CDU panel

USER MANUAL

(MEB2.520-26OCT09A)

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

VRinsight

Virtual Reality Insight

BEFORE USE : Thanks for purchasing VRi's CDU panel.
Before operating your units, please read through this manual and keep it for future reference.
For any further question, visit www.wilcopub.com or contact us below:

Fax : +32-2-33107 51
E-mail (Support team) : info@wilcopub.com

NOTE : This manual could be redistributed unless you modify the contents. This manual has been written out on a Serial FP v2/Jet Liner's CDU panel basis.
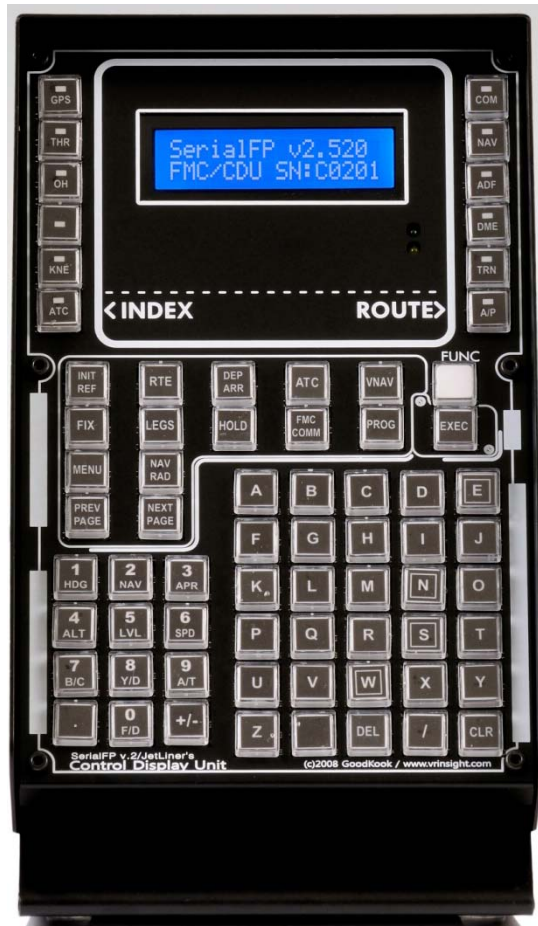
All software (& software versions) stated here (MEB2.520-26OCT09A) is subject to change without advanced notice for improvement.

If you want to download the latest driver version for panel & application programs, visit www.vrinsight.com

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Box contents

VRinsight CDU panel

The **CDU pane**l of VRinsight features Control Display Unit for Flight Management Computer(FMC) . The **CDU panel** supports various types of aircrafts for the commercial add-on aircraft(PMDG B737,744, Level-D B767 and PSS A319,320). It works as input device of alpha-numeric keys and/or user defined control functions where

the FMS is not implemented, such as default aircraft of MSFS and most freeware aircrafts. It is completely interfaced with MSFS9 and MSFSX through interfacing application software "SerialFP2", the **CDU panel** can be connected simply through USB port of your computer.

•**SerialFP2** **software supports all functions to CDU combo panel**
• **If you want to use a USB hub, be sure that the USB hub is USB 2.0 compliant.**
  Otherwise it may cause a malfunction.

Features

- Same functionality and externality with actual FMC

- All necessary buttons and LCD getting close to real flight

- Offer actual flight circumstance via CDU panel with full control complement

- Fully metal cases

- One year warranty

Technical specifications

- USB interface type to computer

- USB power supply type to CDU panel

- 14cm(W) x 26cm(H)

- 2.3Kg

Compatibility software

- Flight simulator 2004 / FSX by Microsoft

Operating software

- SerialFP2

SerialFP2 Installation

With CDU panel, an "Install DVD" is included. When you insert it in DVD driver of your computer, "*VRinsight HTML"* document will be shown. Then click "SerialFP2" (operating software) and install it at a proper folder.
"SerialFP2" is the main operating software of VRinsight used for all VRinsight flight panels.

SerialFP2 software supports all functions of CDU panel and completely interfaced with MSFS9 and MSFSX enables full simulation with simple connection your computer through USB.
Be sure that when installing SerialFP2, "Install USB-Serial Driver" must be checked.

After installation, you can find "SeiralFP2" in "All programs" of "Start menu".

USB Connection

The connection between CDU panel and your computer is made using a USB cable that plugs into one USB port on your computer. **If you want to use a USB hub, be sure that the USB hub is USB 2.0 compliant. Otherwise it may cause a malfunction.**

When you connect CDU panel to your computer at first, your computer will detect it and will describe the process step by step.

