

SETUP GUIDE/MANUAL

For

FDS PRO-MX-CDU/MCDU



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1.0 Product Information

- **NEW! VGA LCD (800x600 or 1024x768 Resolution)**
 - All Metal Construction (Bezel and Structural Components)
 - Dual Use Design (Drop in DZUS Rail Compliant and/or Desktop)
 - New Dimpled Injection Molded Keys
 - Open Source Interface for Simple Integration with available CDU Software (SDK Required)
 - PnP with Sim-Avionics, Project Magenta and AST
 - Dimmable Key Brightness
 - Dimmable LCD Display Brightness (Software Dependant)
 - Super Realistic Tactile Feel Keys (With Audible Click)
 - Dimensions: 8.95" x 5.75" Footprint (Dzus Compliant)
- API included with Interface Software



FDS A320 MCDU and FDS B747/777

PLEASE NOTE: The FDS-PRO-MX-CDU does not function unless you have installed the FDS-CDU Controller Software. Or available Avionics Suite software that “talks” directly to the CDU/MCDU.

(IE: Sim-A uses the SYSBoard Controller instead) Configuring the CDU by following the instructions on the following pages will enable you to turn on the backlighting, LCD Screen and use the keyboard.

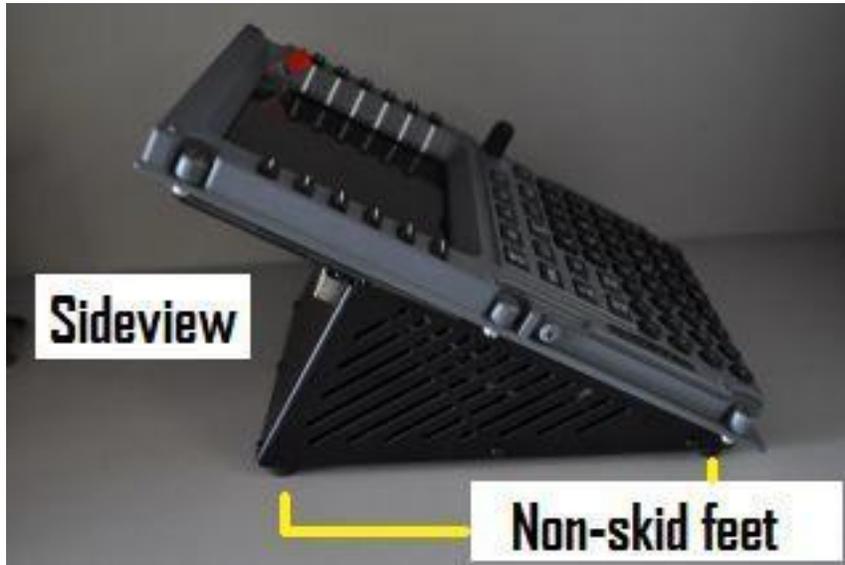
2.0 Compatible Software List

- **aeroSystems**
 - **AST (Limited Support)**
 - **iFly (Limited Support)**
- **Level D (Limited Support)**
- **PMDG B737NGX and B777**
- **Project Magenta (Limited Support)**
 - **ProSim B737 and A320**
- ***Aerowinx Precision Simulator (PSX)***
 - **Sim-Avionics B737 and B777**

API documentation included with the install package.



3.0 Features



DZUS fasteners and non-skid rubber feet



Functioning Dimmer for key backlighting and
Screen dimming (software dependent)

4.0 FDS-CDU Software Installation for Testing

4.1 FDS-CDU Software is located here

<http://www.tekworx.ca/downloads.html>

CDU software v3.1.5 (Current version at time of this manual creation: Jan/2018) [LINK](#)

Install the software on each computer that will have a CDU plugged into it via a USB cable (self-installing). Single PC users only need to install it once and assign each CDU/MCDU to the correct position (Captain or F/O)

NOTE: Sim Avionics users can assign 3 CDU's (Captain, F/O and Observer for B777 Simulators). A nice feature for full functionality!

4.2 FDS-CDU Software Installation

Plug in the USB cable to the computer and CDU/MCDU and wait for the hardware to be found.

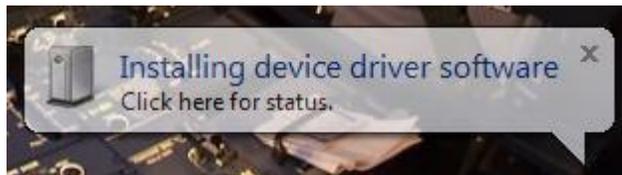


Fig.1

Start the FDS-CDU software; it will appear down by the clock in the Task Bar.



Fig.2

1. Right click on the ICON and select Configure. (Fig.2)
2. Select **Test Module** from the drop-down menu. (Fig.3)
3. Select CDU1 in the Drop-down menu. (Fig.3)
4. Click on SAVE.

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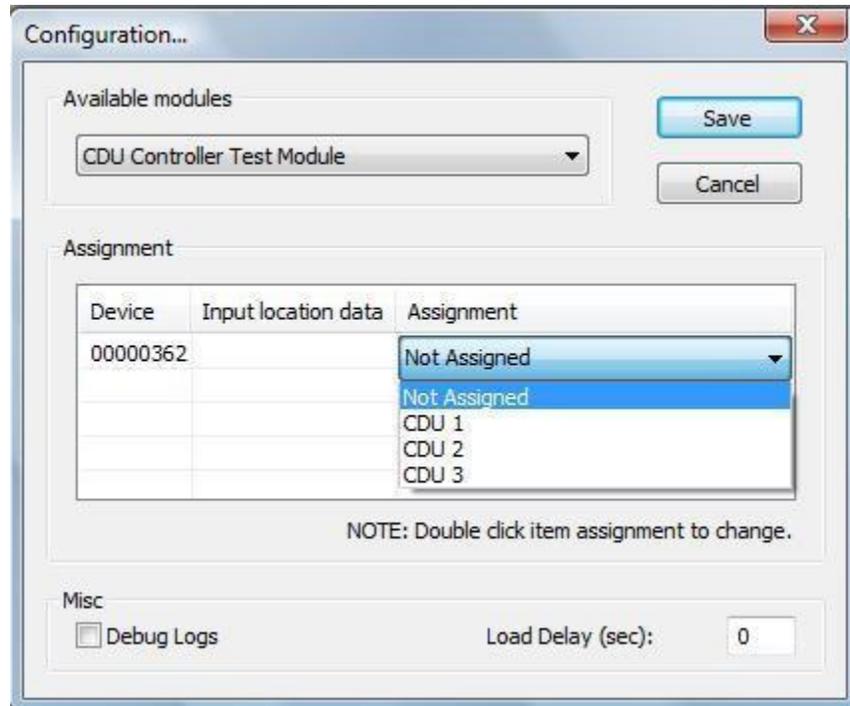


