

Precision Flight Controls, Inc.

Serial CAT III System and FS2004 Setup Guide



Preface

This setup guide will walk you through the necessary steps to setup your **CAT III System** with Microsoft Flight Simulator 2004. For connection diagram please refer to the packet that you received with the console.

This setup guide assumes that you have already installed the Microsoft Flight Simulator 2004 (FS2004). If you have not installed FS2004 software, please install it now and refer to this guide once installation is done. For reference on software installation, please refer to the software manual that you have received.

CAT III System includes:

- Cirrus II
- Avionics
- Cirrus Rudder Pedals

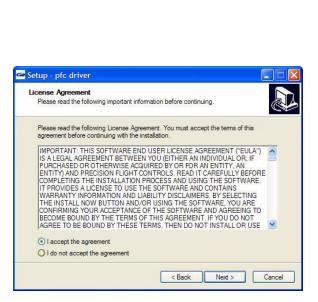
INSTALLATION OF PFC DRIVER (DLL)

The PFC Driver, which includes the PFC.dll and FSUIPC.dll, is the software that allows serial Precision Flight Controls, Inc. devices to communicate and work with Microsoft Flight Simulator 2004 and Microsoft Flight Simulator X. Because of the internal difference between the softwares please make sure that you download the appropriate PFC Driver for the software that you are using.

- 1. Go to our webpage where you can Download the PFC driver from our site: <u>http://www.flypfc.com/drivers.html</u>
- 2. Choose the PFC Driver for Microsoft Flight Simulator 2004
- When you click on the link it will ask where you want to save the file, make sure that you save it on your Desktop.
- 4. Now that you have downloaded the driver please close your browser.
- 5. On your desktop, please look for the PFCFS2004.exe, and double click on it.
- 6. Click on Next.



 Read through the license agreement. You will need to Accept the agreement to be able to use the driver. Once you have agreed click on Next.



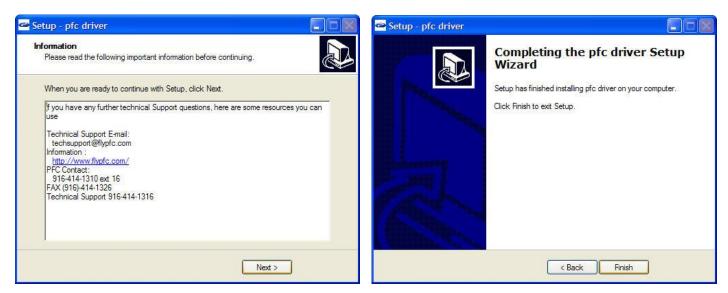
PECDU

52004.EXE

8. Now click on Install.

Setup - pfc driver	
Ready to Install Setup is now ready to begin installing pfc driver on your computer.	
Click Install to continue with the installation.	
< Back Instal	Cancel

9. Now click on **Next** then **Finish**.



Getting the COM Port information:

The COM port or serial port is a port used by the CAT III System to communicate to Microsoft Flight Simulator. It is important to know the correct COM port number that your Cirrus II is connected to. This information will be necessary for proper communication between Microsoft Flight Simulator and CAT III system. The steps below will guide you to find out the correct com port number.

- 1. Let's go to Start, Control Panel
- 2. Do you see Pick a Category or do you see icons such as Accessibility, Add/Remove Programs?
- 3. If you are seeing pick a category, then choose Performance & Maintenance then choose System
- 4. If you are seeing icons such as Accessibility, Add/Remove Programs, choose System
- 5. From the Systems Window, choose Hardware then Device Manager

- 6. Expand the **Ports** list by clicking on the plus (+) sign
- 7. Make a note of the com port numbers as you will need this later in your setup.
 - a. My COM Port number/s :_____ and ____
- 8. Go ahead and close the System Window as well as the Control Panel Window

Hardware Setup

- 10. Let's start Flight Simulator
- 11. Once it has completely started, choose Create a Flight.
- 12. Then click on Fly Now!
- 13. Once the flight sim should show a **PFC Control Connections Check** window.