Power Connection

Power supplying of CDU panel is done by USB port of your computer. Make sure that before trying to operate CDU panel, you must confirm the USB connection first in order to prevent malfunction.

Before trying to operate, be sure that LCD displaying is shown.

Run "SerialFP2"

When you confirm all setup processes done; "SerialFP2" installation, "USB connection" and "Power connection", you are ready to operate CDU panel.

Download & install "FSUIPC"

Refer to "Download & install FSUIPC" at "Download" part of www.vrinsight.com
FS 9 requires FSUIPC v3.80 or later. FSX requires FSUIPC v 4.26 or later.

Double click shortcut of "SerialFP2" or find it in "All programs" of "Start menu .
If everything is done properly, below window will be shown.

CDU controls explanation (Explanation with Boeing)

CDU panel (Control Display Unit) features as an input unit of FMC (Flight Management Computer). It can be used for a radio panel and an auto flight control unit.
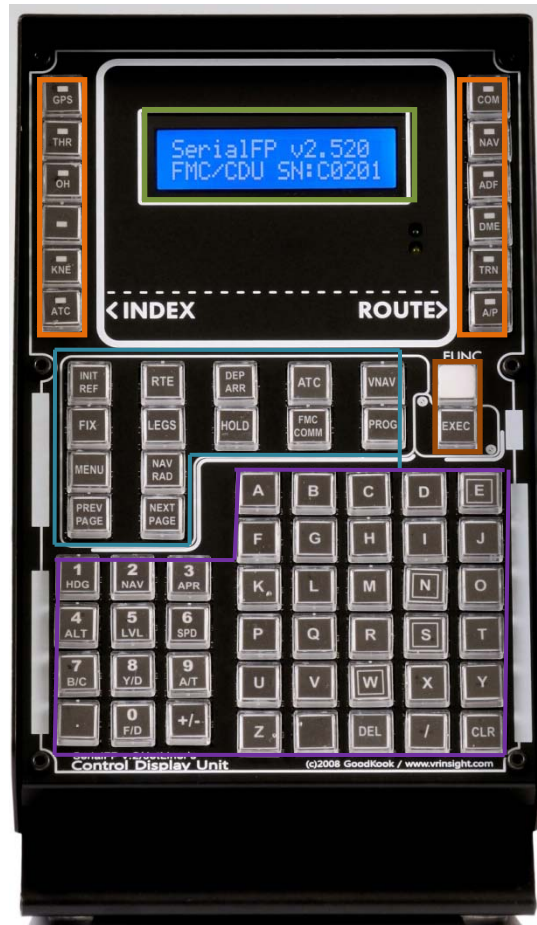
Alphabet & Numeric buttons : Allows the flight crew to type in commands and data into the CDU

Selection buttons : Buttons are used to carry out a pre-defined function that has been assigned to it by the current menu

Function & Menu buttons : Buttons are used to carry out a pre-defined function that has been assigned to it by the current menu

LCD display : It works as scratch pad for CDU panel key-in or shows the information of NAV1, NAV2, ADF, DME, TRN, COM, SQUAWK CODE for radio stack functionality.

Selection buttons : Buttons are used to carry out the pre-defined function that has been assigned by the current menu

INIT REF	Provides manual and preflight initialization of the FMC and access to various pages of reference data
RTE	Used to enter information on aircraft's route
DEP ARR	Used to select departure/arrival pages for the origin and destination airport for each route
ALTN	Allows selection of alternative airports and display of related information
VNAV	Provides vertical navigation profile guidance of all phases of flight
FIX	Used to create waypoint fixes and waypoints for display on the ND
LEGS	Provides information about each LEG segment of the route
HOLD	Used to enter a HOLD pattern into the route
FMC	Flight Management Computer Communication
PRO G	Provides general flight progress information
MEN U	Provides access to other system and menus that use the CDU

NAV RAD	Display radio tuning information and provides for manual operation of the Navigation Radio
PREV PAGE	Returns to the previous CDU page
NEXT PAGE	Advances to the next CDU page

Alphabet & Numeric buttons : Allows the flight crew to type in commands and data into the CDU

SP	Displays a space between words or data
DEL	Displays DELETE in the scratched. Is used to delete commands and data from CDU
CLR	Clears the scratchpad
N	North key input
E	East key input
S	South key input
W	West key input
.	Displays an asterisk(*) in the scratchpad

EXEC	Executes the current command

FUNC	Cycle the panel between CDU and to Radio stack function
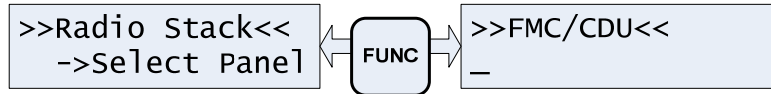
```
>>Radio Stack<<         >>FMC/CDU<<
  ->Select Panel   [FUNC]  _
```

LCD display : It works as scratch pad for CDU panel key-in or shows the information of NAV1, NAV2, ADF, DME, TRN, COM, SQUAWK CODE for radio stack functionality.