Fig.3

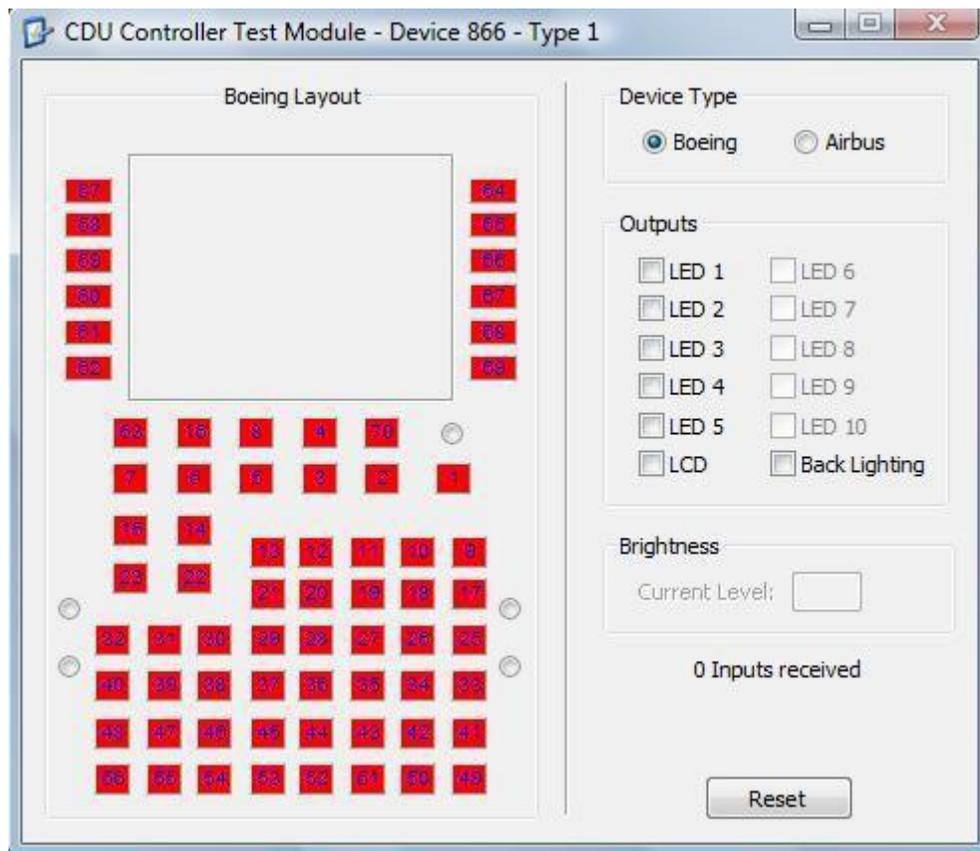


Fig.4

The Test Module will show a CDU and you will be able to test all the keys, LED's, backlighting and LCD screen. Also, the value assigned to the dimmer knob starting at 0-255. You can click in the boxes on the right or click on each LED position and the LCD screen in the CDU picture. Select Airbus for MCDU's and also the Airbus style you are using (*FDS-A320-PRO-MX-MCDU is modelling the Thales version*)

4.3 “No Sync”

“No Sync” means there is no video Connection. Check the cables and /or adapters being used. If you see “No Sync” on the FDS-CDU Test Module that is normal and does not reflect what you will see on the CDU Hardware.

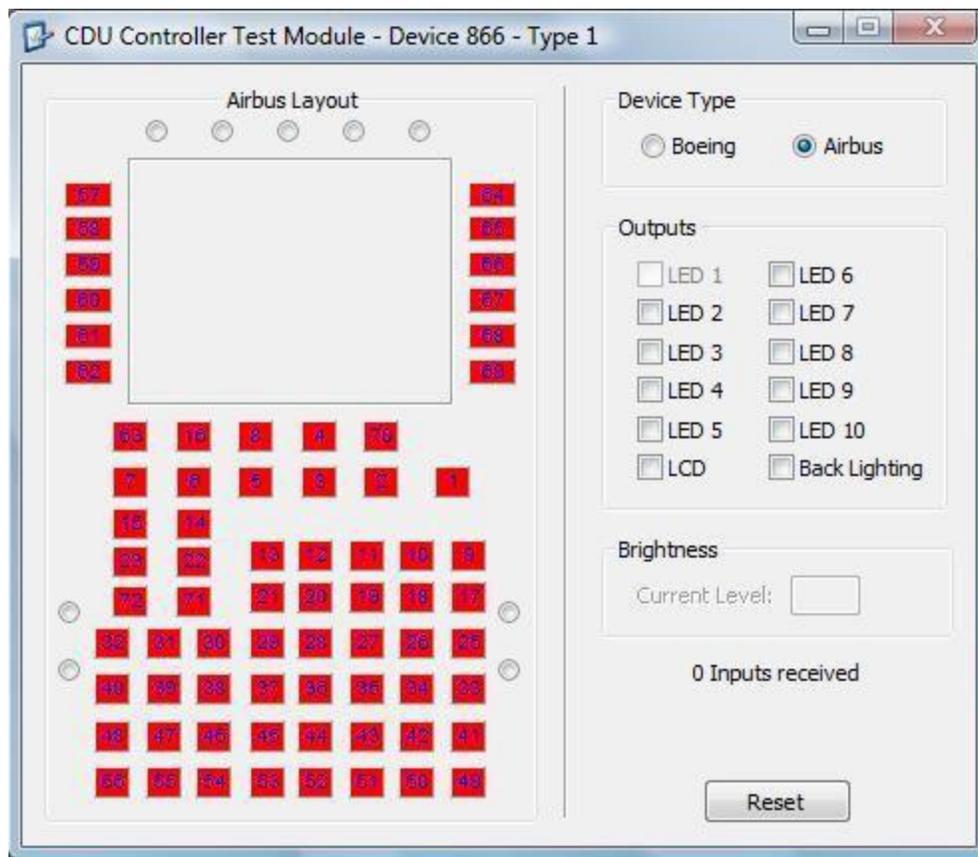


Fig.5

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Fig.6

CDU in Test mode with LCD and backlighting turned on

5.0 Sim-Avionics (Sim-A) CDU Instructions

Using the SYS Controller Software (New since 2014)

5.1 Setup Instructions

- 1) Connect CDU USB, power (12V) and VGA cable.
- 2) Open the SYS Controller software in the main Sim-A folder.
- 3) Software will open. (Fig.7)

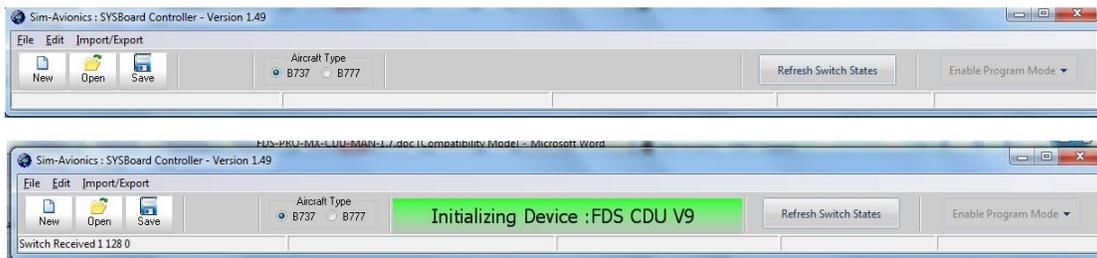


Fig.7

- 4) CDU Hardware is initialized.

