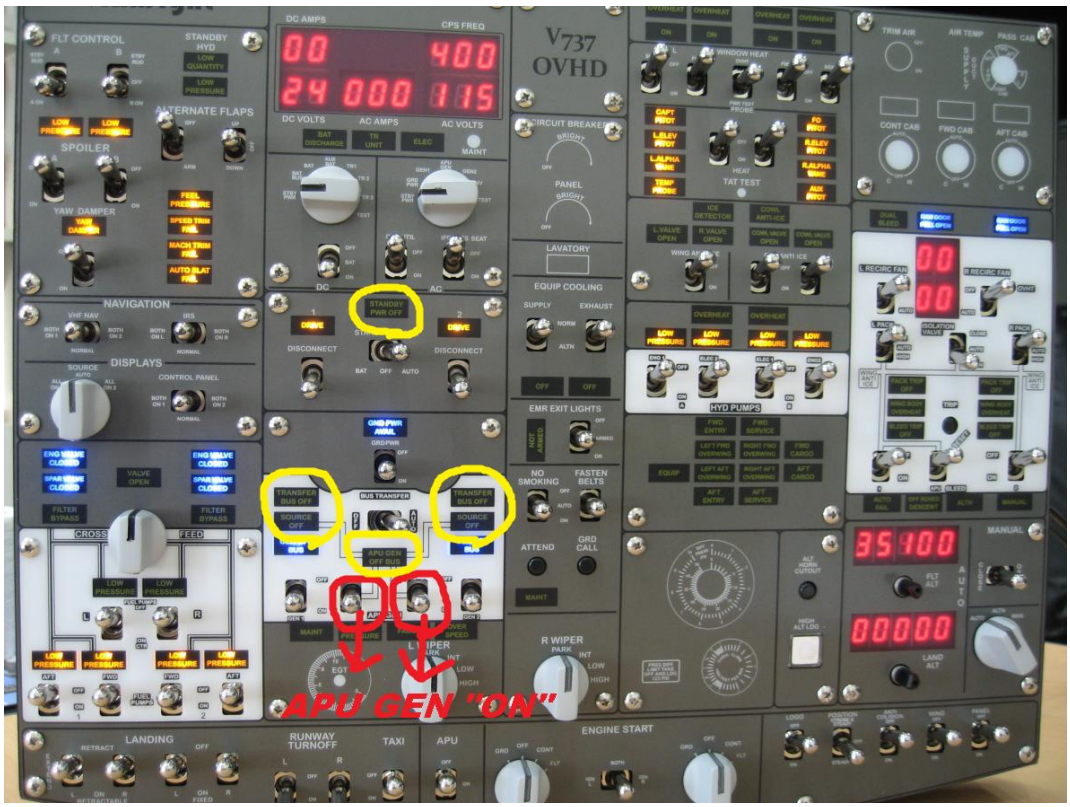
As APU EGT is getting up, LOW OIL PRESSURE will be off. APU EGT rise up to 850~890, then down to 450~500. Finally, APU GEN OFF BUS will be illuminated showing APU is started.

9. **Powered by APU. As APU is started, Electrical power is sourced by APU generator. Check APU GEN OFF BUS is on, pull down (ON position) both APU GEN switches.**



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When "GND PWR AVAIL" is on, pull down "GRD PWR" switch. Verify STANDBY PWR OFF, TRANSFER BUS OFF, SOURCE OFF lights are extinguished.

10. **Now, the plane has both the exterior power and the APU power, but this does not mean that both power are providing electricity to the plane simultaneously. The power, which is connected last (in this case, APU) is the one that is truly providing electricity to the plane.**

    Ask the ground crew to remove the exterior power. GND PWR AVAIL light will be dextinguished.

