Prop Cockpit Trainer & 2S

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

VRinsight

Contents

Copyright ©2012 VRinsight
www.vrinsight.com

1. Introduction

1.1 General

The ***Prop Cockpit Trainer*** of **VRinsight** is a realistic propeller training device with full control and screen system for instrument flight. Modeled single engine aviation, aluminum yoke, Engine start Magnetos (5-positions), Landing Gear, 3 Axis lever, Flap switch, Radio panel & GPS are closely reproduced to experience real instrument flight synchronized with Microsoft's Flight Simulator.

The ***Prop Cockpit Trainer*** is the one of the most affordable training device for student pilots, on-line pilots to fly at anytime and anywhere.

It is completely interfaced with MSFS9 and MSFSX through add-on software "***VRiSim***" which enables ***Prop Cockpit Trainer*** to perform full simulation with simple connecting PC through USB.

1.2 Features

- Same functionality and externality with real Propeller cockpit
- Gauges on the panel;
  - Speed indicator
  - ALTITUDE indicator with position bar setting rotary knob
  - ALTIMETER with BARO setting rotary knob
  - TURN COORDINATOR
  - HEADING indicator with heading bug and gyro rotary knob
  - VERTICAL SPEED indicator
  - VOR1 indicator with OBS rotary knob
  - VOR2 indicator with OBS rotary knob
  - ADF indicator with HDG rotary knob
  - FUEL/OIL gauge
  - Manifold pressure gauge
  - TACHOMETER
  - CLOCK
  - GPS with push buttons and rotary knob (GPS500 model)
- Radio panel
  - Red color 7 Segments and tact switches.
  - Luminous Tact switches
  - Integrated unit with all radio stack units ; COM 1 & 2, NAV 1 & 2, ADF, DME, TRANSPONDER, Auto-pilot
- Solid cast aluminum powder coasted yoke.
- Controls on switch panel
  - Engine start magnetos switch ; 5 positions
  - Battery switch
  - Fuel boost pump switch
  - Light switches ; BCN, LANDM TAXI, NAV, STROBE
  - Pitot heat switch
  - Pitch / Trim wheel with status indicator FNDs
  - 3 Axis lever ; Throttle, Fuel mixture, Propeller pitch
- Flap lever
- Fuel tank selector
- Landing gear switch with position indicator lights

Copyright ©2012 **VRinsight**
www.vrinsight.com

- Fully metal case & Aluminum cases
- Standalone type
- Available in Window mode only
- USB 2.0 compliant connection for control interface
- External power requirement : 110V / 220V free voltage
- Video port requirement : One free DVI / VGA video port
- Compatible with Microsoft's Flight Simulator X and 2004
- Compatible with Microsoft Windows XP, Vista and Windows 7
- Dimensions & Weight (Prop Cockpit Trainer)
  W : 75 cm L : 78 cm H : 46 cm (without feet) /103cm (with feet)
  Weight : 31 kg (without feet) / 33 kg (with feet)

- Dimensions & Weight (Prop Cockpit Trainer – 2S)
  W : 75 cm L : 108 cm H : 46 cm (without feet) /103cm (with feet)
  Weight : 51 kg (without feet) / 53 kg (with feet)
- 1 year warranty

Copyright ©2012 **VRinsight**
www.vrinsight.com

1.3 Display & Controls Configuration

The ***Prop Cockpit Trainer*** has a configuration of Cessna 172 / 182.
Its displaying areas displays the Speed indicator, ALTITUDE indicator, ALTIMETER, TRUN COORDINATOR, HEADING indicator, VERTICAL SPEED indicator, VOR 1 indicator, VOR 2 indicator, ADF indicator, FUEL / OIL gauge, TACHOMETER, CLOCK and GPS.

- GPS is a replica of Garmin 500

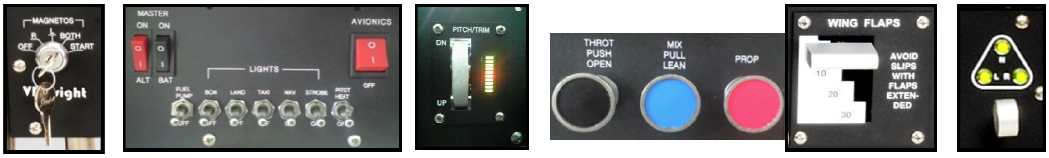
Its control parts are divided by Radio panel, Yoke and Switch panel.
The Radio panel features COM 1/2, NAV 1/2, ADF, DME, Transponder, Auto-pilot unit
The switch panel features Magnetos, Battery Avionics & light switches, Pitch / Trim wheel, 3 Axis lever, Flap lever, Landing gear.

Cockpit panel with GPS

Radio panel

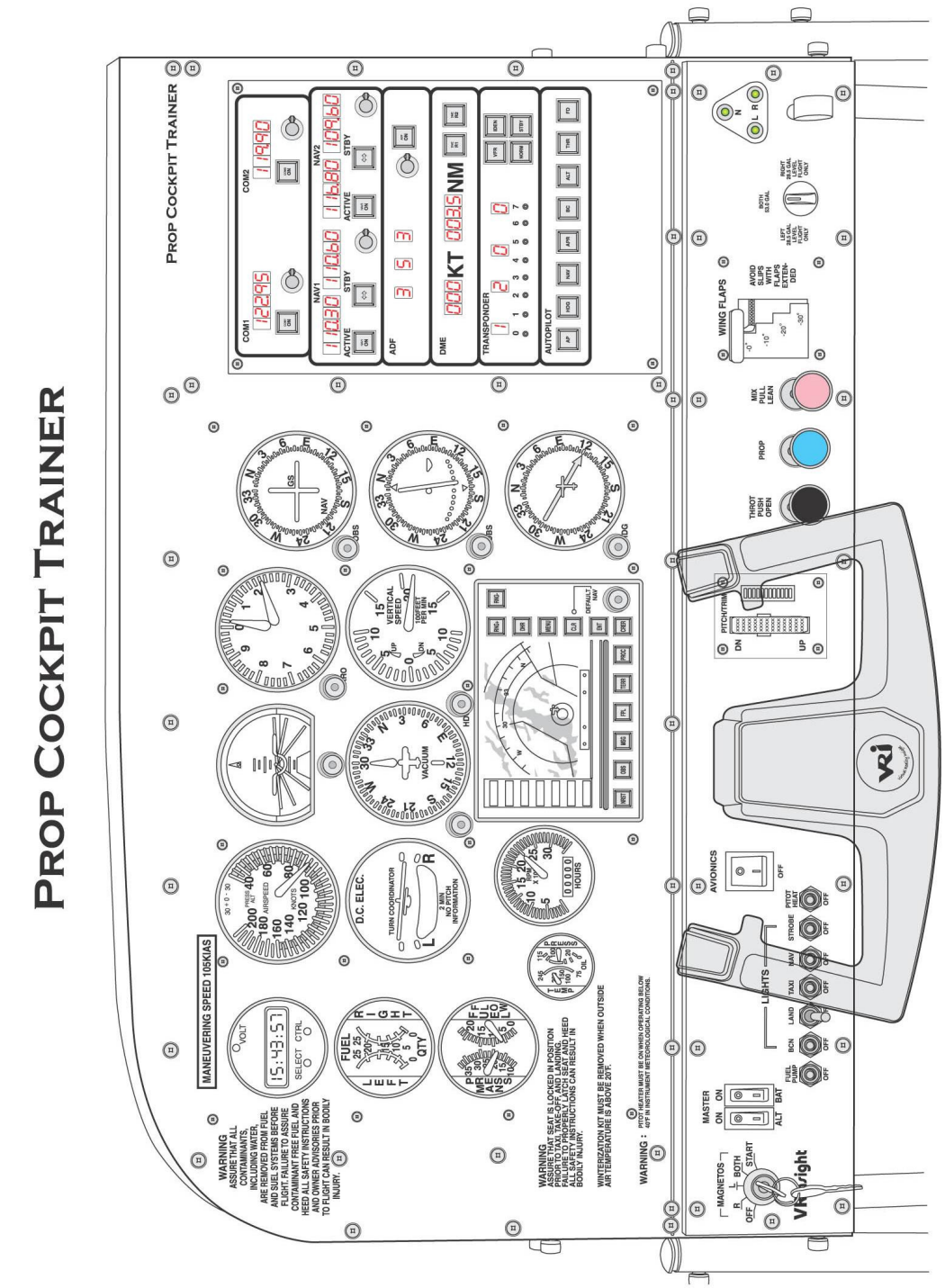
Yoke

Switch panel

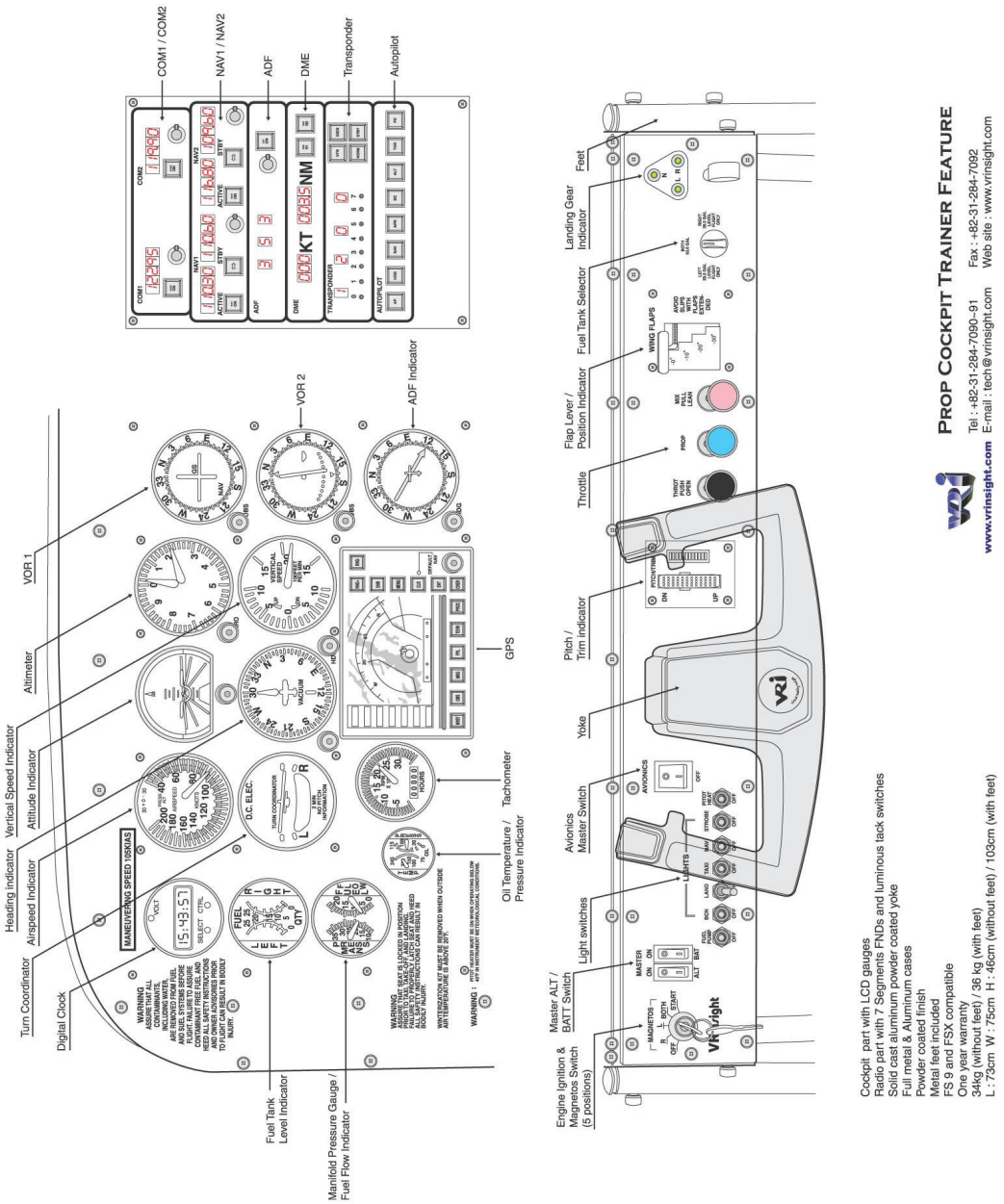


Magnetos | Battery, Avionics & light switches | Pitch / Trim wheel | 3 Axis lever | Flap lever | Landing gear

Copyright ©2012 **VRinsight**
www.vrinsight.com

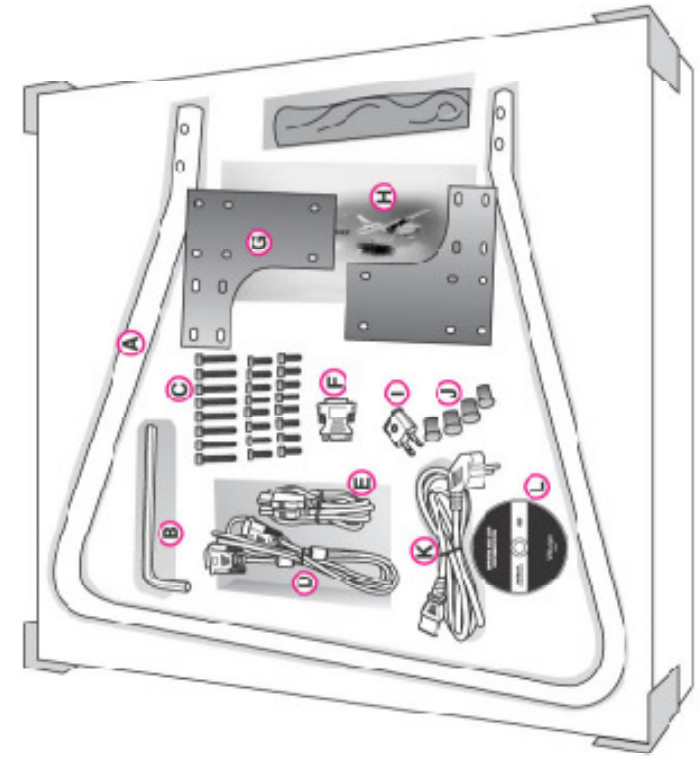


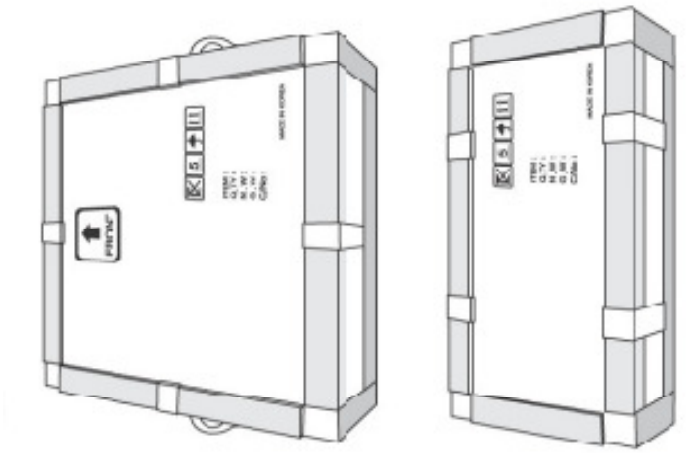
Copyright ©2012 **VRinsight**



Copyright ©2012 **VRinsight**
www.vrinsight.com

2. Deliverables





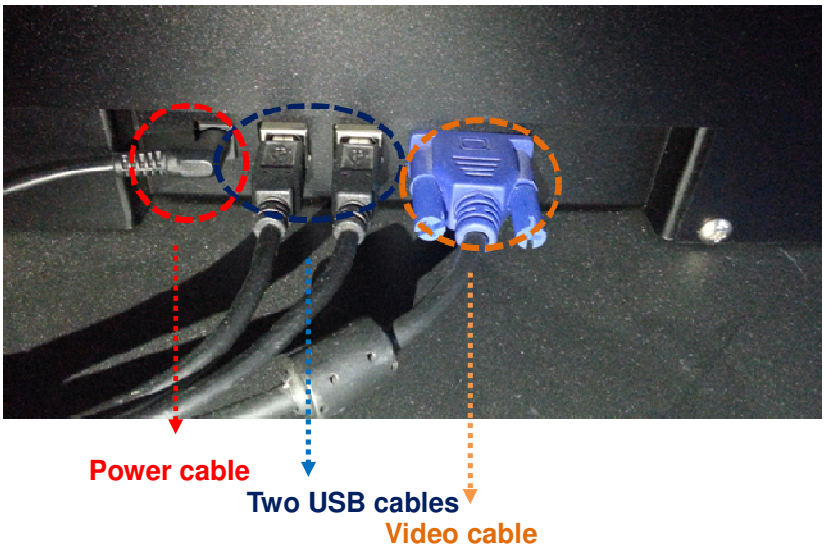
A : Stand foot / 2EA
B : Wrench / 1EA
C : Wrench bolt (8 x 10 / 16EA, 8 x 40 /8EA)
D : Video cable / 1EA
E : USB cable / 1EA
F : Adaptor VGA to DVI / 1EA
G : L-shape plate / 2EA
H : Check list / 1EA
I : Plug adaptor (220V->110V) / 1EA
J : Foot cap / 4EA
K : Power cable / 1EA
L : DVD / 1EA