Assign the CDU(s) by opening “Enable Program Mode” on right side of SYS Controller (Fig.8)

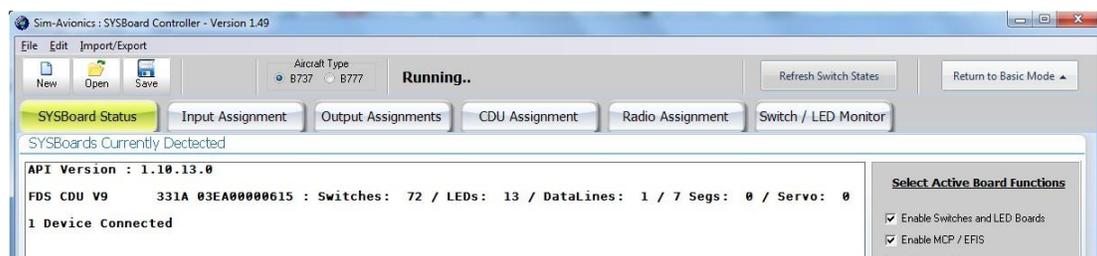


Fig.8

- 5) List of SYSBoards or Devices Connected is shown. Select CDU Assignment Tab. (Fig.8)
- 6) Press any Key on the CDU you want to assign.

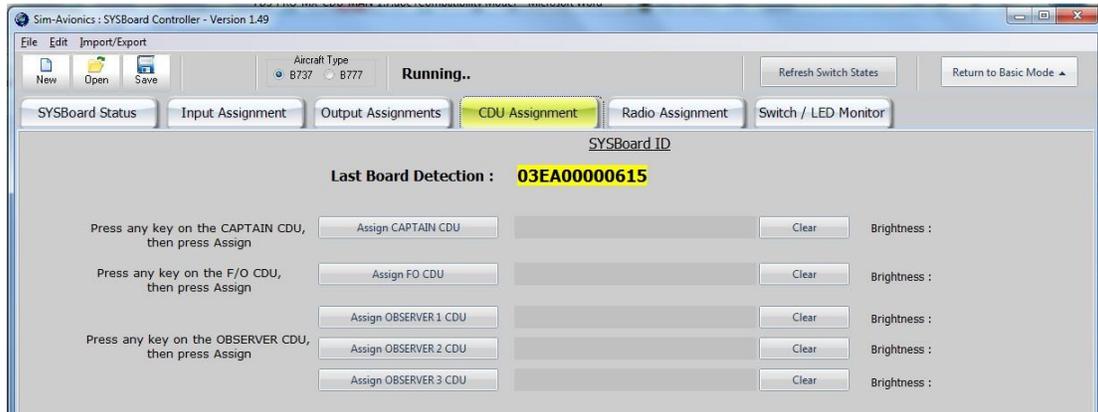


Fig.9

Number appears in yellow. Assign to the CDU, in this case CAPTAIN CDU (Fig.9)

- 7) CDU will show assigned and Press “SAVE” (Fig.10)

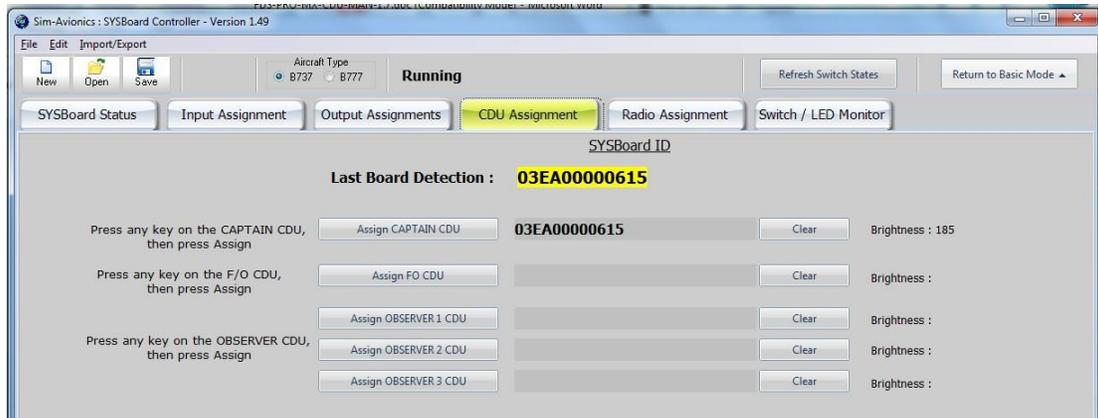


Fig.10

- 8) Once assigned the CDU screen and backlighting will turn on.
- 9) Start the Sim-A CDU software by clicking on the exe in the CAPT CDU folder.



Fig.11

- 10) The CDU appears on the Main PC screen as above. Drag the CDU over to the CDU screen. (Fig.11)
- 11) Once positioned in the FDS CDU hardware screen, press the “END” key on your computer keyboard. The CDU will go to Full Screen.
- 12) Close the Sim-A CDU program to allow the screen settings to be written to the CDU ini file in Sim-A
- 13) Re-start the CDU program and the CDU will display the CDU screen in your CDU hardware.

***Follow the Line Set-up procedure on page 18 of the Sim-Avionics User manual located in the Main Sim-Avionics folder in the Documentation folder.**

5.2 Sim-A Line Set-up

1. Press the MENU key
2. Press SIM
3. Press NEXT PAGE
4. Press Line Setup
5. Change each line number by entering the new number with the keypad and select the line you want to adjust. The line will move, adjust the number till lined up. Do this for each line. IE: Shows 58 enter 68, select the LSK and the text will shift down. (if you make a mistake enter a number close to what it was and select the LSK to return the line). Only required for the left side, it will adjust the right side as well.
6. Press NEXT PAGE to go to the next menu page.
7. This is for the Title, Margin and Scratchpad

Press SAVE when completed.



6.0 ProSim CDU Instructions:

In the most recent pre- releases (1.39.38) ProSim now supports the FDS CDU with its own version of the TEKWorx driver (interfacelTAPI.dll) ProSim will then recognize the CDU.

Please install our latest prerelease as explained here:

<http://www.prosim737.com/forum/viewtopic.php?f=81&t=4932>

Uninstall the FDS drivers / TEKWorx software if installed. FDS_CDU software can be used as a Test module if required for testing. The FDS-CDU software cannot be running at the same time as the Avionics software.

