

# **PF3 – ATC at its best**

---

## **User Guide**

**Document Issue 3.1**

**Included with PF3 release version 3.13.0**

# PF3 User Guide

## Table of Contents

<b>1. WELCOME ABOARD.....</b>	<b>7</b>
<b>2. WHAT'S NEW.....</b>	<b>8</b>
<b>3. SYSTEM REQUIREMENTS.....</b>	<b>12</b>
<b>4. INSTALLATION.....</b>	<b>13</b>
4.1 INSTALLING PF3.....	13
<b>5. PF3 LICENCE AUTHORISATION.....</b>	<b>14</b>
5.1 OVERVIEW.....	14
5.2 WHAT IS IT?.....	14
5.3 ONLINE AUTHORISATION.....	15
5.4 OFFLINE AUTHORISATION.....	17
5.5 FAQ'S FOR ONLINE AUTHORISATION.....	21
<b>6. HOW TO UNINSTALL PF3.....</b>	<b>24</b>
<b>7. PF3 OPTIONS AND CONFIGURATION.....</b>	<b>25</b>
7.1 OVERVIEW.....	25
7.1.1 Main Menu Options Selection.....	25
7.1.2 Options #1 Main Display.....	26
7.1.3 Pilot's Voice.....	27
7.1.4 Virtual Co-Pilot modes.....	27
7.1.5 Taxi Guidance System.....	29
7.1.6 ATIS Volume and Options.....	31
7.1.7 Traffic Advisory enroute.....	32
7.1.8 Debug Info.....	32
7.1.9 Misc Options.....	33
7.1.10 Push & Start Options.....	36
7.1.11 Other Options from this display.....	36
7.1.12 Trans Alt & Alt Baro Calls.....	37
7.1.13 Rebuild PF3 Database Procedure.....	38
7.1.14 Hotkey Options.....	43
7.1.15 SID/STAR Page Options.....	45
7.1.16 Even More Main Menu Options.....	50
7.1.17 Select a Flight Plan.....	51
7.1.18 ... the remaining Main Menu Options.....	56
7.1.19 Options #2 Main Display.....	57
7.1.20 Adjusting the Regional Voice Accent.....	58
7.1.21 Add a New Facility Frequency.....	59
7.1.22 Control Center Mapping and Altitude Settings.....	63
7.1.23 Excluding Individual Voices.....	66
7.1.24 Designated Parking Control.....	67
7.1.25 Advanced Options and INI File Tweaks.....	69
7.1.26 Validate your PF3 Installation.....	82
7.1.27 Deactivate your PF3 License on this PC.....	82
7.1.28 Adjust Altitudes, SIDs, STARs and Holds for Selected Flight Plan.....	83
7.1.29 Define Oceanic Airspace for the Selected Flight Plan.....	89
7.1.30 PF3 Profiles.....	90

# PF3 User Guide

<b>8. PF3 FEATURES IN MORE DETAIL.....</b>	<b>91</b>
8.1 THE TGS GAUGE.....	91
8.2 THE STANDALONE TGS DISPLAY .....	92
8.3 THE TGS2 GAUGE.....	93
8.4 OCEANIC PROCEDURES.....	94
8.5 TRAFFIC ADVISORIES.....	94
8.6 REQUESTING HIGHER/LOWER ALTITUDE.....	94
8.7 AUTO TAXI SPEED CONTROL .....	95
8.8 AI AIRCRAFT CONFLICT MONITORING.....	95
8.9 OTHER AI TRAFFIC DETECTION.....	96
8.9.1 <i>Additional Ground Control Monitoring</i> .....	97
8.10 HOW WE HANDLE ATC CHATTER CALL SIGNS.....	97
8.11 STEP CLIMBS AND DESCENTS.....	98
8.12 EN-ROUTE CONTROL CENTRES.....	98
8.13 HOW WE DETERMINE THE ACTIVE RUNWAY.....	98
8.14 DESIGNATED PARKING.....	98
8.14.1 <i>Stage 1</i> .....	99
8.14.2 <i>Stage 2</i> .....	99
8.15 RESUMING A FLIGHT.....	100
8.16 VISUAL CONNECTION INDICATOR.....	102
8.17 INTERACTIVE SUPPORT FOR FDC USERS.....	103
8.18 ACARS ATIS.....	104
8.19 IN-FLIGHT VOLUME ADJUSTMENT.....	106
8.20 VFR FLIGHTS IN PF3.....	107
8.20.1 <i>Standard VFR</i> .....	107
8.20.2 <i>VFR Free Flight</i> .....	107
8.21 LOCAL TRANSITION ALTITUDES.....	108
8.22 FAILING TO CONTACT THE NEXT ATC FACILITY.....	109
<b>9. SOME ATC INSTRUCTIONS.....</b>	<b>110</b>
9.1 DESCENDING FROM TOD AT PILOT’S DISCRETION.....	110
9.2 VARIABLE TAKE-OFF INSTRUCTIONS.....	110
9.3 NEW CALLS FROM TOWER AFTER LANDING.....	110
9.4 ENTERING A HOLDING PATTERN.....	110
9.5 REQUESTING ‘DIRECT TO...’.....	111
<b>10. DECLARING AN EMERGENCY.....</b>	<b>113</b>
10.1 OVERVIEW.....	113
10.2 MAYDAY.....	113
<b>11. OCEANIC PROCEDURES .....</b>	<b>115</b>
11.1 ABOUT.....	115
11.2 OCEANIC COM PROCEDURES.....	115
<b>12. DEFAULT HOTKEY DETAILS.....</b>	<b>117</b>
12.1 HOW TO USE HOTKEYS.....	117
12.2 HOTKEY FUNCTIONALITY EXPLAINED.....	117
12.2.1 <i>Hotkey Ctrl + Shift + E</i> .....	117
12.2.2 <i>Hotkey Ctrl + Shift + =</i> .....	117
12.2.3 <i>Hotkey Ctrl + Shift + \</i> .....	117
12.2.4 <i>Hotkey Ctrl + Shift + C</i> .....	117
12.2.5 <i>Hotkey Ctrl + Shift + D</i> .....	118

## PF3 User Guide

---

12.2.6 Hotkey Ctrl + Shift + V.....	118
12.2.7 Hotkey Ctrl + Shift + W.....	118
12.2.8 Hotkey 'H' .....	119
12.2.9 Hotkey 'L'.....	119
12.2.10 Hotkey Ctrl + Shift + Y.....	119
12.2.11 Hotkey Ctrl + Shift + N.....	119
12.2.12 Hotkey ESC.....	119
12.2.13 Hotkey Ctrl+Shift+T.....	119
12.2.14 Hotkey '0' (zero).....	120
12.2.15 Hotkey '1'.....	120
12.2.16 Hotkey '2'.....	121
12.2.17 Hotkey '3'.....	122
12.2.18 Hotkey '4'.....	122
12.2.19 Hotkey '5'.....	123
12.2.20 Hotkey '6'.....	123
12.2.21 Hotkey '7'.....	124
12.2.22 Hotkey '8'.....	124
12.2.23 Hotkey '9'.....	125
<b>13. REMOTE RADIO STACK PROGRAM.....</b>	<b>126</b>
13.1 OVERVIEW.....	126
<b>14. REMOTE TEXT PROGRAM.....</b>	<b>128</b>
14.1 GENERAL.....	128
14.2 INSTALLATION.....	128
14.3 FEATURES.....	128
<b>15. TGS GAUGE REPLACEMENT PROGRAM.....</b>	<b>130</b>
15.1 OVERVIEW.....	130
15.2 THE PROGRAM .....	130
<b>16. PF3 DISPLAY UTILITY PROGRAM.....</b>	<b>132</b>
16.1 GENERAL.....	132
16.2 THE PROGRAM.....	133
16.3 CUSTOMISING THE DATA FILE.....	136
16.3.1 Changing the Data file.....	136
16.3.2 Data File Content (default).....	137
<b>17. WHICH MESSAGE WINDOW TO USE?.....</b>	<b>140</b>
17.1 WHAT WE RECOMMEND.....	140
17.2 SETTING UP REMOTE TEXT.....	140
17.3 SETTING UP THE FSUIPC MESSAGE WINDOW.....	140
<b>18. USING VR SOFTWARE WITH PF3.....</b>	<b>141</b>
18.1 OVERVIEW.....	141
18.2 SETTING UP PF3.....	141
18.2.1 Using VR for all ATC communications.....	141
18.2.2 Switching between using VR and your VCP for ATC communication.....	141
<b>19. TIME TO FLY.....</b>	<b>143</b>
19.1 THE PF3 QUICK-START TUTORIAL.....	143
<b>20. HINTS AND TIPS.....</b>	<b>145</b>



# PF3 User Guide

20.1 EXECUTING A FLIGHT PLAN.....	145
20.2 HOLDING PATTERNS.....	152
20.2.1 Entry Procedures.....	153
20.2.2 Inbound Leg.....	154
20.2.3 Outbound Leg.....	154
20.2.4 Procedural Turns.....	154
20.2.5 Exit Point.....	155
20.3 UNCONTROLLED AIRPORTS.....	156
20.4 USING PF3 WITH MCE.....	156
20.5 A WORD ABOUT SID/STAR USE IN PF3.....	158
<b>21. PF3 GENERAL FAQ SECTION .....</b>	<b>161</b>
<b>22. TGS GAUGE INSTALLATION INSTRUCTIONS.....</b>	<b>167</b>
22.1 HOW TO INSTALL THE OPTIONAL GAUGE ONTO A PANEL.....	167
22.2 BACKING UP YOUR HARD WORK.....	173
22.2.1 This one is for a third party aircraft in FS9.....	173
22.2.2 This is for the default Cessna in FS9:.....	173
22.2.3 This is the default 737-800 FSX.....	174
22.2.4 The default 747-400 in FSX.....	174
22.2.5 Installing TGS into the PMDG747-400 Queen of the Skies for FSX.....	174
22.3 INSTALLING THE TGS GAUGE INTO A WINDOW.....	178
22.3.1 Install the gauge into a window for the FS2004 default 747-400.....	178
22.3.2 Install the gauge into a window for a 3rd party aircraft in FS2004.....	179
22.3.3 Install the gauge into a window for a 3rd party aircraft in FSX.....	180
22.3.4 Install the gauge into a window for a default aircraft for FSX.....	180
22.3.5 A Few Useful Notes:.....	181
<b>23. EXTENDED CONTROL SECTOR FILE.....</b>	<b>182</b>
23.1 OVERVIEW.....	182
23.2 ARGENTINA-CHILE ANTARTIC PENNINSULA DISPUTE.....	183
23.3 UNUSED SECTOR NAMES.....	183
<b>24. TGS GENERAL FAQ SECTION.....</b>	<b>184</b>
<b>25. KNOWN ISSUES.....</b>	<b>185</b>
25.1 YOUR SKIN.....	185
25.2 SENIOR MOMENTS.....	185
25.3 IN THE UNLIKELY EVENT .....	185
<b>26. SUPPORT.....</b>	<b>188</b>
<b>27. CREDITS.....</b>	<b>189</b>
27.1 BETA TESTERS.....	189
27.2 PF3 PROGRAM DESIGN AND DEVELOPMENT.....	189
27.3 PF3 DOCUMENTATION.....	189
27.4 SPECIAL THANKS .....	189
27.5 ADDITIONAL WORK.....	189
<b>28. COPYRIGHT AND LICENSING.....</b>	<b>191</b>
28.1 COPYRIGHT.....	191
28.2 ACKNOWLEDGEMENTS.....	191

## PF3 User Guide

---

28.3 SOFTWARE LICENSE AGREEMENT .....	191
---------------------------------------	-----

## 1. WELCOME ABOARD

Thank you for purchasing **PF3** – ATC at its best.

To ensure your journey with us is as comfortable and trouble free as possible, please take the time to peruse this user guide.

+ + + + +

**PF3** is the next stage in our *flight* plan to bring you the most realistic, encapsulating and stable ATC program available for flight simulation.

The name is probably somewhat familiar and you may well remember us for bringing back the much loved ATC program Proflight 2000 to your flight sim world several years ago. But **PF3** goes much, much further than that.

**PF3 is almost a complete rewrite and a stand-alone program that doesn't require nor use anything from the now defunct ProFlight 2000.**

So what's new?

Read on...

## 2. WHAT'S NEW

**PF3 includes all the relevant, much loved features and options available in our previous ATC program plus, much, much more...**

- **PF3** now supports MSFS – *Please also see the separate document **Known Issues when using MSFS***
- **PF3** comes complete with 119 voice sets, covering 20+ different geographic regions in our **PF3** world.
- **PF3** monitors AI aircraft on the ground as you taxi to/from the runway to ensure there are no conflicts.
- Automatic speed control when taxiing to/from the runway.
- **PF3** offers a simple point and click on any flight plan, then fly !!
- Additional ATIS voice sets.
- Radio enhancement voice packs included as part of the basic installation.
- Control center hand-off altitudes configurable for each **PF3** geographic region.
- **PF3** does NOT alter your flight plan in any way
- **PF3** is configurable for most voice recognition programs.
- All ATC and ATIS frequencies used in **PF3** are taken DIRECTLY from your flight simulator.
- Just a single installation of **PF3** will work with either FS2004, FSX, P3D and MSFS, even if you have all three flight simulators installed. Whichever one is running **PF3** will work with it (provided you use the correct FREE version of FSUIPC)
- **PF3** allows you to add any missing ATC frequency that doesn't currently exist in your flight simulator.
- Use either COM1 or COM2 to communicate with ATC or listen to ATIS.
- **PF3** offers the use of configurable flight profiles, so you can set up the type of airport required, your aircraft's rate of climb/descent and also your preferred approach speed.
- Receive a simulated ACARS display using your flight sim's kneeboard (*FS9 and FSX*) or the new (V3.10) In-Sim display windows (*P3D and MSFS*) to show all the ATC frequencies available at your departure airport, thereby alleviating the problem of not knowing what frequency to tune to. You can also request ATIS reports via ACARS.
- Much more accurate control center hand-offs as all our ATC control zones have been revamped and extended.