Copyright ©2012 **VRinsight**

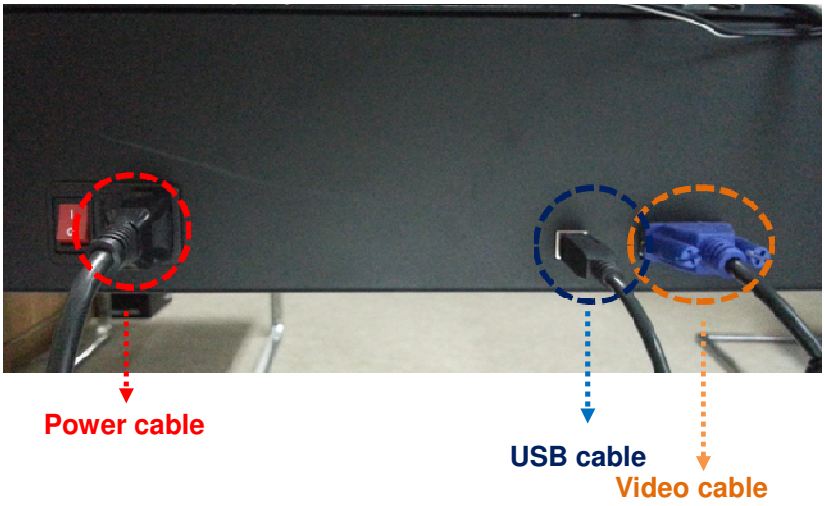
3. Connection

3-1. Plug/Connection Diagram

There are two connection parts; the linkage between the upper part and the lower part



The back of the lower part



- Video cable for color LCD display
- Power cable for external power source
- USB cable (A to B type) is for interface

Copyright ©2012 VRinsight
www.vrinsight.com

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 **Prop Cockpit Trainer** 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 **Prop Cockpit Trainer** module installer can be found in the supplied DVD,

\VRiSim\Install_ProPit.exe
\VRiSim\Install_Radio-Stack.exe
\VRiSim\Install_PCTSP.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. Panel Installer installation

Panel Installer software configures each aircraft to use in **Prop Cockpit Trainer**. Once it is done, no additional configuration is required.

***NOTE** : See the **Appendix** for **Panel Installer** on how to configure the aircraft*

4-4. FSX Acceleration pack installation

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

Copyright ©2012 VRinsight
www.vrinsight.com

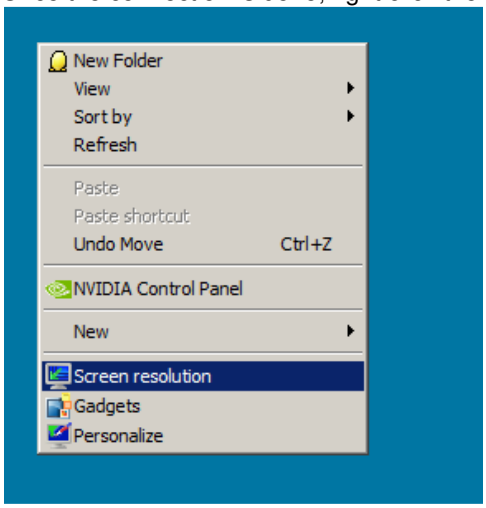
5. Monitor setting

There is a 20.1" color LCD monitor inside of **Prop Cockpit Trainer.** It means the **Prop Cockpit Trainer** is a LCD monitor so to make the **Prop Cockpit Trainer** work, **Prop Cockpit Trainer** should be detected in your computer.

Step 1. Connect the external power source to the **Prop Cockpit Trainer**.

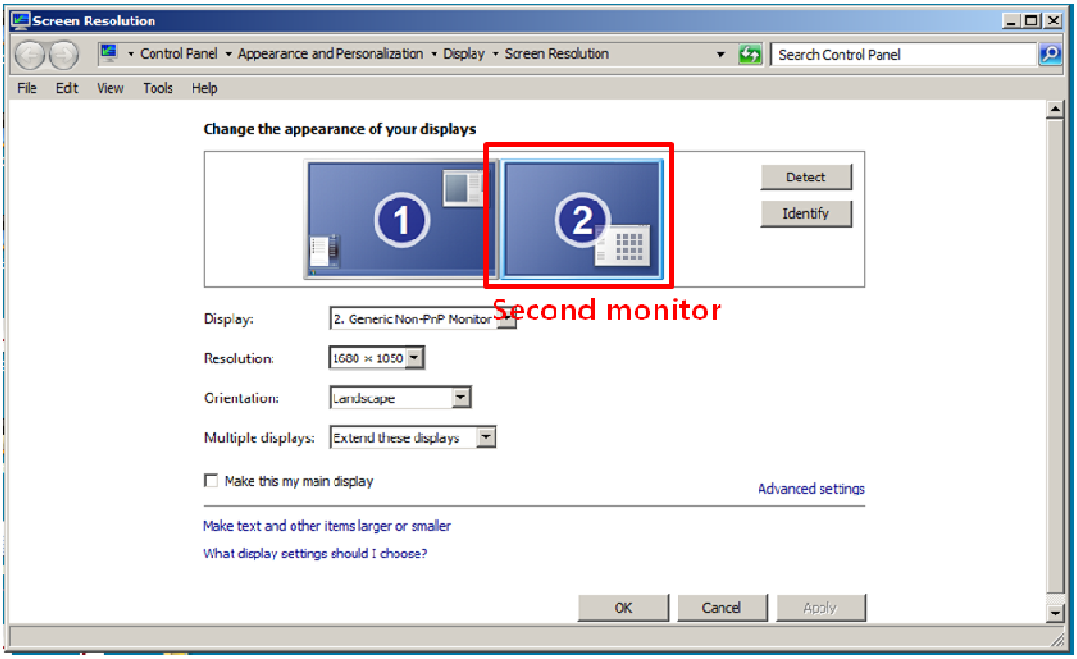
Step 2. Connect the USB cable of the **Prop Cockpit Trainer** to the computer

Step 3. Connect the Video cable of the **Prop Cockpit Trainer** to the computer
Once the connection is done, right click the **Desktop** (=**Wallpaper**) and go to **Screen resolution**

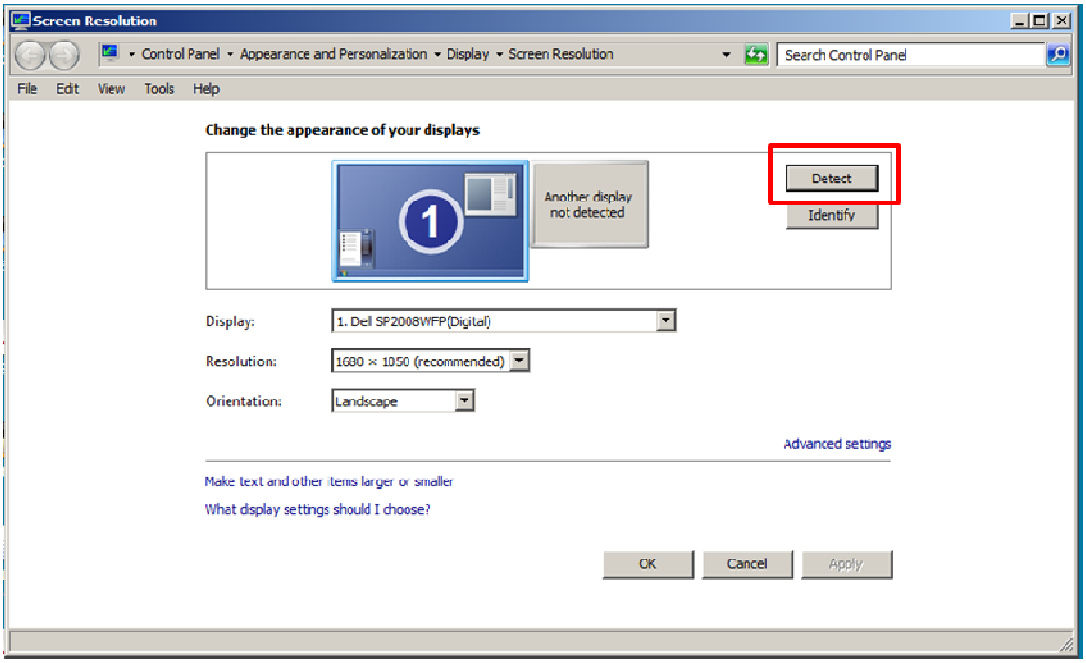


Step 4. Once the **Prop Cockpit Trainer** is properly connect to the computer, monitor No.2 (=**Prop Cockpit Trainer**) is automatically detected like below image.

Copyright ©2012 VRinsight
www.vrinsight.com

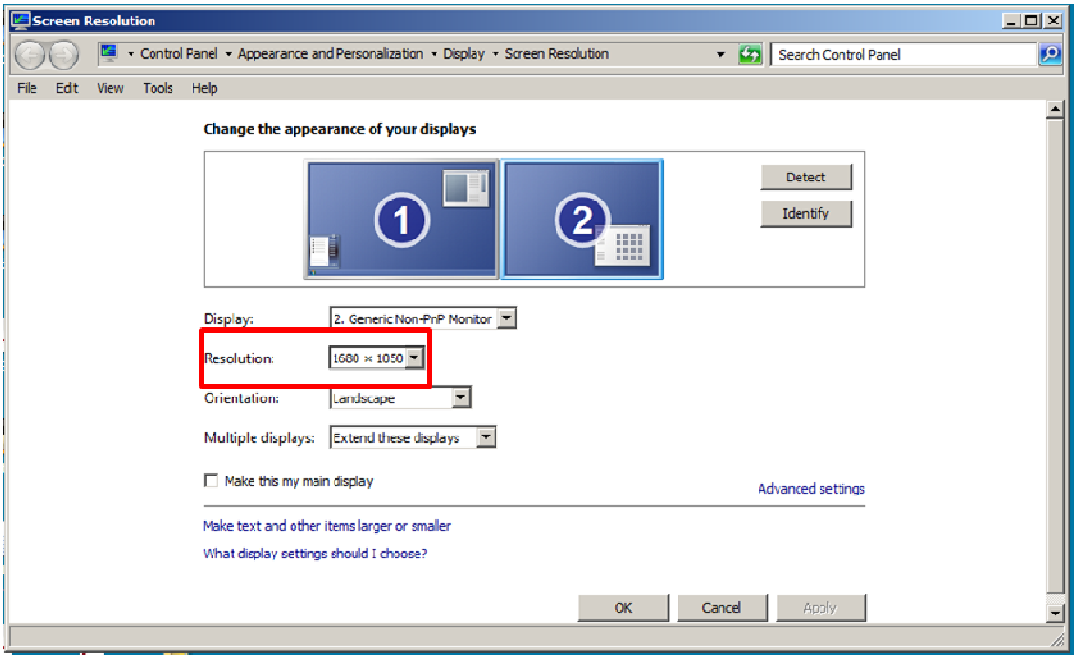


NOTE: *If the* ***Prop Cockpit Trainer*** *is not detected as a second monitor like below image, click "****Detect****".*

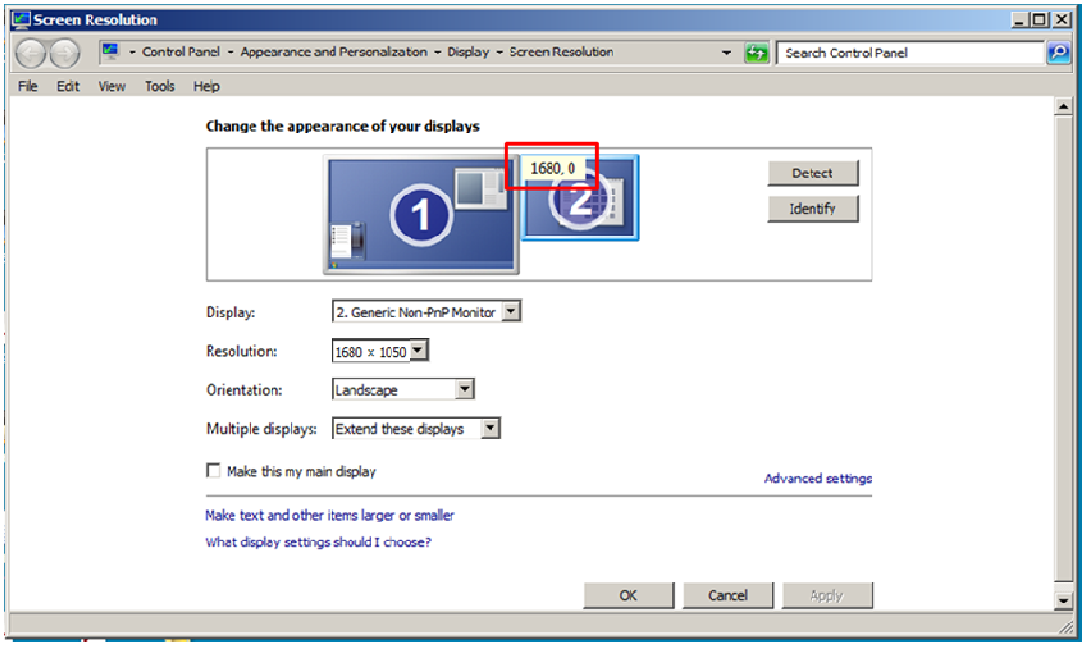


Step 5. Find the recommanded screen resolution: 1680 * 1050 (1024 * 768 / 1920 * 1080)

Copyright ©2012 **VRinsight**
www.vrinsight.com



Step 6. Place the mouse cursor at the left top of the Monitor No. 2 and check the position.



Copyright ©2012 **VRinsight**
www.vrinsight.com

6. 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 **Prop Cockpit Trainer**.

***NOTE** : **Section 4. Software installation & Section 5. Monitor setting** 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".
***NOTE :** Be sure that the selected aircraft should be configured through the **Panel Installer** in advance.*

Step 2. Load the Prop Cockpit Trainer view.

Prop Cockpit Trainer view is automatically loaded like under.

NOTE:** If the **Prop Cockpit Trainer view** is not loaded, go to **VIEW**-> **Instrument Panel** -> **Main** and check **NORMAL

NOTE:** If the **View mode** is **3D,** change it to **Cockpit

***NOTE:** Be sure that MSFS is run in **Window mode**.*

Copyright ©2012 **VRinsight**
www.vrinsight.com

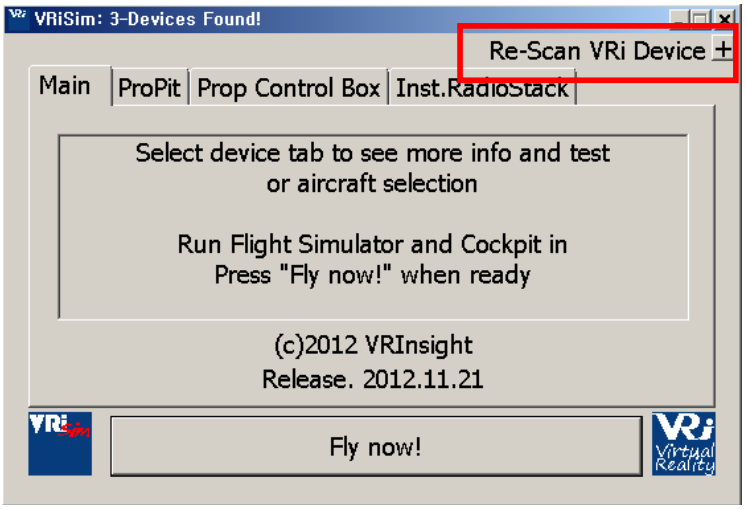
Step 3. Undock the Prop Cockpit Trainer view

Place the cursor on the **Prop Cockpit Trainer** view and right click to **Undock window**

Step 4. Run VRiSim

Double-click "**VRiSim**" short-cut icon to run. "**VRiSim**" searches all VRinsight hardware units and list up founded device(s). Device searching process could be taken several minutes. Following image is showing that three device, **ProPit, Prop Control Box** and **Inst.RadioStack** are found and listed by "**VRiSim**" software. "**VRiSim**" manages multiple devices.

