



MS Panel

VRinsight

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Introduction

General

The Multi Switch Panel is a compact unit to control any function available from ALL simulators and games capable of handling joystick inputs. Because of this, the installation as a joystick makes it easy as well as commands/key assignments. Due to its design, the VRinsight Multi Switch panel will fit needless with other VRinsight flight panel products like the MCP Panel, CDU II, and Instrument RadioStack or even with the JetPit or ProPit. Combinations are endless!

The Multi Switch Panel black box offers the following parts:

- Multi Switch Panel complete with angled bracket,
- A DVD with this User Guide, standard.xml sample file, MSFS_Controls text file and several VRinsight product instruction movies and Wilco Publishing promotion movies.
- An "Application Instruction" sheet with three removal tools and attached to it, a pushbutton placards sheet.

Features

The following offers all the features of the VRinsight Multi Switch Panel.

- Fully compatible with all simulators:
 - Flight Simulator X and FS2004,
 - Falcon 4,
 - IL-2 Sturmovik,
 - Black Shark,
 - Lock ON,
 - X-Plane,
 - Ship Sim Extremes,
 - Space Shuttle etc.
- Plug & Play installation.
- No driver required.
This means it's fully programmable directly from your simulators or FSUIPC.
- Full metal case.
- A USB 2.0 cable connection.
- Panel backlight, which is always ON.
- Ten push buttons.
- Two 2-positions ON/OFF toggle switches.
- One return toggle switch.
- One 3-position ON/OFF toggle switch.
- Six encoder switches.
- Two potentiometers.
- Four sliders.
- One four position HAT view button.
- Measurements:
 - Length: 30.5cm (12 inch)
 - Width: 12.5cm (4.9inch)
 - Height: 11cm (4.3 inch).
- Weight: 1.5kg
- 1 year warranty.

These two images of the Multi Switch Panel show you the identification of the used push buttons, switches, knobs, encoders and sliders.



- A Fast Rotate and Hold feature for rotary encoders "D"
- B Pushbuttons (12)
- C Encoder switches (6)
- D Potentiometers (2)
- E Four positions view button (1)
- F Two positions ON-OFF toggle switches (2)
- G Return toggle switch (1)
- H three positions ON-OFF toggle switch (1)
- J Sliders (4)

Installation

Connecting the Multi Switch Panel

Since the Multi Switch Panel comes only with one USB cable, hardware installation will be as easy as possible. Remember that the USB receptacle should be USB 2.0 compliant else problems could arise. Follow these steps for a successful hardware installation. Although the following steps represent Windows Vista/7 installation, the Multi Switch panel is also compatible with Windows XP.

- Connect the USB cable of Multi Switch panel to a USB PC receptacle or to a USB 2.0 hub.
- The Multi Switch panel is recognized as a new Human-Interface Device (New Hardware).
- Check all four parts of the Multi Switch panel are illuminated. This means the blue backlight behind the pushbuttons, switches, sliders and HAT switch should illuminate at the light blue marked areas down below.

Note: The blue LED light will be dimmed in a bright environment.



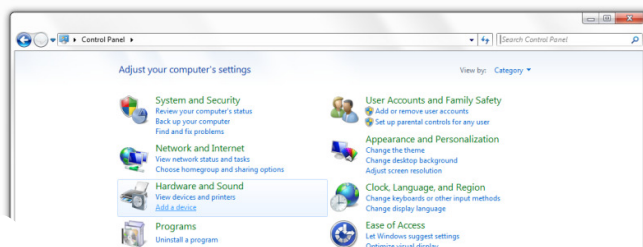
Calibration

General

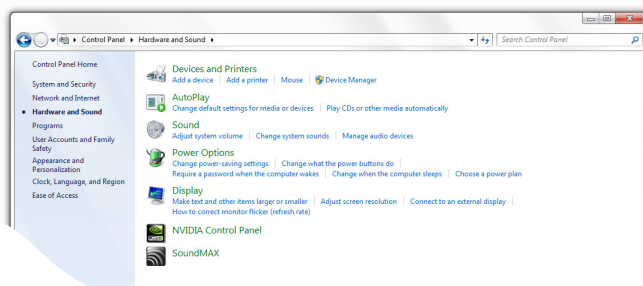
Since the Multi Switch panel is recognized as a joystick, it must be calibrated before using it. Hardware calibration examples are given for working with Windows 7 and Windows XP-SP3. Because of the similarity with Windows Vista, no calibration example of this Operating System is included. The actual Windows calibration is for all Windows system the same and therefore only screenshot in relation to Windows 7 are shown.