## PF3 User Guide

---

- Check your **PF3** installation using the **PF3** Validation program to ensure you have all the correct files installed.
- Improved handling of emergency situations.
- **PF3** supports both IFR and VFR flights plus our exciting (new in Ver 3.10) VFR Free Flight mode so you can take full advantage of enjoying the outstanding visual qualities of the new MSFS.
- **PF3** supports alternate airports which you can choose to divert to for whatever reason.
- **PF3** comes complete with 50+ application skins to give the program the look you prefer... don't worry though if you prefer the look of our previous ATC program as we've included that skin too. And if you don't like using any skins at all **PF3** let's you do that also.
- The maximum length of SID/STAR names has been increased from 5 to 7 characters.
- **PF3**'s Hold feature has been completely changed. You can now easily select which VOR/NDB waypoint within your flight plan you want to initiate a hold, by a simple mouse click.
- Full taxi instructions to/from the runway. i.e. ATC instructs you to.... *"taxi to gate 27 via taxiway delta, bravo two, alpha one, charlie three"*.
- Taxi Guidance System (TGS) includes an (optional) panel gauge or stand-alone program. The gauge (a new version is included in **PF3** Version 3.10) and/or standalone utility program points to the next taxi waypoint, displays a series of LEDs to indicate the distance to the next taxi waypoint. TGS also includes AUDIBLE instructions from your VCP telling you... *"next left into delta.... bear right into bravo two... straight on... gate 27 on the right"* (just like your in-car navigation system).
- **PF3** provides full Oceanic Procedures when flying to/from the US (over the pond) and between Gander/Shanwick controlled areas. This includes simulated HF radio transmissions using real world SELCAL sounds when ATC contact you. Your VCP will also radio through position reports at each intersection.
- **PF3** also provides a way for you to define Oceanic Procedures to any flight plan if you wish, no matter how unrealistic it may be, PF3 will accommodate you.
- **PF3** supports 'Push and Start' request options.
- **PF3** offers extended SID/STAR functionality.
- Closed Caption mode to make it easier to hear what ATC are saying, also useful for those who maybe hard of hearing.
- Designated Parking at your destination airport.

## PF3 User Guide

---

- Transition Altitudes can be set globally or for individual airports or you may use a combination of both.
- User defined runway settings so any runway can be marked for landings only, takeoffs only, both or even closed.
- User defined variable background radio interference noise that changes when you tune to another control centre for that added realism.
- **PF3** supports restarting a flight due to problems or simply because you want to.
- Full interactive support for those using **PF3** and FDC together.
- Automatically pause **PF3** and FS at a specified distance from the airport, runway and/or FAF.
- In addition to normal ATIS broadcasts **PF3** also provides ATIS via its simulated ACARS system (*now available in both P3D and MSFS with our - new in ver 3.10 - In-Sim window displays*)).
- **PF3** supports user defined minimum FAF altitudes for any FS airport, particularly handy for those hazardous approaches.
- Even during your flight you can change the volume for either ATIS, ATC, your VCP or the radio background noise.
- Free **PF3** in-flight frequency/hotkey display utility included for those with a second monitor or client machine perhaps.
- Free **PF3** Remote Text utility included for those with a second monitor of client machine perhaps.
- 'Request Direct To...' feature if you wish to deviate from your flight plan.
- Two-way AI traffic advisories.
- Minimum departure altitude settings can be configured for any of your FS airports.
- Mark any voice set you may not like so that it is not used again.
- Remap ATC control centres names if you hear one which is no longer in use.
- **PF3** supports the Project Magenta Boeing type MCP (*and probably others but they have not been tested*).
- Display the last 10 transmissions ATC made to you.
- Adjust the speed of ATC taxi instructions and your read-back.
- Database refresh utility to apply any add-on scenery data you may install for your flight simulator to ensure **PF3**'s database is perfectly in sync.
- All new approach vectoring code.

## PF3 User Guide

---

- Integrated ATIS for all of the 1200+ equipped airports in FS9, FSX, P3D and MAFS, plus the ability to add more.
- You will hear the full airport name announced in **PF3**'s ATIS for all those ATIS equipped FS9/FSX/P3D/MSFS airports.
- AI traffic based chatter, so you actually hear ATC communicating with other traffic around you.
- Listen to ATC as they give clearance, taxi, takeoff, landing, climb, descend, turn and hand off instructions to AI Traffic.
- Intelligent step climbs and descents which will be slightly different each time for added realism.
- Regional ATC calls and instructions, reflecting the subtle and sometimes not so subtle differences between FAA and CAA controllers.
- New In-Sim display windows for showing Closed Caption text, ACARS simulated transmission messages and also the current available PF3 Hotkeys for each section of your flight. In-Sim display windows **ONLY** work with P3D and MSFS and can be displayed even when you're using full screen mode. Further details of this new feature later in this User Guide
- A new feature to allow aircraft to taxi along the runway if the taxiway takes you to the runway some distance from the runway end. In such circumstances the aircraft would have to enter the active runway, taxi along to the end and then do a 180 degree turn to line up. Prior to **PF3** version 3.10, if there was no inbound traffic, you would just be cleared for takeoff. With this new feature you will be told to 'line up and wait'. You could then enter the active runway and taxi to the end, where you would then turn 180 degrees to line up. Once lined up ATC would then clear you for take off... you would not have to contact Tower again as the call would happen automatically.

### 3. SYSTEM REQUIREMENTS

Microsoft Flight Simulator FS9, FSX, P3D or MSFS.

3.5 GB disk space required

Microsoft's NET Framework ver 4.0.30319 or later

A FREE copy of Pete Dowson's FSUIPC module (*although we highly recommend purchasing the registered module*)

Runs under Windows XP (32/64), VISTA (32/64), Windows 7 (32/64), Windows 8.1 (32/64) and Windows 10 (32/64)



## 4. INSTALLATION

### 4.1 Installing PF3

Once you have downloaded your purchase simply unzip and run the **PF3\_Installation\_Setup.exe** program (*right-click and select Run as Administrator*) and follow the onscreen instructions.

**PF3** can be installed on the same computer running your flight simulator program or on any client machine connected to your flight simulator program via Pete Dowson's WideServer/WideClient application.

The exact location you choose to install **PF3** is not important except we strongly recommend you **DO NOT** install into the 'C:\Program Files' folder or 'C:\Program Files (x86)' folder. Since as far back as Windows Vista the Program Files folder is regarded as a protected area and Windows will prevent certain files from being created and/or updated, which can lead to some programs failing intermittently.

Also, during the installation, it is always best to stop all other programs, especially your anti virus program and any other security type programs you might have. Once the installation is complete you must then configure your anti virus program to exclude **PF3** and its sub-directories from any scanning.

*Note: Depending on the speed of your PC the installation can take between 2 and 40 minutes*

#### **IMPORTANT**

**When using PF3 you must turn your flight simulator's ATC volume OFF (i.e down to zero), otherwise you could find yourself listening to PF3 and FS ATC simultaneously.**

**It has been reported that turning Microsoft Flight Simulator off by deselecting the adjacent ATC tick boxes can cause FS to crash, so please just turn the volume right down.**

## 5. PF3 LICENCE AUTHORISATION

### 5.1 Overview

Software companies around the world have come to realize that activation-type copy protection systems provide a reasonable solution to the problem of piracy while at the same time respecting customers by not burdening them with a hard-to-use licensing system.

Reducing piracy means that the software vendor can use steady revenues to further improve the product and guarantee business continuation. It is unfortunate that piracy exists because we know the majority of our customers follow the licence terms but it is a fact of life in this digital age.

We trust the system we have chosen will be virtually transparent for the majority our customers.

### 5.2 What is it?

Activation is a set of simple and quick steps taken upon installation in order to begin using **PF3**. There are many products available that use a similar system activation system. When **PF3** is installed it contacts a central server via the internet to complete the 'activation' and tie it to the provided licence/activation code (*which was provided by email*).

This anti-piracy system helps protect our investment in our software and enables us to continue its development at a competitive price. The licence protection and monitoring system is managed by software\_DNA from softWORKZ Innovation Inc. This system does not collect any details about you or your computer during licence activation and re-activation. You may optionally enter your email address for password retrieval if ever you lose your password.

Unlike other activation systems, the software\_DNA system does not tie your licence permanently to your computer hardware. Instead, your licence is tied to your activation code and password that you define. As a result, you will have no problem re-activating your software after reformatting your hard drive, after upgrading hardware components in your computer, or when you move your software to a new computer. However, activation and reactivation does require an Internet connection. This Internet connection can be on a different computer from where your application is installed.

### 5.3 Online Authorisation

If the PC you are running **PF3** on is connected to the internet you will see the following screen displayed the very first time you run it.



Now enter your licence/activation code you received via email when you purchased **PF3**. This would have been included in the same email you received with the download link.

**Please do take note of the reminder and ensure you run PF3 as Administrator. If you don't this activation WILL FAIL!**

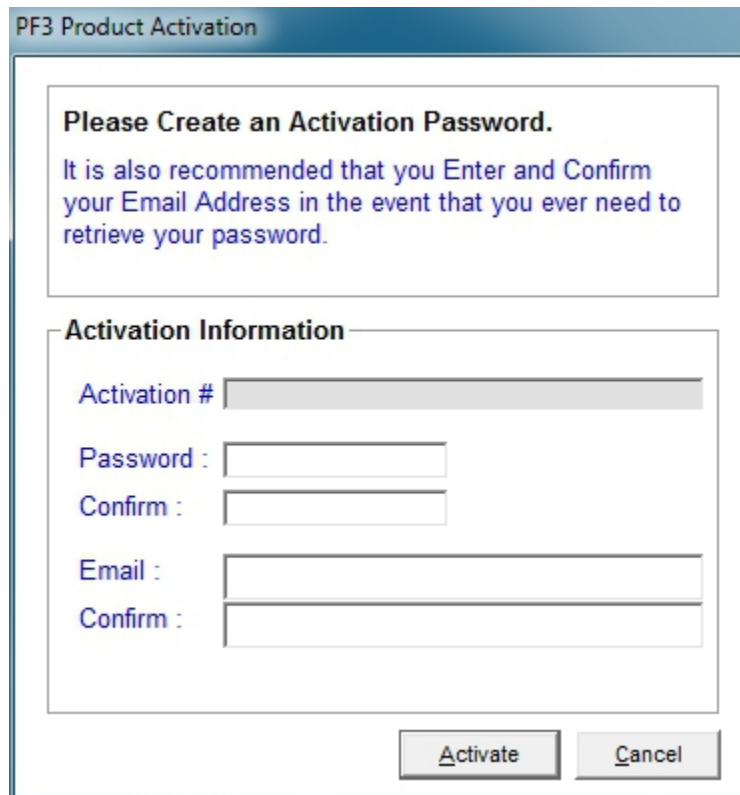
Now click on *Continue*.

## PF3 User Guide

---

The next screen requires you to create/enter a password and enter your email address. In addition to activating **PF3** this information will allow you to access details about the activation and/or request reactivating it at anytime should you change your PC. Your email address will also be required to retrieve your password should you forget it at anytime, so please enter this information carefully and make a note of it somewhere safe for future reference.

Here's what the password/email request screen looks like:-



The screenshot shows a dialog box titled "PF3 Product Activation". Inside, there is a section titled "Please Create an Activation Password." with a sub-message: "It is also recommended that you Enter and Confirm your Email Address in the event that you ever need to retrieve your password." Below this is a section titled "Activation Information" containing several input fields: "Activation #" (a greyed-out field), "Password :" (a text box), "Confirm :" (a text box), "Email :" (a text box), and "Confirm :" (a text box). At the bottom right, there are two buttons: "Activate" and "Cancel".

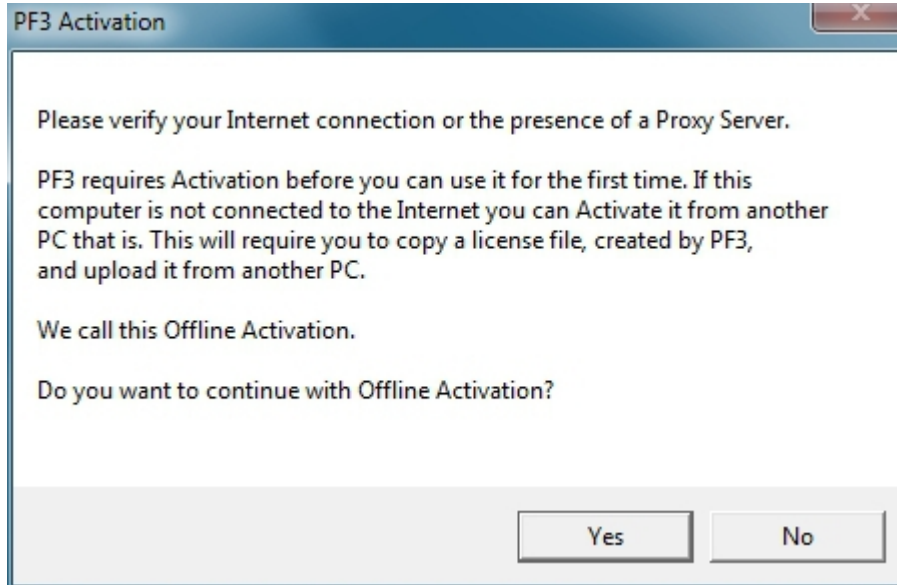
Once complete please click on the *Activate* button.

As soon as the activation process is complete, which will only take a few seconds, the **PF3** main menu will be displayed.