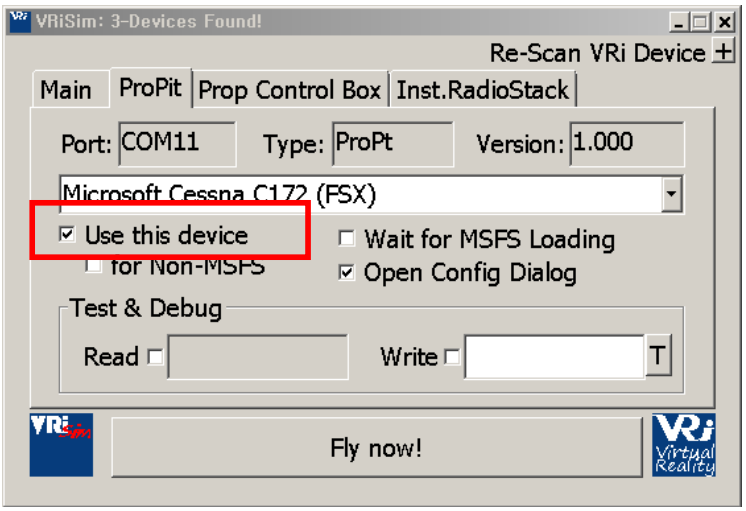
Copyright ©2012 **VRinsight**
www.vrinsight.com



NOTE : *Even if your* ***Prop Cockpit Trainer*** *is connected to your computer and* ***VRiSim*** *does not find the three devices, press* **+** *in order to find all VRinsight hardware units again.*

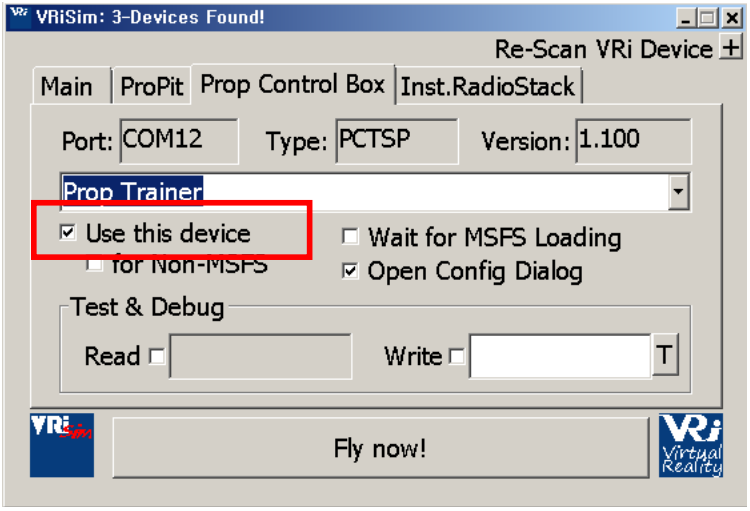
Step 5. Select Aircraft

Go to the tab of each device and select "**Aircraft**". And then check "**Use this device**".

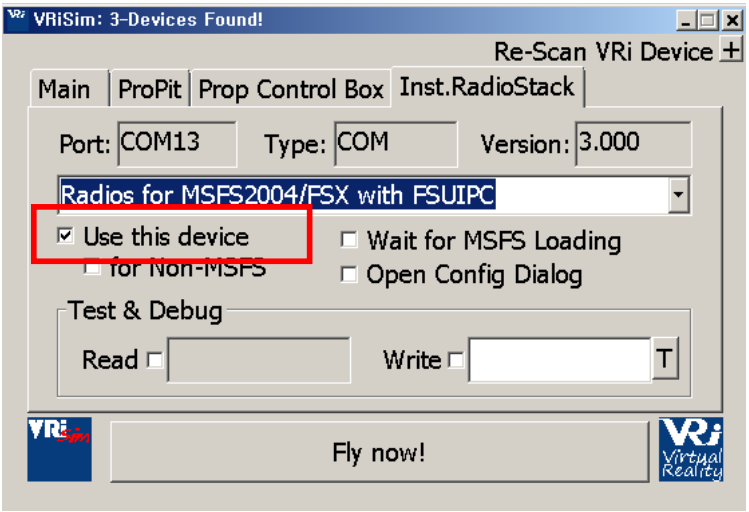


- **In ProPit tab, the selected aircraft should be already configured through the panel installer.**

Copyright ©2012 **VRinsight**
www.vrinsight.com



- **In Prop Control Box tab, select "Prop Trainer"**



- **In Inst.RadioStack tab, select "Radios for MSFS2004/FSX with FSUIPC"**

Step 6. Fly Now!

As the aircrafts are specified to fly with VRi's unit, press "**Fly Now**!" button.
The undocked **Prop Cockpit Trainer** window will move to the **Prop Cockpit Trainer.**

NOTE: *More about the* ***undocked Prop Cockpit Trainer window****, see the* ***Appendix*** *for* ***Window Configuration.***

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

Copyright ©2012 **VRinsight**
www.vrinsight.com

Copyright ©2012 **VRinsight**
www.vrinsight.com

Appendix

FSUIPC
VRiSim
Panel Installer
Window Configuration
Calibration

VRInsight, ©2012

Copyright ©2012 VRinsight
www.vrinsight.com

FSUIPC

1. FSUIPC Installation

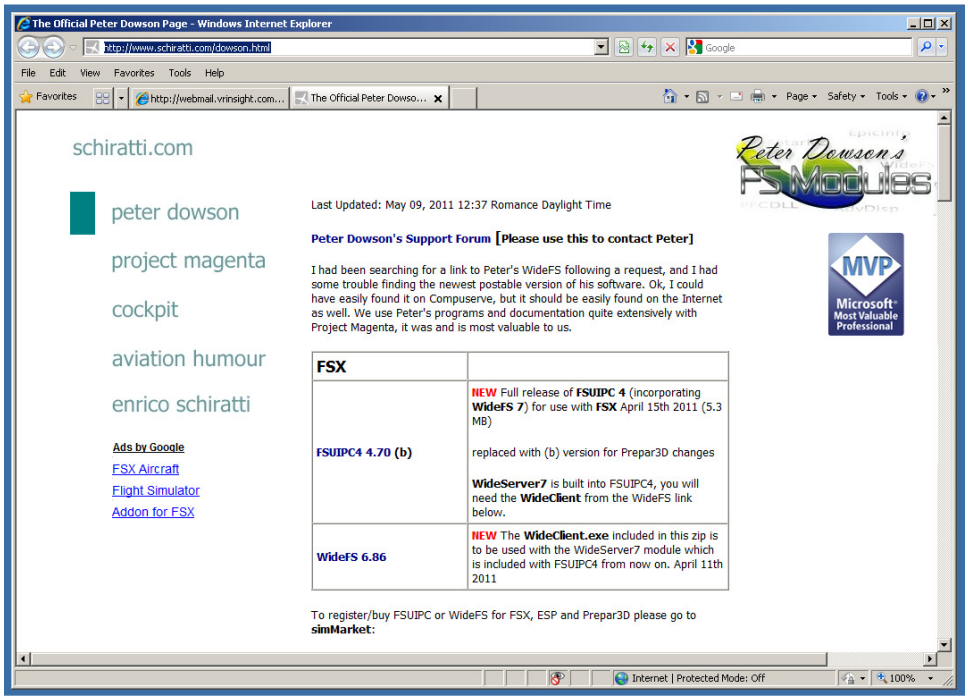
FSUIPC is add-on module for Microsoft's FlightSimulator. VRInsight's hardware panel interacts with Flight Simulator via FSUIPC. **VRiSim** is bridging VRInsight's hardware panel and Flight Simulator via FSUIPC. Actually FSUIPC is pay-ware. **VRiSim** is working with unregistered version of FSUIPC under 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

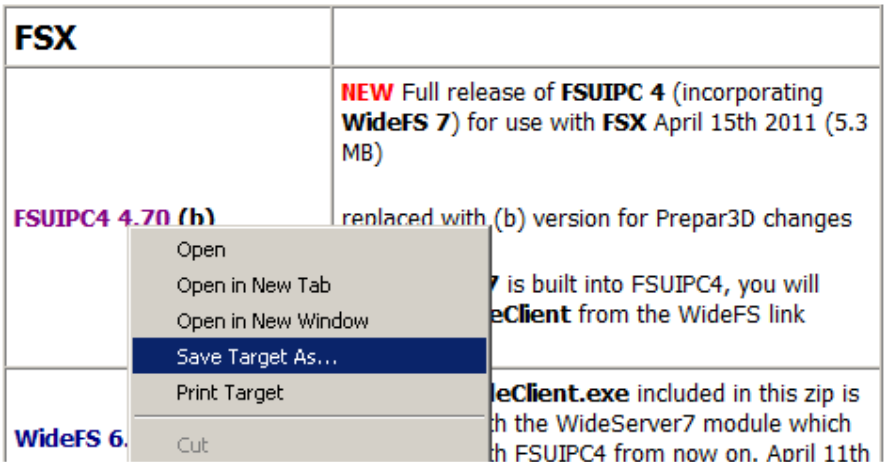
Web browser will be directed to FSUIPC download page, if "Visit Pete Dowson's PSUIPC page" is checked.



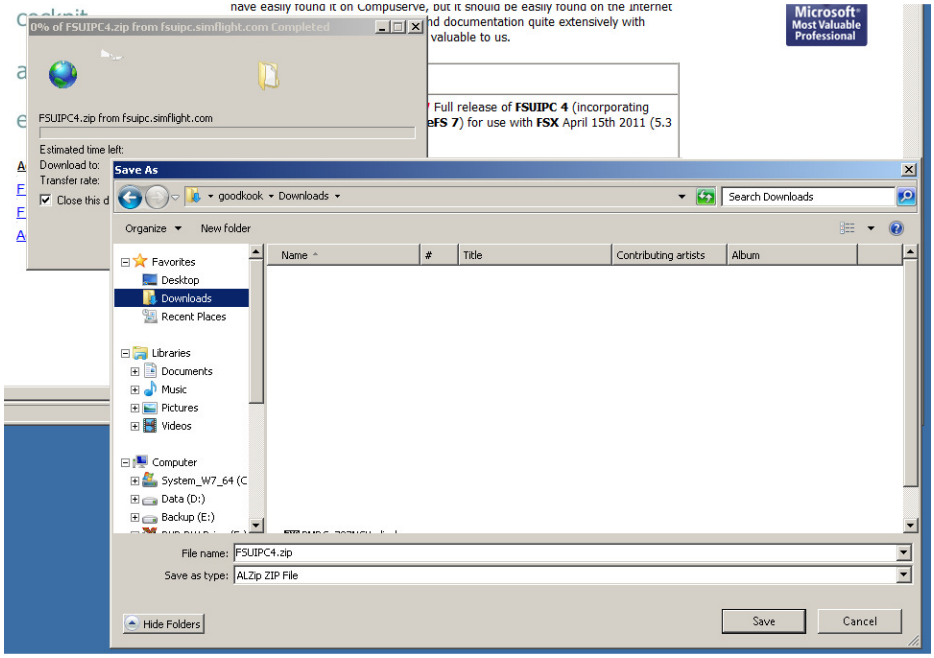
Step 2. Download FSUIPC

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

Copyright ©2012 **VRinsight**
www.vrinsight.com

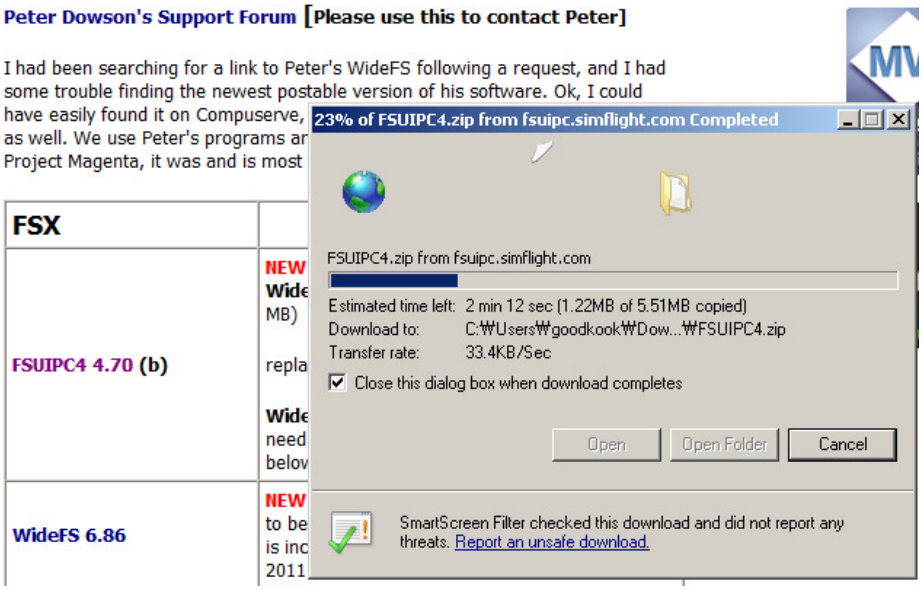


Specify a folder where the FSUIPC4.zip is saved (i.e. “Download”),



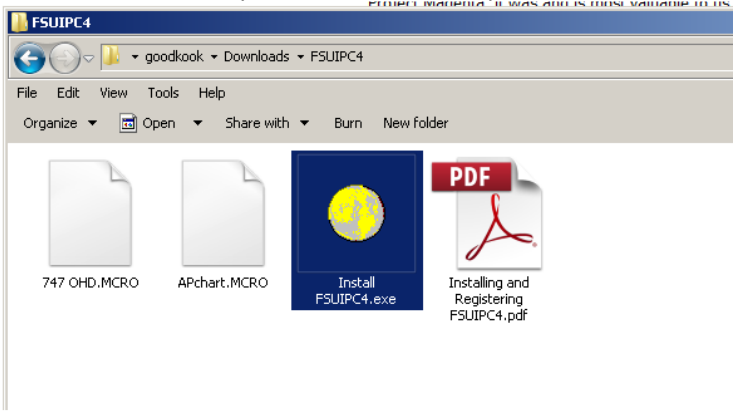
It’ll take several minutes depending on internet connection.