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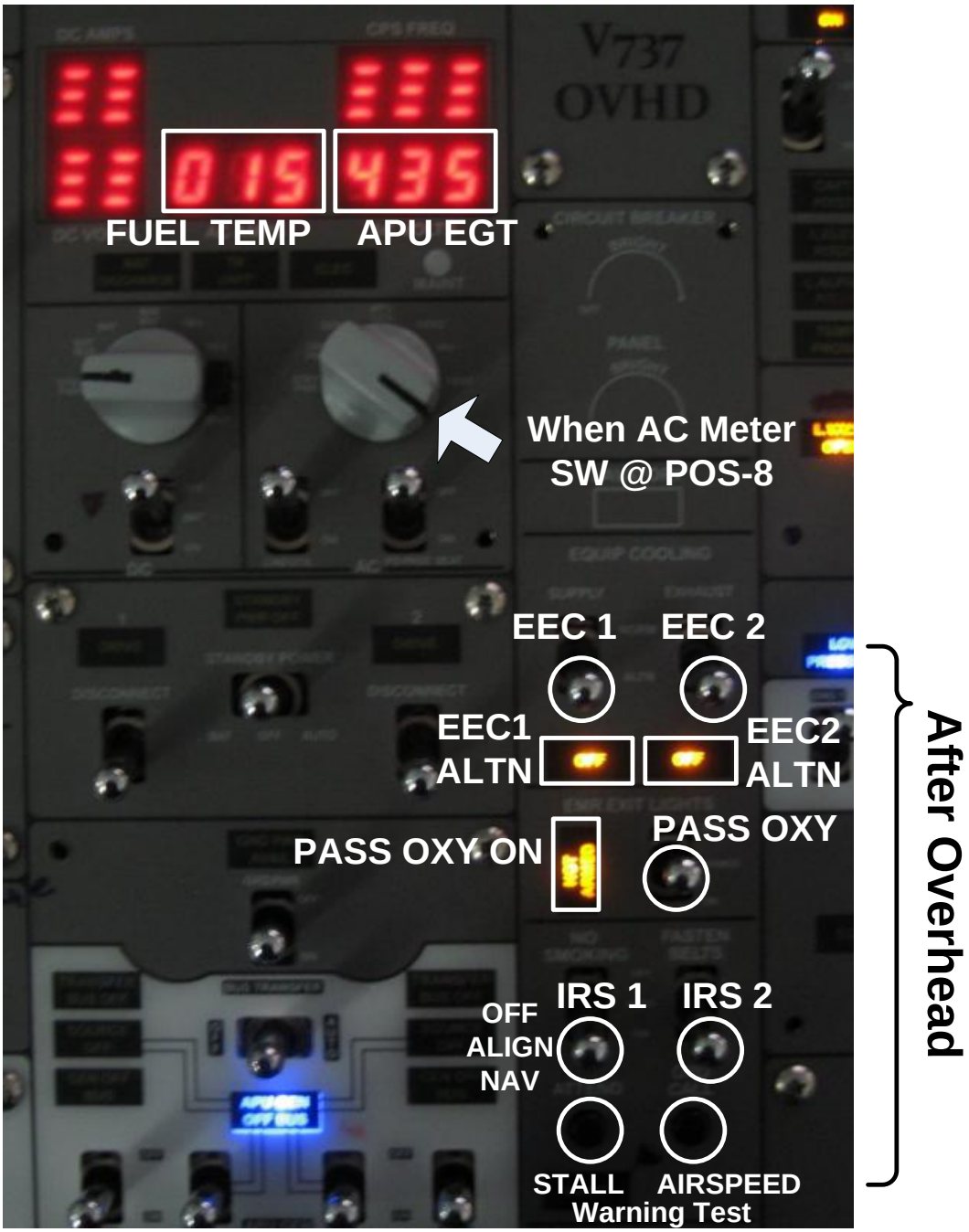
AFT Overhead Panel Functions

The v737 OVHD is FWD overhead panel. When AC meter knob is at 8th position, some switches are worked as AFT overhead panel.