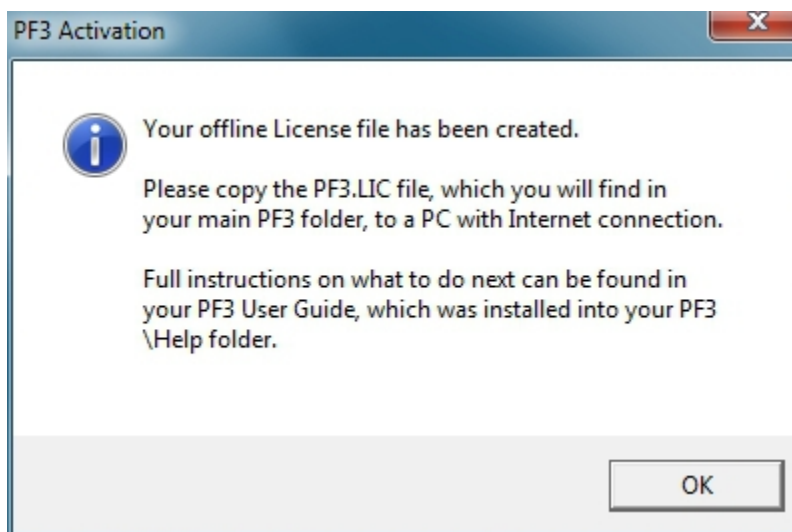
This is a one-time activation process and you will not be required to do it again unless you uninstall/reinstall **PF3** or make a major hardware change to your computer.

### 5.4 Offline Authorisation

If **PF3** is installed on a PC which doesn't have an Internet connection you will see the same screens as detailed in section 5.3. However, after entering a password/email address and clicking *Activate* you will see the following message window:-



To continue with Offline Activation select Yes, at which point the following message will appear:-



## PF3 User Guide

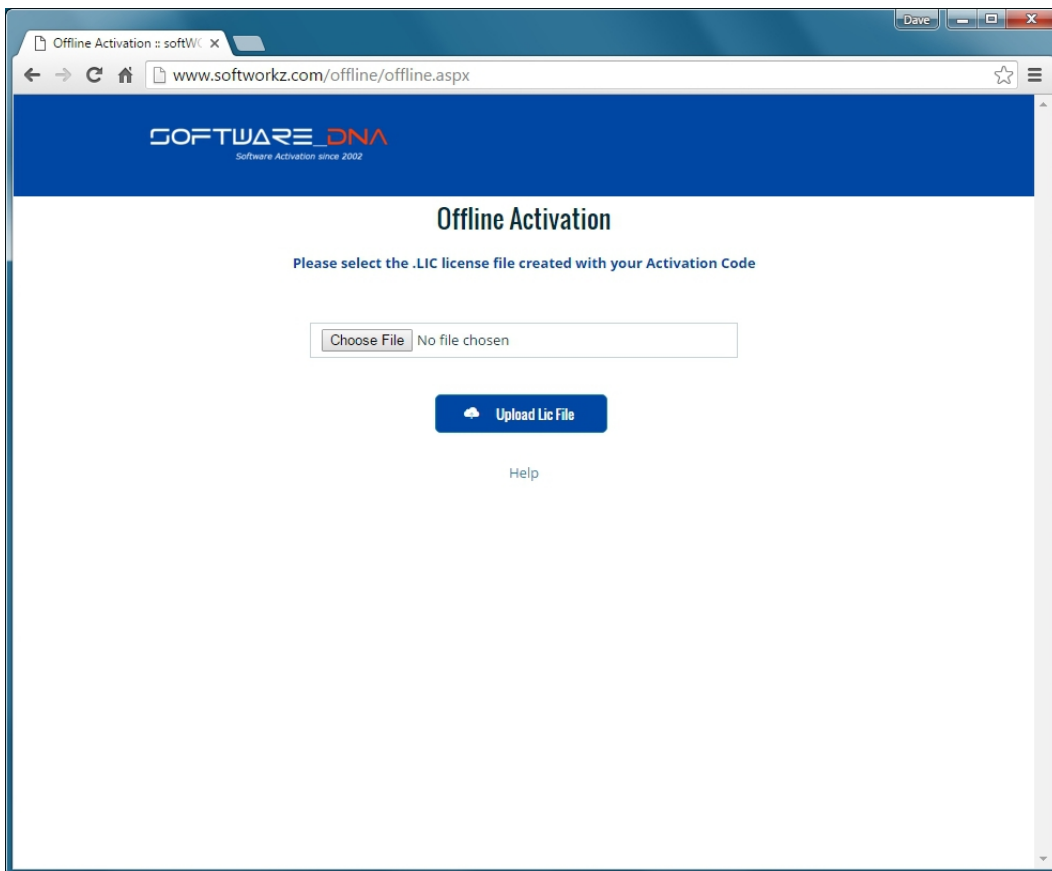
---

Now you need to transfer the **PF3.LIC** file, which was just created in your main **PF3** folder, over to the PC with Internet connection.

Enter the following into your web browser to access the offline activation upload area:-

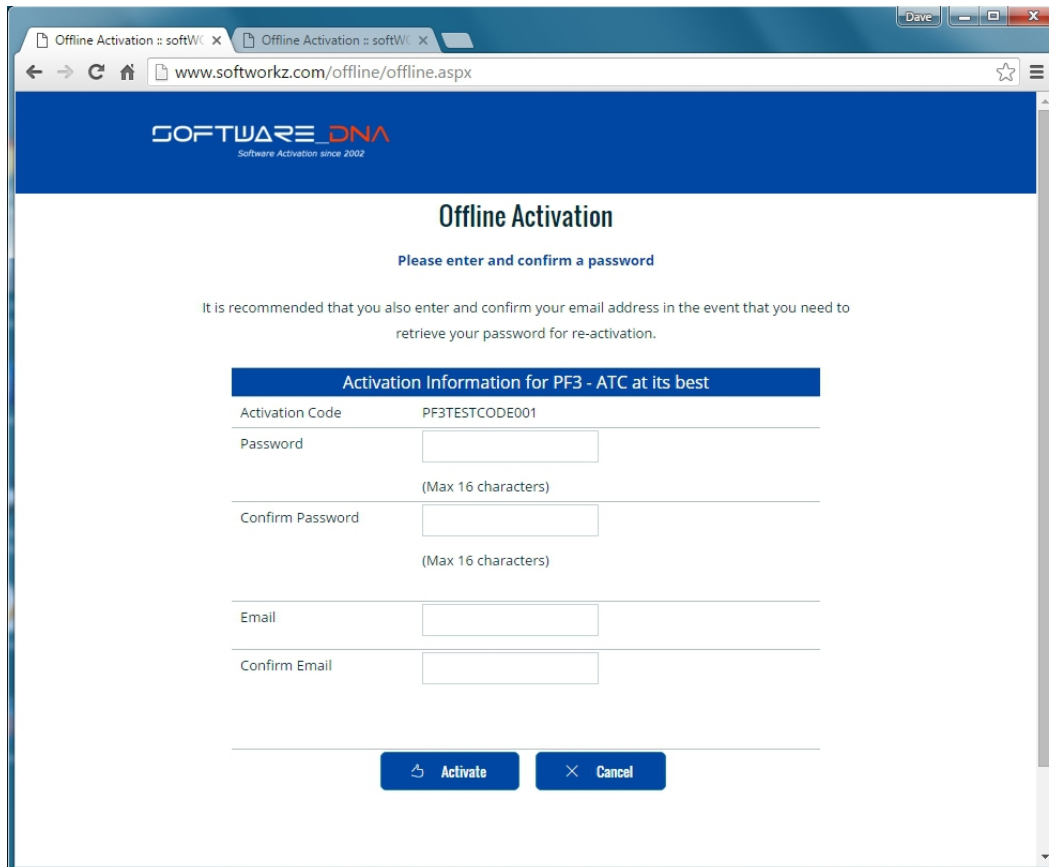
[www.softworkz.com/offline](http://www.softworkz.com/offline)

This is the web page you should see:



## PF3 User Guide

Now select **Choose File** and navigate to wherever you copied the **PF3.LIC** file, then select **Upload Lic File** to see the following page:



The screenshot shows a web browser window with the URL [www.softworkz.com/offline/offline.aspx](http://www.softworkz.com/offline/offline.aspx). The page header features the Software DNA logo with the tagline "Software Activation since 2002". The main heading is "Offline Activation" with a sub-heading "Please enter and confirm a password". A note states: "It is recommended that you also enter and confirm your email address in the event that you need to retrieve your password for re-activation." Below this is a section titled "Activation Information for PF3 - ATC at its best" containing a table:

Activation Code	PF3TESTCODE001
Password	<input type="password"/>
	(Max 16 characters)
Confirm Password	<input type="password"/>
	(Max 16 characters)
Email	<input type="text"/>
Confirm Email	<input type="text"/>

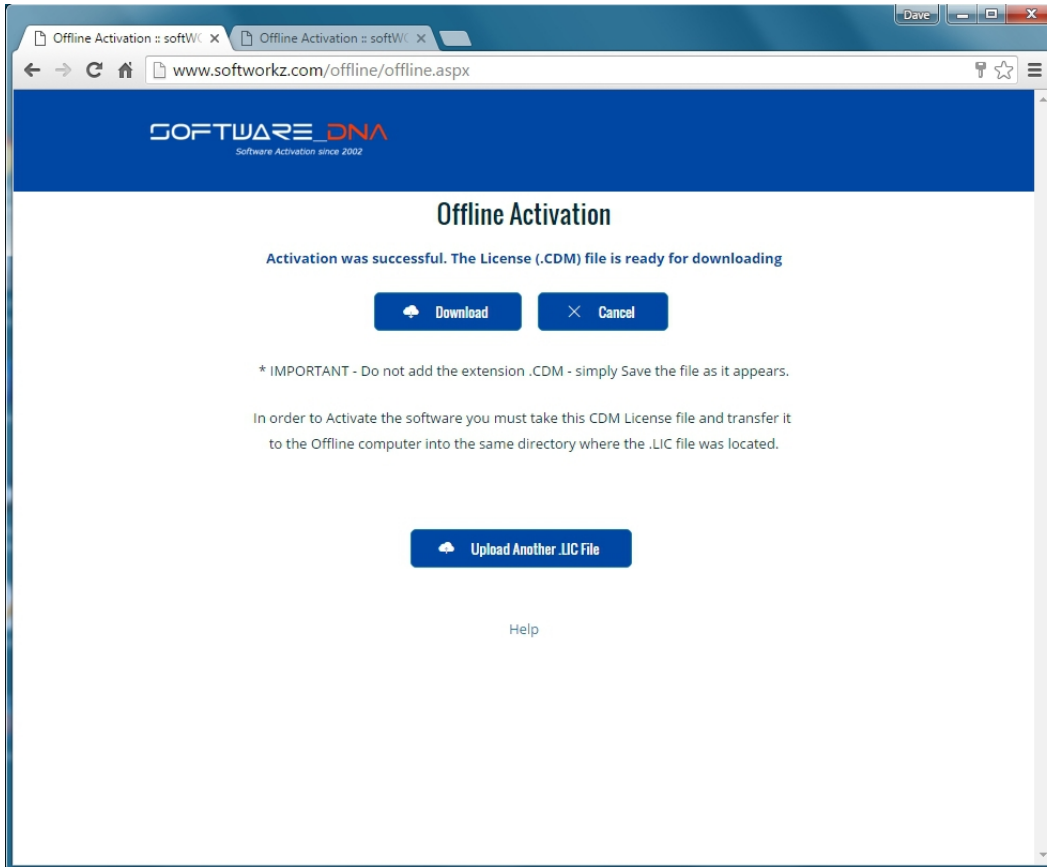
At the bottom of the form are two buttons: "Activate" and "Cancel".

The page requires you to create/enter a password and enter your email address. In addition to activating **PF3** this information will allow you to access details about the activation and/or request reactivating it at anytime should you change your PC. Your email address will also be required to retrieve your password should you forget it at anytime, so please enter this information carefully and make a note of it somewhere safe for future reference.

So go ahead, enter the required information then select **Activate**.

## PF3 User Guide

Provided you've entered everything correctly you should be presented with the following screen:



Now you need to select **Download** to get your Licence (.CDM) file and transfer it to your **PF3** computer, copying into the main **PF3** folder.

Finally you can start **PF3** and the activation is complete.

This is a one-time activation process and you will not be required to do it again unless you uninstall/reinstall **PF3** or make a major hardware change to your computer.