Copyright ©2012 **VRinsight**
www.vrinsight.com



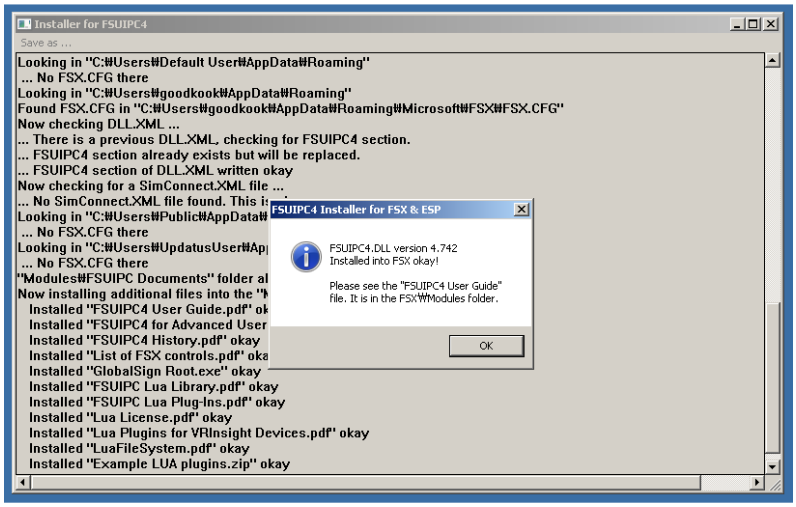
Step 3. Run FSUIPC Installer

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

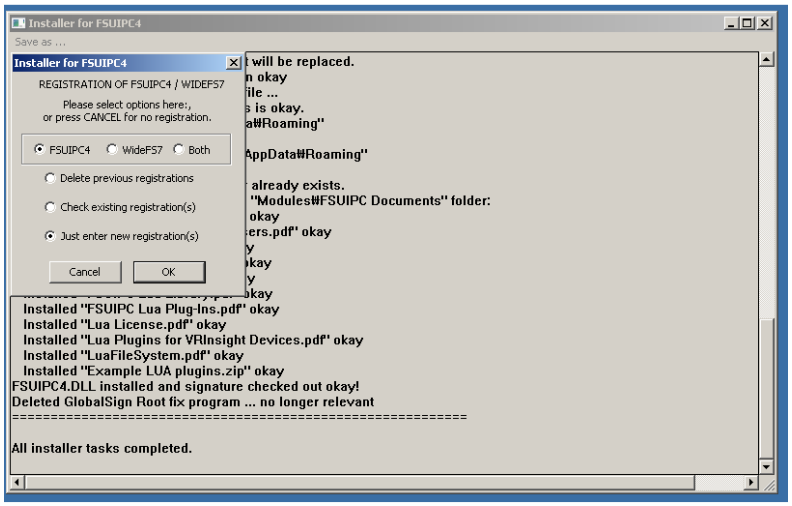


Installation success message will be shown as follows;

Copyright ©2012 **VRinsight**
www.vrinsight.com



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"

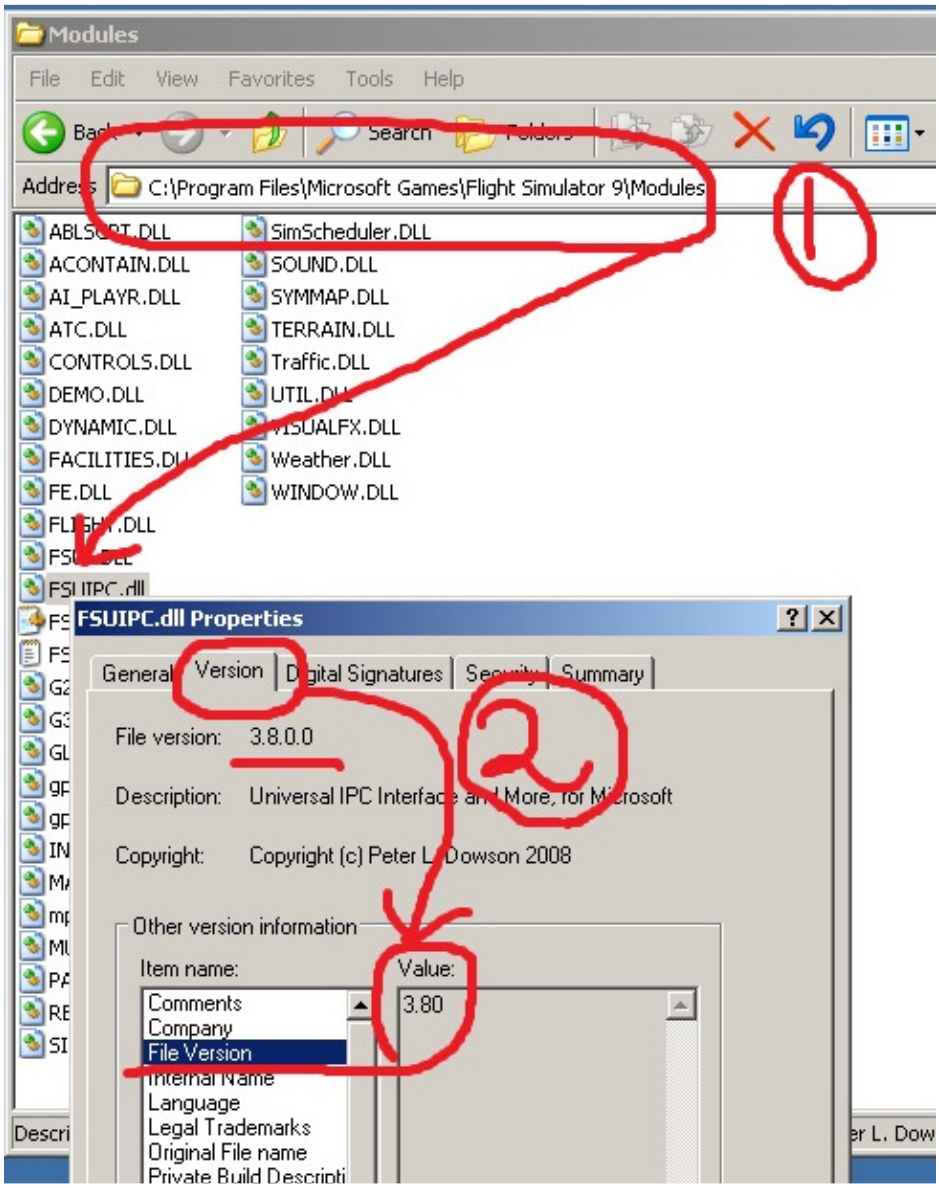
FSX:
"C:\Program Files\Microsoft Games\Flight Simulator X\Modules"

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

Copyright ©2012 **VRinsight**
www.vrinsight.com

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).

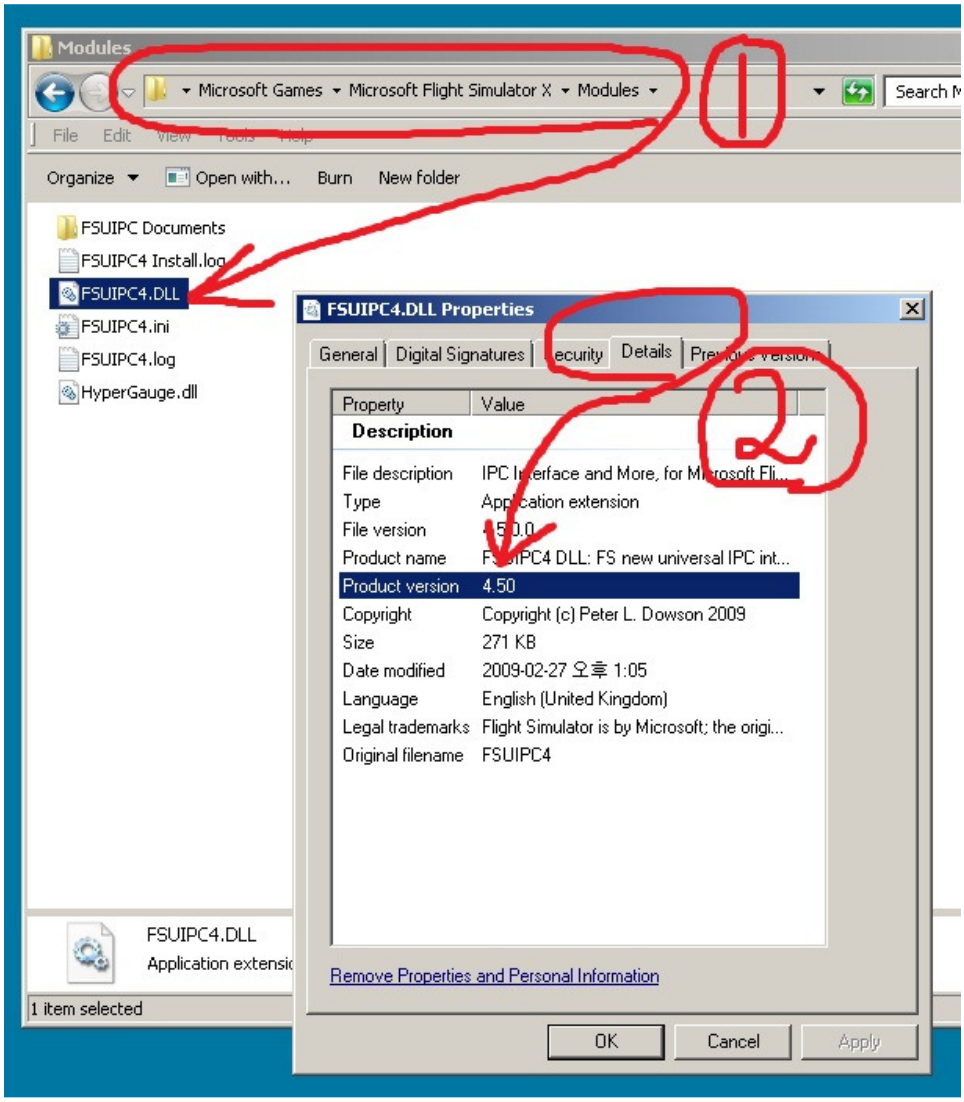
Following screen shot image is taken in Windows XP and FS 2004. FSUIPC’s version number should be 3.7 or above.



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.

Copyright ©2012 **VRinsight**
www.vrinsight.com



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.

Copyright ©2012 **VRinsight**
www.vrinsight.com

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,

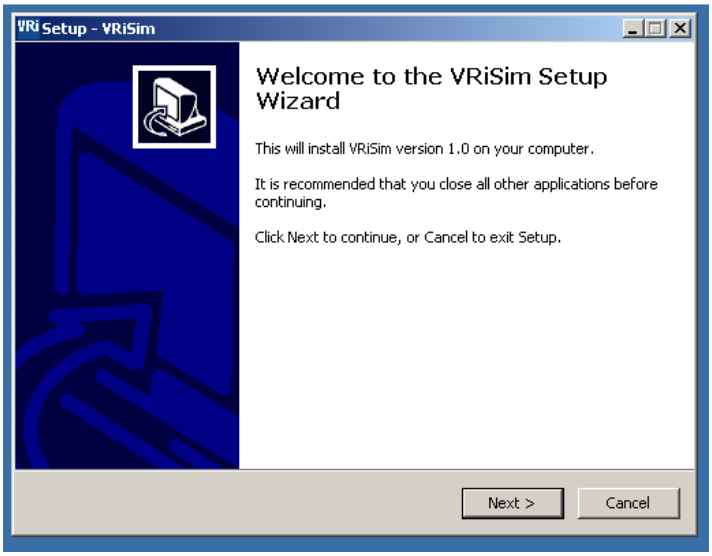
\VRiSim\Install_VRiSim.exe

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.

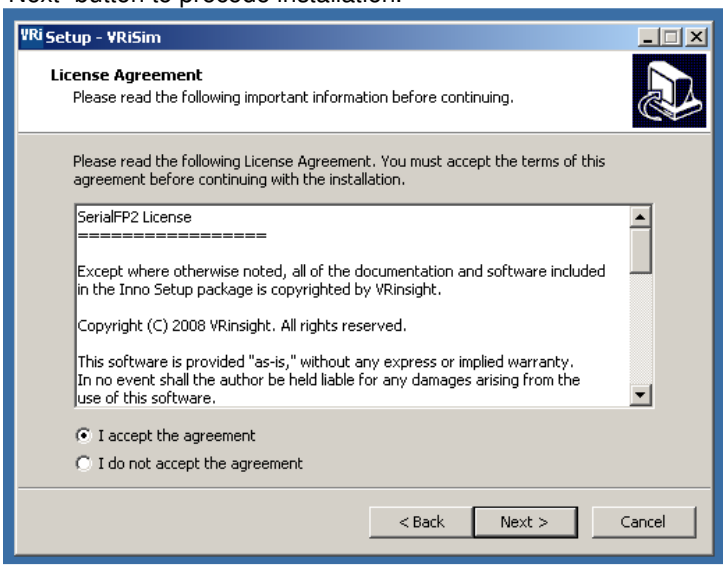
Press Next button on **VRiSim** setup wizard window

Copyright ©2012 VRinsight
www.vrinsight.com



Step 2. License Agreement

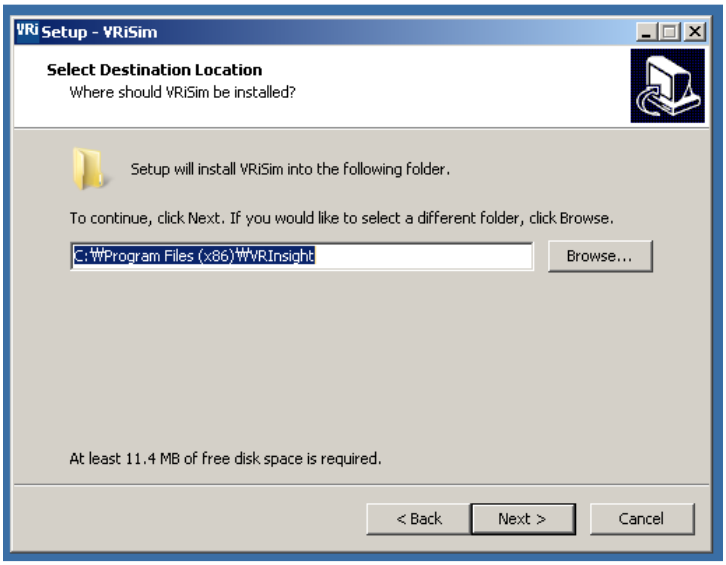
Read License Agreement and check “Accept agreement” radio button. Then press “Next” button to precede installation.



Copyright ©2012 **VRinsight**
www.vrinsight.com

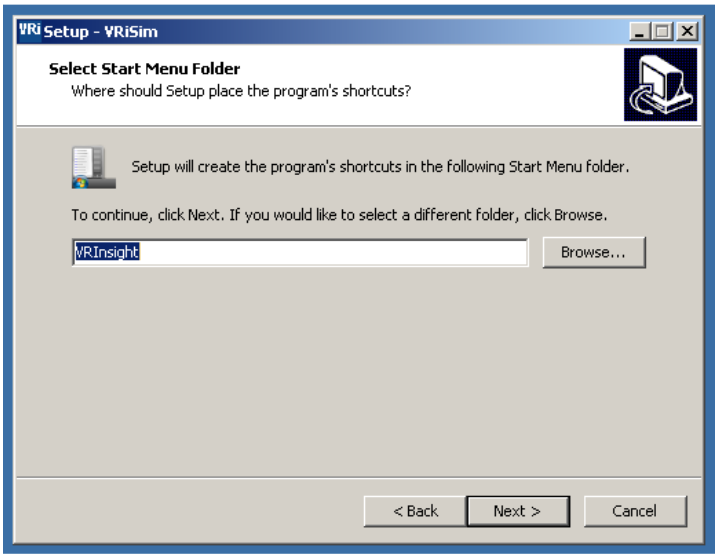
Step 3. Select Destination Location

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



Step 4. Select Menu Folder

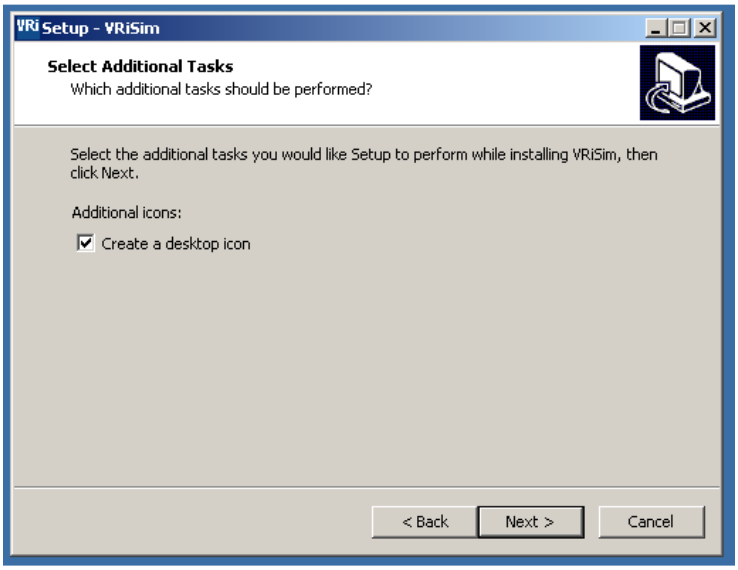
Select Menu folder name as default "VRInsight" and press "Next" button.



