CDU panel

USER MANUAL

(MEB2.520-5JAN09)

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

VRinsight

Virtual Reality Insight

All stated here is subject to change without advanced notice for improvement.

Tel : +82-31-284-7090~91 Fax : +82-31-284-7092 E-mail : tech@vrinsight.com Web site : www.vrinsight.com

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 VRi's web-site www.vrinsinght.com or contact as below;

Tel : +082-31-284-7090 (7091)
Fax : +082-31-284-7092
E-mail (Support team) : tech@vrinsight.com

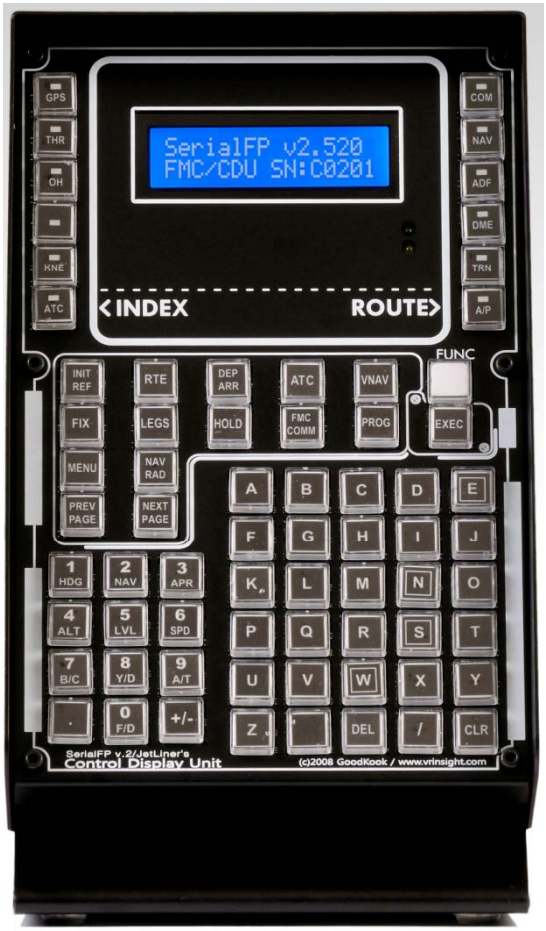
NOTE : This manual could be redistributed unless you modify the contents. This manual has been written out on a Serial FP v2/Jet Liner's CDU panel basis.

All software (& software versions) stated here (MEB2.520-5JAN09) 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

Box contents

VRinsight CDU panel



The **CDU panel** of **VRinsight** features Control Display Unit for Flight Management Computer(FMC) . The **CDU panel** supports various types of aircrafts for the comm ercial 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 a ircrafts. 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 must compliant with USB 2.0 standard. 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 must compliant with USB 2.0 standard. 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.

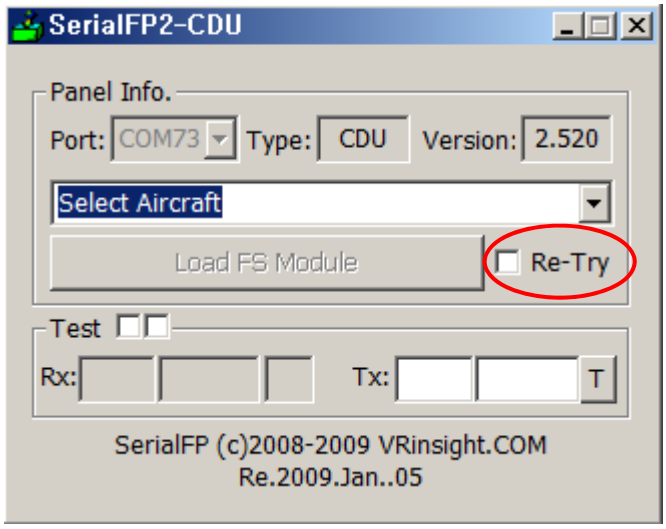
Download & install “FSUIPC”