### 5.5 FAQ's for Online Authorisation

**I have entered my code correctly and have an internet connection, why is PF3 saying I have to do an off-line activation?**

*PF3 cannot reach the activation server. You may be using a proxy server or have a firewall (Windows firewall, ZoneAlarm, BitDefender, etc.). Make sure you have given permission for **PF3** to access the Internet in your firewall (see question below).*

*To verify if you have an Internet Connection, access the Internet using your web browser. If your web browser can connect, then look for a proxy or firewall.*

**I have entered my code and password correctly with a new password to do a re-activation, why is PF3 not being re-activated?**

*Verify that you have an Internet Connection. Your new password must be a new and never-used password. Verify that you have not previously used this password with this activation code.*

**How often will PF3 connect to the activation server via the Internet?**

*PF3 checks with the activation server when it is first installed, when it is re-activated, such as after a disk reformat and reinstall, or if the software is moved to a new computer.*

**Will PF3 work if I don't have an internet connection?**

*Yes, there is an offline activation method available. If no Internet connection is found during activation, or the activation server is not reachable, **PF3** will ask you to do offline activation. **PF3** will provide step-by-step instructions, where a file is written to disk that you move to a computer that does have Internet access (or email access). You can move this file via LAN, floppy disk, CD-R or USB key. You can use your Internet browser (on a machine that does have Internet access) to visit a special page to upload this file and receive another file in return. If you do not have any working browsers then the file can be emailed to our support (note there may be a delay in the return of the file depending on the time of day and week).*

**Does the internet connection speed affect Activation? Will dial-up Activation work?**

*The amount of data transferred during activations is very small. Any stable internet connection will work. Obviously slower connections will take slightly longer to complete the activation steps but this will be negligible.*

### **What information is passed to your server during activation?**

*No personal information or information about your computer configuration are transferred. There is a one-way hash\* of some machine configuration data, your chosen password, and the optional email address sent to the server. If you do not provide the optional information (email address and registration information) then no personal information will be transferred. We suggest you do not use one of your important personal passwords for the activation password, or a password that personally identifies you.*

*\*One-way Hash: Codes that identify parts of the computer are put through a special function (called a 'one way hash') that turns the codes into one code number that is unique to your computer but cannot be deciphered (or reverse engineered) to determine what those components are. Only this hash value is sent to the activation server and not the details on the computer parts.*

### **Can I move PF3 to another computer?**

*Yes, this can be done easily. It is simply a matter of deactivating **PF3** and then uninstalling the application on one computer, reinstalling the application on the new machine, and reactivating the software. If you have remembered your password this will be a fast and easy process.*

### **What is the password for?**

*The password uniquely identifies your licence/activation code. You will need the password if you ever need to reactivate **PF3** (such as after a disk reformat and reinstall or moving **PF3** to a new machine). We suggest you do not use one of your important personal passwords for the activation password or a password that personally identifies you. The password has to be changed and be new (never-used) each time you re-activate the software.*

### **What is the email address for?**

*The email address on the activation and reactivation dialogues is optional. You will be able to activate even if you do not provide an email address. If you do provide an email address, it can be used to retrieve a lost password. If you do provide the email address it will not be used for marketing purposes or sold / provided to any third party. If you do provide an email address we recommend it be one that will be active for some time.*

### **What if I have forgotten my password and did not provide an email address (or my email address is no longer valid)?**

*During a reactivation the previously provided password is required. If the password has been lost and cannot be recovered (because an email address was not provided, or the email address is no longer valid) you will need to contact our support via email.*

*We will be happy to reset your password.*

### **Will changes to my computer cause PF3 to stop working?**

*There are no changes that will cause a permanent disabling of **PF3**. Major changes (disk reformat being one such major change) will mean that you need to reactivate the software. If you have your password this will be a fast and easy process.*

### **What happens if OnCourse Software or softWORKZ suspends service or goes out of business?**

*Both companies have been in business for quite a few years. In fact both companies were formed in 2002 and are healthy, stable and will be around for many years to come!*

*Regardless, your activated application will continue working without the Activation server, although new activations or re-activations will not be possible. Both companies are committed to ensure that a patch will be made available ASAP to resolve this. Either a version with a replaced activation system or a version with no activation will be provided.*

### **I wish to do an online activation but my firewall is setup to block such requests. What are the firewall settings I need?**

*The following is the information that you need to setup your firewall:*

*Main server IP address: reg1.softworkz.com*

*Backup server IP: reg2.softworkz.com*

*Backup server IP: reg3.softworkz.com*

*Port: 80 (Standard HTTP)*

*Domain: softworkz.com*

## 6. HOW TO UNINSTALL PF3

***Before uninstalling PF3 please ensure you DEACTIVATE the software first by going to the Options #2 menu and then selecting 'Deactivate your PF3 License on this pc'.***

We recommend you uninstall **PF3** using the standard Windows Control Panel, *Uninstall a Program* feature.

## 7. PF3 OPTIONS AND CONFIGURATION

### 7.1 Overview

**PF3** offers a host of configurable options for you to tinker with and setup the system to your very own requirements, personal likes and dislikes.

*Please Note: Some screen shots may differ on your system due to the skin you're using or changes to **PF3** since this document was written.*

#### 7.1.1 Main Menu Options Selection

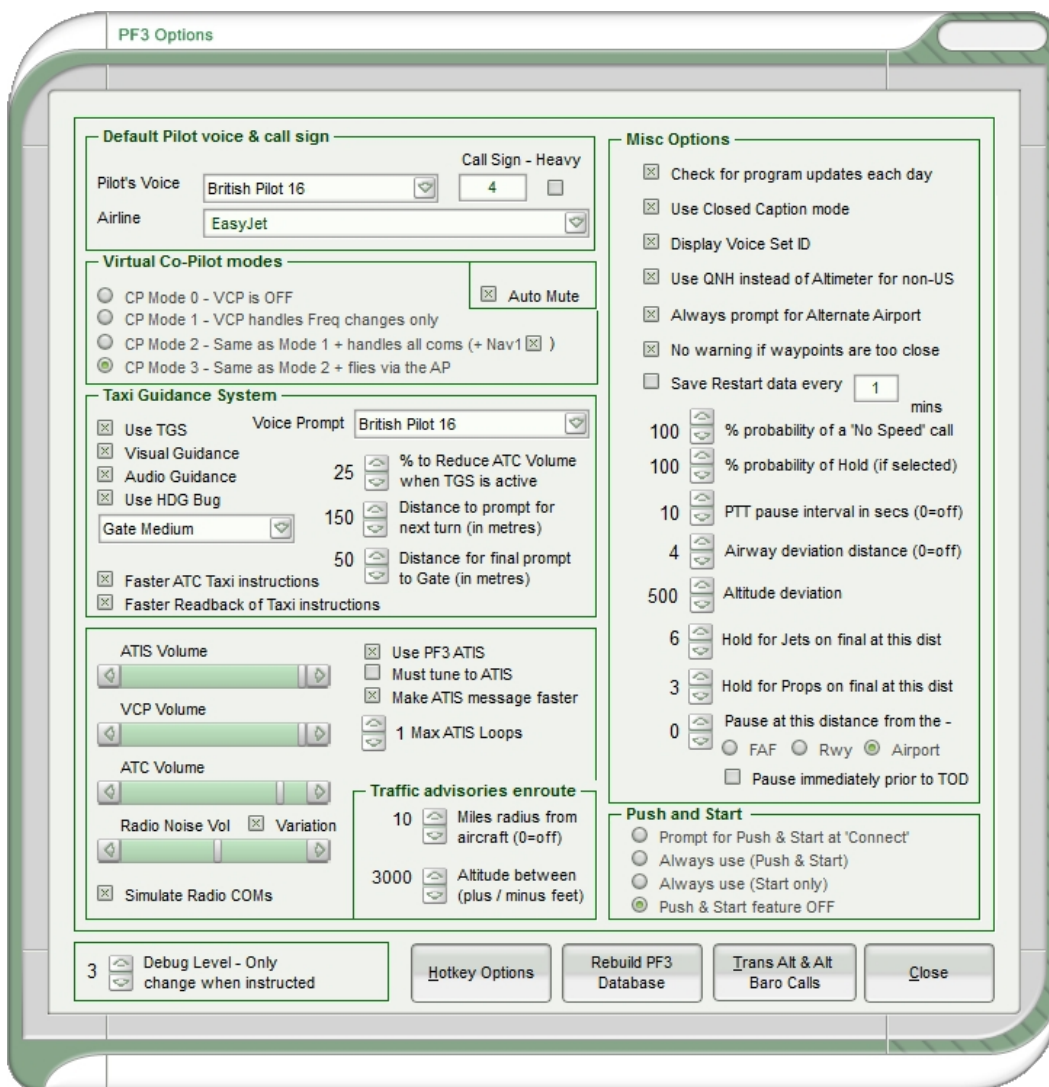


## PF3 User Guide

General options are accessed from the main **PF3** screen by selecting either the **Options #1** or **Options #2** buttons.

### 7.1.2 Options #1 Main Display

The first *Options* page shown below shows the majority of the most commonly used options available in **PF3**. In this section we hope to show you what each of these options are for plus how and when you might use them within your flight simulator environment.



### 7.1.3 Pilot's Voice

At the top left you can select the *Pilot's Voice* you want to use. This is the voice you will hear communicating with ATC (*unless of course you use voice recognition software, but more about that option a little later*), so in reality it is actually the PNF rather than the PF, unless you're flying solo!

To the right of the voice selection box is where you enter your actual call sign and next to that is the 'Heavy' indicator.

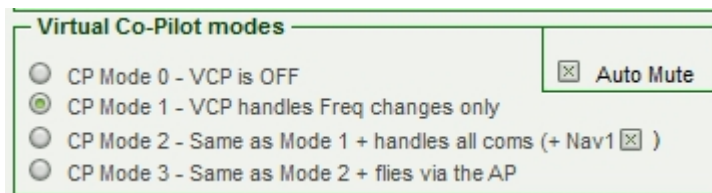
Below the call sign option is a drop down box listing all the available airlines that **PF3** recognises and who's call signs are supported.

So in the above example ATC would contact you as "Easy Four". But if you selected the 'Heavy' option the call would become "Easy Four Heavy"

Obviously, if you selected British Airways in the drop-down box you would hear "Speedbird Four" or "Speedbird Four, Heavy"

### 7.1.4 Virtual Co-Pilot modes

Below the *Default Pilot voice & call sign* panel you will see the various *Virtual Co Pilot modes* available, all of which are fully explained on the *options* page by right-clicking the actual option text.



Selecting a particular mode will be the one used for all loaded flight plans. This mode can also be changed mid-flight by using the default C\S\V hotkey.

*Note: C\S\V means pressing and holding the Ctrl and Shift keys together, then pressing and releasing the V key. Finally you release the Ctrl and Shift keys.*

So what do each of these options do I hear you ask...

**CP Mode 0** - Tells your virtual co-pilot not to say anything at all and don't touch anything either!

**CP Mode 1** - With this mode selected your VCP will handle any frequency changes received from ATC. He will actually dial in the required frequency for your COM radio.

## PF3 User Guide

---

**CP Mode 2** - In this mode you start to work your VCP a little harder and make him/her (*yes there are some hers available*) handle all your communications with ATC plus handle any necessary frequency changes. You will also notice a small tick box next to this option marked (+ Nav1) and this enables you to select if you would like your VCP to also set your NAV1 frequency when on an ILS approach. This particular option is new to version 3.1 and was added following a user request. If you prefer to set the NAV1 yourself then you can simply turn this feature off.

**CP Mode 3** - With this option you can almost start to relax a little. Not only will your VCP change COM frequencies when required and handle all the verbal stuff with ATC but he will also ensure your auto-pilot is correctly setup up too. So any changes in heading or altitude, instructed by ATC, your VCP will dial them into the AP. *This can be really useful if you're on a long haul flight and want to pop off to get your tea!*

All joking aside, CP Mode 3 can be really useful when you first start using **PF3** because it gives you time to see exactly how things work with regard to the interaction between you, ATC and your flight sim.

**Auto Mute** - This option (added in version 3.3.0) provides the means by which you may use Voice Recognition software and you trusty VCP, switching between each as and when you like.

This option will only be activated if

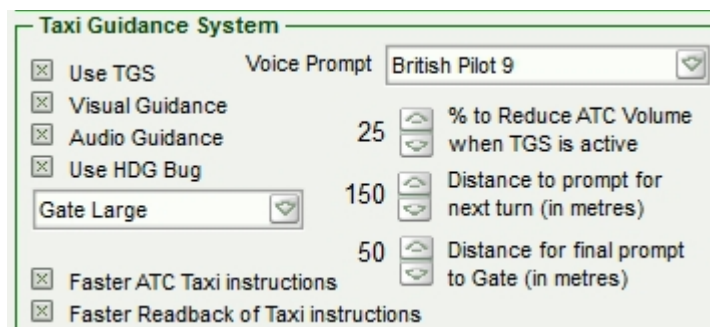
- (a) your pilots voice is NOT set set 'None'
- (b) your VCP mode is set to 0 or 1
- (c) your PTT pause interval (Options #1) is set to a value greater than zero
- (d) you use the PTT hotkey before pressing any ATC communication hotkey.

Configured correctly, when you press the PTT hotkey and then a communication hotkey (say C/S/0) you will not hear your pilot/vcp voice talking to ATC, provided you complete the keying sequence before the PTT pause interval expires. This would then allow you time to speak directly to ATC via your VR software. If at any time you wanted your VCP to take over talking to ATC you simply hit the communication hotkey without using the PTT key. This will be detailed again in section 18 Using vr software with pf3



### 7.1.5 Taxi Guidance System

Below the *Virtual Co-Pilot modes* panel you will see a really exciting and useful feature of **PF3**, the Taxi Guidance System.



This panel allows you to configure the TGS in a variety of ways. You must check the **Use TGS** option in order to activate this feature. Doing so will ensure you arrive at the correct runway/gate/parking position as assigned by the ground or tower controller!

**Visual Guidance** - This option enables the nifty TGS Gauge and or Standalone Program which will display directional guidance for you during the taxi segment of your flight. *Each of these items will be described fully in a later section of this document.*

**Audio Guidance** will provide you with audio directions, not unlike an in-car GPS system. The audio guidance will also give you the name of the taxiway you should be turning onto. Eg. *"Turn left onto taxiway Delta"*

The **Use HDG Bug** enables your heading bug to constantly point towards the next taxi *waypoint* along your route to the runway/gate, plus the number of taxi waypoints remaining will appear in the AP Course display. This is a useful feature should you decide not to install the TGS gauge or use the standalone TGS Display utility for whatever reason. When you select to use the Hdg bug as a taxi aid then whatever settings were originally showing on the AP HDG and/or AP Course displays will be remembered by **PF3** when TGS is started and reset to their original values when TGS completes. *Please Note this function may be disabled with some third-party add-on aircraft.*

The **Voice Prompt** selection enables you to choose a different voice for the TGS commands than the one you hear communicating with ATC. If you select 'None' then the TGS voice defaults to the pilot voice selection. This option is also useful for those using voice recognition software alongside **PF3**, as those users have to select 'None' for their pilot's voice and would therefore not hear any TGS audio prompts. But this option now provides them with full TGS operations too.

## PF3 User Guide

---

The **% to Reduce ATC Volume when TGS is active** reduces the volume of general ATC chatter so you don't miss any of the taxi instructions given by your trusty VCP. Any ATC instructions directed at you though will not be affected by this option.

The **Distance to prompt for next turn** is the distance before the next taxiway turn you will hear your VCP say "Next left" or "Next right on to taxiway Delta". So if you prefer to hear this when you are literally on top of the next turn you need to reduce this setting. If you want more time to get ready for the turn you need to increase the setting.