6.1 ProSim CDU Setup

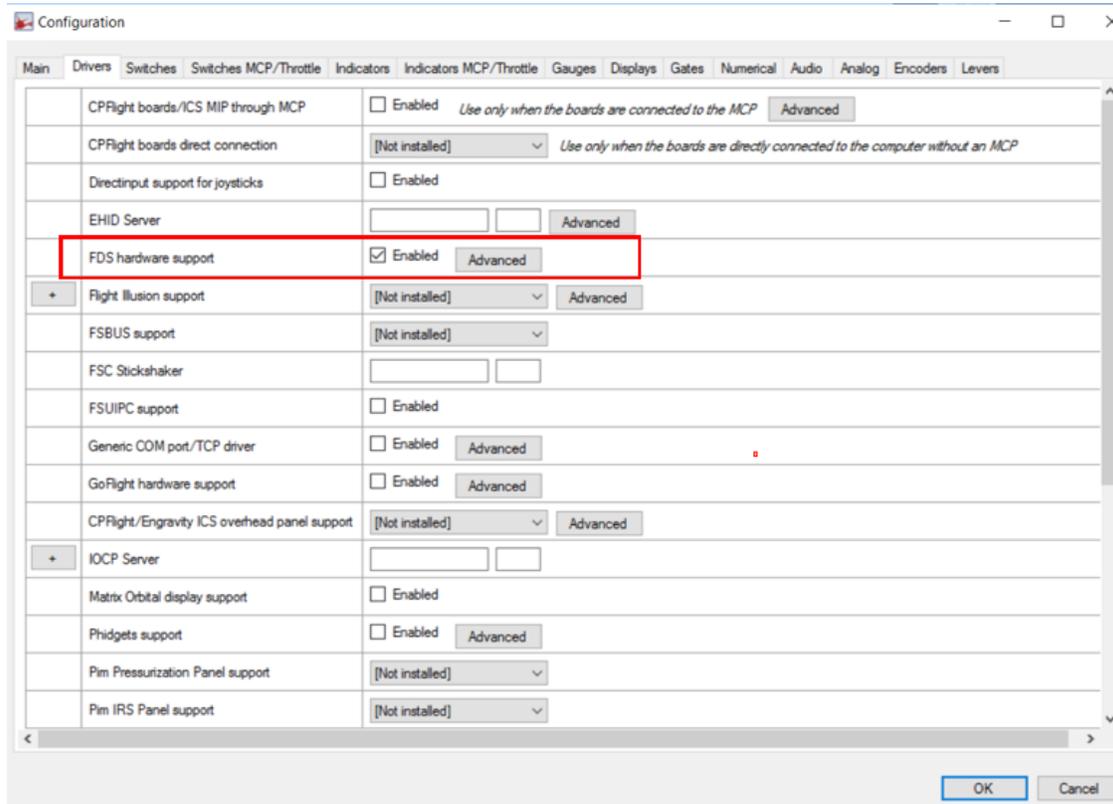


Fig.12

Make sure you have selected “**FDS Hardware Support**” by selecting Config/Configuration then Drivers. (Fig.12)

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Open the ProSim CDU software and select the exe file.



Fig.13

6.2 ProSim CDU Assignments

- 1) Right-click on the CDU screen and select Config. (Fig.14)
- 2) Enter the ProSimSystem Server IP Address to connect the CDU software and showing a green Connected indicator. **(A)**
- 3) Select the CDU position (Captain or First Officer) **(B)**

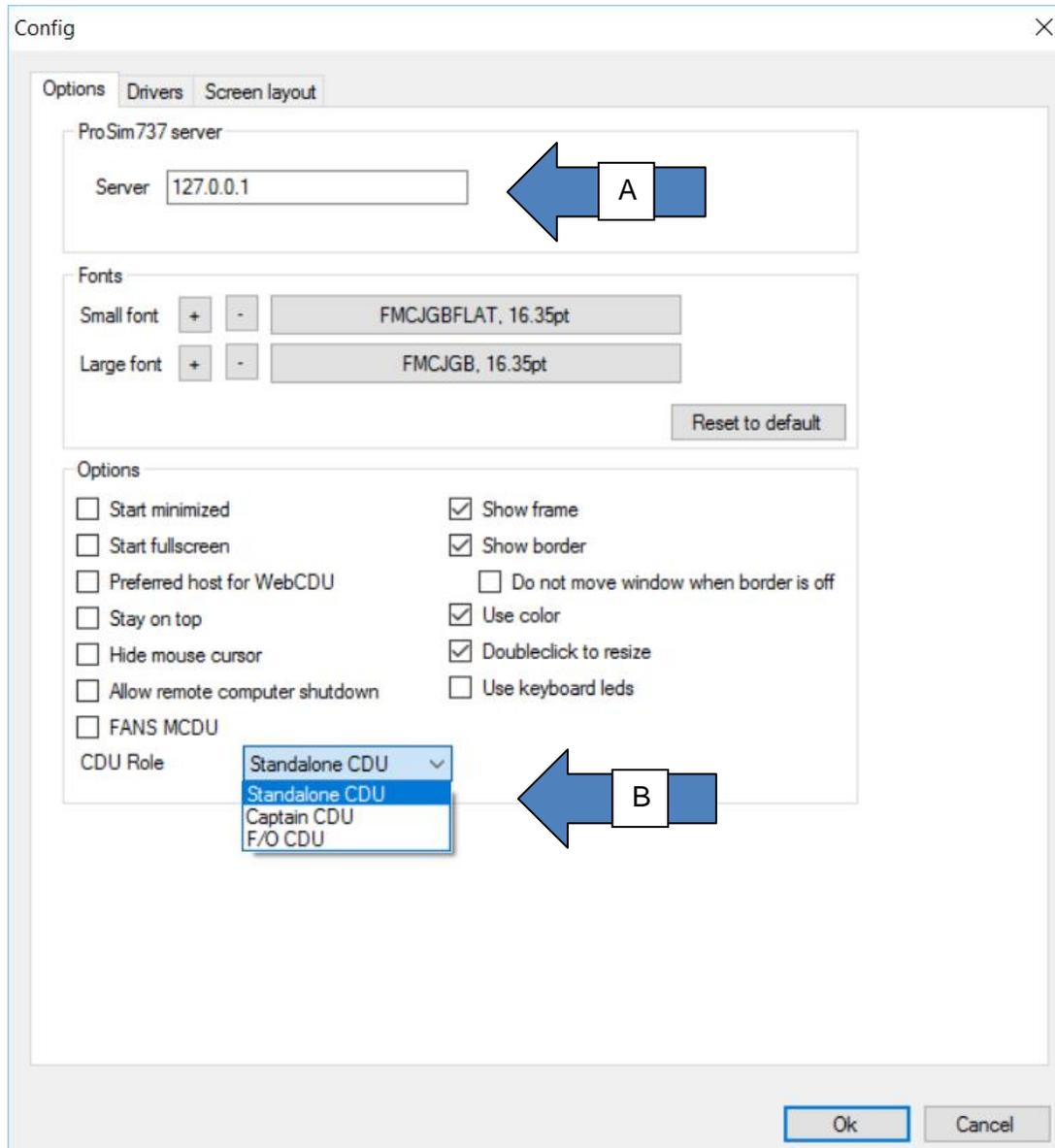


Fig.14

Select the **Drivers** Tab

- 1) Select **Enabled**
- 2) Select the CDU serial number

Note: It is easier to do each CDU one at a time so that you know which serial number you need to select.