PFC Control Connections Check		×	PFC Control Connections Check		×
Checking operation of the PFC equipment			Checking o	operation of the PFC equipment:	
Version of supporting FSUIPC module:	FSUIPC is okay. All options available: 3.470	4	Version of supporting FSUIPC module:	FSUIPC is okay. All options available: 3.470	4
COM serial port port connection:	COM1 open okay	1	COM serial port port connection:	COM1 open okay	4
Yoke–aileron control:	>>>>>>>>>>No results seen at all!	x	Yoke-aileron control:	Okay!	4
Yoke–elevator control:	>>>>>>>>>>>	X	Yoke–elevator control:	Okay!	4
Pedals-rudder control:	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	X	Pedals-rudder control:	Okay!	4
Throttle quadrant operation:	>>>>>>>>>>>	X	Throttle quadrant operation:	Okay!	4
Avionics / radio stack connection:	>>>>>>>>> No expected results received!	X	Avionics / radio stack connection:	>Okay!	4
Mode Control Panel (MCP) connection:		X	Mode Control Panel (MCP) connection:	>>>>>>>>>>>>>	X
Project Magenta CDU connection:		X	Project Magenta CDU connection:	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	X
Press RETRY, an	d move or fix controls within 8 seconds		Press RETRY, an	d move or fix controls within 8 seconds	_
PFC driver version 1.92	Retry Quit FS Continue FS	3	PFC driver version 1.92	Retry Quit FS Continue	FS

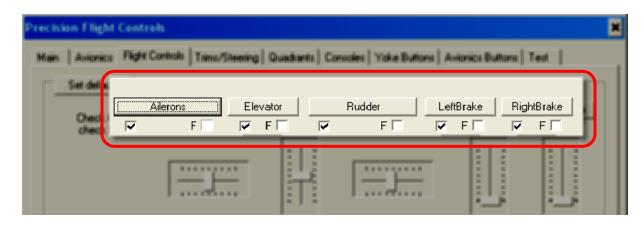
- 14. Choose the comport which is Comport which is the port that your hardware is connected to.
- 15. It should say COM (x) open-okay. (If it does not say OK look at you notes and see what number the customer gave you. If there is more than one, they will need to select on the list and click on retry)
- 16. Please tell me if you are getting a green check on the Yoke-aileron Control, Yoke-Elevator Control, Pedal-Rudder Control, Throttle Quadrant Operation, and Avionics/Radio Stack connection.

NOTE:

- If you do not have PFC Cirrus Rudder Pedals the Pedals-Rudder Control Connection will not turn
 green
- If you do not have avionics panel the Avionics /Radio Stack Connection will not turn green
- If you do not have The PFC Mode Control Panel (MCP) the Mode Control Panel (MCP) Connection will not turn green.
- If you do not have the Project Magenta CDU the Project Magenta CDU connection will not turn green.
- 17. Now that all the controls that are applicable to you have checked OK, click on Continue FS.
- 18. Now press the ALT key on your keyboard and choose PFC.
- 19. In the Precision Flight Controls window, choose Flight Controls.

Enable Flight Controls

- 1. Now choose the Flight Controls.
- 2. Now enable the **Elevator** and **Aileron**, by clicking on the enable box which is opposite of the **F** for filter box.



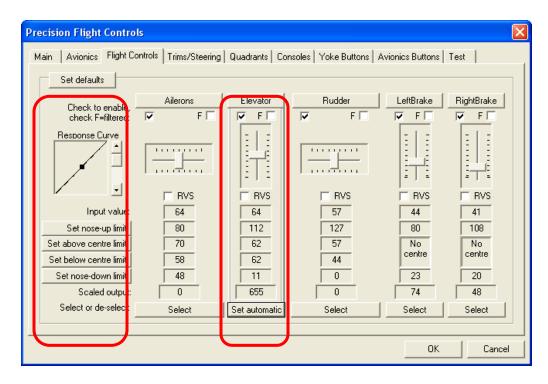
Aileron Calibration

- 3. Now click on **Select** button under the **Aileron Axis**. This should say **Set Automatic** now.
- 4. Turn your yoke all the way to the Left and hold it. Click on the Set left most limit.
- 5. Turn your yoke all the way to the **Right** and hold it. Click on the **Set right most limit**.