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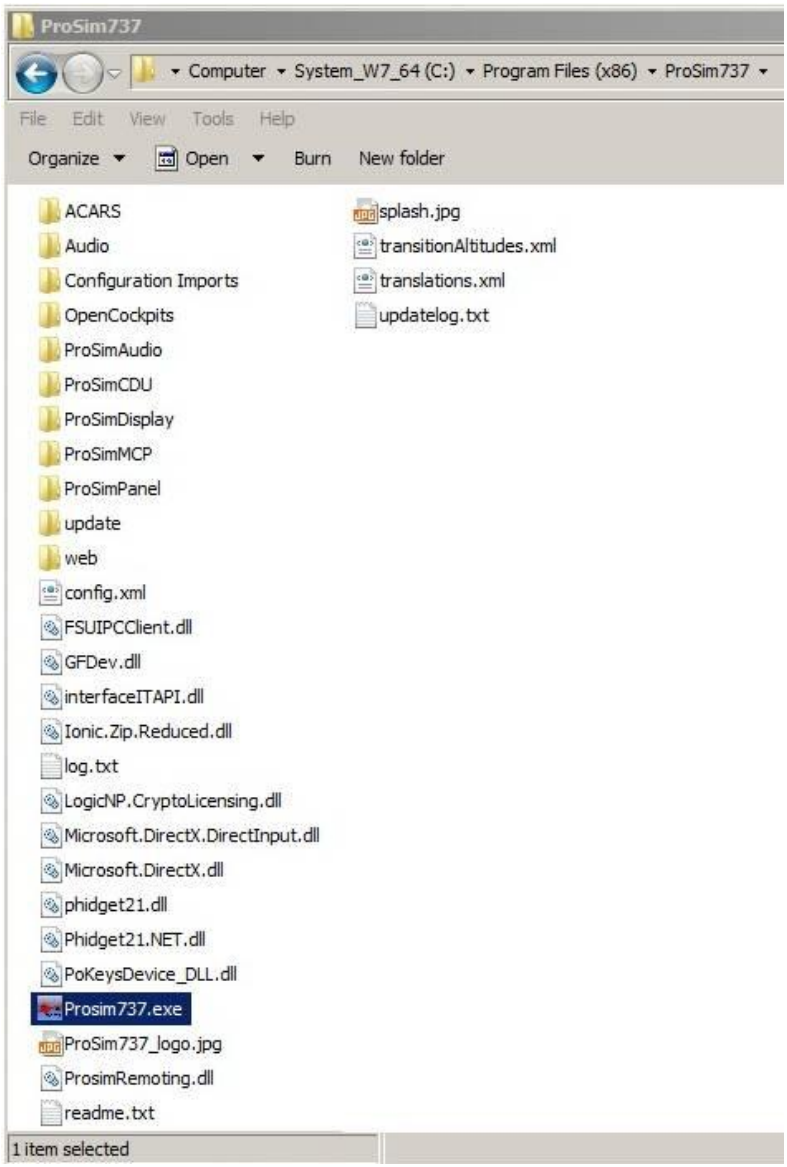
ProSim 737

We are pleased to announce that ProSim & VRinsight have made compatibilities for CDU II & V737 Overhead.

To fly with ProSim 737, you need to finish all necessary step to use V737 Overhead (for instance, monitor setting, configuration through Panel installer and etc). You also need to install **ProSim737 Suite V 1.31 (ZIP)** first through http://prosim-ar.com/downloads/

1. Run Prosim 737.exe.
(In case of Windows 7 / 64bit, you can find it C driver -> Program Files (x86) -> ProSim737)

- Prosim 737.exe is a kind of base package like a ***VRiSim***. After run Prosim 737.exe you need to run the specific module driver (In case of V737 Overhead, go to ProSimPanel and run ProSimPanel.exe)