Windows 7 (or Vista)

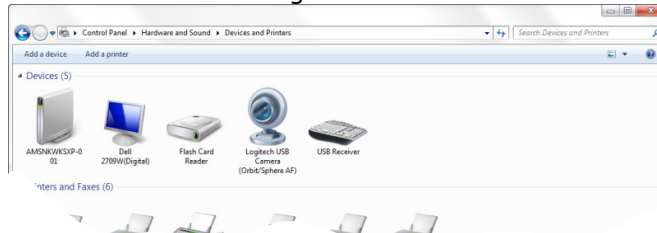
- Step 1 Connect your Multi Switch panel to a USB 2.0 receptacle.
- Step 2 Open the Windows Control Panel.
Either you have Category view or Large (small Icons) view active. For Category view follow step 3A else 3B.
- Step 3A - Category view - Click Hardware and Sound.



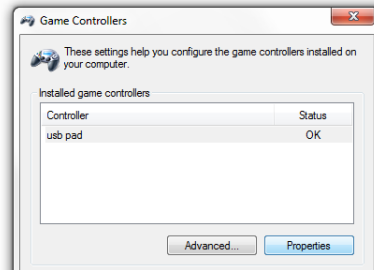
- Click Devices and Printers.



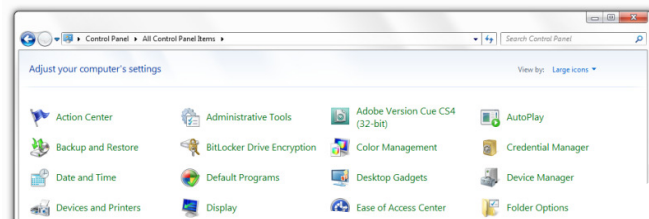
- Right click the usb pad icon and chose Game controller settings.



- Step 3A - Category view (con't)
- The Game Controllers window appears.
 - Click the Properties button.
 - Continue with step 4.

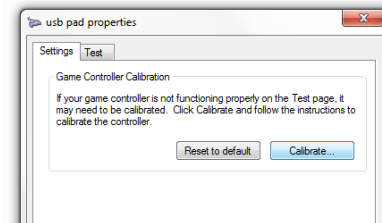


- Step 3B – Large (small) Icon view ...
- Click the Devices and Printers icon.



- This will bring you to the 3rd screenshot of step 3A thus right click the usb pad icon and chose Game controller settings.
- The Game Controllers window as you can see above appears. Click the Properties button.

- Step 5
- Click the Settings tab in the usb pad properties window followed by the Calibrate button.

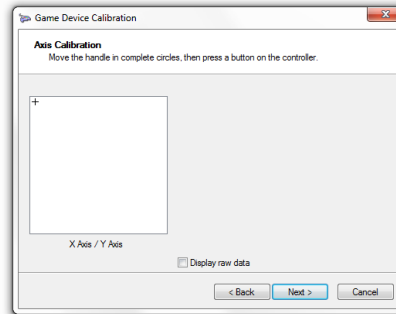


- Step 6
- The Welcome to the Device Calibration Wizard appears. Start the wizard by clicking the Next> button. Continue till the Axis Calibration appears.



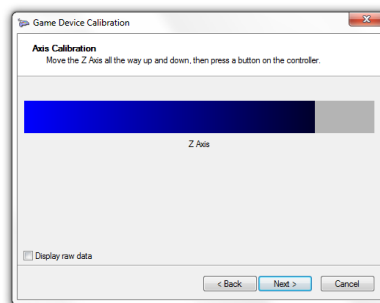
Step 7

- Gently rotate knobs R1 and R2 several times from left to right and follow their output on the screen.
- Note:** Knob R1 will move "+" left to the right and knob R2 will move "+" up and down).
- When done, click the Next> button.