Panel installer launch

: Panel installer will copy & paste all necessary panel data to work CDU.
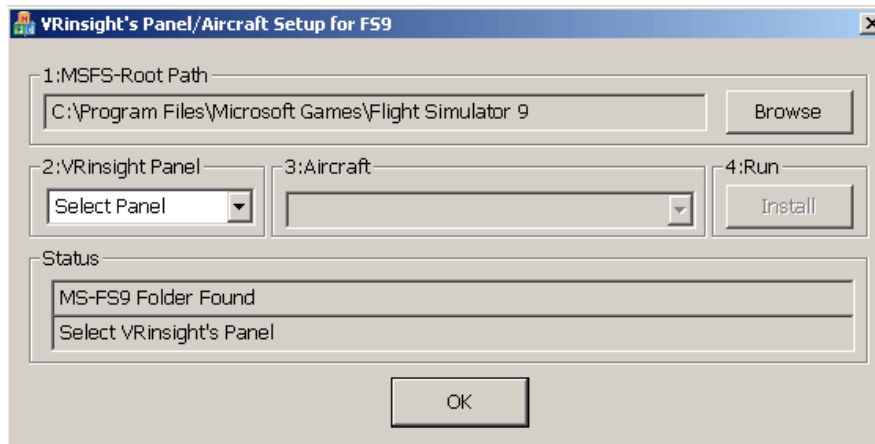   automatically. Be sure "Panel Installer" should run before running SerialFP2.
   * Once the panel is installed, aircraft configuration is kept.
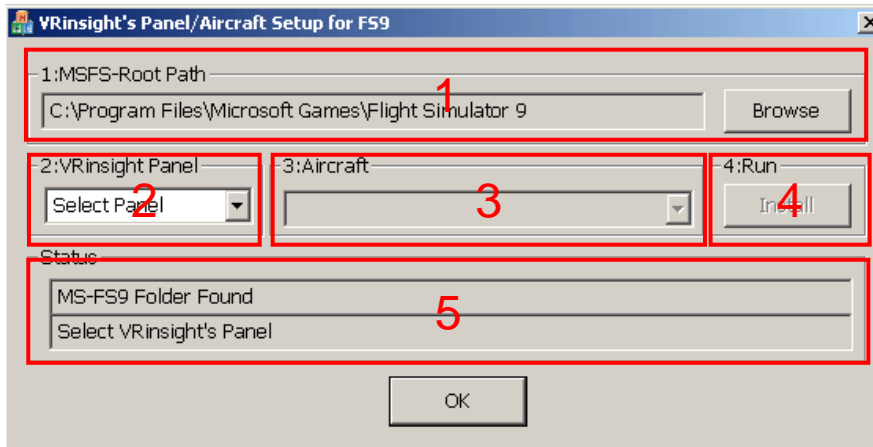After "SerialFP2" installation, you can find "Panel Installer".
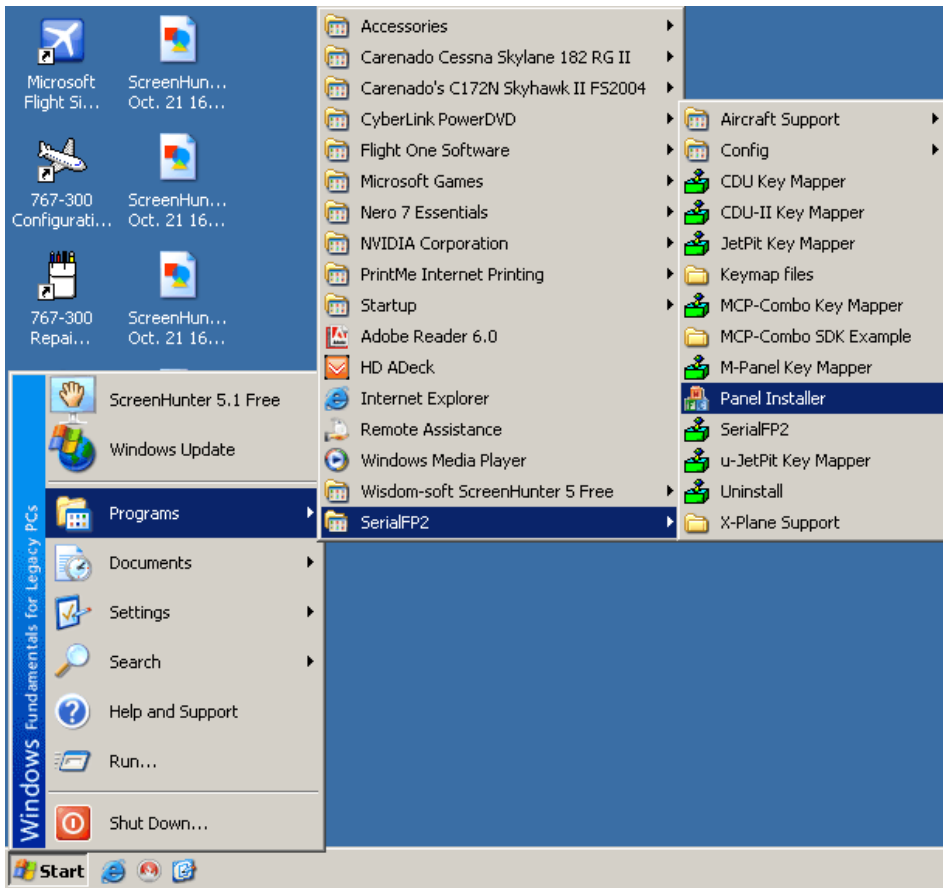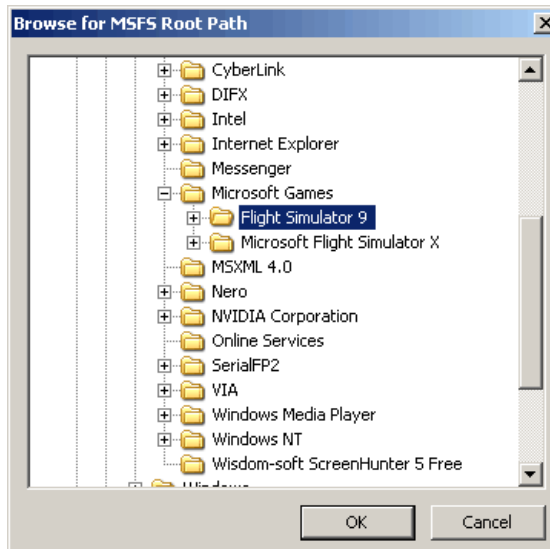