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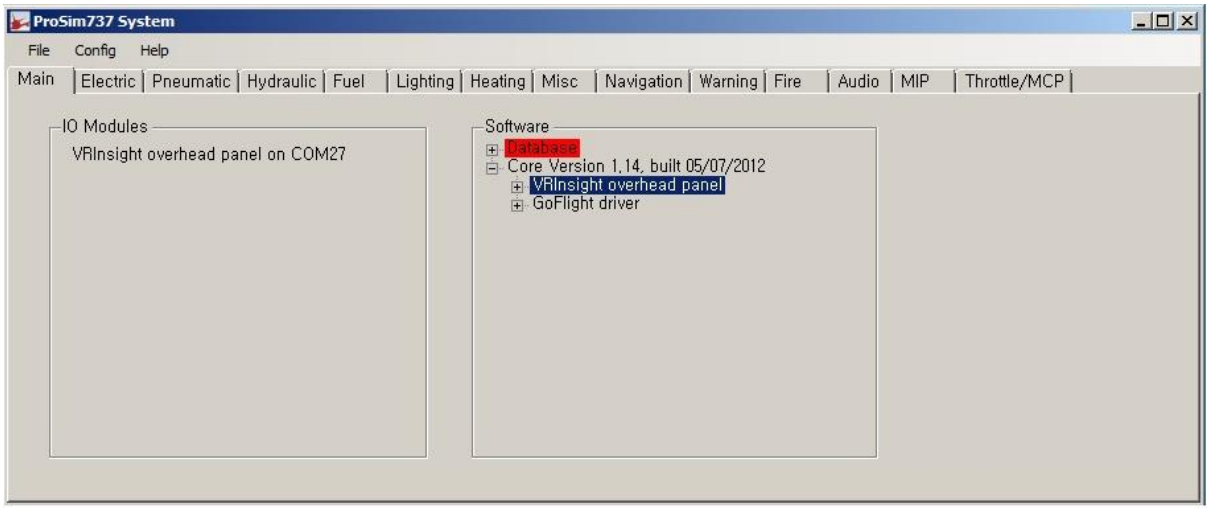
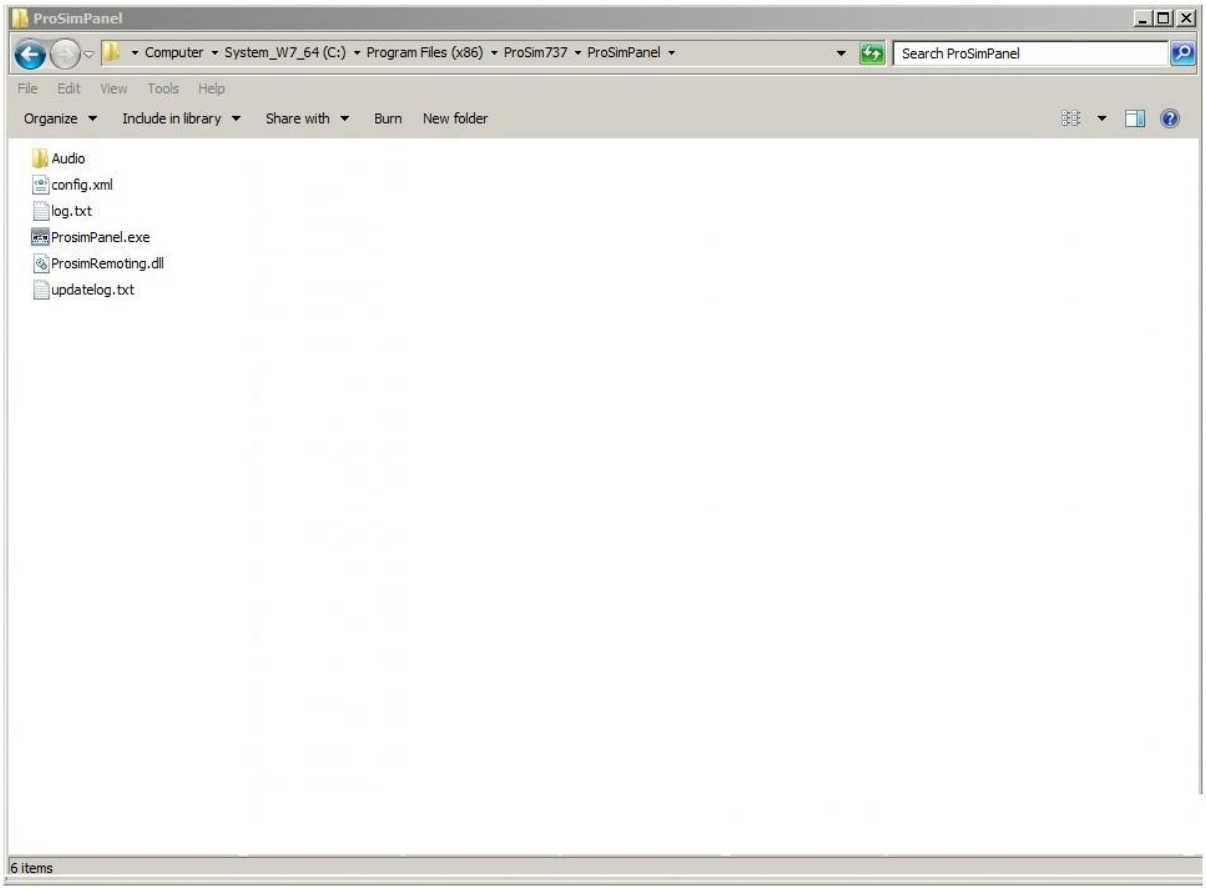


- After run Prosim 737.exe for V737 Overhead, the above Prosim737 System window will pop-up.

2. Run ProSimPanel.exe (C driver -> Program Files (x86) -> ProSim737 -> ProSimPanel)



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3. When you find the ProSim737 Panel window like under, you are ready to use V737 Overhead.

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