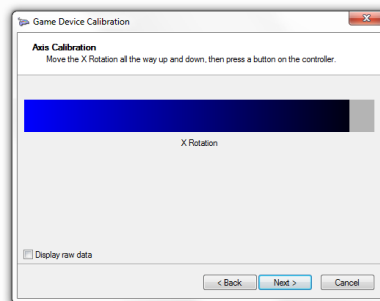
Step 8

- The *Axis Calibration Z Axis* window appears.
- Move S1 slider, which is recognized as Z axis, up and down and check for movement of the blue bar down below.
- When you are ready, click the Next> button.



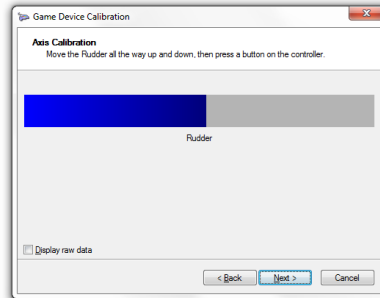
Step 9

- The *Axis Calibration for X Rotation* appears.
- Move S2 slider, which is recognized as X Rotation, up and down. Check for correct blue bar movement.
- When you are ready, click the Next> button.



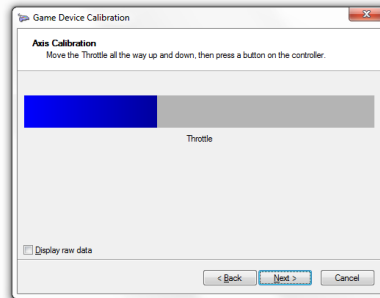
Step 10

- The *Axis Calibration for Rudder* window appears.
- Move S3 slider, which is recognized as Rudder, up and down.
- Click once more the Next> button.



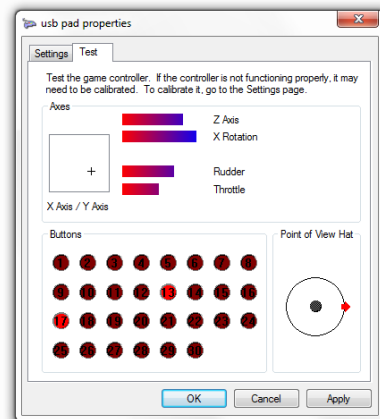
Step 11

- The *Axis Calibration for Throttle* windows appears.
- Move S4 slider, which is recognized as Throttle, up and down.
- Click Next> and finish the Calibration Wizard. This concludes the calibration procedure for the sliders and rotary encoders R1 and R2.



Step 12

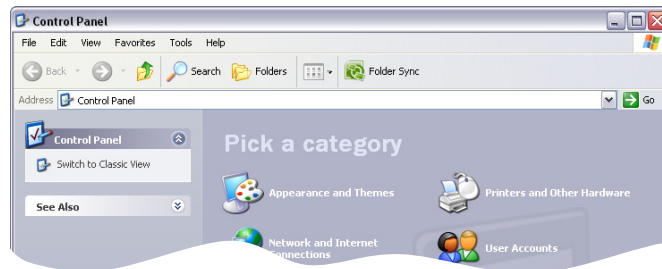
- Select the Test tab as shown below.
- Move and/or press all Multi Switch panel buttons, switches, knobs and sliders and check for their correct output on the usb pad properties window.
- When you are finished with testing are the switches, buttons, sliders and knobs, click the OK button.



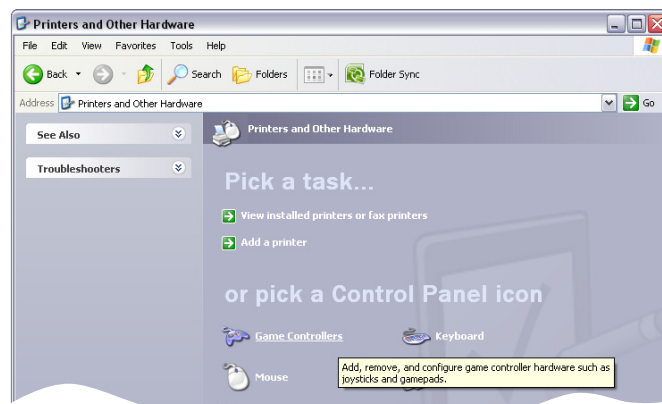
Windows XP

Since the Game Device Calibration is more or less the same for every Windows version, this Windows XP section only covers those parts that differ from Windows 7 (or Vista). Once you've reached Windows XP step 4, you continue with the device calibration of the previous section.