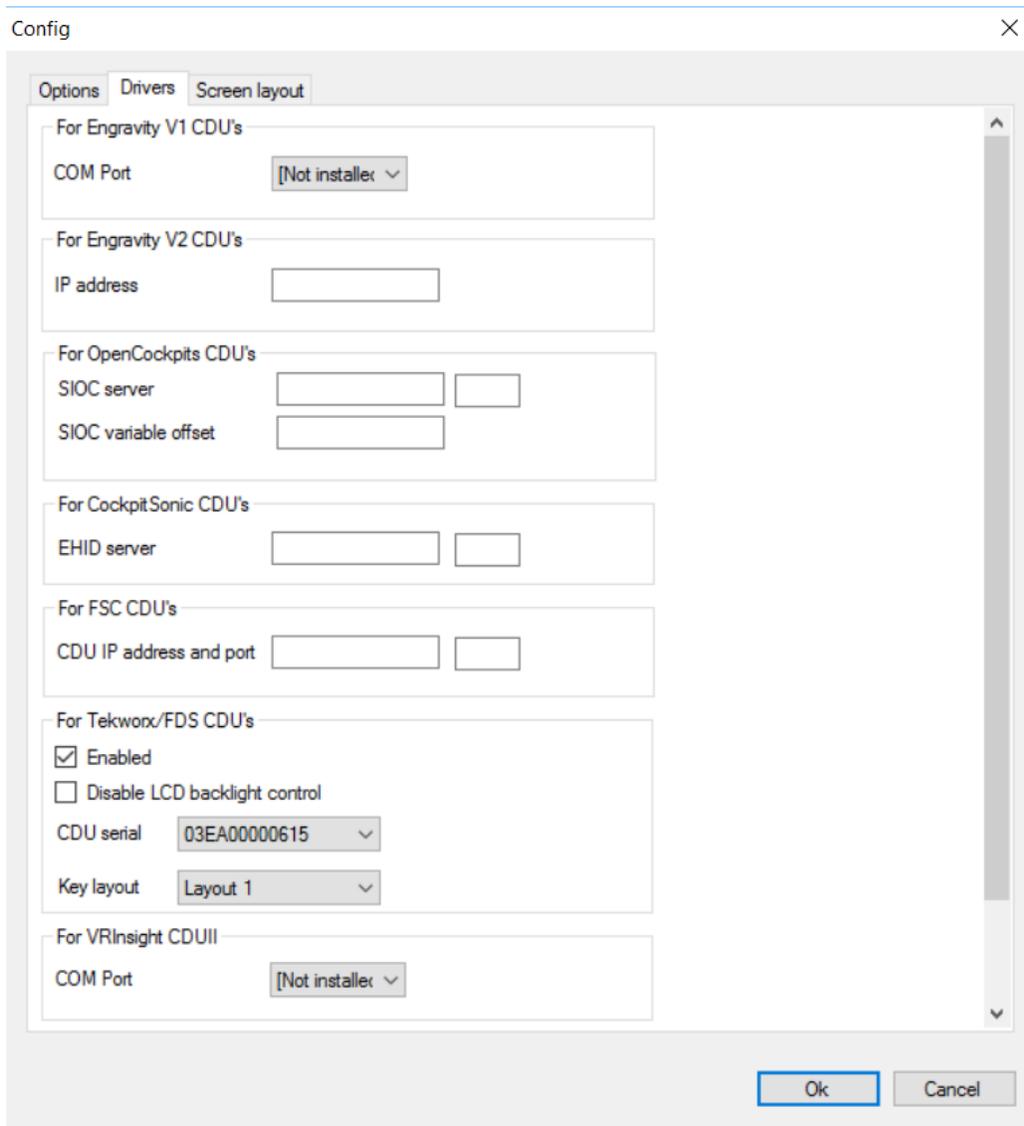


Fig.15

Back to the Options Tab

- 1) Set the Fonts as shown or find the settings you prefer.
- 2) Select Start Full screen
- 3) Deselect Show Frame and Show Border