Refer to “Download & install FSUIPC” at “Download” part of www.vrinsight.com

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

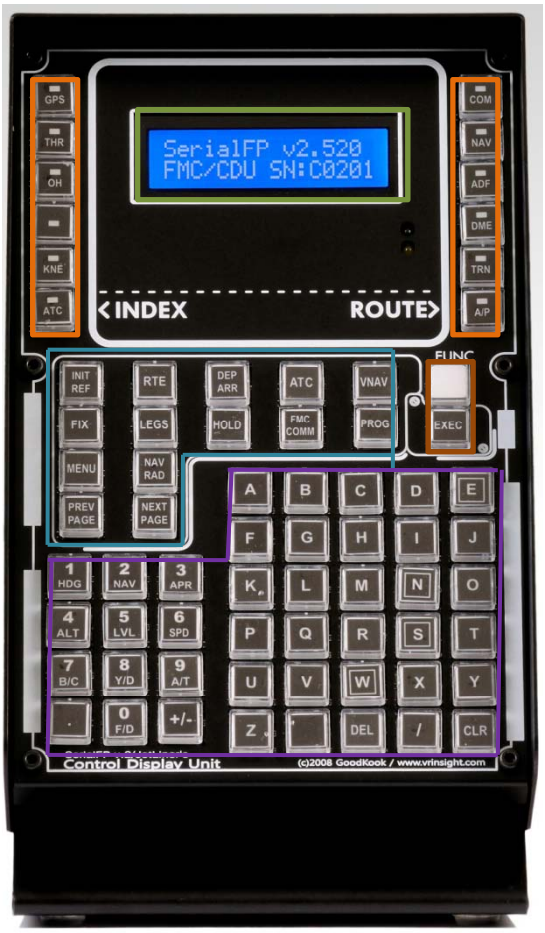
Run MSFS9 / MSFSX and run SerialFP2. Drop down “Select Aircraft” to select aircrafts and press “Load FS Module” button.

*** Before operate MCP combo panel, check “Re-Try”.**



CDU controls explanation

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
PROG	Provides general flight progress information
MENU	Provides access to other system and menus that use the CDU

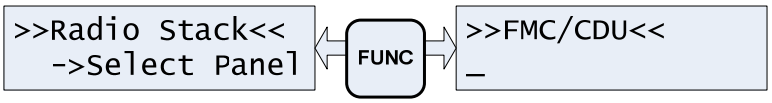
	NAV RAD Display radio tuning information and provides for manual operation of the Navigation Radio
	PREV PAGE Returns to the previous CDU page
	NEXT PAGE Advances to the next CDU page
	Alphabet & Numeric buttons : Allows the flight crew to type in commands and data into the CDU
	SP Displays a space between 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



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.

Preparing CDU panel before Flight

Check installation “SerialFP2”.

Step 1 : **Initial check up**
As USB cable is plugged into your computer, initial messages are displayed on LCD screen. CDU panel has 2-lines & 16 characters type LCD to display various flight data and control information.

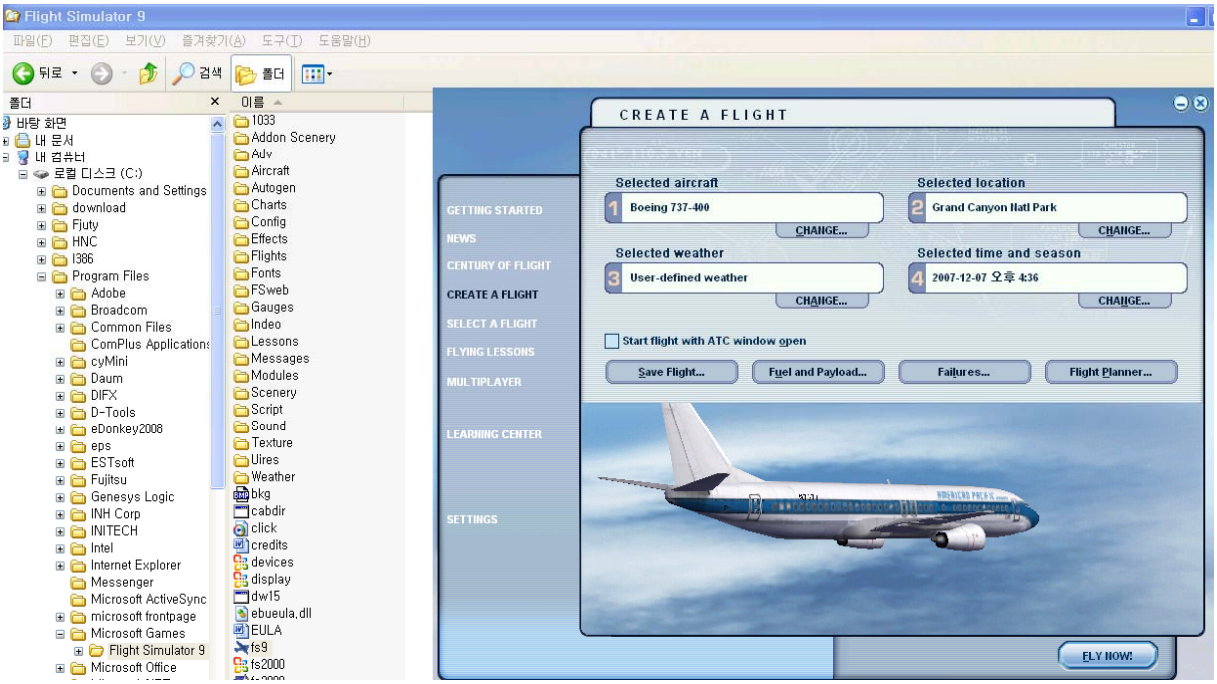
NOTE : Please check the Serial number & Version.
All software(& software version) stated here is subject to change without advanced notice for improvement.
Please verify the latest version via www.vrinsight.com