- Step 1 - Connect your Multi Switch panel to a USB 2.0 receptacle.
- Step 2 - Open the Windows Control Panel.
- Either the contents comes up with Category view or Classic view. For Category view take step 3A else 3B.
- Step 3A (Category view) - Click Printers and Other Hardware.



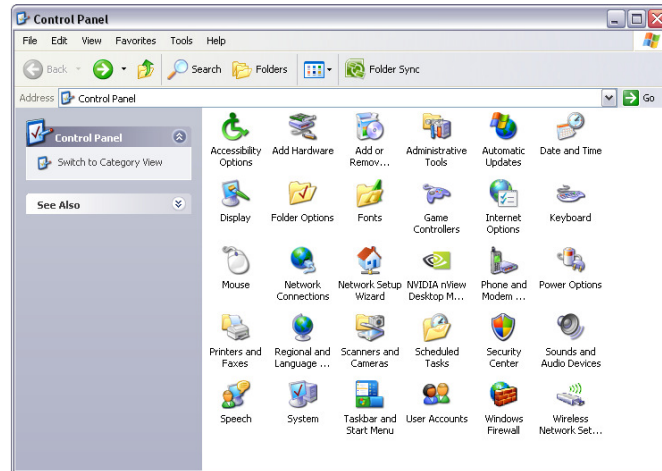
- Click Game Controllers icon.



- This will lead you to the Games Controllers window with the *usb pad* joystick or actually the Multi Switch panel.
- Click the Properties button.

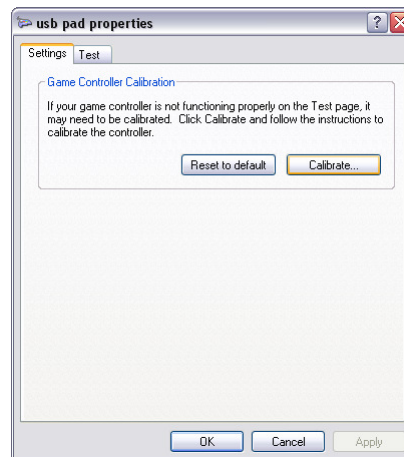


Step 3B (Classic view) - Click "Game Controllers" icon.



- This will lead you to the Games Controllers window with the *usb pad* joystick or actually the Multi Switch panel.
See for this the 3rd screenshot on the previous page.
- To continue with the test, click the Properties button on the Game Controllers window.

Step 4 - Click the Settings tab in the usb pad properties window followed by the Calibrate button.



For actual Windows XP usb pad calibration; go to page 6, step 6 of the Windows 7 (or Vista) section.

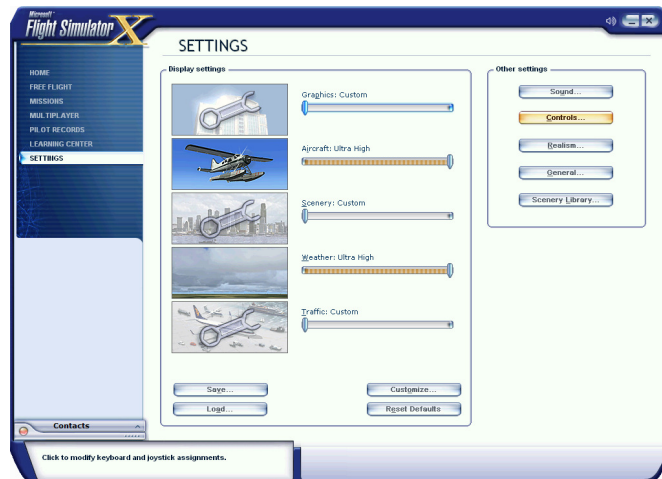
Assignment keys/commands to the Multi Switch Panel