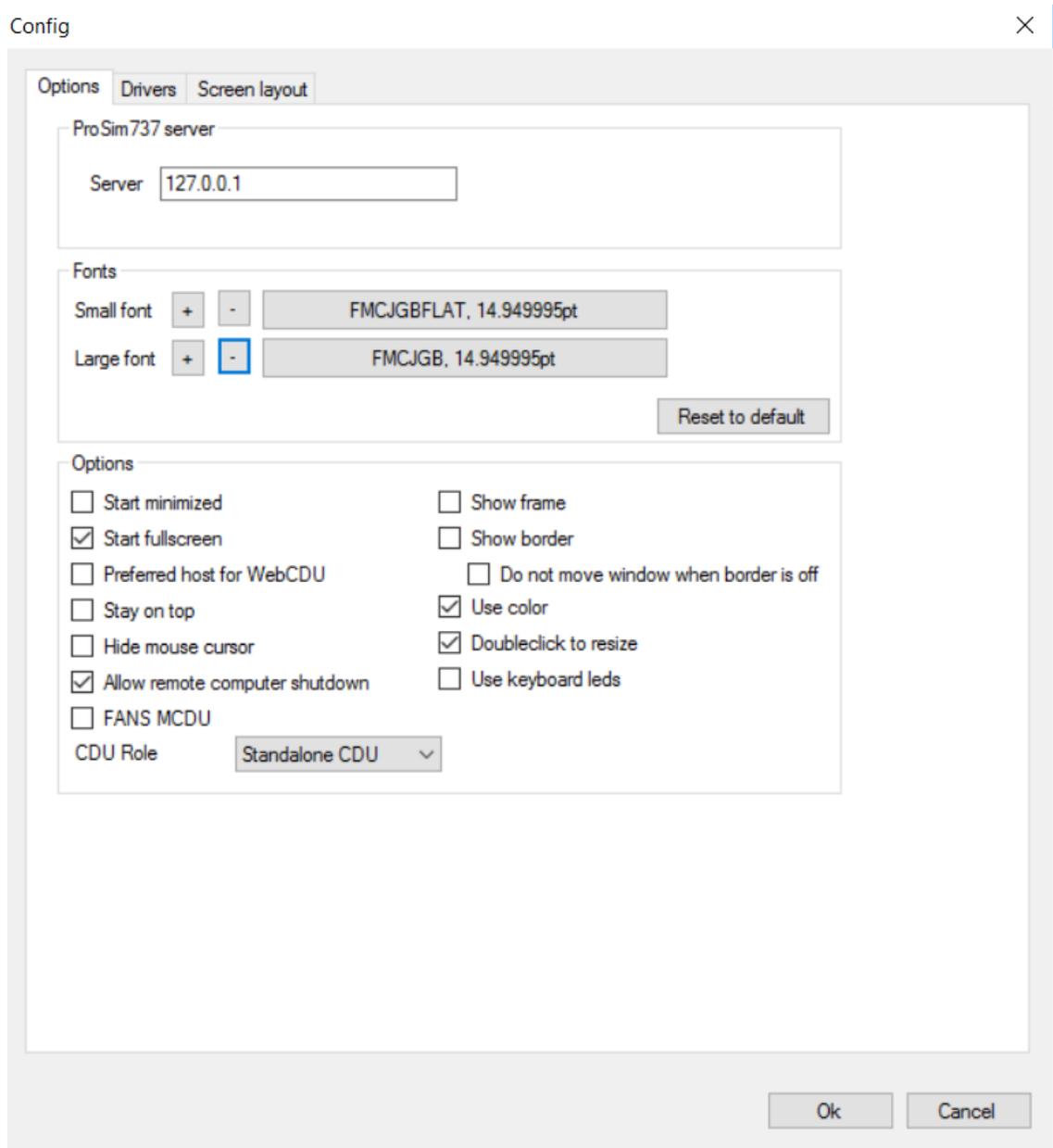


Fig.16

6.3 Moving the ProSim CDU to the CDU screen

- 1) Drag the CDU (as shown) over to the screen of the Hardware CDU



Fig.17

6.4 ProSim Screen Setup

Do the Screen Layout following the instructions provided by ProSim.

This is the ProSim software setup for the Screen Layout. Fig.18

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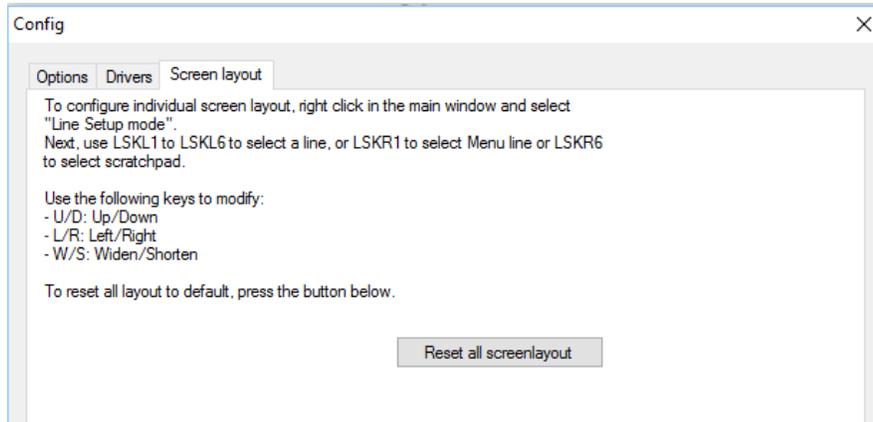


Fig.18



Fig.19



7.0 AEROWINX PRECISION SIMULATOR (PSX) CDU SETUP

Start the FDS-CDU Software. (Fig.20)

Open the software; it will appear on the Task Bar.



Fig.20

Right-click on the ICON and select Configure. Select **Aerowinx Precision Simulator (PSX)** from the drop-down menu as shown below. (Fig.21)

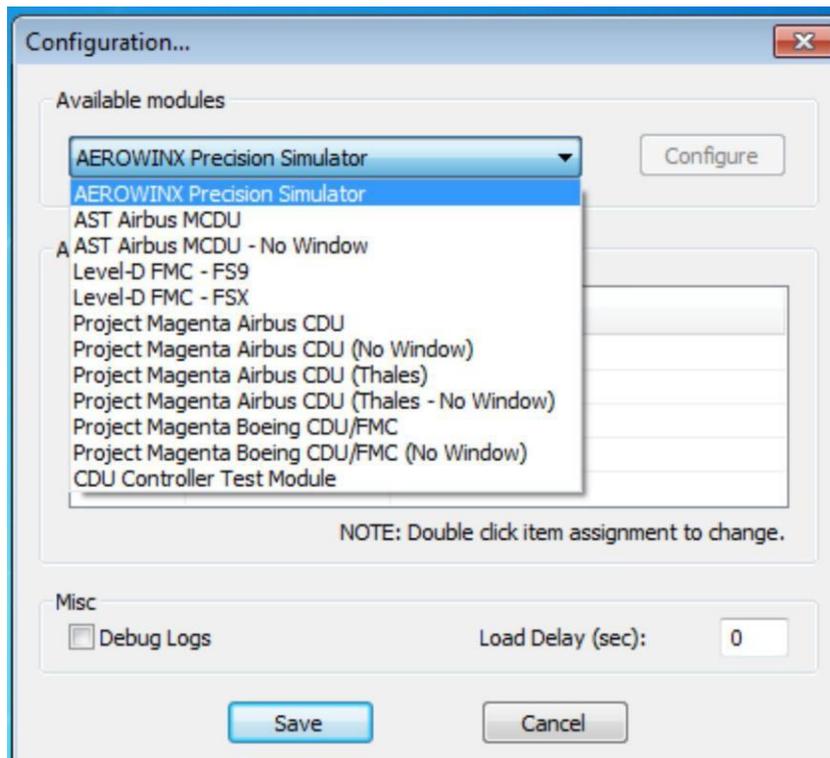


Fig.21

7.1 PSX CDU Configuration

When PSX is selected the Configure Icon to the right of the drop-down menu will darken. If the CDU is being configured from a networked computer other than the PSX Server the IP address and Port number of the Server should be selected. The port number can be obtained from looking at the PSX server's **Preferences – Basic** page. Fig.22

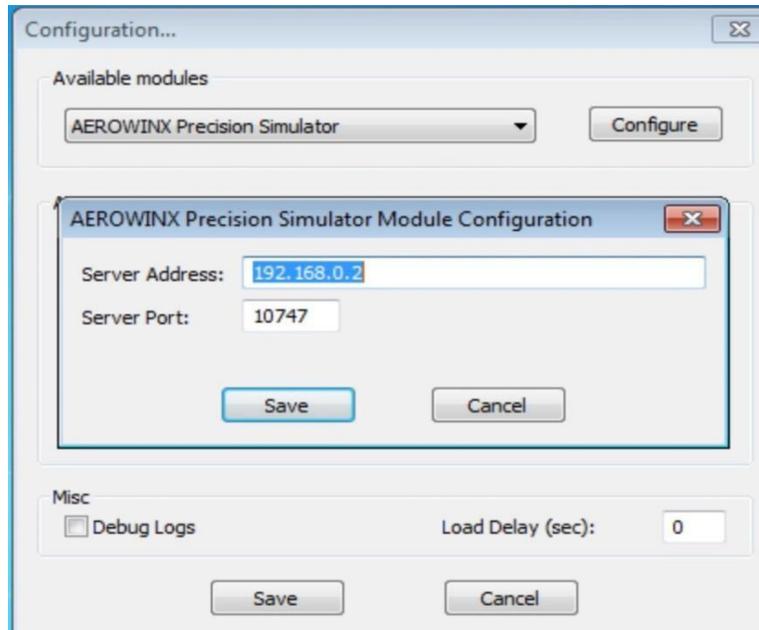


Fig.22

In the Assignment Tab use the Drop-down menu to select the position of the CDU as shown in the following screenshot. For PSX the CDU position is defined as left, center and right. Left is the captain's CDU, Center is the Observer's CDU on the aft aisle stand and Right is the First Officer's CDU. All three CDUs can be on the same PC if desired. Fig.23