How to use "Panel Installer".
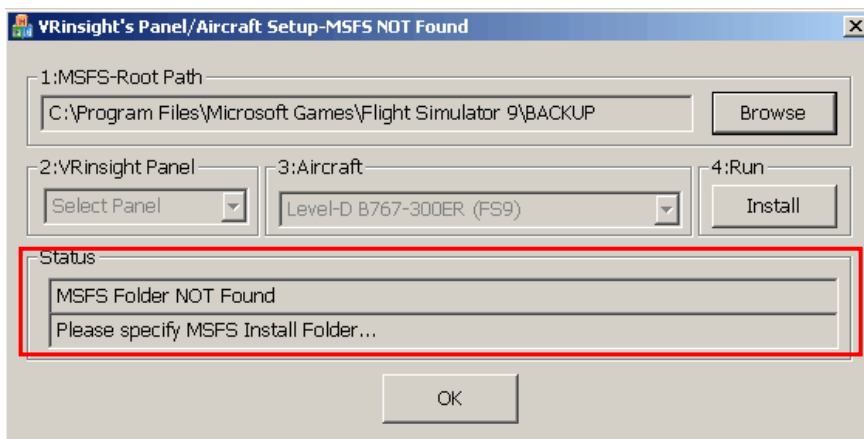**1.Run "Panel Installer" first**