Introduction

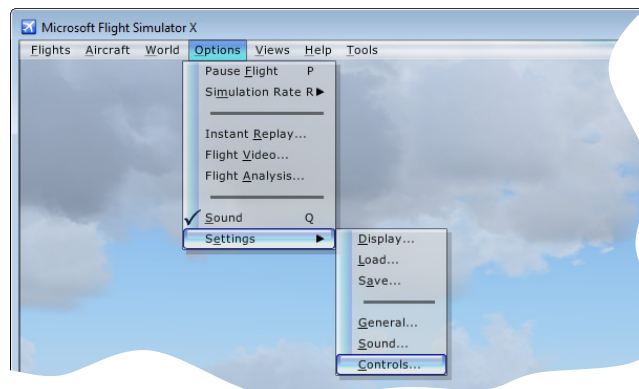
Calibrating the Multi Switch panel is essential for correct operation with Microsoft Windows Operating Systems. Once this calibration is completed, assigning keys and/or commands to the various pushbuttons, knobs, sliders and switches on the Multi Switch panel is essential to get it "customized" with the simulator. This section deals with some examples of how to assign keys/commands to the panel. Because the panel is recognized as an ordinary joystick, the assignment procedure is not different than other hardware. Although the assignment procedure is not much different compared to other joysticks, find in this section a Microsoft Flight Simulator X (or FS2004), Laminar Research X-Plane 9.x and Falcon 4.0 examples.

Flight Simulator X (or FS2004)

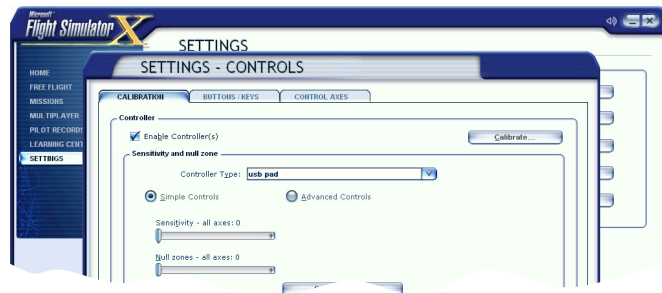
- Step 1 - If not yet done, connect the Multi Switch Panel USB cable to a USB 2.0 receptacle.
- Start FSX. Either FSX starts up with a default flight or you will get the FSX startup window.
- When FSX comes up with the startup window, select on the left side **Settings**, followed by **Controls**.



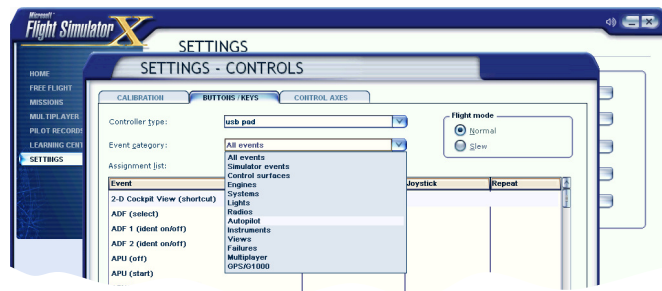
- When FSX comes up with a default flight, select from the menu Options – Settings – Controls.



- Step 2 - By default the Settings-Controls window shows up with the Calibration tab active.
Confirm that the Controller Type shows usb pad.



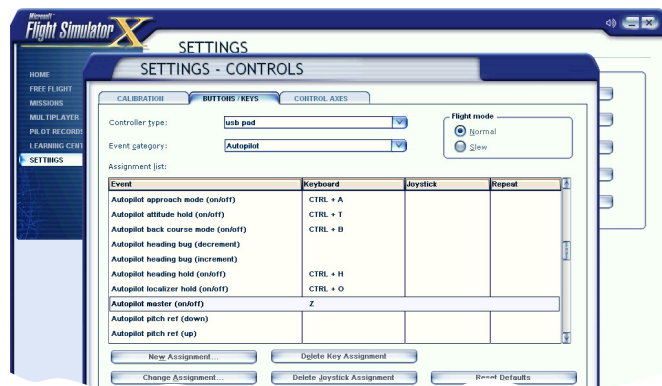
- Step 3 - Click the BUTTONS/KEYS tab.



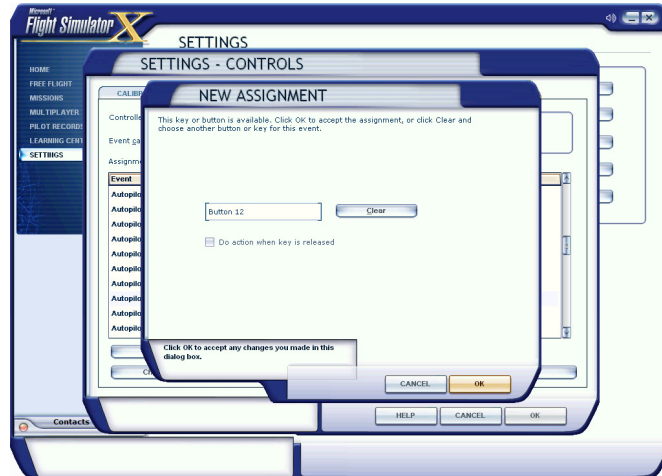
- Select from the Event Category list an event of your choice. For this example we take the Autopilot.
-

- Step 4 As you can see on the screenshot, event Category Autopilot is active. I want to assign event **Autopilot master (on/off)** to VRinsight Multi Switch panel pushbutton B6. To achieve this, perform the following actions.