**Distance for final prompt to Gate** is much the same as the previous option except it pertains only to when you're approaching your assigned gate after landing.

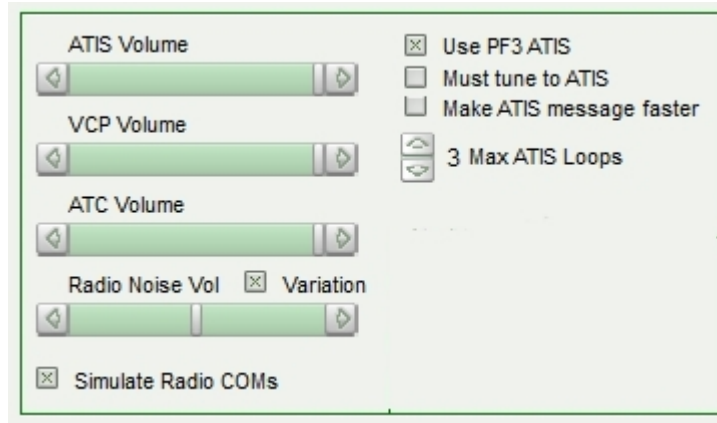
*Please Note: The reason this additional trigger was added was because we felt it was the best way you could be absolutely certain which gate your VCP means when he says turn 'left/right to gate'. If the setting is too high you could turn too early toward the wrong gate, equally if the setting is too low you could over shoot your turn. We/I have always found a setting of 50 to work perfectly so you should only mess with this value if you're having problems finding the right gate. Personally, by the time I get to the final taxi waypoint I always ensure I am doing about 3-5 knots... that way my turn into the gate is always just right.*

**Faster ATC instructions** simply makes ATC's taxi instruction to you faster. Some may prefer this as it is probably more realistic. However, if you're new to **PF3** and/or ATC communications you may find it easier to understand these instructions if you turn this option off. You can also use the *Closed Caption* mode (*explained later*) to display ATC instructions textually.

**Faster Readback of Taxi instructions** – This one probably doesn't need any explanation... *so I won't explain it!*

### 7.1.6 ATIS Volume and Options

Below the *Taxi Guidance System* selections you will find the *Volume* control and *ATIS* control panel.



The first option **ATIS Volume** allows you to adjust the volume of **PF3**'s own ATIS messages.

**VCP Volume** controls the volume of your VCP.

**ATC volume** controls the volume ATC and other (AI) aircraft you might hear on your current frequency.

**Radio Noise Vol** adjusts the sound heard *'behind'* the radio transmissions. This background noise adds to the authenticity of transmissions, and is adjustable to your liking. This additional ambience will only be heard when ATC are talking or you hear another aircraft in communication with ATC, it is not heard when your VCP is talking.

**Variation** - This small *checkbox* changes the type of background radio noise you will hear each time you switch from one control facility to another. Not only does this alleviate the risk of your ears becoming tired of the same background noise but also adds a little more realism, replicating the fact that some control facilities provide better signals than others.

**Simulate Radio COMs** - This option is off by default and will make all radio transmissions sound like... well, radio transmissions... to emulate what it's really like listening to ATC. If you try it and don't like, or would prefer to hear a clearer sound over the radio, just leave it off.

All these options and controls provide the means by which you can finely tune the sounds and volumes to suit your own particular taste and to create the level of ambience you prefer and consider to sound *'just right'*.

*Please Note: If you find the sound from your flight simulator is drowning out all ATC calls and you have all **PF3** settings at maximum, it's time to turn your*

## PF3 User Guide

---

*flight sim volumes down till you reach the optimum level. Then, if need be, you can push the overall sound balance (your amp) up to suit.*

**Use PF3 ATIS** - Which you'll find a little to the right of the ATIS volume control is the master switch that obviously turns this whole feature off, should you wish to use the default system provided by your flight simulator to listen to ATIS, although this is not really recommended.

**Must Tune to ATIS** ensures **PF3** will prompt you to actually tune to ATIS prior to making initial contact with ATC.

**Make ATIS message faster** for those impatient ones amongst you.

**Max ATIS Loops** sets the maximum number of times **PF3's** ATIS will play before automatically stopping. However, if the message stops and you would like to listen to it again just momentarily change your COM frequency and then set it back to the correct ATIS frequency and the message will replay for the number of loops defined here.

### 7.1.7 Traffic Advisory enroute

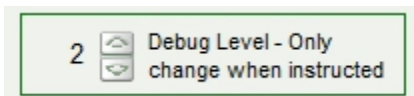


To the right of the volume controls are our **Traffic Advisory** options.

**Miles radius from aircraft** The first one controls the horizontal radius within which you want to be advised of other (AI) traffic movements.

**Altitude between** This is the vertical radius within which you would be advised of other (AI) traffic movements.

### 7.1.8 Debug Info



Below the volume controls at the lower left of the screen there is a *Debug Level* control. This control filters the information written to the debug logging file. Normally this would be set to '0' (zero) but you may be requested by **PF3 Support** to increase this as an aid to collating data with regard to any problems you may have reported. The range is from 0 (zero) to 4. **Be**

## PF3 User Guide

**warned:** setting this to 3 or 4 will produce **very** big logs and you should only use this setting if/when asked to do so.

### 7.1.9 Misc Options

On the right-hand side of the main options page you will see the following options:-

**Misc Options**

- Check for program updates each day
- Use Closed Caption mode
- Display Voice Set ID
- Use QNH instead of Altimeter for non-US
- Always prompt for Alternate Airport
- No warning if waypoints are too close
- Save Restart data every  mins
- 100   % probability of a 'No Speed' call
- 100   % probability of Hold (if selected)
- 10   PTT pause interval in secs (0=off)
- 4   Airway deviation distance (0=off)
- 500   Altitude deviation
- 6   Hold for Jets on final at this dist
- 3   Hold for Props on final at this dist
- 0   Pause at this distance from the -  
 FAF  Rwy  Airport
- Pause immediately prior to TOD

**Check for Program Updates each day** ensures you always keep up to date with any program updates using our own auto-updates feature.

*Please Note: OnCourse Software does NOT collect ANY personal data from your computer during this process. PF3 does, however, require an internet connection for this feature to work and connect to one of our updates servers.*

**Use Closed Caption mode** enables you to 'see' a text display of all ATC communications on the screen. This information can be displayed in either the

## PF3 User Guide

---

default FS message window (*not recommended*), the FSUIPC message window or the RemoteText utility that comes with **PF3** (*recommended*). Not only is this feature really useful for those times when you may not be 100% certain as to what was just said but it's also great for those who are a little hard of hearing (*like yours truly... what?*)

**Display Voice Set ID** is used to prefix the closed caption text with a two letter voice set identifier, which is required if you wish to use the 'Exclude Individual Voices' feature. *More about this later.*

**Use QNH instead of Altimeter for non-US** – In most countries outside North America ATC will provide the current altimeter settings in millibars (1013 rather than 29.92). The actual call would be "QNH 1013" instead of "Altimeter 2992". Setting this option to OFF will result in the 'Altimeter' setting being given in all **PF3** regions.

**Always prompt for Alternate Airport** – **PF3** supports the use of alternate airports and therefore, with this option set to ON, you will be prompted to enter an alternative airport each time you load a flight plan. Even with this prompt turned on you may still choose to skip entering an alternate airport if you wish, or if you never want to use an alternate airport simply set this option OFF. You select your alternate airport by entering the ICAO code when prompted.

*Please Note: **PF3** only validates the ICAO code you enter to ensure it is valid. It does not, however, perform any other checks. This means you could actually enter an alternate airport that was on the other side of the World! **PF3** doesn't care and if/when you request to go to your alternate **PF** ATC would be happy to facilitate your request... so please be careful when planning your flight.*

**No warning if waypoints are too close** – **PF3** will warn you if any of your flight plan waypoints are too close together or too close to either your destination/departure airports. **PF3** will not drop any waypoints from your flight plan and this is only a cautionary message to ensure you have a problem free flight. Tests have shown **PF3** can happily handle waypoints closer than the distance that triggers these warnings but this is largely dependent on how acute the change of course is between one waypoint and another and also the pilot's ability to navigate to each waypoint. This message will be displayed if any of your waypoints are closer than 5 nautical miles or your first waypoint is closer than 10 nautical miles from your departure airport or the last waypoint is closer than 15 nautical miles from your destination airport. By selecting this option you will suppress any such warnings.

**Save Restart data every** – turns on **PF3**'s 'resume-a-flight' feature, allowing you to resume from a point mid-flight should you either abort a flight or as a result of a program problem. Next to this is a small data entry box where you enter the interval length (in minutes) you want **PF3** to save your flight data. We recommend for best results to set this to 1 minute, which

## PF3 User Guide

---

means **PF3** will save its restart data every minute. *We will discuss this feature in depth later in this document.*

**% Probability of a 'No Speed Restriction' under 10K** - Normally aircraft are restricted to a maximum of 250 knots below 10,000', although at times ATC can lift this restriction. If you set this to zero it turns the feature off completely, setting it from 1-100 allows you to set the probability of getting the call.

(A) As of version 3.7. The probability factor is set to something other than zero

(B) Your aircraft is capable of going faster than 250 knots

(C) You are still in climb mode (i.e. you haven't reached your cruise altitude)

(D) You are IFR

(E) Your altitude is between 3000' and 9000' (AGL), which is also subject to a randomizing factor applied using your percentage setting. However, if you have a 'heavy' call-sign you will bypass the probability factor and WILL get the 'no speed' call.

**% Probability of Hold (if selected)** – New in version 3.1 this option allows you to set the probability of being instructed to hold at the waypoint you may have selected on the *Adjust Altitudes, SIDs, ATRs and Holds* page. If you have a hold selected and set this to 100% then you will definitely be instructed to hold when nearing the selected waypoint in your flight plan. If you set this to 0% then obviously the hold would not be initiated and then if you set this option to 50% there would be a fifty-fifty chance of being held at the waypoint.

**PTT pause interval in seconds** is the amount of time **PF3** goes silent when you hit your Press to Talk hotkey, the intention is to allow for using voice recognition software without being interrupted during your call. **PF3**'s default PTT Hotkey is the **Esc** key. This key is NOT active by default. *We will discuss using voice recognition software alongside **PF3** later in this document.*

**Airway Deviation Distance** - by default ATC will nag you if you are +4 or -4 miles off the designated airway. You can use this option to increase this margin or set it to zero to turn the 'nags' off completely.

**Altitude Deviation** - This is used to trigger the altitude 'nag' if you're not within a margin (+/- this figure) of your ATC assigned altitude

**Hold for Jets and Hold for Props** - sets the distance at which ATC will instruct you to hold for inbound traffic while waiting for takeoff clearance. The default here for jets is 6 miles and for props it's 3 miles, but you may want to make these less if using a lot of AI aircraft and therefore your departure airport will probably be very busy.

**Pause Mode** - this determines the distance from either the FAF, runway or your destination airport you would like to pause FS/**PF3**. The first two options (FAF/Runway) would not become *active* until you reach the last waypoint in your flight plan, whereas the last option (Airport) is active for the entire flight.

You might find this useful for those long-haul flights where you might leave FS on auto-pilot but don't want to risk missing the exciting part of your flight!

### 7.1.10 Push & Start Options



The **Push and Start** panel enables you to set the default behaviour of this feature. Enabling the option gives you the greatest degree of flexibility on each flight.

**Prompt for Push & Start at 'Connect'** – this selection will present you with the following three options each time you hit '*connect*' to begin your flight...

- (1) Use Push and Start for this flight
- (2) Use Start feature only for this flight
- (3) No Push & Start for this flight

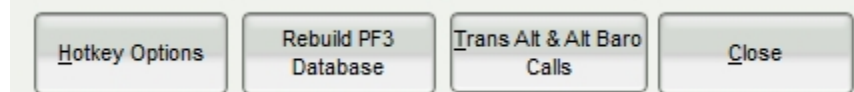
**Always use (Push & Start)** – With this option set to on you will use the *Push & Start* feature on every flight.

**Always use (Start only)** – This option allows you to just use the *Start* feature on every flight but no push back clearance.

**Push & Start feature OFF** – With this option selected you won't be prompted when you '*connect*' to FS to select your *Push & Start* option and each of these features will be off permanently.