Copyright ©2012 **VRinsight**
www.vrinsight.com

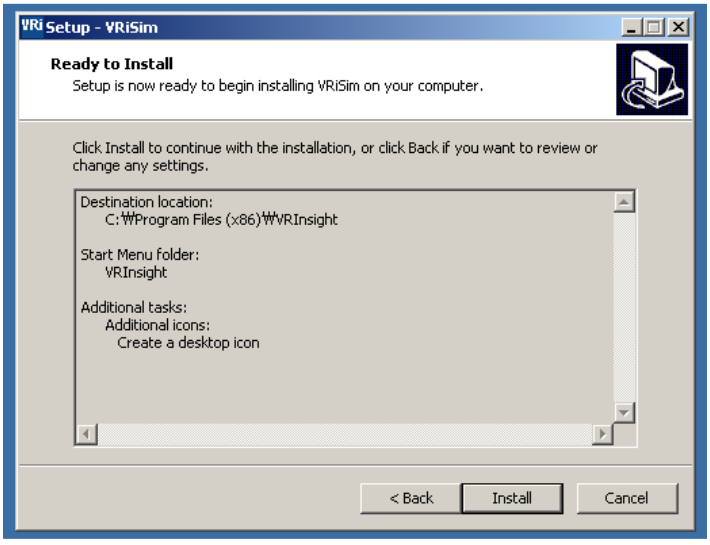
Step 5. Create a desk-top icon

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



Step 6. Ready to install

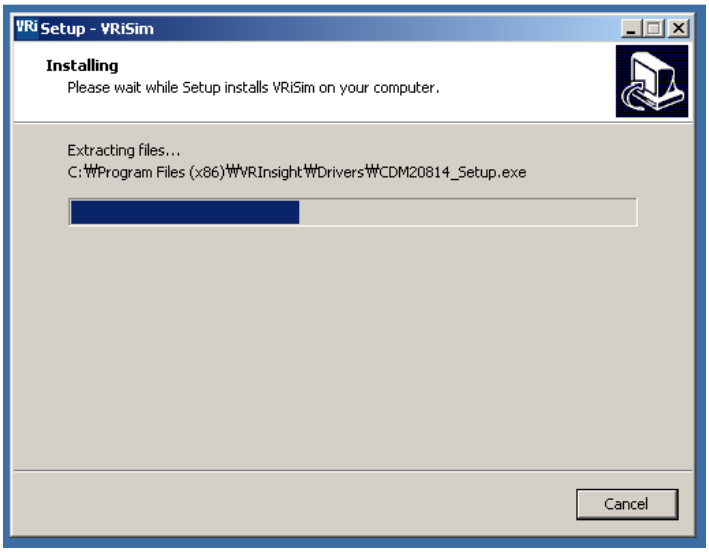
Now ready to install **VRiSim**. Review installation setting and press “Install” button.



Copyright ©2012 **VRinsight**
www.vrinsight.com

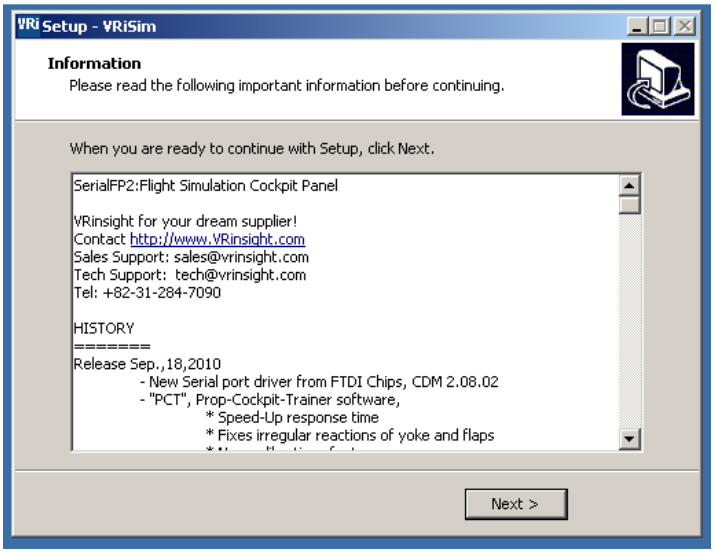
Step 7. Installing

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 web-site. Press "Next" button.

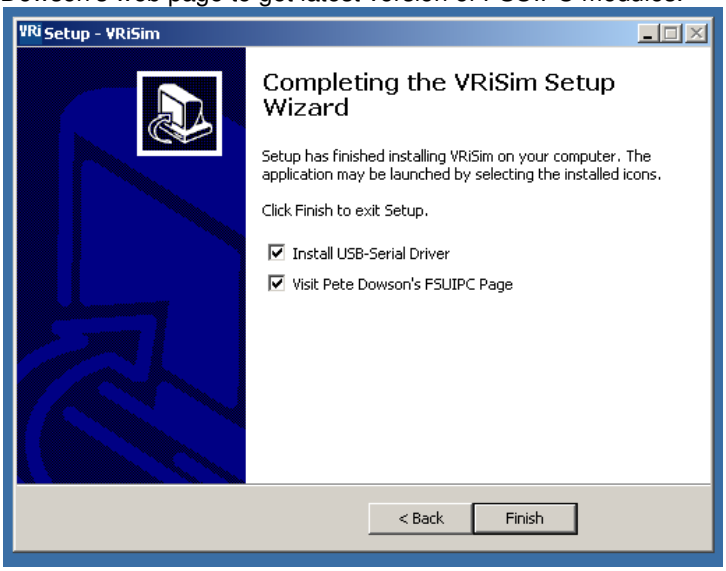


Step 9. Install USB-Serial Driver

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

Copyright ©2012 **VRinsight**
www.vrinsight.com

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

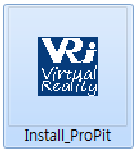
The base-package installer only installs basic utilities; "**VRiSim**" and "**Panel Installer**". Additionally device specific module must be installed. These installers are found in the supplied DVD under the folder named "**VRiSim**". Or downloaded at VRInsight's web-page, http://www.vrinsight.com/devel_shot

3. Prop Cockpit Trainer module Installation

Prop Cockpit Trainer module is divided into three modules ; "**Install_ProPit.exe**", "**Install_Radio-Stack.exe**" and "**Install_PCTSP.exe**"

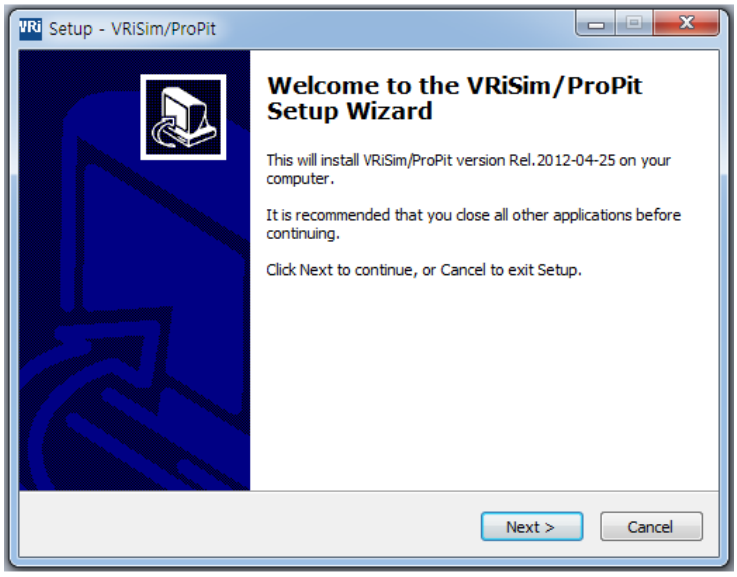
The three module installers can be found in the supplied DVD,
Or downloaded at VRInsight's web-page, http://www.vrinsight.com/devel_shot

Step 1. Run ProPit Installer

Run "Install_ProPit.exe" 

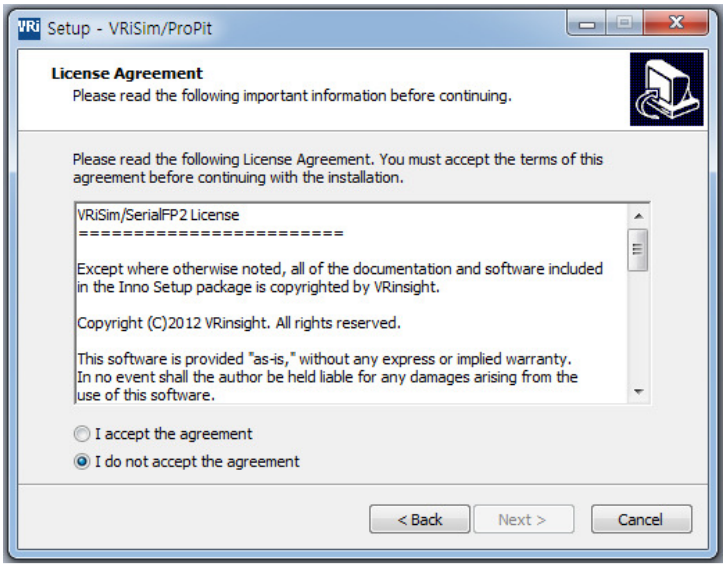
Press Next button on VRiSim/ProPit setup wizard window

Copyright ©2012 **VRinsight**
www.vrinsight.com



Step 2. License Agreement

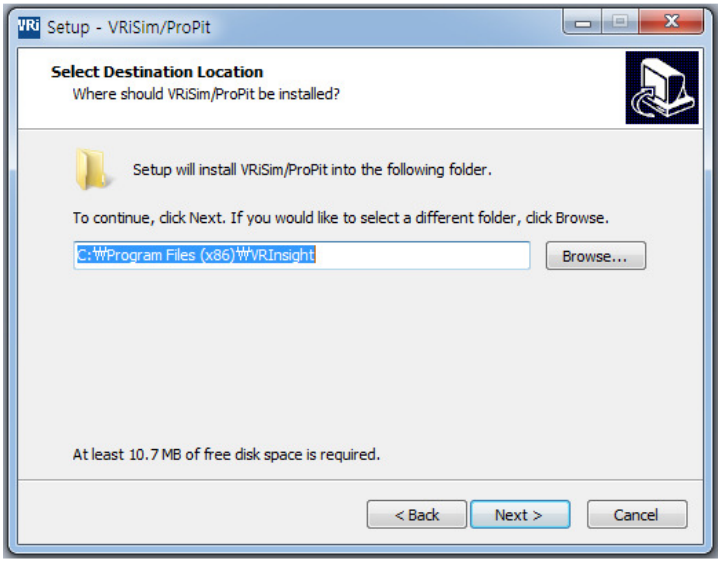
Read License Agreement and check “Accept agreement” radio button. Then press “Next” button to precede installation.



Copyright ©2012 VRinsight

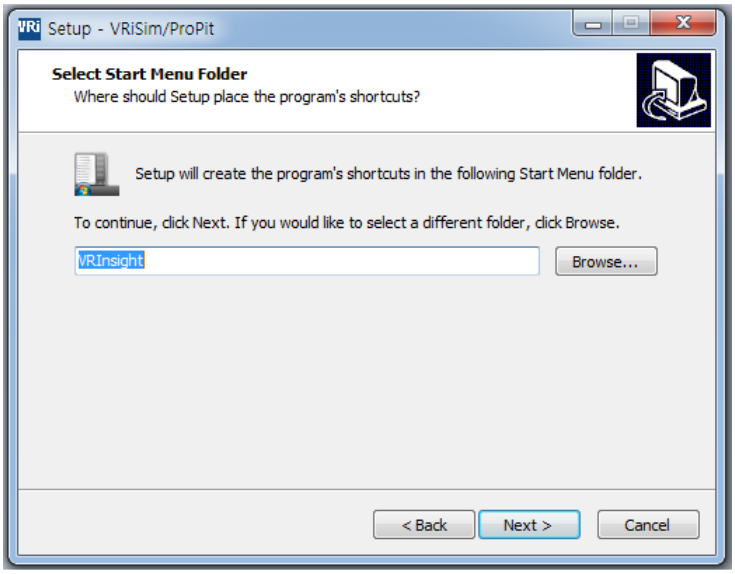
Step 3. Select Destination Location

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



Step 4. Select Menu Folder

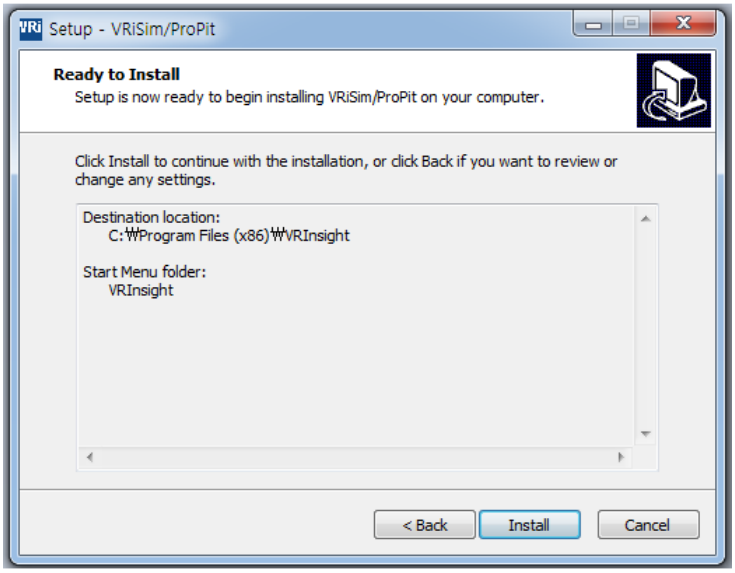
Select Menu folder name as default "**VRInsight**" and press "Next" button.



Copyright ©2012 VRinsight
www.vrinsight.com

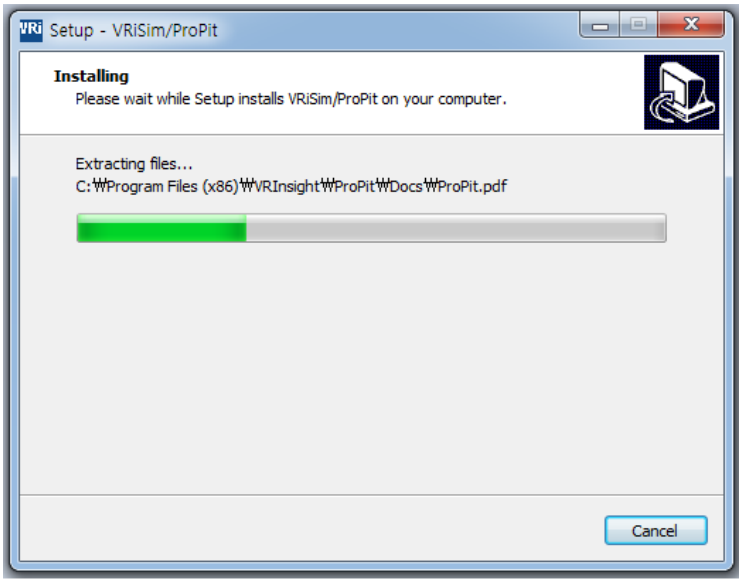
Step 5. Ready to Install

Now ready to install **Prop Cockpit Trainer** module. Review installation setting and press “Install” button.



Step 6. Installing

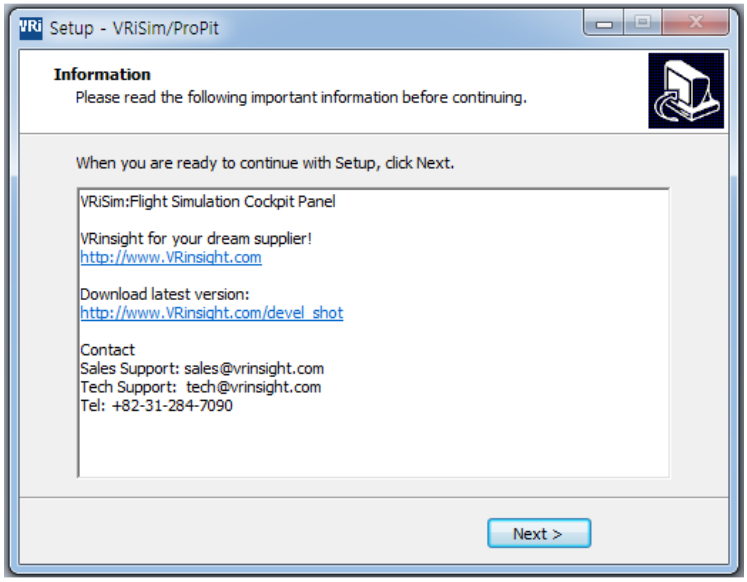
Files are extracted and copied into destination folder during installing step. Animated bar-graph is showing installing process.