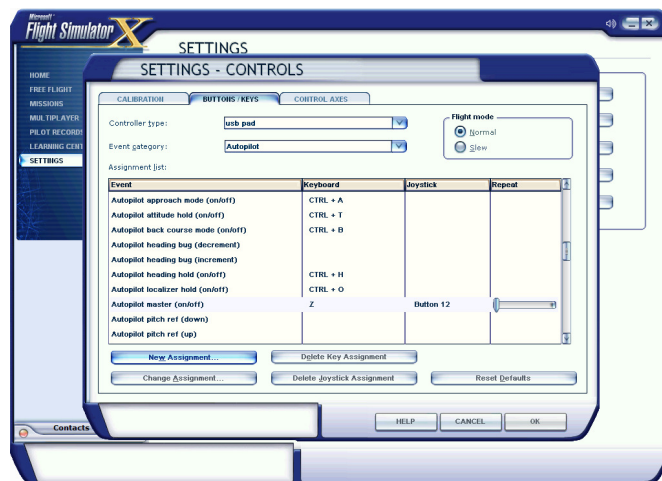
- If already a joystick is assigned to this, click the Delete Joystick Assignment button.
- Click the New Assignment button.



- Step 5 - Press pushbutton B6 (or any other) on the Multi Switch Panel.
This Multi Switch panel button B6 is recognized in FSX as button 12, which is of no further use.
- Click the **OK** button to confirm your action.



- Step 6 As you can on the screenshot, Autopilot master (on/off) is actually assigned to FSX Joystick Button 12, but more important, to your Multi Switch panel pushbutton B6.

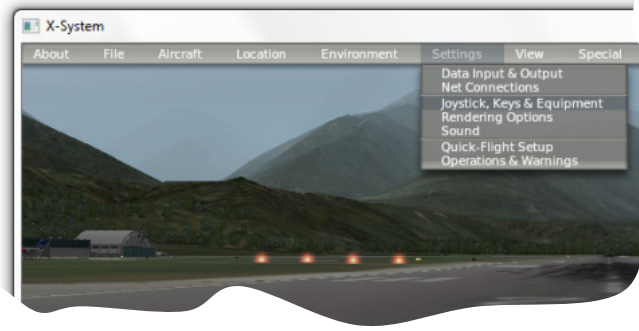


- Step 7 - Perform the previous steps and apply this to all buttons, switches, rotary knobs, encoders and sliders.

Note: If the VRinsight Multi Switch panel is your only simulation hardware components then you use the Control Axis tab for assigning Rudder, Throttle, X Rotation and Z axis. The procedure to do this is the same as the previous discussed steps.

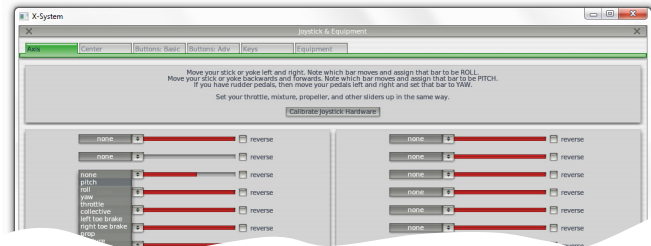
Laminar Research X-Plane 9.x

- Step 1
- If not yet done, connect the Multi Switch Panel USB cable to a USB 2.0 receptacle.
 - Start X-Plane 9.x and select from the X-Plane menu Settings – Joystick, Keys & Equipment.