### 7.1.11 Other Options from this display

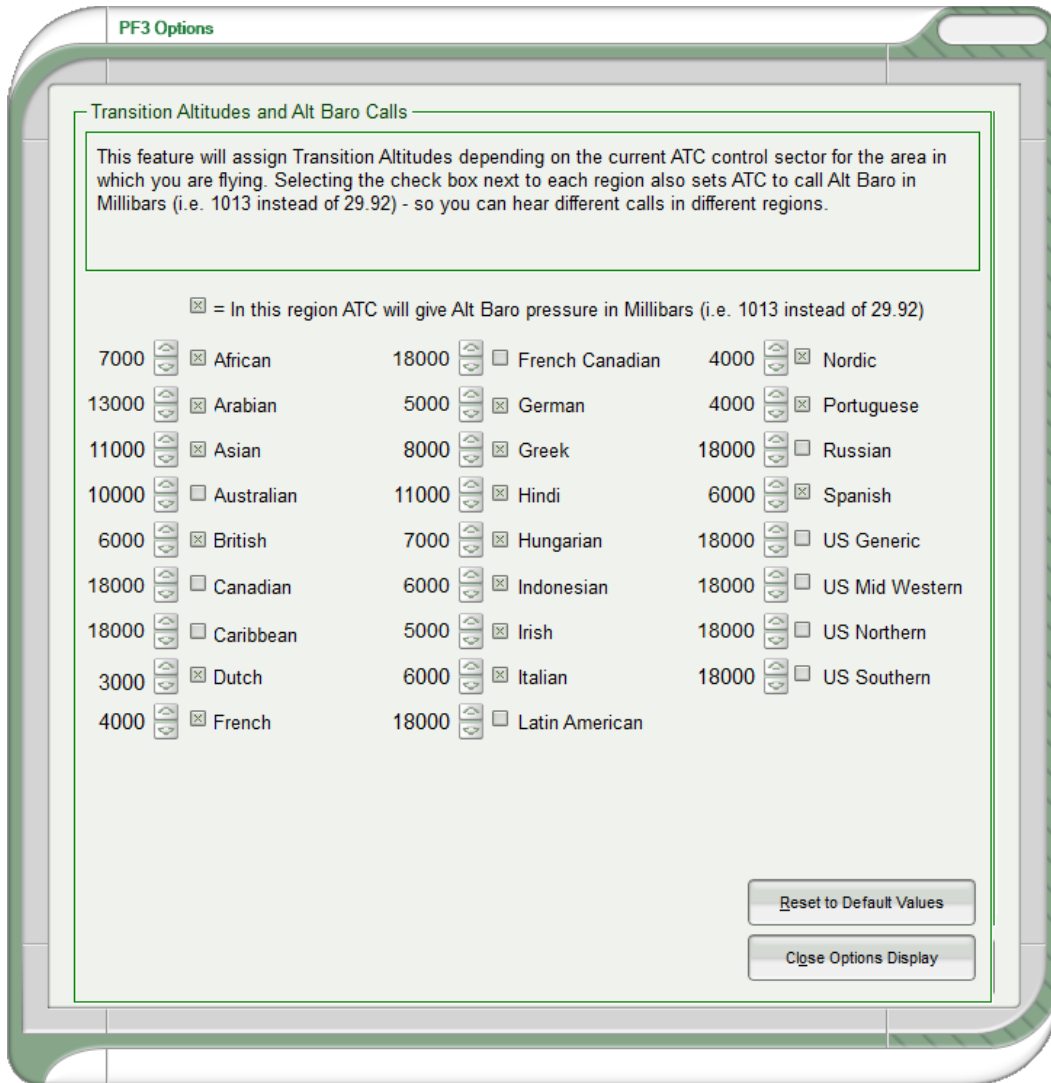
Below the **Push and Start** panel you will see four additional buttons:-





### 7.1.12 Trans Alt & Alt Baro Calls

The **Transition Alts & Alt Baro Calls** button displays another screen showing the 26 **PF3** geographic regions available.



Each of the above regions will be set with a default value showing the *transition altitude* for that particular area. The area you're currently flying through will be determined by **PF3** and the relevant ATC controller's *accents* and *transition altitude* will be set accordingly. What this means is you could fly from one country to another and experience varying *transition altitude* calls together with a change in ATC controller accents. All part of the realism **PF3** brings to your flight sim world.

Regional specific Alt Baro call options are likewise provided, so you might hear ATC say '*one zero one three*' in the UK but '*two nine nine two*' in the US, if that's how you had it configured. These options give you complete control over the transition altitude and altimeter setting calls you will hear within each of these regions.

Closing the *transition altitude* display takes you back to the first *options* page and from there you can select the **Rebuild PF3 Database** option.

### 7.1.13 Rebuild PF3 Database Procedure

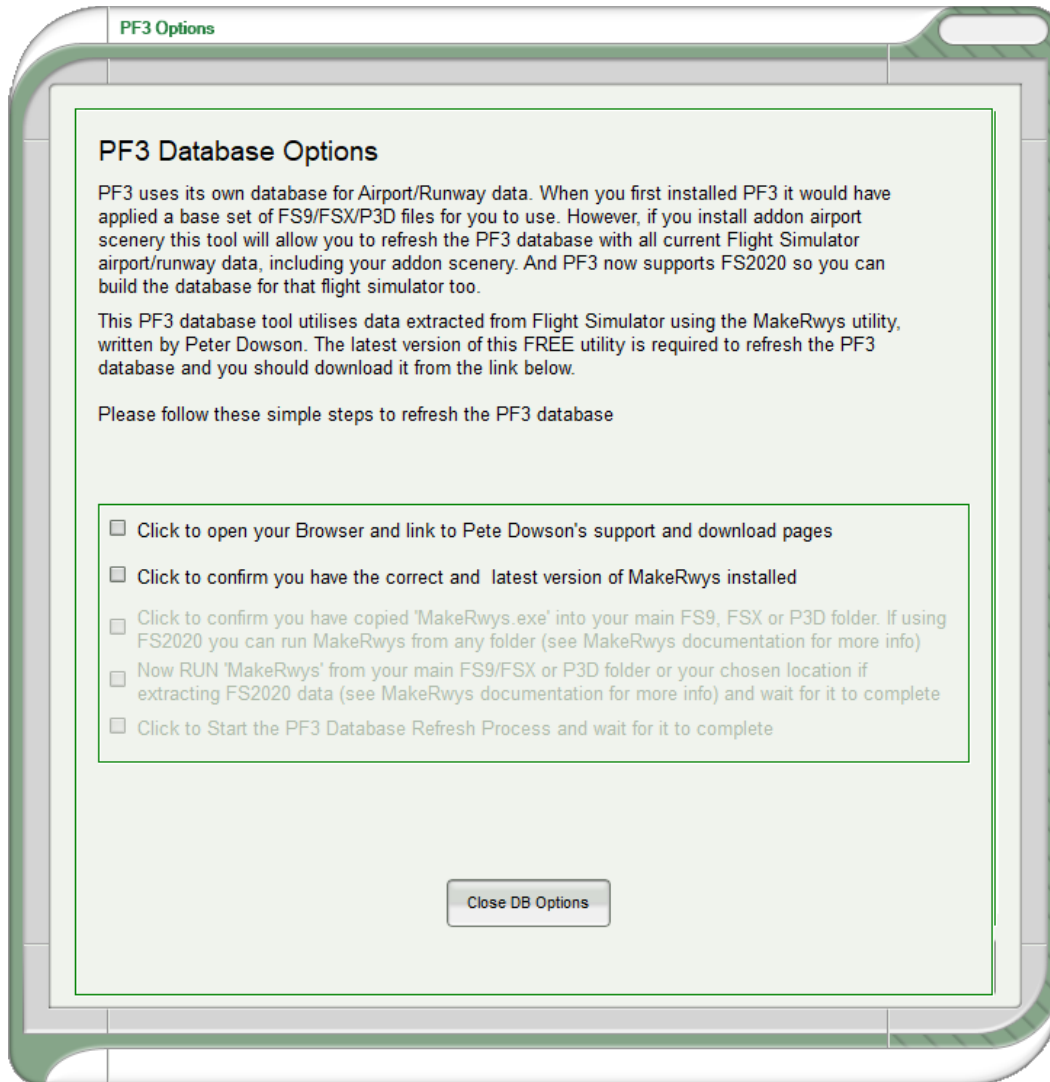
Accessed by using the **Rebuild PF3 Database** button this is a very important feature and one you will need to use from time to time, either when adding new scenery/airports to Flight Simulator or when advised by OnCourse Software following the addition of a new feature that might require the database to be rebuilt.

This is important because **PF3** uses the same data for runways and COM frequencies as FS, so any time any such changes are made to FS we need to reflect those changes in the **PF3** database files to keep everything nicely in sync.

So let's see how easy this is to perform:-

## PF3 User Guide

After selecting **Rebuild PF3 Database** the following screen will be displayed:-



This screen is quite self-explanatory, especially if you take the time to read the displayed text. The whole idea here is to give you a checklist (*you should know all about checklists*) of things to do and make each step as easy as possible. So for this example we will assume this is the first time you have rebuilt the **PF3** database.

Selecting the first option will open your Browser and link to Pete Dowson's support and download pages, where you will find the MakeRwys utility, which is used to extract the required data from FS.

## PF3 User Guide

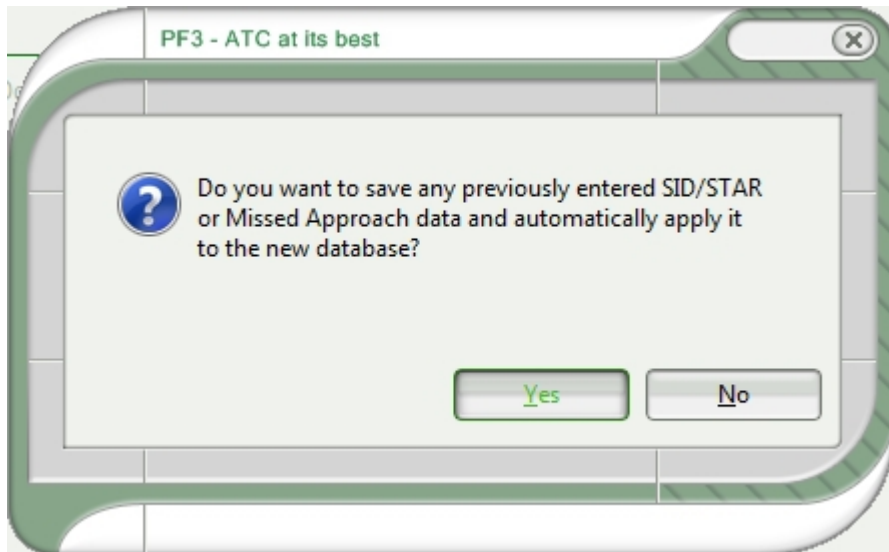
---

*Please note: At the time of writing this link was correct, but as we are not responsible for this link or MakeRwys we cannot guarantee this will always be the case. Should the link fail at any time the latest version of MakeRwys can always be found at the [Pete Dowson Support Forum...](#) just google it!*

Once you have downloaded the utility you should follow the instructions provided with the program, but simply all you have to do is copy the **MakeRwys.exe** program into your main FS folder, except for MSFS users, then run it. At which point you can select the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> checklist items (see above) to confirm (a) you have the latest version of MakeRwys, (b) you have installed it and (c) you have run it.

Finally, once MakeRwys has completed its task, which can take a few minutes, you can then select the 5<sup>th</sup> and final check item that says '*Click here to Start the **PF3** Database Refresh Process and wait for it to complete*'

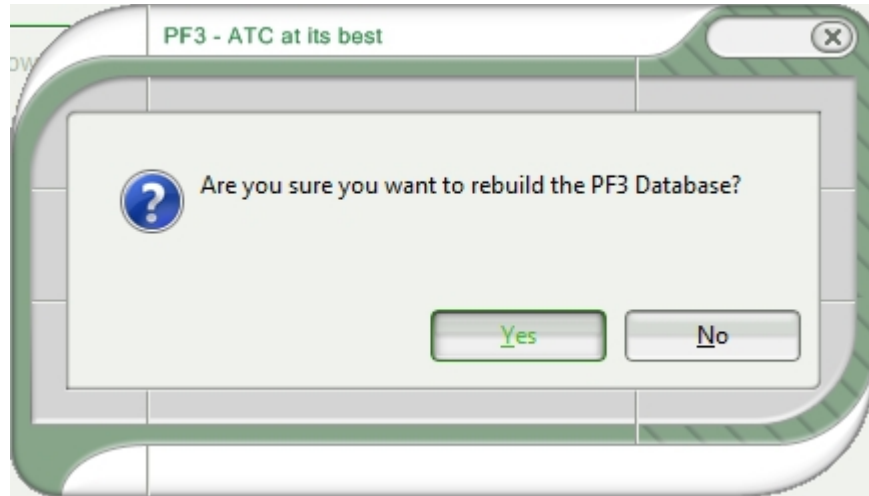
A warning screen will then appear asking if you wish to save any of the changes you may have made to the database.



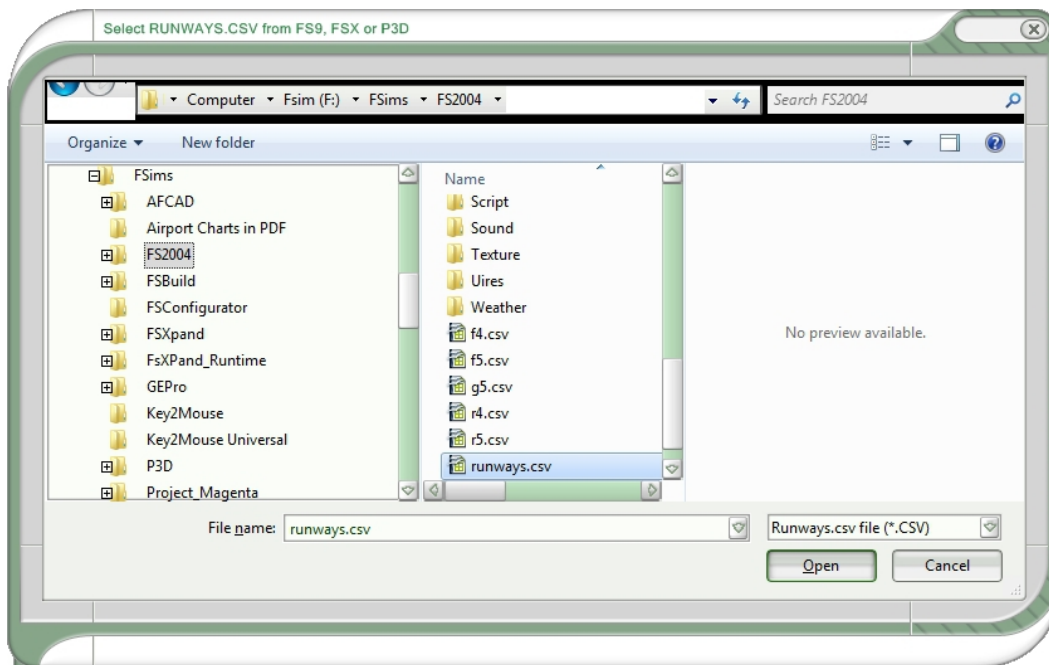
If you have configured any SIDs/STARs, missed approach data, etc, etc, and do not wish to lose it you should select 'Yes'. This will ensure **PF3** saves any *user* changes and reapply them following the creation of the new database files.

## PF3 User Guide

After that you will be asked once more to confirm that you do actually want to update/create the **PF3** database.