1.MSFS-Root Path : Browse the path where "Flight Simulator 9" or "Microsoft Flight Simulator X" is installed.
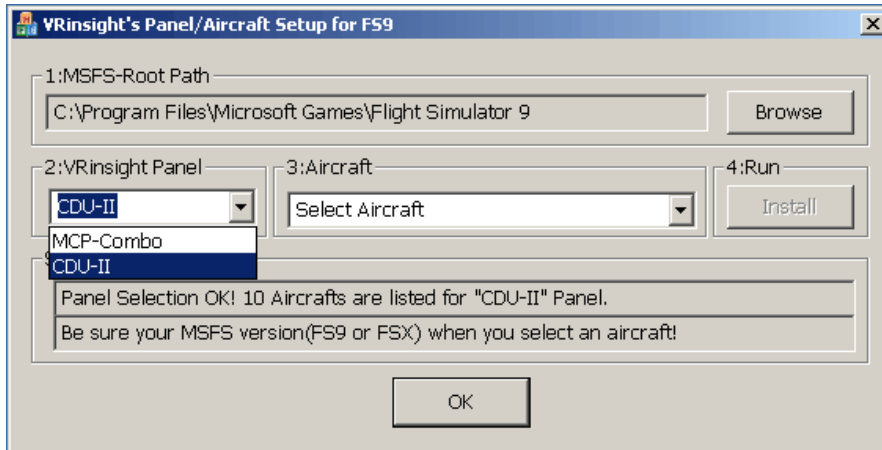
    * If "Flight Simulator 9" or "Microsoft Flight Simulator X" is installed other "Drive" or "Directory", find the path and click "OK".
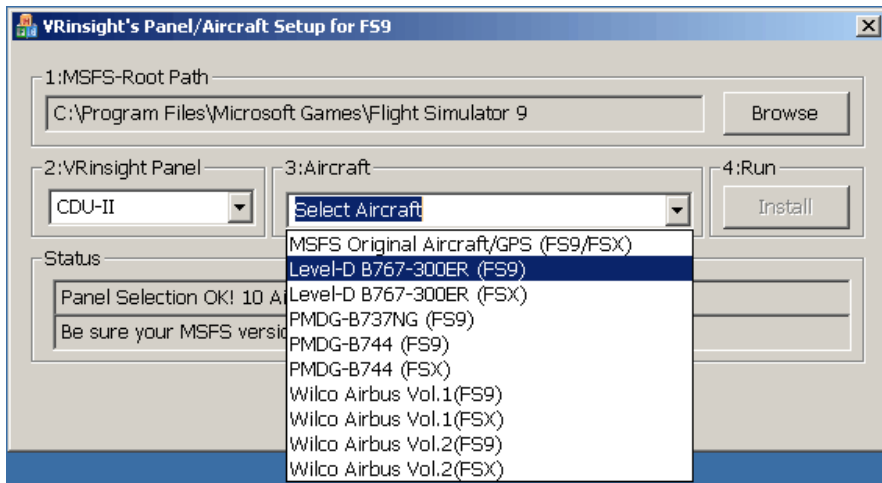

    * if you select a wrong path, "Status" window displays error message.

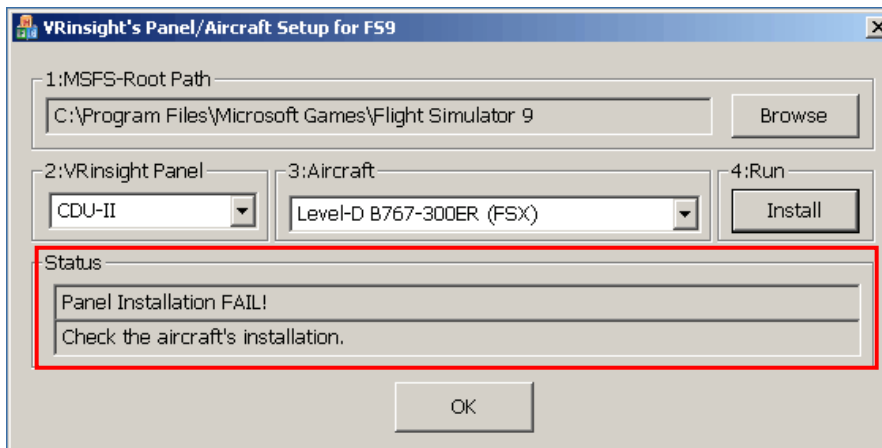2. **VRinsight panel** : Drop down and select your panel.

3. **Aircraft** : Drop down and select your aircraft.

4. **Run** : Copy & paste all necessary panel data to work CDU automatically.
   * If you select an aircraft for FS9 and the "MSFS-Root Path" is for FSX, "Status" window displays error message and all necessary panel date will not be automatically copied & pasted. And vice versa.