Initial message

Initial message of CDU panel, firmware version is showed up.
LCD blinking is normal. LCD is blinking from time to time until the panel is linked to application software and flight simulator.

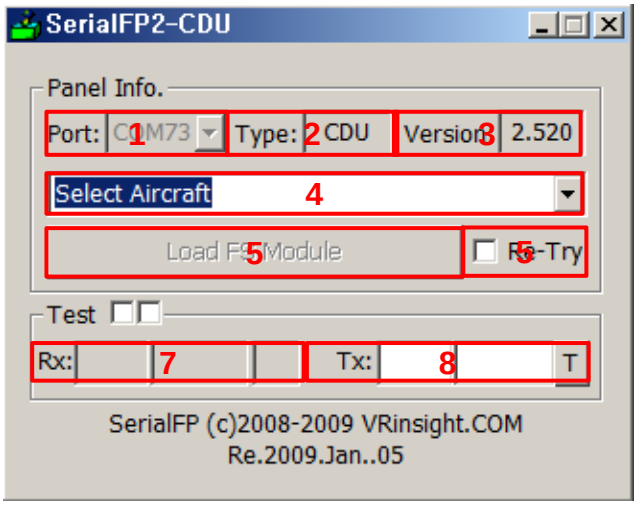
Step 2 : Run flight simulator (MSFS9 / MSFSX)

1) Run flight simulator (MSFS9 / MSFSX) before linking USB connected panel to application software “SerialFP2”.
2) Select flight.



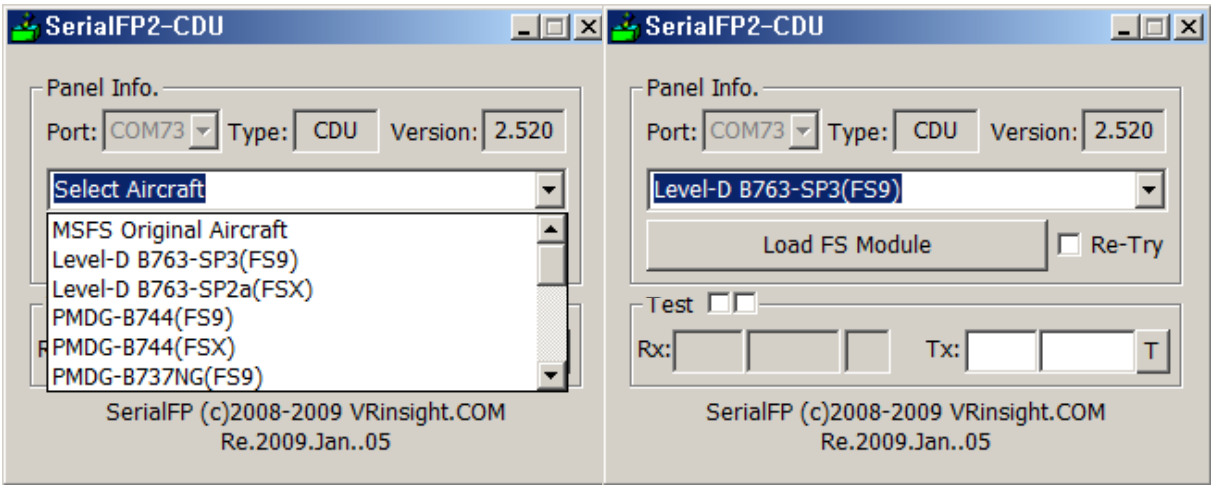
Step 3 : Run panel linking application software “SerialFP2”.