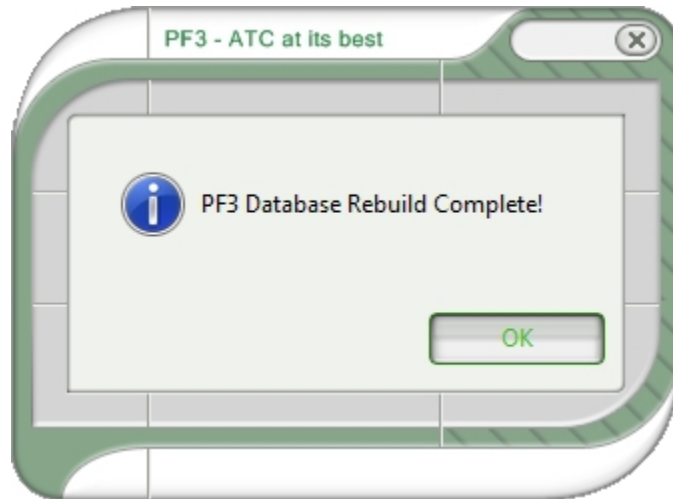
If you select 'Yes' to continue the following screen will appear, from which you have to select the **runways.csv** file from the main FS folder. This file should have just been created by the MakeRwys.exe program.



## PF3 User Guide

---

After selecting the **runways.csv** file click on OPEN and the **PF3** database will be created/rebuilt, which should only take a few minutes maximum to complete. Hopefully you will see this message following the rebuild:-



That's it!

In the unlikely event that you should have any problems (*I've always wanted to say that*) rebuilding the **PF3** database try deleting the following files from your main FS folder first, or the folder you chose to run MakeRwys for MSFS, then rerun Makerwys and retry the rebuild:-

**F5.csv**

**G5.csv**

**R5.csv**

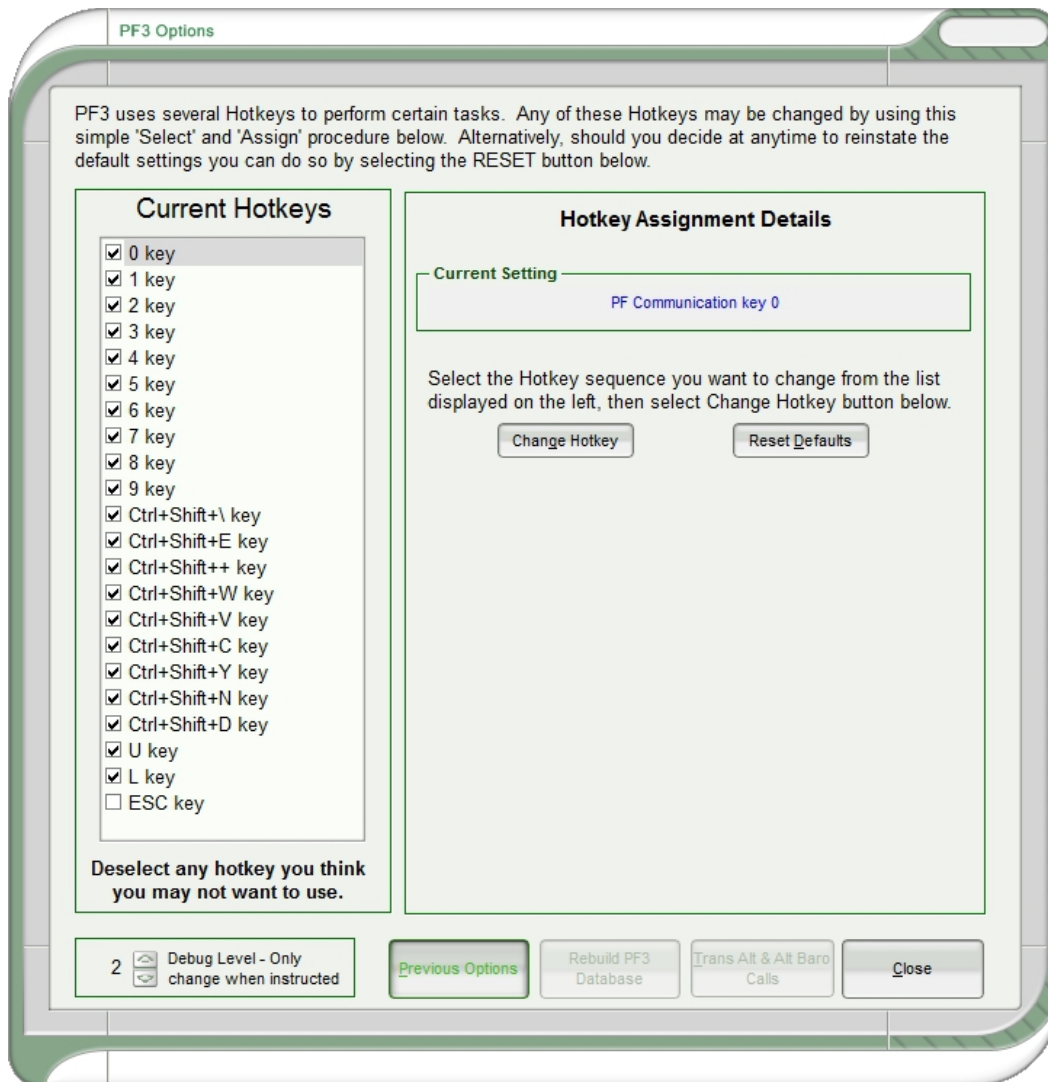
**T5.csv**

**Runways.csv**

You may run the **PF3** database rebuild at anytime, even if you have not made any changes to FS, although you should only need to after adding new scenery/airports.

Now you can select the **Close DB Options** button to return to the main options screen and from there you can select the **Hotkey Options** button which will display the page shown in section **7.1.14**

### 7.1.14 Hotkey Options

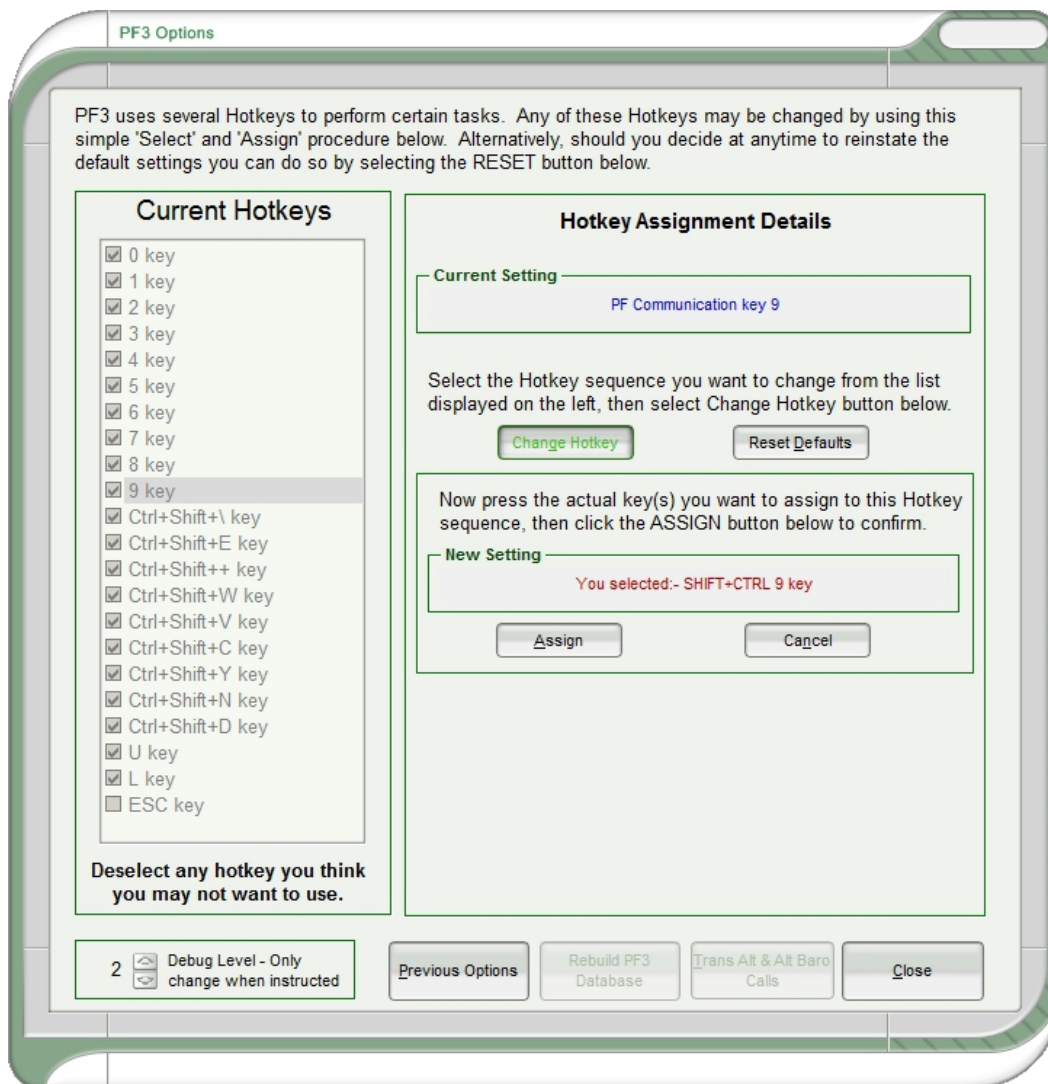


There are 23 pre-configured hotkeys in **PF3**. However, the Hotkey page allows you to assign any key or multi-key combination for each hotkey, should you wish to change the defaults. Simply select the hotkey from the left hand-side, then select *Change Hotkey*. Now press the actual key(s) you want to use for this hotkey and click *Assign* and the new keying sequence will be active and ready to use.

**You must exit PF3 and restart it before any hotkey changes will become active in your next flight.**

## PF3 User Guide

The following screen shot shows how the above display changes after you select the **Change Hotkey** option.



In this example we are attempting to change the default setting for the #9 hotkey to use the Shift+Ctrl+9 combination of keys instead.

You will also notice there is a small tick box to the left of each hotkey name under the Current Hotkeys list. This indicates if the hotkey is active or not. Any keys you don't use should be disabled because the total number of hotkeys available, for all applications using this FSUIPC facility, is limited to a maximum of 56. So it just makes sense if you don't use a particular key or keys then deselect them.



## PF3 User Guide

You can now select the **Close** button to return to the main menu screen. If you'd selected the **Previous Options** button you'd have returned to the Options #1 display instead, but for now we're done with those options.

### 7.1.15 SID/STAR Page Options

From the main menu display if you select **SIDs/STARs PF3's unique SIDs** (DPs) and STARs screen will be displayed:-

Set your SID (DP), STAR and Missed Approach altitudes for any runway. The SID/STAR name is where you enter a maximum of 7 characters to be read out by ATC. The 'Alt Comp' field is the altitude at which you should complete the SID and when ATC interaction resumes. Set this to zero and ATC will provide the altitude during clearance. 'MAp Alt' is the altitude ATC will give you during a missed approach. 'Rwy Use' allows you to control which runways are used for takeoff/landing - enter B=Both, L=Landing, T=Takeoff or X=Closed. You can also set a Transition Altitude and/or Minimum Approach (FAF) Altitude (entered as QNH) for individual airports. Everything here is OPTIONAL. Please see the PF3 User Guide for full details. PF3 also supports multiple SIDs/STARs per runway. To select from this list, in addition to maintaining it, please double-click the SID or STAR Name text box for your selected runway.

Use	Rwy	ILS	Hdg	Alt	Len	SID Name	Alt Comp	MAp Alt	STAR Name
-----	-----	-----	-----	-----	-----	----------	----------	---------	-----------

Use	Rwy	ILS	Hdg	Alt	Len	Name	SID Alt Comp	MAp Alt	STAR Name
-----	-----	-----	-----	-----	-----	------	--------------	---------	-----------

SIDs (DPs) Active  
 If no SID (DP) name entered use the default 'Delta Papa'  
 If no SID (DP) name entered use T04

STARs Active (automates 'cleared to final request')  
 If no STAR name entered use the default 'Sierra Tango'  
 If no STAR name entered use

Enter Airport ICAO then press Enter  
  
 FS9 Data  P3D Data  
 FSX Data  FS2020 Data  
Print Displayed Info Display Runways

0 Transition Altitude at XXXX  
0 Minimum FAF Alt at XXXX  
Save Changes Close

This is where you control the use of SIDs (DPs), STARs, Missed Approach altitudes, takeoff/landing designation for any runway, airport specific transition altitudes and airport specific minimum FAF altitudes. And new for version 3.3.0 the ability to add/maintain a list of multiple SIDs/STARs per runway and from which you can select the procedure you wish to use for any flight.