Precision Flight Contro	ls				
Main Avionics Flight Co	ontrols Trims/Steering	Quadrants Co	nsoles Yoke Buttons /	Avionics Buttons	Test
Set defaults					
Check to enable.	Ailerons	Elevator	Rudder	LeftBrake	RightBrake
check F=filtered:	F F	₽ F□	🔽 F 🗆	₩ F	F F
		E E		1111	
II / F		1944 - 1945 - 19			
	Luuduu	E E		171	
	T RVS	RVS	T RVS	RVS	RVS
Input value:	64	64	57	44	41
Set right-most limit:	80	112	127	80	108
Set right centre limit:	70	62	57	No centre	No centre
Set left centre limit:	58	62	44		
Set left-most limit:	48	11	0	23	20
Scaled output:	0	655	0	74	48
Select or de-select:	Set automatic	Select	Select	Select	Select
				OK	Cancel

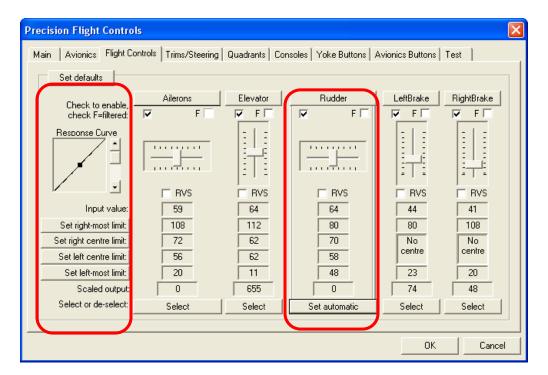
ELEVATOR CALIBRATION

- 6. Now click on Select button under the Elevator Axis. This should say Set Automatic now.
- 7. Pull your yoke all the way to the out and hold it. Click on the Set nose up limit.
- 8. Push your yoke all the way forward and hold it. Click on the Set nose down limit.



RUDDER CALIBRATION

- 9. If you have rudder pedals that those are enable now, but if you do not please uncheck
- 10. Now click on Select button under the Rudder Axis. This should say Set Automatic now.
- 11. Push your left pedals all the way to the Left and hold it. Click on the Set left most limit.
- 12. Push your right pedals all the way to the **Right** and hold it. Click on the **Set right most limit**.



ENABLE TRIMS

- 1. Let us go to the Trims & Steering tab.
- 2. Enable the Aileron Trim and Rudder Trim and move them left to right and see if they are responding.

Precision Flight Controls					X
Main Avionics Flight Cont	rols Trims/Steering Q	uadrants Conso	les Yoke Buttons Avior	nics Buttons Test	
Set defaults Check to enable, check F=filtered;	AileronTrim	ElevatorTrim	RudderTrim	SteeringTiller	
	T RVS	RVS	T RVS		
Input value: Maximum used:	59	255	66	255	
Centre high:	108	108	108	108	
Centre low:	72	No centre	72	72	
Minimum used:	56		56	56	
	20	20	20	20	
Scaled output:	0	16383	0	16383	
Select or de-select:	Select	Select	Select	Select	
				OK Cance	el

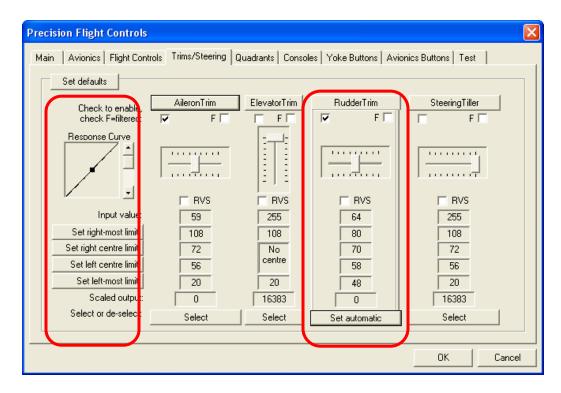
AILERON TRIM CALIBRATION

- 3. Now click on Select button under the Aileron Trim Axis. This should say Set Automatic now.
- 4. Turn your Aileron Trim knob the way to the Left. Click on the Set left most limit.
- 5. Turn your Aileron Trim knob all the way to the Right. Click on the Set right most limit.