Copyright ©2012 VRinsight
www.vrinsight.com

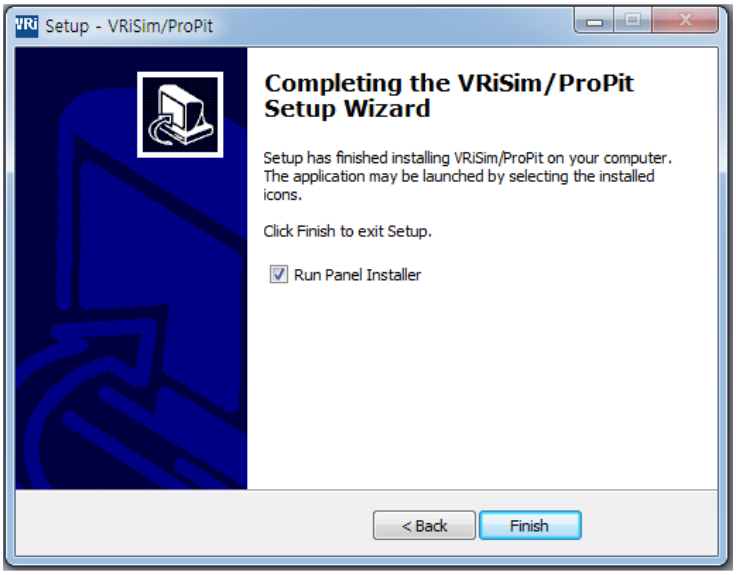
Step 7. Information

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



Step 8. Complete Prop Cockpit Trainer module setup

Prop Cockpit Trainer module setup is done. Optionally, run "**Panel Installer**" to configure the aircraft.



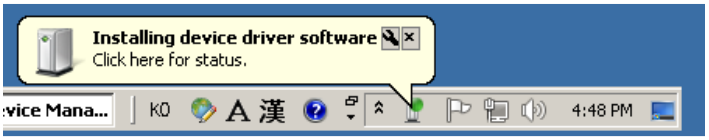
Step 9. Install "Install_Radio-Stack.exe" & "Install_PCTSP.exe".

To complete module installation, follow the step 1 ~ 8 for **"Install_Radio-Stack.exe"** & "**Install_PCTSP.exe**".

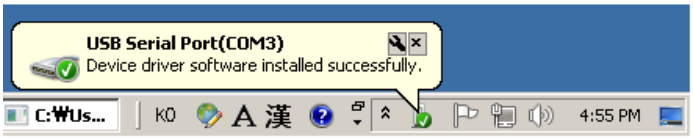
Copyright ©2012 **VRinsight**
www.vrinsight.com

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

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

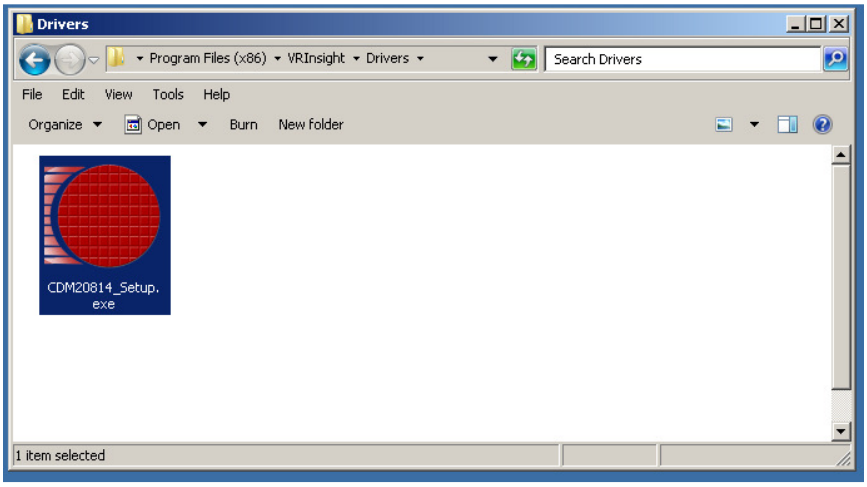


Already the driver software was installed during **VRiSim** software installation, the new device is recognized as "USB Serial Port(COMx)". Following picture is an example of success message for the new VRinsight's flight panel hardware that is recognized as COM3.



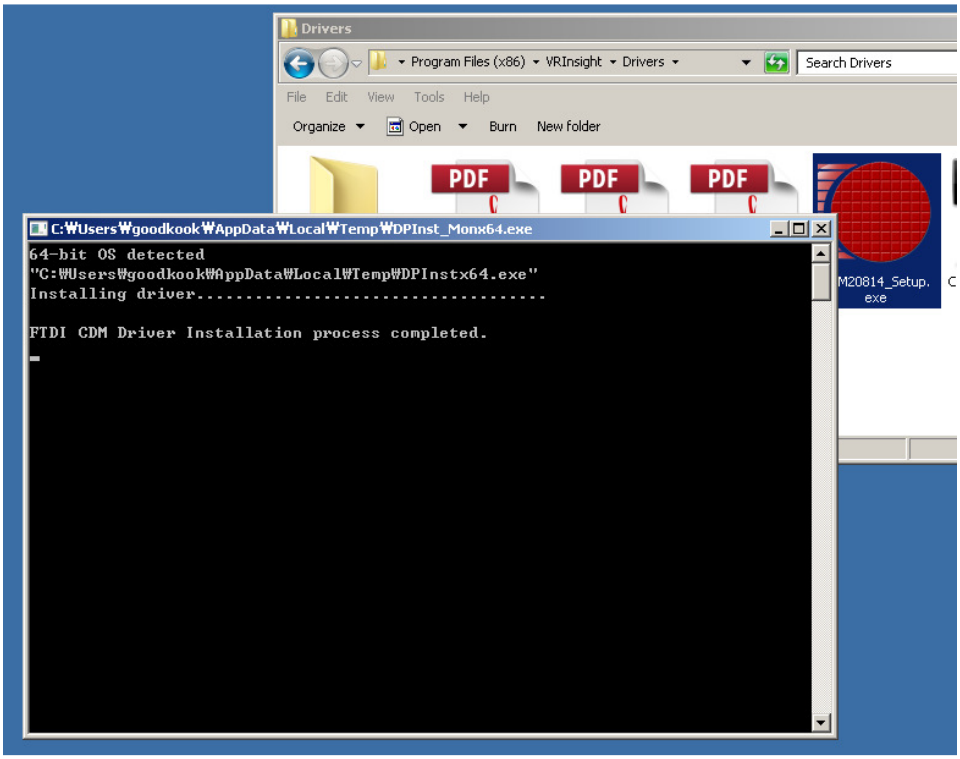
When it fails to install driver software, re-install driver software.

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.

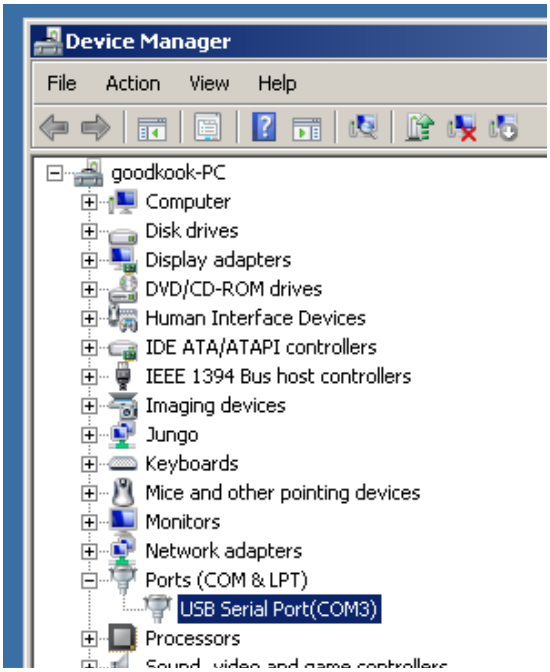


Re-installation of USB-Serial driver is simply to run this installer. Disconnect all VRInsight's flight panel from the PC before running the driver software installer. Temporarily a window is prompted showing "Installing driver……." and ended with completion message. This prompted window will be closed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

Copyright ©2012 **VRinsight**
www.vrinsight.com



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".



Copyright ©2012 **VRinsight**
www.vrinsight.com

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

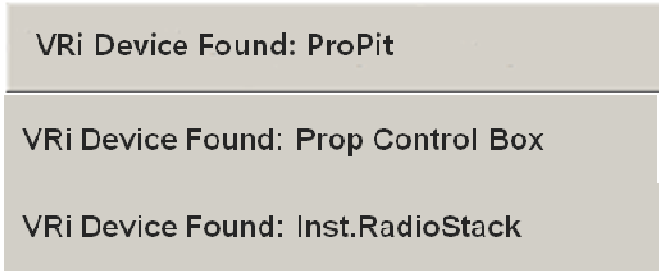
5.Run VRiSim Software

VRiSim is managing software for VRinsight's Flight panel application. It interfaces between **Prop Cockpit Trainer** 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.

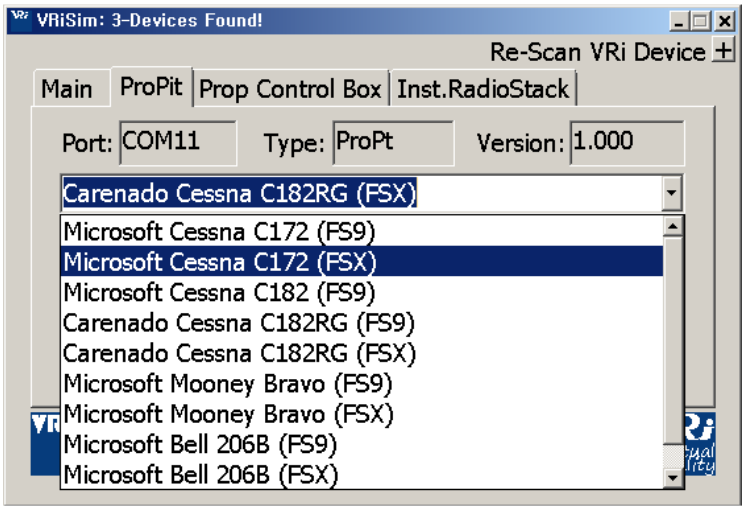
Following three messages would be displayed as all three devices are found and connected successfully,



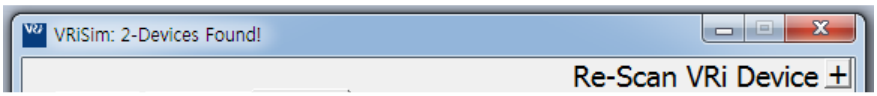
Following picture shows 3 devices ; **ProPit, Prop Control Box** and **Inst.RadioStack**, are found and connected to **VRiSim**. Each device is listed as separated tab.

Copyright ©2012 VRinsight
www.vrinsight.com

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



When any device that is already connected to PC's USB port but it 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.

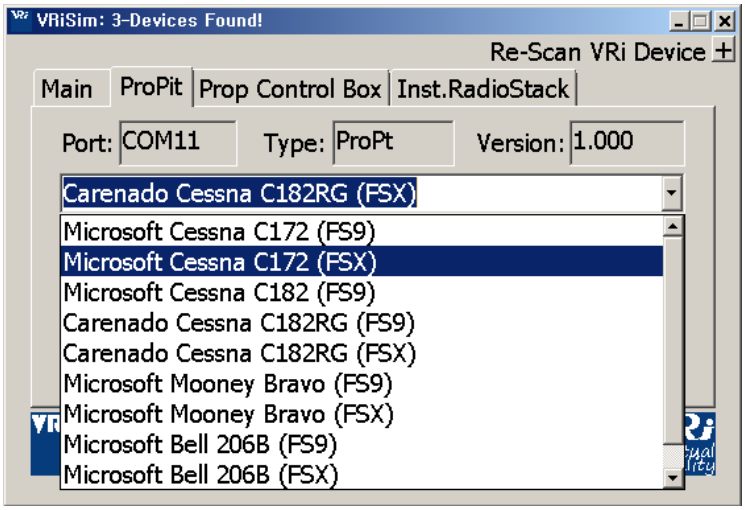


The base-package installer has only **VRiSim**. If additional device specific module is NOT installed, aircraft selection box will be blanked as showing message "NO AIRCRAFT LISTED".

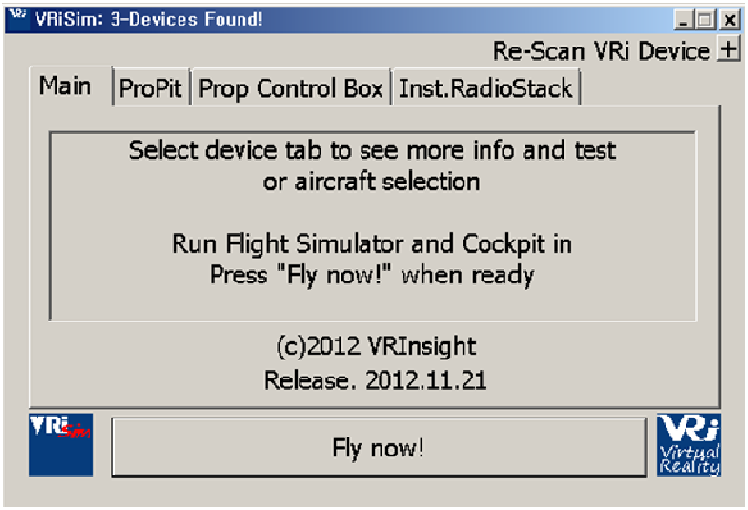
Copyright ©2012 **VRinsight**
www.vrinsight.com

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.



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, the selection is saved for the next flight.

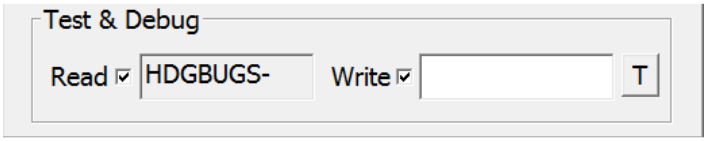


Copyright ©2012 **VRinsight**
www.vrinsight.com

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**.



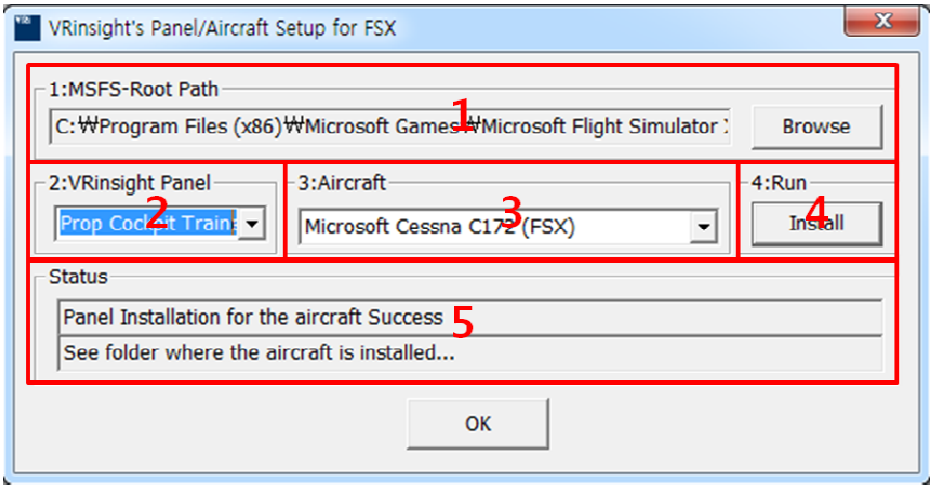
Copyright ©2012 **VRinsight**
www.vrinsight.com

Panel Installer

1. What is "Panel Installer"

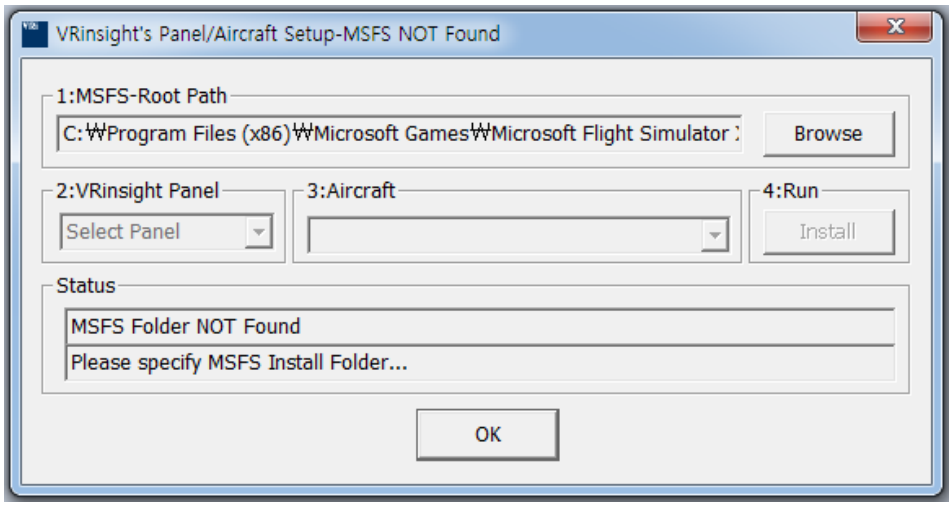
To make VRi's flight panel work with MSFS aircrafts, aircraft's panel configuration file, *panel.cfg*, and related initialization file, **.ini*, need to be modified. When this process is not done properly, Prop Cockpit Trainer will not work. "**Panel Installer**" do this modification properly.