Run application software “SerialFP2.exe” which is linking CDU panel to flight simulator. Be sure that flight simulator is already started.



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

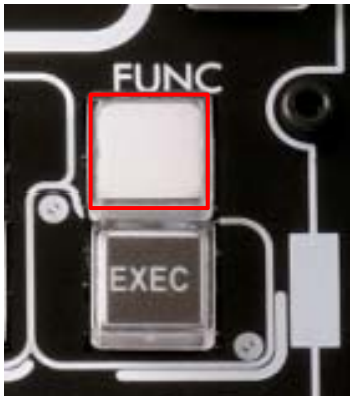
Drop down “Select Aircraft” and press “Load FS Module”.



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.

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”.

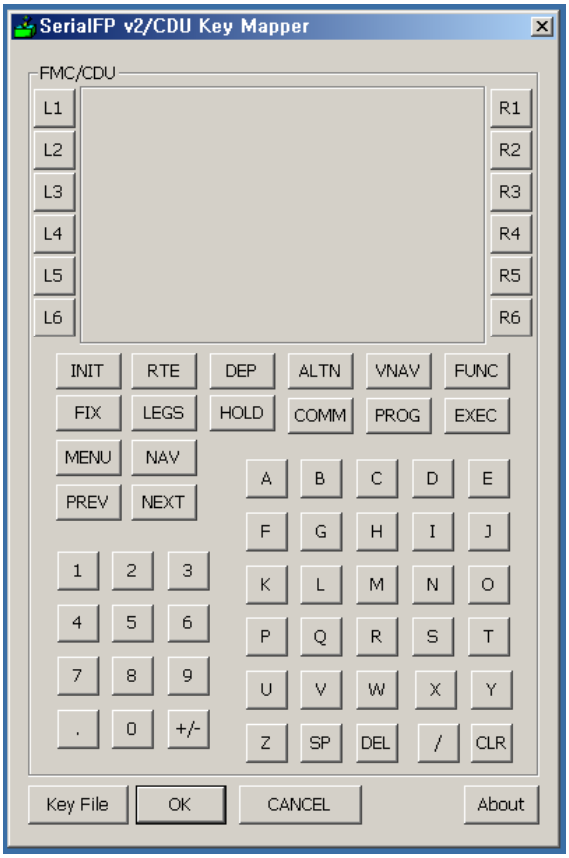
Pressing “FUNC” button at “Radio” function, MSFS’s “FMC” window can be opened or closed.

Key-command sticker

key-command sticker 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.

Freeware & original aircrafts.

Freeware & original aircrafts do not offer FMC/CDU function (Only for payware aircrafts ; Wilco, PMDG, Level-D, PSS). Using CDU panel for other purposes is available for freeware & original aircrafts.
All key-board control commands can be programmable in CDU panel using CDU Key Mapper.



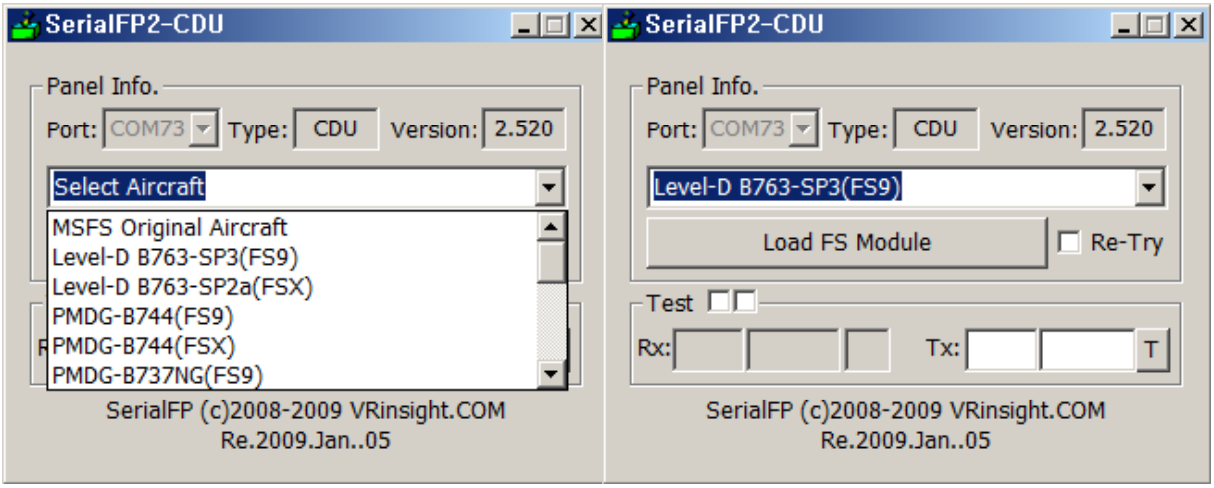
Payware aircrafts. (Wilco, PMDG, Level-D, PSS)