Precision Flight Controls					×
Main Avionics Flight Contr	ols Trims/Steering Q	uadrants Console	es Yoke Buttons Avion	ics Buttons Test	
Set defaults					
Check to enable, check F=filtered:	AileronTrim	ElevatorTrim	RudderTrim	SteeringTiller	
E I					
	E RVS	: :	E RVS	E RVS	
Input value:	64	255	66	255	
Set right-most limit:	80	108	108	108	
Set right centre limit: Set left centre limit:	58	No centre	56	72	
Set left-most limit:	48	20	20	20	
Scaled output:	0	16383	0	16383	
Select or de-select:	Set automatic	Select	Select	Select	
				1	
				OK Cance	

RUDDER TRIM CALIBRATION

- 6. Now click on **Select** button under the **Rudder Trim Axis**. This should say **Set Automatic** now.
- 7. Turn your Aileron Trim knob the way to the Left. Click on the Set left most limit.
- 8. Turn your Aileron Trim knob all the way to the Right. Click on the Set right most limit.



ENABLE QUADRANTS

- 1. Now the next tab is the **Quadrants**.
- 2. You can enable the levers that you have by clicking on the Quadrant Enabled check box
- 3. And you can scroll through the list by clicking on the arrow on the right next to the "Single Prop Non Carbureted." Please also disable the one that you do not have.

Precision Flight Controls							×
Main options Avionics Op	tions Flight Con	trols Throttle Q	uadrants Conso	les Voke Buttor	is Avionics Butt	ons Test	
Quadrant Enabled	Assign to airc	xaft ⊨ Setde	faults	Jet	2 Engined		
	Spoilers		Throttle1	Throttle2		Reverser	
	RVS						
Input value:	0	127	0	26	127	127	
Set fully up limit:	108	0	108	108	0	108	
Set deployed zero limit:	35	No	No	No	No	No	
Set armed zone limit:	35	centre	centre	centre	centre	centre	
Set parked limit:	20	0	20	20	0	20	
Scaled output:	0		0	1117		0	
Select or de-select:	Set automatic	Select	Select	Select	Select	Select	
					OK	Cancel	

ADDITIONAL OPTIONS

- 1. On the **Consoles** page, please check the box for **Parking Brake is a switch**.
- 2. Also on the same **Consoles** page, please increase the **Trim Sensitivity** from 16 to 55. This box is located on the right hand side.
- 3. Check the box for the Separate left and right cowl flaps.
- 4. Click on the predefined set. This should have changed the Action with PROP etc

Precision Flight Controls			×		
Main Flight Controls Trims/Steering	Quadrants Consoles Yoke Bu	uttons Avionics Buttons Test			
Cirrus II or Profe	ssional Flight Console	CIRRUS II Console button codes enabled			
 Parking brake is a switch (i.e. it is not a momentary push button) Separate left and right cowl flaps Accessing engines (4 and 3 eng aircraft) Disables only autopilot vertical modes when used Disconnects autopilot completely when used Disconnects autopilot completely when used Trim sensitivity (note: also affects AP trim rocker) = 55 					
Programmable buttons/switches Button on Console	Action with JET	Rep/sec Action with PROP etc			
Left cowl flaps close	.0: No action assigned	▼ 2 Dec Cowl Flaps1 ▼			
Left cowl flaps open	.0: No action assigned	▼ 2 ÷ Inc Cowl Flaps1 ▼			
Alternate Air	.0: No action assigned	▼ 0 ÷ Carb heat/Anti-ice ▼			
Right cowl flaps close	.0: No action assigned	▼ 2 ÷ Dec Cowl Flaps2 ▼			
Right cowl flaps open	.0: No action assigned	▼ 2 ÷ Inc Cowl Flaps2 ▼			
reserved	.0: No action assigned	💌 🛛 🐳 .0: No action assigned 💌			
List all FS ctrls List PM ctrls	List 767PIC ctrls	Predefined Set Clear all			
		OK Cancel			

- 5. At this point, please click on OK.
- 6. Press the ALT key again and go to Flight and then Exit
- 7. Start Microsoft Flight Simulator again.
- 8. Start Flying!