With **Panel Installer**, when you select proper path, product, aircraft, this process will be a piece of cake.



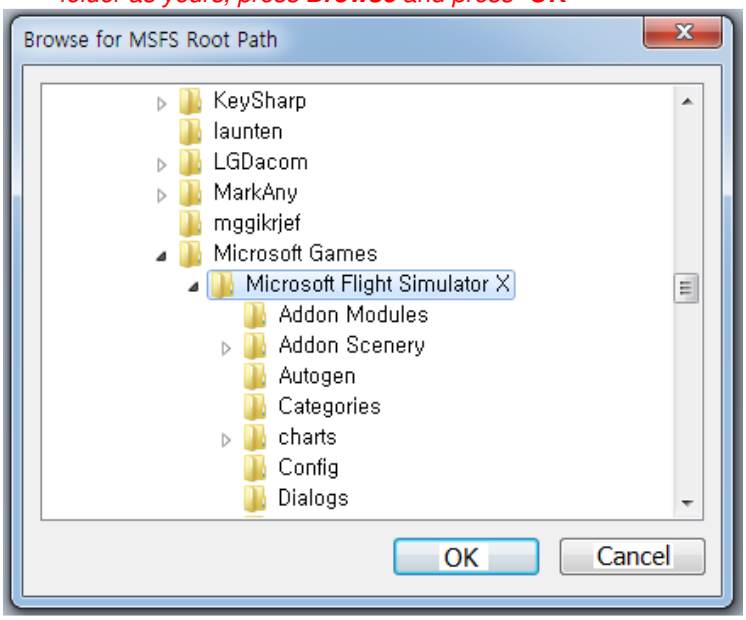
1. **MSFS-Root Path:** Browse the path where "Flight Simulator 2004" or "Microsoft Flight Simulator X" is installed.

- If "Flight Simulator 2004" or "Microsoft Flight Simulator X" is installed other "Drive" or "Directory", find the path and click "OK".
- If you select a wrong path, "Status" window displays error message.



Copyright ©2012 VRinsight
www.vrinsight.com

NOTE : *Even if the default **MSFS-Root Path** of the **Panel Installer** shows the same folder as yours, press **Browse** and press "**OK**"*



2. **VRinsight panel:** Select **Prop Cockpit Trainer**.
3. **Aircraft**: Select your aircraft.
4. **Run**: Copy & paste all necessary panel data to work **Prop Cockpit Trainer** automatically.
5. **Status**: Inform current status.

2. How to start "Panel Installer"

Run "**Panel Installer**" that can be found in the program group "VRInsight".

A. Go to Windows "**Start**"
B. Find program group "**VRinsight**"
C. Click "**Panel Installer**"

IMPORTANT NOTE: ***"Run As Administrator"***

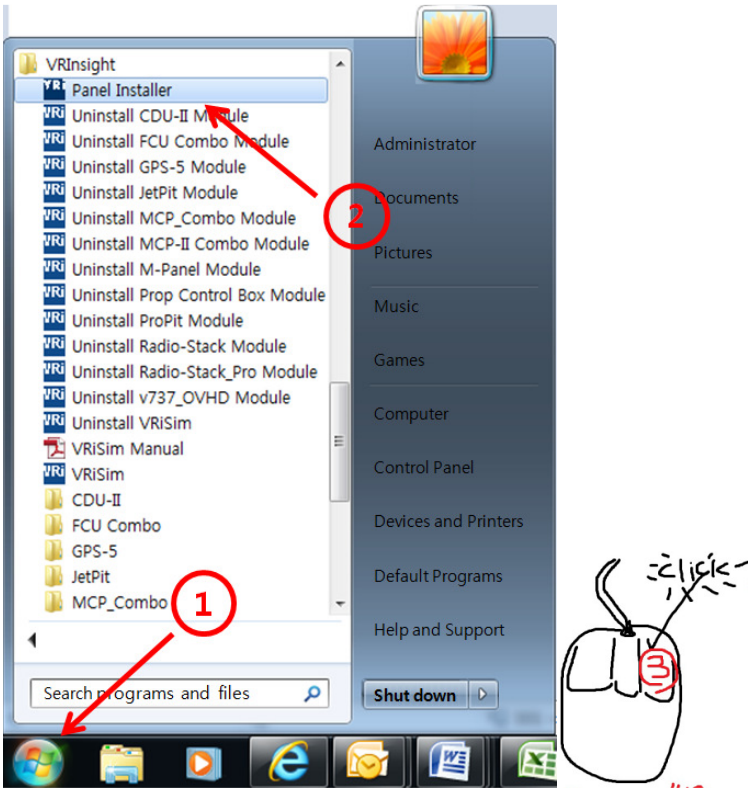
Windows 7 and Vista has more intensive security policy for system safety from accidental corruption of system files. A user can't access system folder (i.e. "Program Files", "Windows") for reading and writing, even if he/she has administrator's privilege. To access these folders, he/she must be "Administrator".

"**Panel Installer**" or "**VRiSim**" try to access system folder to know where FSX/FS 2004 is installed. But it could be blocked if it's not "Run As Administrator". So, please do as following procedure to run software,

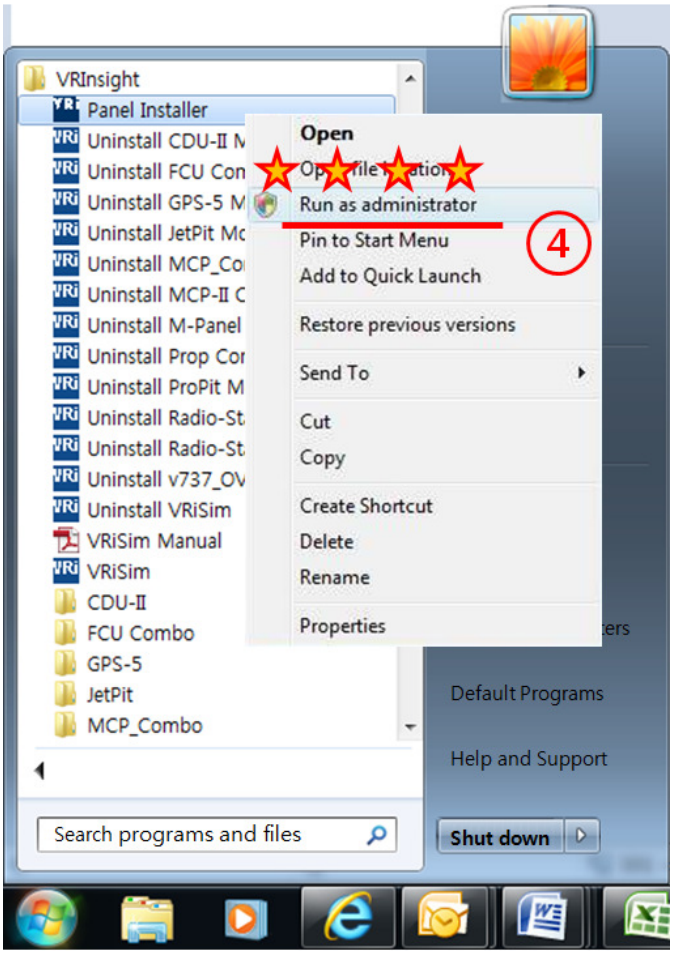
(1) Go to "**Start**" and find program group "**VRInsight**"
(2) Place mouse pointer upon "**Panel Installer**"

Copyright ©2012 **VRinsight**
www.vrinsight.com

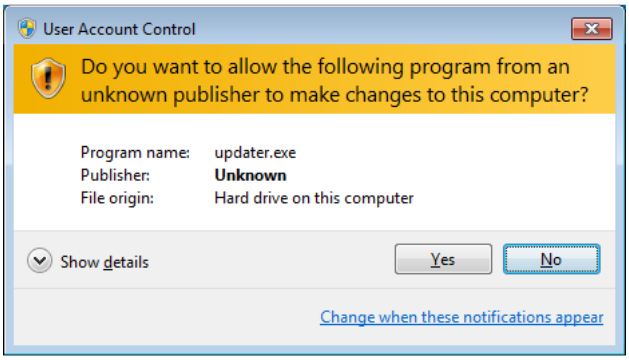
(3) Click right mouse button
(4) Click "**Run As Administrator**"



Copyright ©2012 **VRinsight**
www.vrinsight.com



You'll see a UAC message if you try to "run as administrator". Press "Yes" to allow the software running.

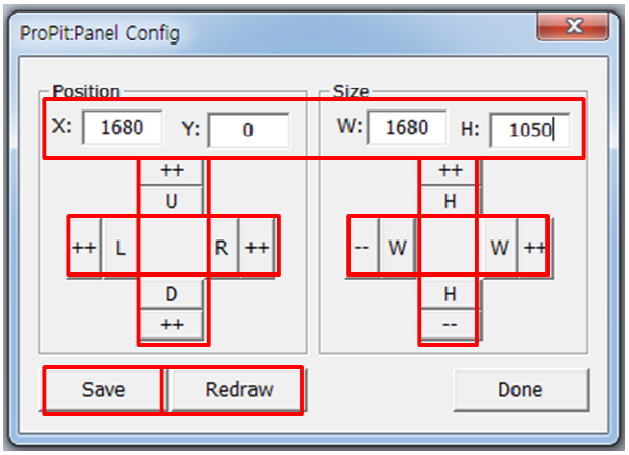


Want to know more about UAC (User Account Control)?
http://en.wikipedia.org/wiki/User_Account_Control

Copyright ©2012 **VRinsight**
www.vrinsight.com

Window configuration

When the first **Prop Cockpit Trainer** setup is done, the **undocked Prop Cockpit Trainer window** may not be placed at the **Prop Cockpit Trainer.**
Then with **Prop Cockpit Trainer:Panel Config** window, you can adjust placing the undocked **Prop Cockpit Trainer** window.



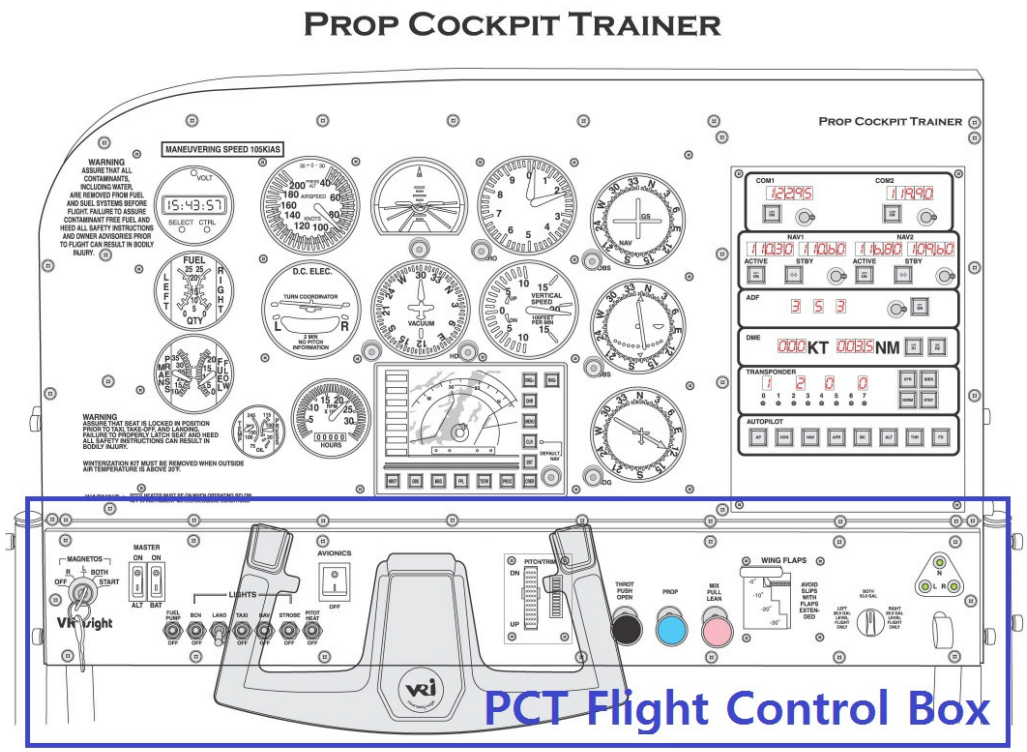
X, Y	Current position of gauges display window
++ U	Moves gauges display window to up
++ D	Moves gauges display window to down
++ L	Moves gauges display window to left
++ R	Moves gauges display window to right
W, H	Current size of gauges display window
++ H	Expands in up & lower gauges shape
-- H	Reduces in up & lower gauges shape
++ W	Expands in left & right gauges shape
-- W	Reduces in left & right gauges shape
Redraw	Execute current settings
Save	Save all settings.

NOTE: *The size (W & H) is the resolution of* ***Prop Cockpit Trainer*** *monitor and the Position (X & Y) is the position of* ***Prop Cockpit Trainer*** *monitor. You can find the values in* ***Screen resolution****.(Refer to* ***5. Monitor setting****)*

Copyright ©2012 VRinsight
www.vrinsight.com

Calibration & Test for
Prop Cockpit Trainer (PCT) Flight Control Box

VRinsight Tech Support Team
2010-May-25
http://www.vrinsight.com



This document explains how to calibrate and test the PCT's Flight Control Box.

Preliminary
Running Flight Simulator and running VRiSim

Step 1: Run Flight Simulator (MSFS9 or FSX)

Flight Simulator (MSFS9 or FSX) must be running and the aircraft which configured through the panel installer should be running. The view mode should be changed to "**Cockpit"**.

Step 2: Run VRiSim

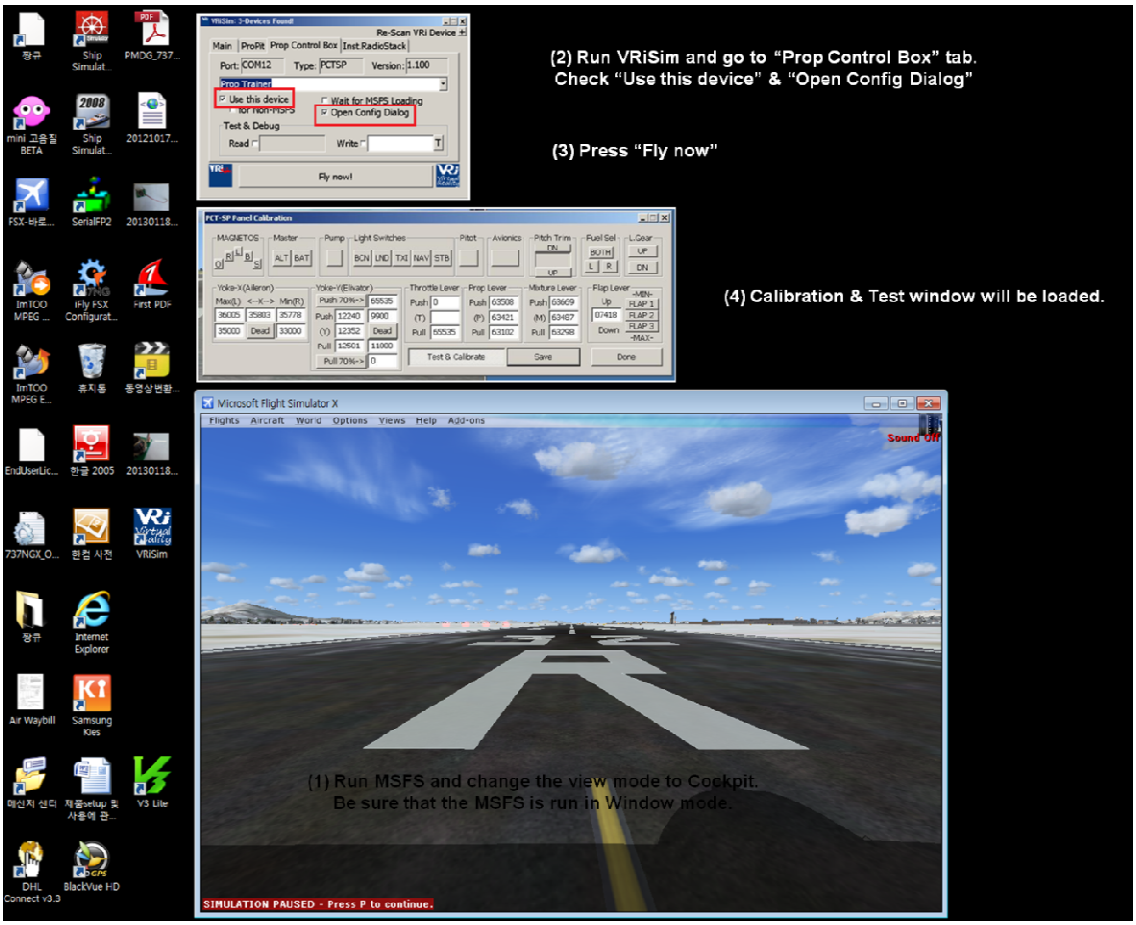
Run **VRiSim** (the interfacing software between PCT hardware and MSFS). Three devices (ProPit, Prop Control Box and Inst.RadioStack) are found and connected automatically. If the devices are

Copyright ©2012 **VRinsight**
www.vrinsight.com

connected successfully, select an aircraft and check "**Use this device**". And then press button titled "**Fly Now**".