CDU panel supports various type of aircrafts including default aircraft of MSFS, freeware and payware. Supported payware aircrafts are;

MSFS Original Aircraft
Level-D B763-SP3(FS9) Level-D B763-SP2a(FSX)
PMDG-B744(FS9) PMDG-B744(FSX) PMDG-B737NG(FS9) PMDG-B737 Only(FS9)
PSS A319/320(FS9) PSS A330/340(FS9)
Wilco B737 PIC Wilco 777ER Wilco airbus ½
Wilco embraer-ERJ Wilco embraer-Legacy Wilco Cessna Citation X
PSS A319/320(FS9) PSS A330/340(FS9)
Cooksky Super 80 pro
F1 ATR-72

Any aircraft can be supported, if key-commands are known at least and added-on "SerialFP2" software's aircraft list.

STEP 1.
Connect CDU panel to PC and load MSFS. And then run SerialFP2.
STEP 2.
Select aircraft type and press "Load FS Module"



STEP 3.
Initial function of CDU panel is ">>Radio Stack<<". Confirm MSFS's CDU/FMC window is opened or closed by pushing "FUNC" button.
There might be some time interval. Relax and wait. If MSFS's CDU/FMC window doesn't open or close, re-execute SerialFP2 and follow STEP 1, 2.

When "FUNC" button is pressed, LCD displaying below picture; means It functions as a "Radio panel".

When “FUNC” button is pressed, LCD displaying below picture; means It functions as a “Radio panel”.

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

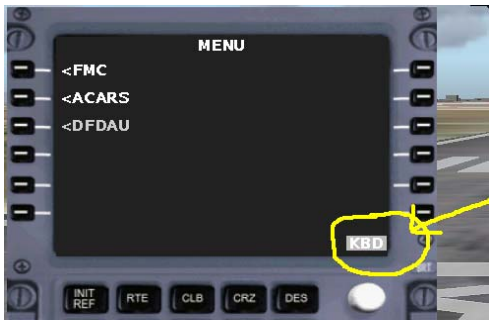
Press R1 ~ R6 buttons and confirm the function

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

STEP 4.
Input necessary data for your flight.

*** 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.2**

*** Cautions on Key-Commands using CDU panel for PMDG’s.**
: 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. Some USB port is dummy port.

Initial LCD display

LCD BRIGHTNESS trouble - LCD contrast

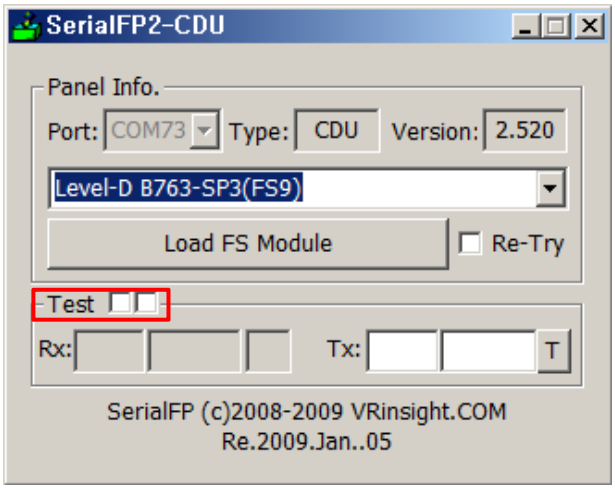
When the panel is plug into your computer, initial messages are displayed on LCD after power-on self test. If it’s dimmed or cloudy, tune the contrast.

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) Run MSFS first
2) Download & install FSUIPC
3) Setup “SerialFP2”
4) Connect CDU panel to your computer
5) Run “SerialFP2”
6) Check “Re-Try” is checked
7) Select your aircraft