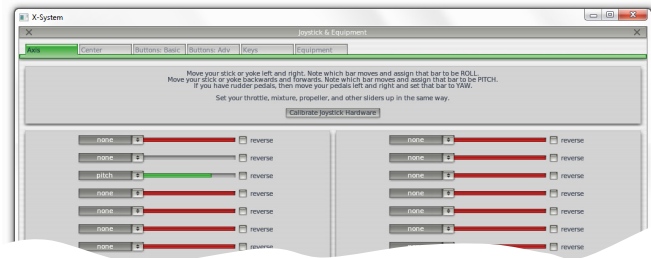


- Step 2
- Basically, assigning keys, buttons, knobs, sliders etc. is very similar to Microsoft Flight Simulator. The only difference is the way it is created and organized. The Axis tab allows you to assign Multi Switch panel sliders to an X-Plane function. Perform the following steps:

- Slider S1 on the VRinsight panel is moved up and down. On the X-System window this is the 3rd LH red bar from the top.
- Click on the text left of the red bar.
- A pull-down list appears. Select one of your choices. Here we selected **pitch**.



- Step 3
- After you selected **pitch**, the red bar becomes green and shows pitch left of it, indicating this is assigned to the pitch channel on your Multi Switch panel.



- [illegible]

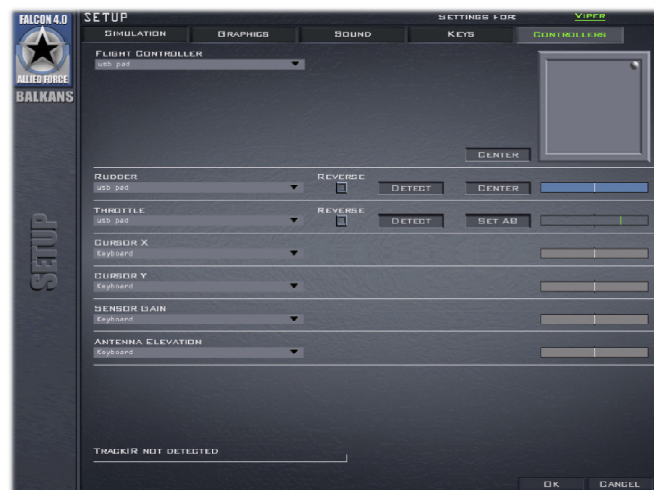
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Falcon 4.0 Allied Force

- Step 1 - If not yet done, connect the Multi Switch Panel USB cable to a USB 2.0 receptacle.
- Step 2 - Run Falcon and go to SETUP-KEYS.
- Note:** Falcon4AF_patch_1.0.13 should be installed before use.
- Assign function for A1 ~ B6, T1 ~ T4, E1 ~ E4.
 - Click the Apply button and save the file.



- Step 3 - Go to CONTROLLERS and chose from the FLIGHT CONTROLLERS dropdown list usb pad.
- Rotate R1 and R2. Knob R1 will be assigned as aileron and knob R2 as elevator.
 - Move up switch T1 and switch T3 up and down. T1 is then assigned as Throttle and T3 as rudder.
 - When you are finished, click the OK button to save the changes.



Appendix

FSX Standard.xml file

Actually, Microsoft's Flight Simulator X has more than hundred possible controls, which are not listed in the previous discussed Control Assignments of the Settings page.

To assign unlisted commands for operation with the VRinsight Multi Switch Panel, the user can manually edit the FSX Standard.xml file.

The DVD comes with a MSFS_Controls.txt that lists all the possible FS commands of which only a limited amount is available via the Settings-Controls window. Furthermore the DVD comes with an example standard.xml, which should not be used. This file offers only possible assignments and is not replacing your whole standard.xml file.

Users are able to manually modify the standard.xml file with the help of the MSFS_Controls.txt file. This should only be done when the basic FSX/FS2004 commands are not enough.

Editing commands within FS2004 (FS9) is done in the same way however, for this the FS9.cfg (configuration file) should be used.

Modifying Standard.xml (FSX)

In case you want to modify your FSX Standard.xml file, you have two options; either you assign keys/commands within FSX (easiest and practical way). Using this method is easy and practical. Assignment changes made in FSX are stored in the standard.xml file.