Step 3: Load "Calibration and Test" Window

The "**Calibration & Test**" window will be loaded, when pressing the "**Fly Now**".

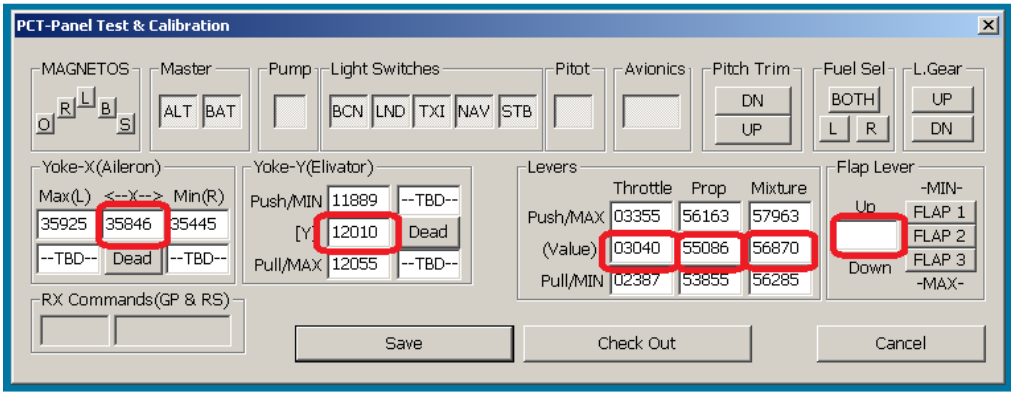


Copyright ©2012 **VRinsight**
www.vrinsight.com

Calibration and Test Procedure

Step 1: Press button “Test & Calibrate”.

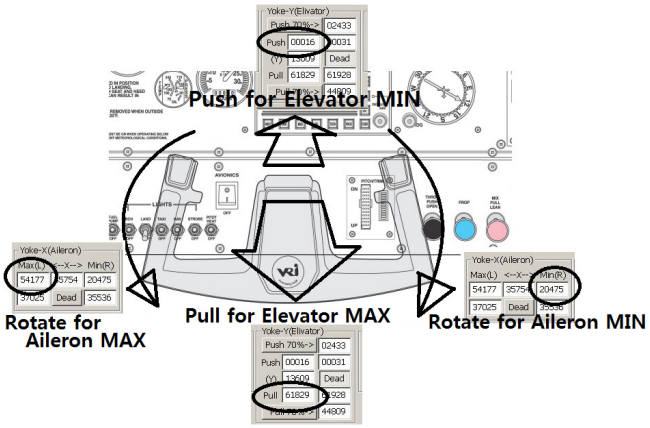
The PCT-Flight Control Box (PCT-FCB) has switches, levers and a Yoke. As it goes to calibration phase, all axes will be initialized to null values. The Yoke(X/Aileron and Y/Elevator) and levers (Throttle, Prop-Pitch, Mixture and Flaps) should be calibrated and re-configured. Switches will be tested as functioning correctly.



IMPORTANT: *Axes values should be displayed as Yoke and Levers are moved. When it does NOT display any values in the red-box of above picture, press “Cancel”. And then reload “Calibration & Test” window.*

Step 2: Calibrate yoke’s aileron and elevator axis

To set the maximum & minimum value of yoke’s Aileron and Elevation, fully rotate and push forward / pull backward. See axis’ sampled values while yoke is moving.



Step 3: Configuring “Dead Zone” for Yoke-X (Aileron)

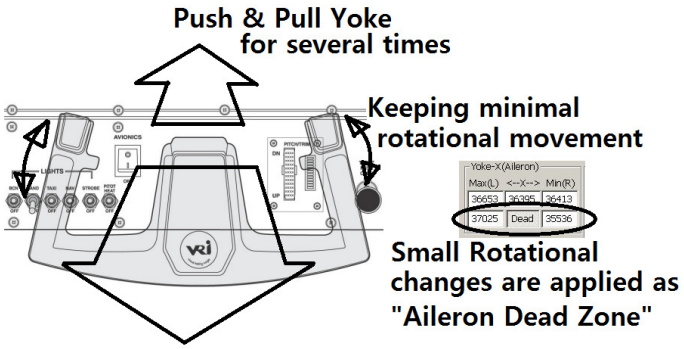
Configuring “Dead Zone” for yoke’s axis is possible. It also set yoke’s center position.

Copyright ©2012 **VRinsight**
www.vrinsight.com

- Press “Dead” button of Yoke-X (Aileron). As far the button is shown as pressed status 

, yoke’s rotational movement is applied as Aileron “Dead-Zone”.
- Push and Pull the yoke for several times without rotation. See changing values of dead zone MIN/MAX. Small rotational movements are applied to “Dead Zone” of aileron axis.
- To end dead-zone setting, press “Dead” button again seeing un-pressed status 

.

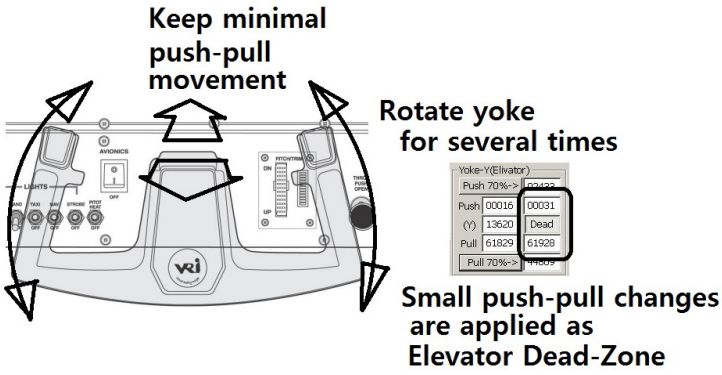


Step 4: Configuring Dead Zone for Yoke-Y (Elevation)

- Press “Dead” button of Yoke-Y (Elevation). As far the button is shown as pressed status 

, yoke’s push-pull movement is applied as Elevator “Dead-Zone”.
- Rotate the yoke for several times without push-pull. See changing values of dead zone MIN/MAX. Small push-pull movements are applied to “Dead Zone” of elevator axis.
- To end dead-zone setting, press “Dead” button seeing un-pressed status 

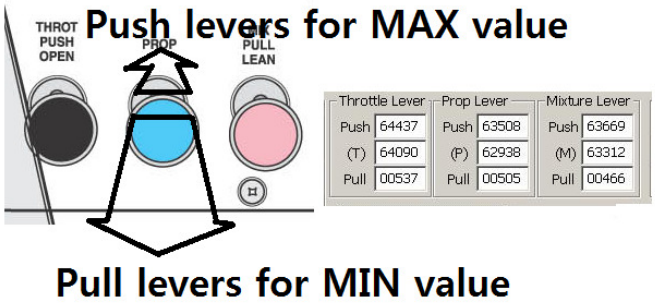
.



Step 5: Setting MIN/MAX for Throttle, Mixture, Prop-Pitch Levers

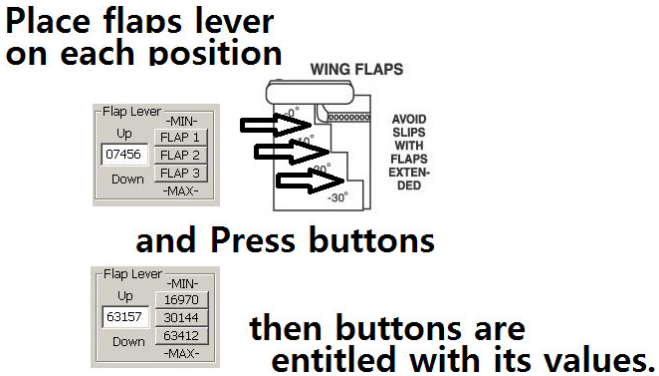
MIN and MAX values for the levers are memorized by fully pushing and pulling.

Copyright ©2012 **VRinsight**
www.vrinsight.com



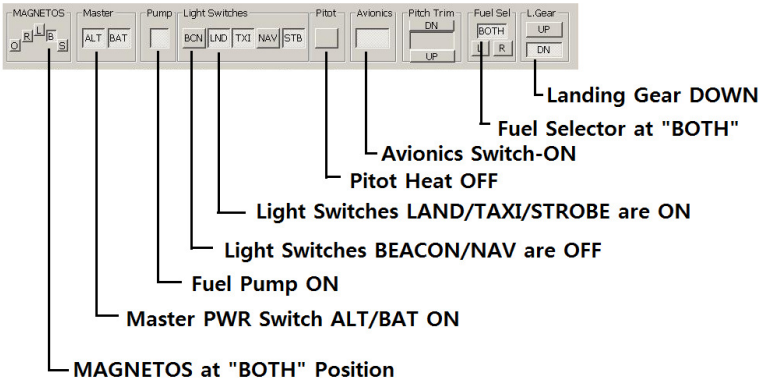
Step 6: Wing Flaps control positions

There are three steps for flap control. Set the values for each flap position as follows,



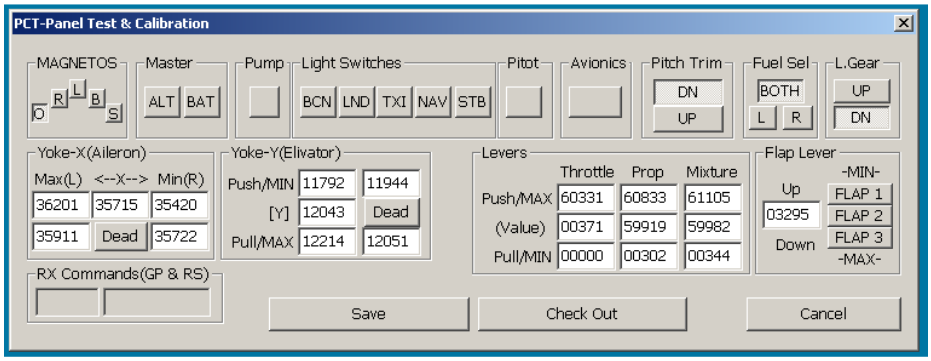
Step 7: Test switches

Turn on and off each switch hardware and see functioning correctly on the software.



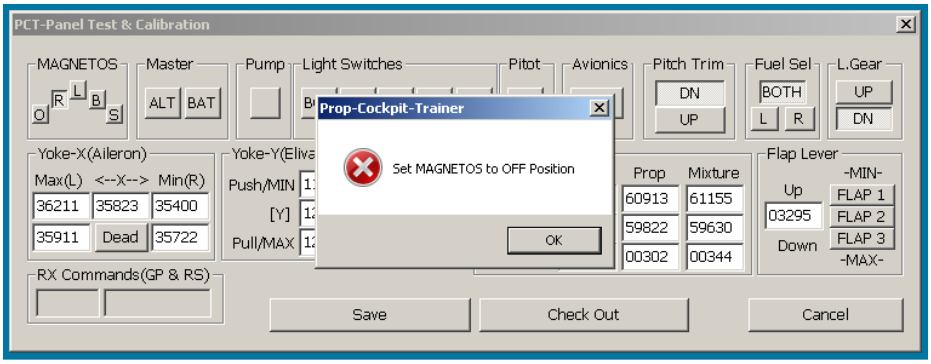
Each switch and Lever should be proper position before flight.

Copyright ©2012 **VRinsight**
www.vrinsight.com



Pre-Flight Check	
MAGNETOS ……. OFF	YOKE/AILERON…... AT CENTER
MASTER ALT …… OFF	YOKE/ELEVATOR.... AT CENTER
MASTER BAT …… OFF	THROTTLE ……... MIN(PULL)
Fuel Pump …….. OFF	PROP …….. MAX(PUSH)
LIGHT BCN …….. OFF	MIXTURE …….. MAX(PUSH)
LIGHT LND …….. OFF	FLAPS …….. RETRACTED(UP)
LIGHT TXI …….. OFF	
LIGHT NAV …….. OFF	
LIGHT STB …….. OFF	
PITOT HEAT ……. OFF	
AVIONICS …….. OFF	
FUEL SEL …….. BOTH	
LANDING GREAR … DOWN	

"Check Out" button checks switches and levers are positioned well in its "Pre-Flight". Otherwise, it will show a message. This pre-flight check-out can be skipped by pressing "Cancel" button.



Step 8: Save Calibration Result

Press "Save" button 

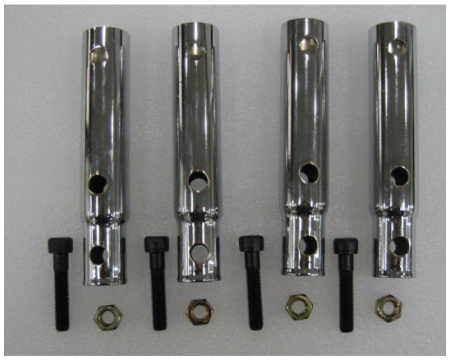
to save the calibration result which can be used for the next flight. DO NOT save before calibration completed. Dead zone of Yoke's X and Y axes and flap position should be configured exactly!

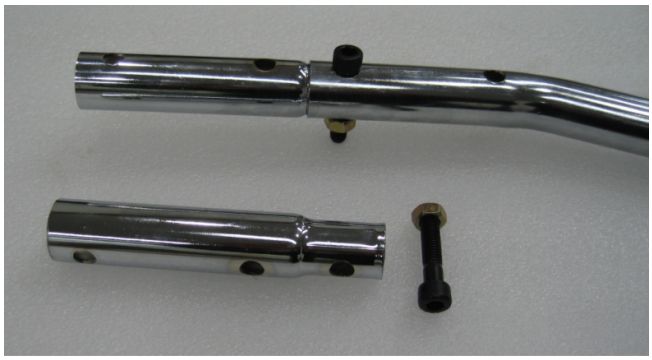
Copyright ©2012 **VRinsight**
www.vrinsight.com

Foot raiser kit

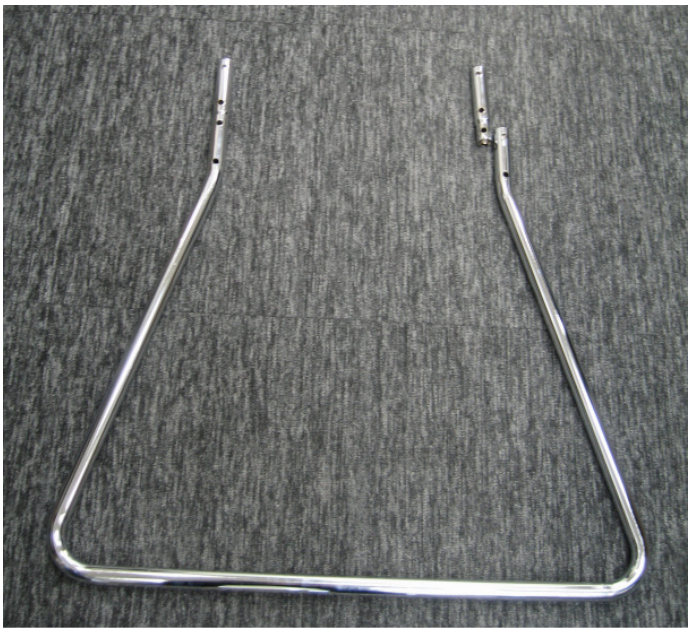
Copyright ©2012 VRinsight
www.vrinsight.com

The Kits includes 4 raisers elevating 10.5cm(4.1”) and Bolts & nuts.





Assemble the raiser to PCT’s lower box and put in foot. Join the raisers and foot using bolts & nuts for the safety.



Copyright ©2012 **VRinsight**
www.vrinsight.com