5. Status : Inform current status.
   * If everything is done properly, you will get below message
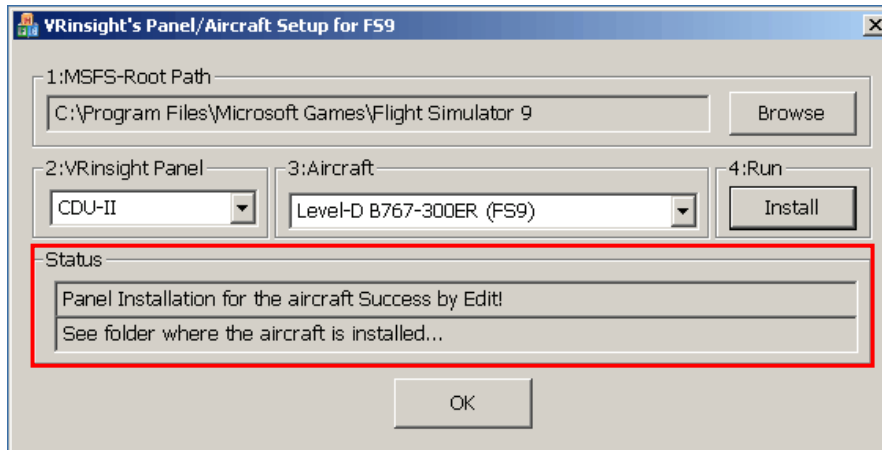
Preparing CDU before Flight

Step 1 : Initial check up
Before flight with CDU, please check the followings are done

A. Install of SerialFP2.
    * Check that "Install USB-Serial Driver" is checked or not.

B. Confirm that proper version of FSUIPC is installed or not
    (FSUIPC v3.80 or later for FS9 / FSUIPC v4.26 or later for FSX)

C. Confirm the USB connection.
    * Check that the USB port of your computer is dead or not
    * Check that if you use USB hub, be sure that the USB hub is USB 2.0 compliant.

D. Confirm that "Panel Installer" is executed or not.

Step 2 : Run flight simulator (MSFS9 / MSFSX)
A. Run flight simulator (MSFS9 / MSFSX).
B. Select Aircraft.
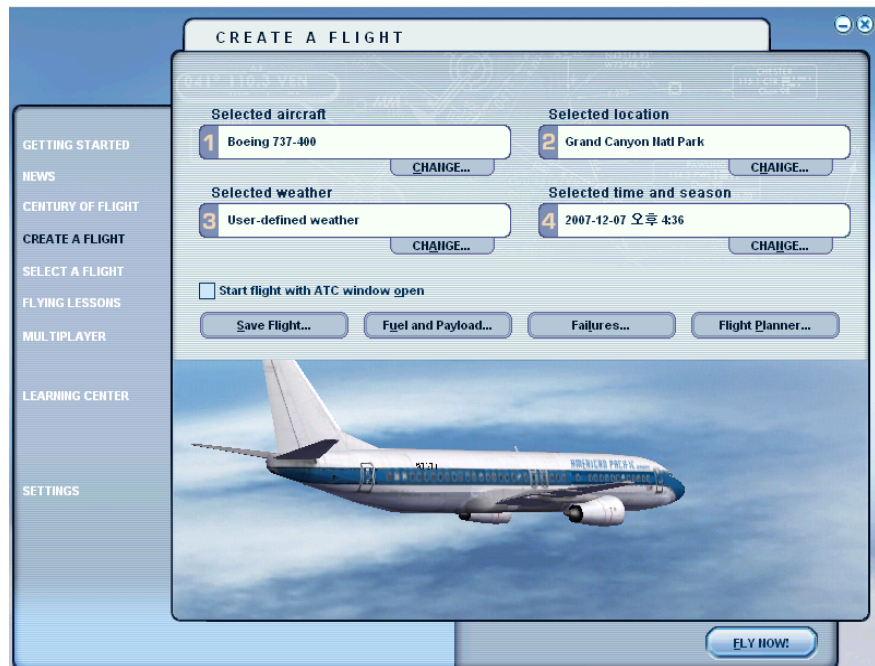
Step 3 : Run panel linking application software "SerialFP2".
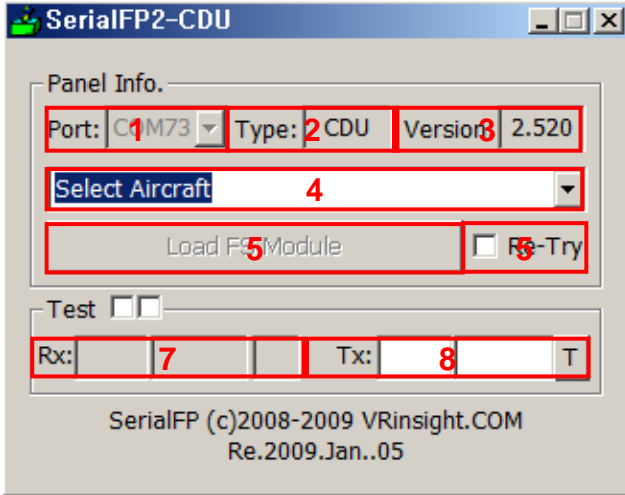
1 : Number of COM(USB) port
2 : Type of panel
3 : Firm ware version
4 : Aircraft selection
5 : Link to game
6 : Software loading sequence change
   Original sequence
(MSFS loading first => SerialFP2 running)
   New sequence
(MSFS loading / SerailFP2 running first
=> Serial FP2 running / MSFS loading)
7 : Input test for panel
8 :Link test for panel with game