Another option is in combination with the supplied MSFS_Controls.txt file. You then modify the standard.xml file directly. When you are looking for this option, follow the next steps:

- For Windows Vista/7 users:
Go to "X":\Users\your_name\AppData\Roaming\Microsoft\FSX\Controls.
Note: Since "AppData\Roaming" is a hidden directory, you need to type the whole directory path. Instead of <your_user> you put your own name e.g.
"X":\Users\Angelique\AppData\Roaming\Microsoft\FSX\Controls where "X" should be replaced by the FSX drive letter.
- For Windows XP users you go to:
"X":\Documents and Settings\<your_name>\Application Data\Microsoft\FSX\Controls.
Note: Since "Application Data\" is a hidden directory, you need to type the whole directory path and instead of <your_user> you put your own name.
- Your own standard.xml file offers, with the usb pad connected, two entries:
<Name>**usb pad**{DEAAC6B0-E5A6-11DF-8001-444553540000}</Name> and
<Name>**usb pad SLEW** {DEAAC6B0-E5A6-11DF-8001-444553540000}</Name>.
Note: All the characters between {xxxxxx xxxx etc} will differ on your PC.
- Where you need to look for is the <Name>**usb pad** section.
Find here an example of a standard.xml, section <Name>usb pad:
 <Entry>
 <Index>5</Index>
 <Down>**AP_MASTER**</Down>
 </Entry>
 <Entry>
 <Index>6</Index>
 <Down>AP_N1_HOLD</Down>
 </Entry>
- For example, bold text – **AP_MASTER** – is an assignment that can be found in the MSFS_Controls.txt file as well. By changing this name and thus the assignment, you can change the function of Multi Switch panel button, switch, knob etc.

Modifying FS9.CFG (FS2004)

FS9 key/command assignments are very similar to that of FSX however; assignment changes are not made in the standard.xml file, but in FS9.CFG.

- For Windows Vista/7 users:
Go to "X":\Users\<your_name>\AppData\Roaming\Microsoft\FS9.
Note: Since "AppData\Roaming" is a hidden directory, you need to type the whole directory path. Instead of <your_user> you put your own name e.g.
"X":\Users\Angelique\AppData\Roaming\Microsoft\FS9 where "X" should be replaced by the FSX drive letter.
- For Windows XP users:
Go to "X":\Documents and Settings\<your_name>\Application Data\Microsoft\FS9.
Note: Since "Application Data" is a hidden directory, you need to type the whole directory path and instead of <your_user> you put your own name.
- Your own fs9.cfg file offers, with the usb pad connected, the following entry:
[JOYSTICK_MAIN {DEAAC6B0-E5A6-11DF-8001-444553540000}].
Note: All the characters between {xxxxxx xxxx etc} will differ on your PC.
- Where you need to look for is the [JOYSTICK_MAIN xxxx] section.
- Find here an example of a fs9.cfg file:
AXIS_EVENT_00=AXIS_AILERONS_SET
AXIS_SCALE_00=64
AXIS_NULL_00=36
AXIS_EVENT_01=AXIS_ELEVATOR_SET
AXIS_SCALE_01=64
AXIS_NULL_01=36
AXIS_EVENT_02=AXIS_THROTTLE_SET
AXIS_SCALE_02=127
AXIS_NULL_02=1
AXIS_EVENT_03=AXIS_RUDDER_SET
AXIS_SCALE_03=64
AXIS_NULL_03=36
AXIS_EVENT_05=AXIS_RUDDER_SET
AXIS_SCALE_05=64
AXIS_NULL_05=36
BUTTON_DOWN_EVENT_00=BRAKES
BUTTON_DOWN_REPEAT_00=1
BUTTON_DOWN_EVENT_01=VIEW_MODE
BUTTON_DOWN_EVENT_02=ELEV_TRIM_DN
BUTTON_DOWN_REPEAT_02=1
BUTTON_DOWN_EVENT_03=ELEV_TRIM_UP
BUTTON_DOWN_REPEAT_03=1
BUTTON_DOWN_EVENT_06=KNEEBOARD_VIEW
BUTTON_DOWN_EVENT_07=GEAR_TOGGLE
BUTTON_DOWN_EVENT_08=VIEW_MODE
BUTTON_DOWN_EVENT_09=GEAR_TOGGLE
BUTTON_DOWN_EVENT_14=FLAPS_DECR
BUTTON_DOWN_EVENT_15=FLAPS_INCR
POV_MOVE_EVENT_00=PAN_VIEW
POV_MOVE_REPEAT_00=1

Find right below an extraction from my own FS9.CFG related to this particular section.
The "AXIS" refers to sliders when it comes to the Multi Switch panel and "BUTTON"
items to for example the pushbuttons.