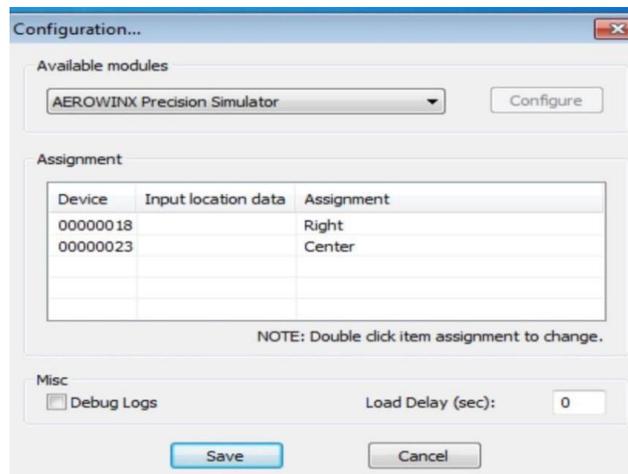


Fig.23

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Click on SAVE. Right click on the ICON and select EXIT. (Fig.23)

7.2 PSX Special Notes

Optimal video card resolution to match the PSX program is 800 x 600.

Once set up and initialized, the screen, the keypad backlighting and the indicator lights are controlled by the state of the B747-400 simulator. When the aircraft is unpowered, all CDUs are inoperative. When powering up a CDU, it takes 20 seconds until the CDU is operative. The left CDU is powered when the Battery switch is ON and the Standby Power Selector is set to AUTO or BAT. The center CDU is powered when AC bus 1 powered. The right CDU is powered when AC bus 1 or 2 is powered. (AC busses can be powered by APU PWR, EXT PWR, or by engine generators.) The CDU screen intensity is set by the **BRT** dimmer knob on the CDU. The keypad backlighting is controlled by the **Aisle Stand Panel** Lighting Potentiometer on the Overhead Panel.



8.0 PMDG CDU Setup

Covers the B737NGX and the B777 only.

Follow instructions included with the downloaded software

Location of User Manual after installation: C:\FDS PMDG Interface

8.1 PMDG Software located [here](#)

FDS-PMDGController V2.0 is the latest version. *Please* review and follow the supplied instructions to get the CDU up and running. Make sure you have installed the Sim-Connect files if running Prepar3D. Sim-Connect is not installed automatically. Must be installed by the user.

8.2 Sim-Connect for Prepar3d

Install all three P3D Sim-Connect versions:

C:\Program Files (x86)\Lockheed Martin\Prepar3D v3\redist\Interface\FSX-RTM\retail\lib\SimConnect.msi

C:\Program Files (x86)\Lockheed Martin\Prepar3D v3\redist\Interface\FSX-SP1\retail\lib\SimConnect.msi

C:\Program Files (x86)\Lockheed Martin\Prepar3D v3\redist\Interface\FSX-SP2-XPACK\retail\lib\SimConnect.msi

NOTE: No need for the Japanese or Russian version (Unless you really want to...)



9.0 Air Sim Tech (AST) MCDU Set-up

FDS-CDU Software is located here:

<http://www.tekworx.ca/downloads.html>

CDU software v3.1.5 link is [here](#)

Open the software; it will appear down by the clock in the Task Bar.



Fig. 24

- 1) Right click on the ICON and select Configure. Select **AST Software** from the drop-down menu.
- 2) Click on SAVE.
- 3) Right click on the ICON and select EXIT.

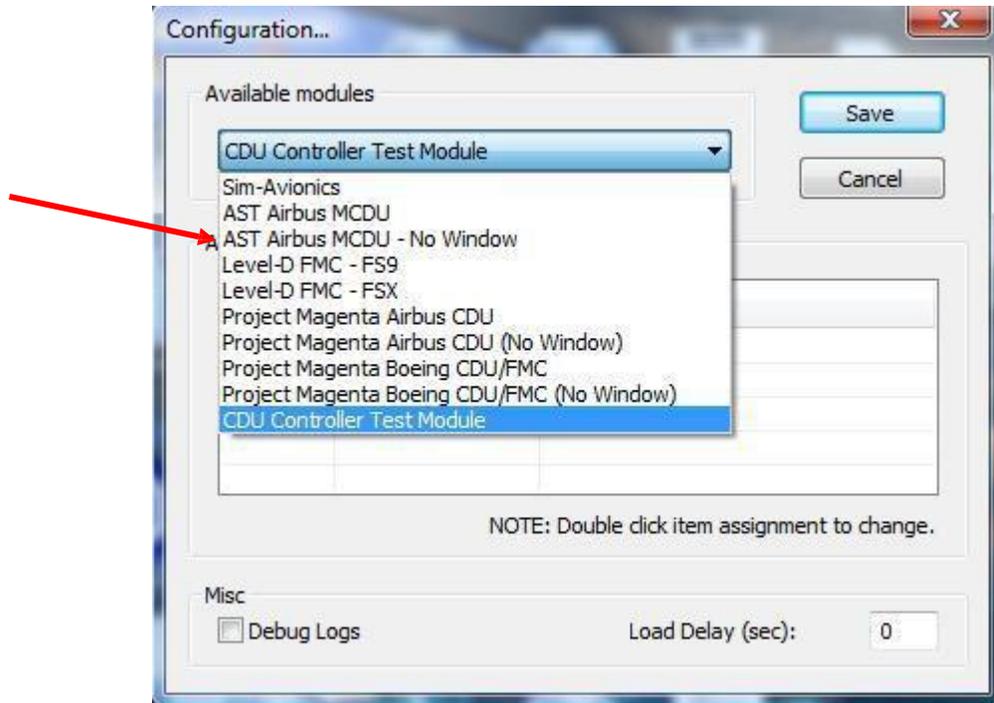


Fig.25

Follow the MCDU instructions that come with AST software for proper installation. AST uses a “Key Teacher” program to assign keys to the MCDU software. Also, the ICFG program will allow you to adjust the screen

<http://www.airsimtech.eu/>

NOTE: You need to choose the “No window” in the Drop-Down menu. Be sure that the MCDU software is **NOT** running when using the “Key Teacher” tool.

Limited support is available to AST currently, FDS does not have any software set-up for testing purposes.