Drop down "Select Aircraft" and press "Load FS Module".
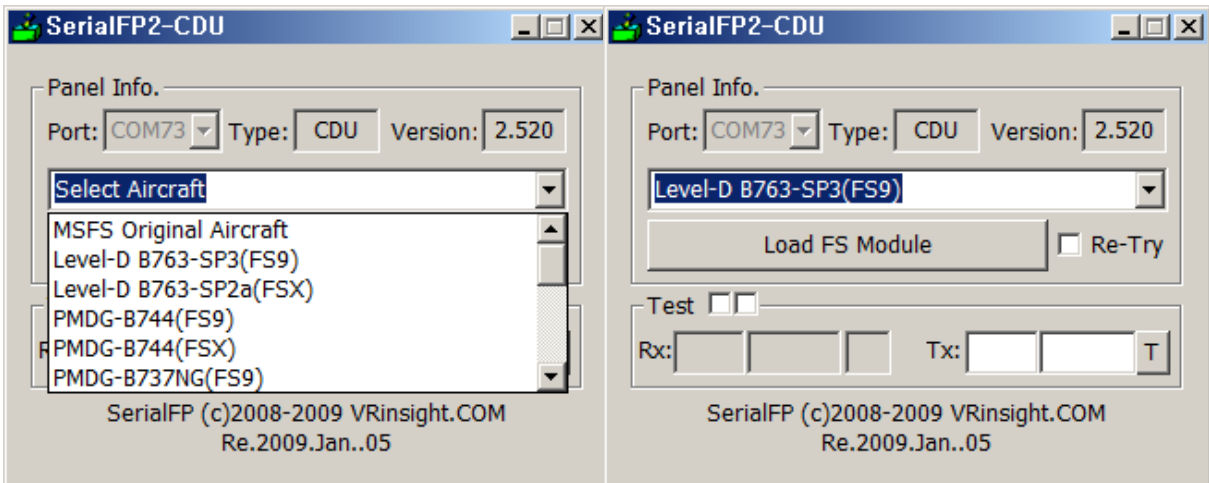
As connection success, LCD display will be also changed as follows.
The panel is functioning as "Radio" or "CDU". To change the function, press "FUNC" button.

CDU panel supports various aircrafts (MSFS's original aircrafts and other payware aircrafts such as Wilco, PMDG, Level-D & PSS). All of buttons on the panel are user programmable. Use key-mapping software provided; "CDU Key Mapper" for CDU panel. After an aircraft selected, press "Load FS Module" button.

Radio Function.

Main features of CDU panel are FMC/CDU function & Radio stack function.
As pressing "FUNC" button, function is converted and new function displays
on LCD.
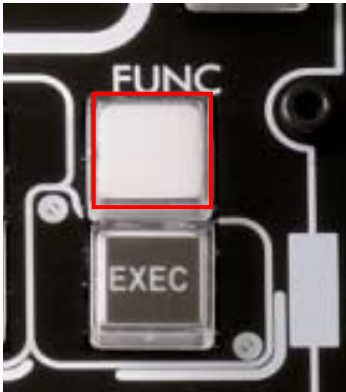

```
>>Radio Stack<<
    ->Select Panel
```

```
>>FMC/CDU<<
_
```

Most CDUs' externalities are quite similar. However operational way differs in aircraft
types. CDU panel is currently available at the aircrafts which are listed on "Select Aircraft".

Pressing "FUNC" button at "Radio" function, MSFS's "FMC" window can be opened
or closed.

When "FUNC" button is pressed, CDU works as a "Radio panel".

```
>>Radio Stack<<
    ->Select Panel
```

Press R1 ~ R6 buttons and confirm the function

LSK	FNUC	LSK	FUNC
R1	COM 1/2 Freq	R4	DME 1/2 Speed & Distance
R2	NAV 1/2 Freq	R5	TRANSPONDER
R3	ADF 1/2 Freq	R6	AUTOPILOT

Key-command sticker

key-command sticker is provided with product and enclosed DVD has
"KeyCap_Decal.pdf" file for "LETTERING" based on MSFS9 / MSFSX . Please print it
out and use for your purpose.