10.0 Project Magenta CDU Setup

FDS-CDU Software is located here:

<http://www.tekworx.ca/downloads.html>

CDU software v3.1.5 [LINK](#)

Open the software; it will appear down by the clock in the Task Bar.



- 1) Right click on the ICON and select Configure.
- 2) Select **Project Magenta** from the drop-down menu.
- 3) Click on SAVE.
- 4) Right click on the ICON and select EXIT.

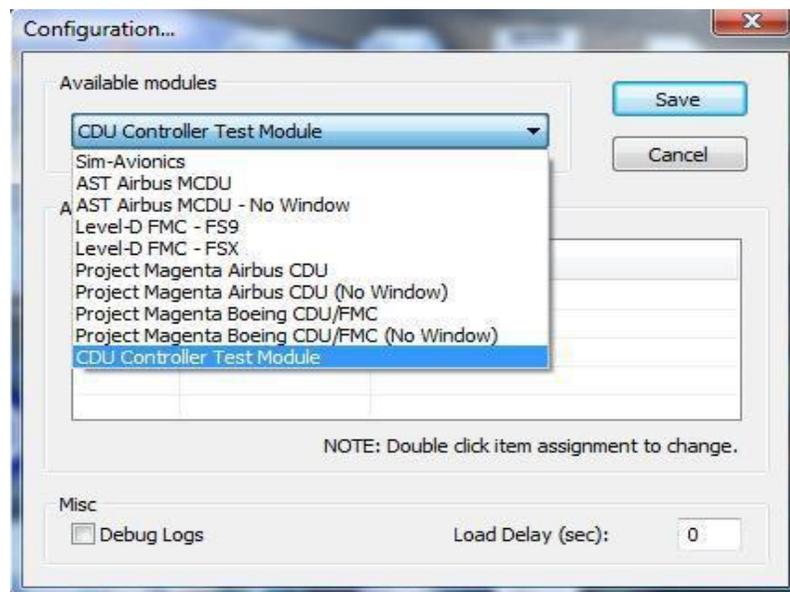


Fig.26

10.1 Project Magenta Special Notes

The RCDU software requires the *Project Magenta* (No Window) when configuring the FDS-CDU software. (Fig.26)

<http://www.projectmagenta.com/resources/MagentaDoc11.pdf> CDU Information starts on Page 30. Set-up and INI file information can be found in this document. Follow the instructions provided.

NOTE: there is no longer any support for Project Magenta especially the RCDU set-up. FDS does not have any of the PM software to be able to test or support.



11.0 iFly CDU Setup (B737 Only)

<http://www.flightdecksolutions.com/pcupload/FDS-CDU-iFly-Module-v1.0.zip>

Follow instructions below. Install FDS-CDU-iFly-Module software **after** FDS-CDU Controller Software.

11.1 iFly Installation Steps

1. First, you will need to download and install the FDS CDU Controller software from

<http://www.tekworx.ca/downloads.php>

FDS-CDU ver 3.1.5 [LINK](#)

***This is the main controller software required to interface the hardware to any software.**

2. After successfully running **FDS-CDU iFly Module v1.0.exe** the installer has made the changes to allow the CDU Controller to interface with the CDU on the FSX iFly aircraft. What did the installer do :

- You will find a new folder : **\FDS iFly Interface\CDU**

This contains **iFlyCDU.dll** which is the iFly addon module for the CDU Controller software.

- A Registry entry is also added during the installation to register the iFlyCDU.dll with the CDU Controller software:

HKLM\Software\TEKWorx Limited\FDS-CDU\Extra Modules\iFly

3. Now all of the components have been installed you need to assign the connected CDU's as either Captain or FO in the CDU Controller software.

To do this you should connect the CDU's to you computer via the USB cables and run the CDU Controller software – **FDS-CDU.exe**

It will show as an icon in the sys tray on the taskbar (down by the clock) (Fig.27)



Fig.27

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. Now Right-Click on the icon and select “Configure” from the popup menu. (Fig.27)

iFly should be available and selected in the “Available Modules” dropdown menu. One or Two devices will be displayed in the Assignment window depending on how many CDU's you have connected. Using the *Assignment* dropdown menu, you can select Captain or FO.

By pressing some keys on one of the

CDU's, you should see Keypresses shown in the *Input Location Data* box. This will help you to differentiate between two CDU's

Press **Save**

Then Right-Click on the CDU Controller icon again and select **Exit**

You have now configured the CDU Controller Software

<http://www.flightdecksolutions.com/pcupload/FDS-CDU-Module-iFly-Manual.pdf>

Limited support is available to AST currently. FDS does not have any software set-up for testing purposes.



12.0 Nav Data (Navigraph)

The necessary files that are required for the CDU to have the latest data are available here:

<http://www2.navigraph.com/www/default.asp>

FMS Data page:

<http://www2.navigraph.com/www/fmsdata.asp>

Scroll down to the appropriate Avionics Suite and select the file. You need to have a subscription to download the latest files.

12.1 **Note: Software suites do not come with the latest Nav Data installed.**

For more info: http://www2.navigraph.com/www/fmsdata_about.asp

Self-Installing software.

*Consider purchasing the “Ultimate Package” for Full Airport Charts and Nav Data.



13.0 FAQ Frequently Asked Questions

13.1 I can't get the CDU to work at all.

Don't panic, do you have the VGA, USB and 12V power connected?

Have you installed and configured the FDS-CDU or Avionics software?

Have you used the FDS-CDU software Test Module?

Have you read the manual?

13.2 The display doesn't look right.

This is a Windows setting. You need to go into the Display Adapter Properties in the Display Settings. "List all Modes"

Check the Frequency (Hertz) in the Video card settings. Some configurations (ie: video cards, settings etc) need to be adjusted.

Change the hertz from 60 to the next one and try. Several to choose from.

Also check if you should use 800 x 600 or 1024 x 768. More hertz settings in there.

We haven't found the exact method to get the right setting. Seems to change by computer. We will update the manual once we sort that out.

13.3 Can I run 2 CDU's on 1 PC?

Yes, you can with Sim-Avionics and ProSim. Only change the CDU config file to start the FDS-CDU software in the Captain's CDU. Select each CDU in the CDU Configuration menu.

Project Magenta currently you cannot run the RCDU unless it is the "Top Window". Testing has shown you will need a second PC. Mirroring a Pedestal CDU from the Captain's CDU is an option for B747 and B777. (A VGA amplifier will be required)

Sim-Avionics allows multiple CDU's running independently allowing the 3 in a B777...

13.4 I don't see the software CDU on my Screen

You need to drag the software CDU screen over to the actual CDU Hardware screen.

Common installation step that is missed.

13.5 The screen shows "No Sync"

"No Sync" on the CDU screen means there is no video Connection. Check the cables and /or adapters being used.

If you see "No Sync" on the FDS-CDU Test Module that is normal and does not reflect what you will see on the CDU Hardware. It Indicates the screen is turned "ON".