Button & Rotary knob assignment

The predefined button & Rotary knob assignments of all aircrafts supported are located
at C\Program Files\SerialFP2\Aircraft\MCP_CDU.

Key mapping & Mouse key

How to make your own key assignment by key-mapping & Mouse key is explained at
"Panel Interface".
You can find it "Download" part of VRinsight web-site / www.vrinsight.com.

PMDG, Wilco, PSS

SDK of Level-D 767-300ER very stable for CDU panel. However Wilcos, PMDGs and other payware aircrafts using Hot-Keys or Key-commands. It may cause slow answer or may cause no answer.
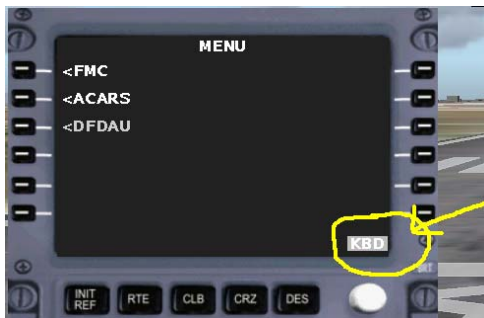
Confirm "KBD" message is on at CDU/FMC window.

If "KBD" message is not on, convert to "KBD" by your mouse.

CDU panel is available only FMC/CDU window is opened.
After shutting down FMC/CDU window, it works as Hot-Keys.
For instance, pressing L1 is same as Pressing F1(L2=F2).

Trouble shooting

INITIAL LCD DISPLAY trouble - Link test.

After connection, check the initial messages. If no message shown, confirm whether you have checked **"Install USB Serial Driver"** of "SerialFP2" setup wizard. If SerailFP2 can not find COM port for CDU, check Device Manager whether CDU has been assigned or not.
After checking, linkage still does not work. Then use other USB ports.

Initial LCD display

LCD BRIGHTNESS trouble - LCD contrast

When CDU in plugged into your computer, initial messages will be shown on LCD.
If you can not clearly see the initial message, tune the contrast.
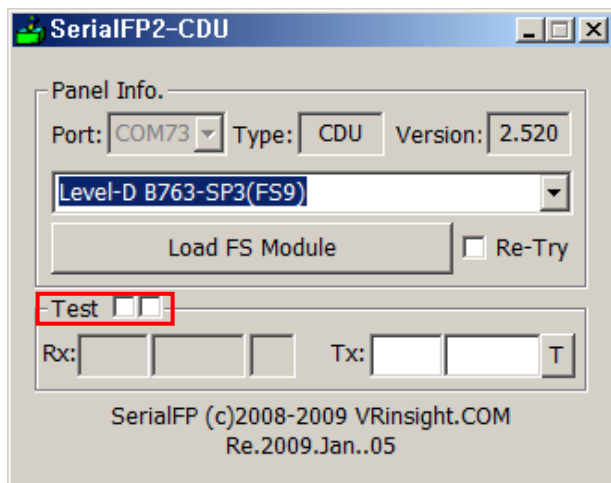
Tune LCD brightness

dark　　**bright**

PANEL FUNCTION trouble 1 - Panel function test

If the panel is linked to "SerialFP2" software correctly, control linkage and functioning of the panel can be tested without starting flight simulator.

1) Check the test box.
(2) Press buttons or rotate rotary-encoder of your CDU panel. Commands(Rx) are transferred to your computer and result(Tx) will be displayed on software. Some transferred values, i.e. COM, NAV, ADF, TRN and A/P are identical to displayed on LCD

PANEL FUNCTION trouble 2- FSUIPC check

Download & install FSUIPC is required for CDU Panel use with Microsoft's Flight Simulator. If you didn't download & install it, do it now. Basic function of FSUIPC is enough to operate. **No registration is required.**
Also check "FSUIPC.dll" file is in "\Program Files\Microsoft Games\Flight Simulator9\Modules". Further information, see "download & install FSUIPC" part.

PANEL FUNCTION trouble 3 – Procedure check

1) Download & install FSUIPC
2) Update your FS (In FSX case, update your FSX with SimConnect)
3) Install "SerialFP2".
4) Run "Panel Installer".
5) Run FS9 / FSX
6) Run "SerialFP2"
7) Select your aircraft