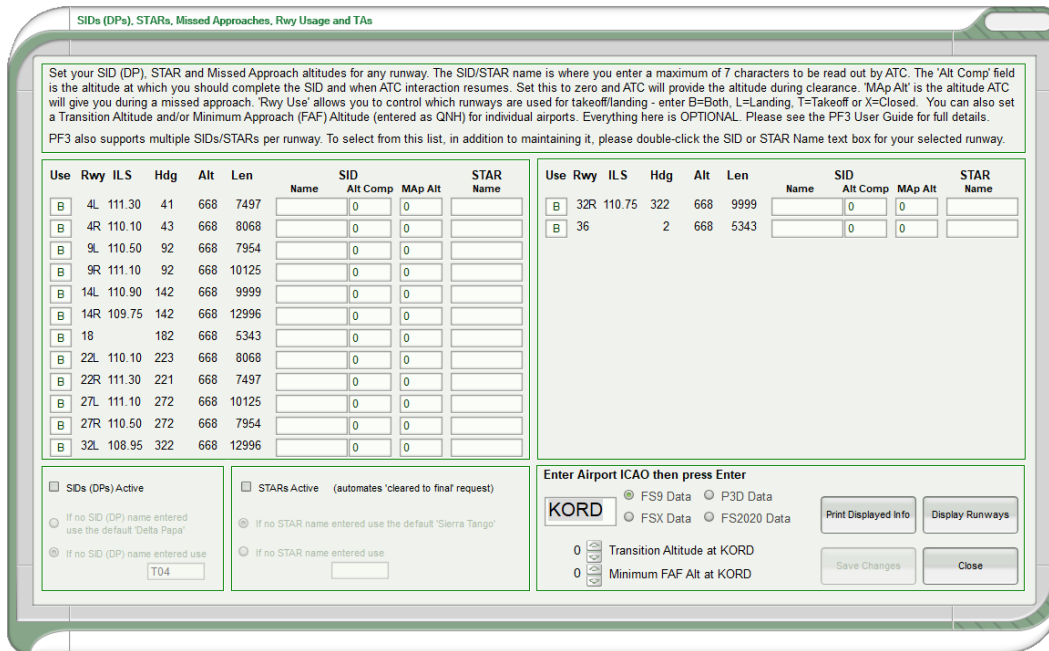
**SIDs (DPs)** - There are quite a few variations you can choose when deciding how to use SIDs. If you wish to fly a published departure from all airports but really can't be bothered to enter any data here, simply select the **SIDs (DPs) Active** master switch. Just below this option if you choose **If no SID (DP) name entered use the default 'Delta Papa'** then each time you contact clearance (at any airport) you will hear 'Cleared as filed, Delta Papa departure at xxxx approved, squawk 1234, contact ground on...' (where xxxx will be the altitude you are initially cleared to while flying the published departure and at which point ATC will resume interaction with you). Until you reach the SID altitude you will not hear anything from ATC other than to hand you off to another control facility and possibly give you new altitude instructions.

## PF3 User Guide

If you don't want to use the default *'Delta Papa'* name for your generic published departures you can enter your own default name if you select the option ***'If no SID (DP) named entered use...'***. Here you can enter a maximum of seven alpha numeric characters which ATC will read out.

The other alternative is for you to enter a name against individual runways. To do so you need to first enter the ICAO code for the airport you want to display, then hit ENTER or select the *Display Runways* button.

In the following example we're displaying the runways from FS2004 for KORD (O'Hare International) Airport:



Using the above configuration, if departing runway 4L Clearance would confirm *"Cleared as filed, Mike-Alpha-Four-Lima at Five Thousand departure approved, squawk 1234"*. You would also hear the same from Tower when being cleared for takeoff.

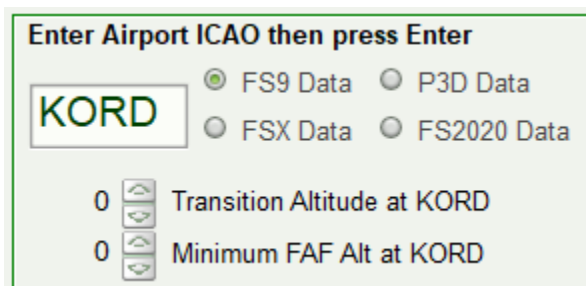
Departing runway 14L you would hear *"Cleared as filed, Alpha-Delta-Lima-One-Four at Six Thousand departure approved, squawk 1234"*.

Departing from any other runway you would hear *"Cleared as filed, Delta-Papa at xxxxx Thousand departure approved, squawk 1234"* where xxxxx would be determined by **PF3** at the time of the clearance and would normally be set at an altitude halfway between the current airports ground elevation and the altitude set for the first waypoint. e.g. If your departure airport's elevation is 1,000' and the first waypoint altitude is set to 11,000' then the *cleared to* altitude would be 5,000' (11,000 - 1,000 / 2).

## PF3 User Guide

---

*Please Note: When accessing, changing or adding any data on this screen you need to ensure you are accessing data for the correct flight simulator, especially if you have more than one flight sim installed. You can do this by choosing either the FS9, FSX, P3D or FS2020 Data option situated just to the right of the Airport ICAO entry box. **PF3** will always remember your last selection.*



The screenshot shows a configuration window titled "Enter Airport ICAO then press Enter". It features a text input field containing "KORD". To the right of the input field are four radio button options: "FS9 Data" (selected), "FSX Data", "P3D Data", and "FS2020 Data". Below these options are two vertical sliders, each with a numeric value of "0" and a label: "Transition Altitude at KORD" and "Minimum FAF Alt at KORD".

This same screen is also used for configuring STARs and/or Missed Approach altitudes. If you choose to activate the **PF3** STARs option (*using the default STAR name*) you would be cleared as such: *"Cleared to final for Sierra-Tango approach, runway xx..."*

Exactly the same variations are available for STARs as they are for SIDs with regard to the departure/approach name used by ATC.

This screen is also used to enter a missed approach altitude. This is the altitude you will initially be told to climb to should you report a *go around*. You don't have to use this feature as ATC will usually tell you to climb to around 3,000' above the airports elevation, but should you find an airport where surrounding terrain would make such an altitude too dangerous you can adjust this feature for each runway/approach should you wish.

Any changes you make to runways, like entering SID/STAR names or altitudes must be saved by selecting the **Save Changes** option. You will be prompted to do so should you forget.

Just below where you enter the airport ICAO you will see a small up/down arrow where you can set the transition altitude for the displayed airport and this will override the value set against the *regional* area (see earlier explanation). However, you do not need to adjust this for each airport and if left at 'zero' then the value set for this airport's region will be used instead. If you do enter a TA for any airport this is how it will work within **PF3**. If you have set a local TA for your departure airport, it will change to the region's TA at a distance of 30 miles from the airport, unless you are flying a SID that is still active at that time in which case airport TA will remain in effect until you complete your SID.

Destination airport TA is currently used once you reach the last waypoint and that process will remain unchanged. For an approach the destination airport

## PF3 User Guide

TA will become active and override the regional setting when you reach your last waypoint.

Below the TA setting is a similar option for setting the minimum FAF altitude for the selected airport. This means this will be the minimum altitude ATC will tell you to descend to during your approach to this airport. This is extremely handy for those difficult approaches, particularly in mountainous areas or at airports surrounded by other hazardous obstructions. However, you do not need to adjust this for each airport and if left at 'zero' **PF3** will handle your approach as normal.

To the left of each runway number you will see a small text box, which defaults to the letter 'B', meaning that runway is designated for both landing and takeoffs. You can change this to an 'L' for landing only, or 'T' to designate it for takeoffs only or even enter an 'X' to marked the runway as closed.

Use	Rwy	ILS	Hdg	Alt	Len	SID			STAR Name
						Name	Alt Comp	MAp Alt	
B	4L	111.30	41	668	7497	MA4L	0	0	

*Please note, these settings will have no effect on AI traffic. To restrict AI traffic from using a particular runway for landing/takeoff you would have to configure the relevant FS AFCAD file, but that is beyond the scope of this document.*

If you double click within either the SID Name or STAR name columns you will see a new popup overlay as shown below:-

SIDs (DPs), STARs, Missed Approaches, Rwy Usage and TAs

Set your SID (DP), STAR and Missed Approach altitudes for any runway. The SID/STAR name is where you enter a maximum of 7 characters to be read out by ATC. The 'Alt Comp' field is the altitude at which you should complete the SID and when ATC interaction resumes. Set this to zero and ATC will provide the altitude during clearance. 'MAp Alt' is the altitude ATC will give you during a missed approach. 'Rwy Use' allows you to control which runways are used for takeoff/landing - enter B=Both, L=Landing, T=Takeoff or X=Closed. You can also set a Transition Altitude and/or Minimum Approach (FAF) Altitude (entered as QNH) for individual airports. Everything here is OPTIONAL. Please see the PF3 User Guide for full details.  
 PF3 also supports multiple SIDs/STARs per runway. To select from this list, in addition to maintaining it, please double-click the SID or STAR Name text box for your selected runway.

Use	Rwy	ILS	Hdg	Alt	Enter/Save multiple SID/STAR data for Rwy 4L				
					Use	SID	Alt Comp	Use	STAR
B	4L	111.30	41	668	-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					-->			-->	
					Save List	Clear List		Close List	

Use	Rwy	ILS	Hdg	Alt	Len	SID Name	Alt Comp	MAp Alt	STAR Name
B	32R	110.75	322	668	9999		0	0	
B	36		2	668	5343		0	0	

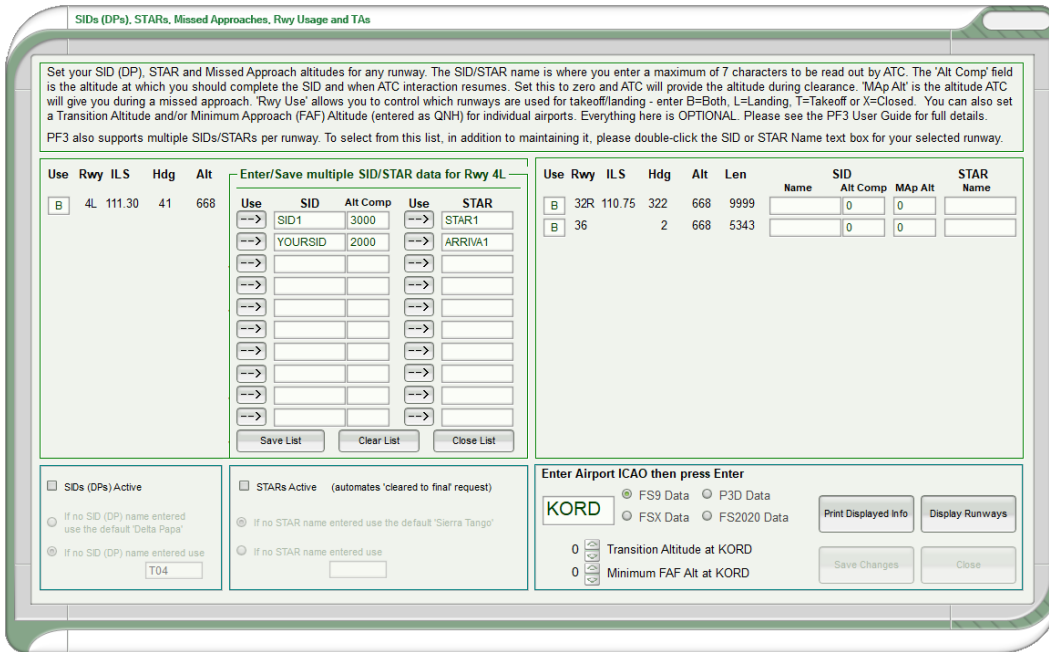
  

<input type="checkbox"/> SIDs (DPs) Active <input type="radio"/> If no SID (DP) name entered use the default 'Delta Papa' <input checked="" type="radio"/> If no SID (DP) name entered use <input style="width: 40px;" type="text" value="T04"/>			<input type="checkbox"/> STARs Active (automates 'cleared to final' request) <input type="radio"/> If no STAR name entered use the default 'Sierra Tango' <input type="radio"/> If no STAR name entered use <input style="width: 40px;" type="text"/>			Enter Airport ICAO then press Enter <input style="width: 60px;" type="text" value="KORD"/>		<input checked="" type="radio"/> FS9 Data <input type="radio"/> FSX Data <input type="radio"/> P3D Data <input type="radio"/> FS2020 Data	<input type="button" value="Print Displayed Info"/>  <input type="button" value="Display Runways"/>
<input style="width: 30px;" type="text" value="0"/> Transition Altitude at KORD				<input style="width: 30px;" type="text" value="0"/> Minimum FAF Alt at KORD				<input type="button" value="Save Changes"/> <input type="button" value="Close"/>	

## PF3 User Guide

This new popup allows you to enter up to 10 SIDs/STARs for each runway. In addition for each SID you can also enter the SID ceiling, or in PF3 terms the altitude at which your SID would be considered completed.

The following screenshot shows a couple of SIDs and STARs entered for KORD's Runway 4L:



This list can then be used to quickly select the desired procedure for your flight simple by clicking on the relevant *arrow* button beside your chosen SID\STAR:

At this point the selected data will be copied back to the main SID\STAR display page in readiness for your flight.

Obviously this new feature is entirely optional and you could continue simply typing in SID/STAR names for each flight. Equally there is no requirement for you to spend weeks of your time typing in SID\STAR information for all the airports you frequent. The thought process behind this new feature is it will be completed as and when, on an airport by airport basis, as part of your flight planning. In this way, your user list of multiple SIDs\STARs will expand over time.

### 7.1.16 Even More Main Menu Options

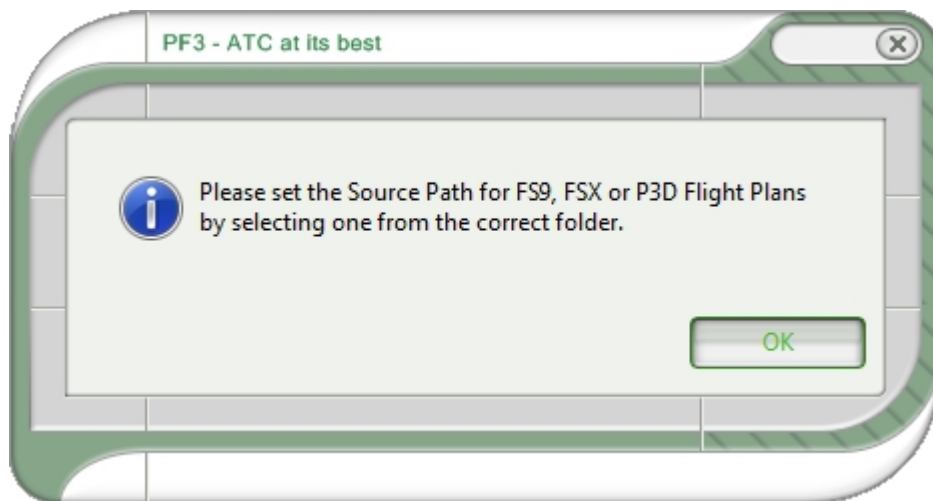
Okay, let's go back to the main menu display now and check out some more options and features:



### 7.1.17 Select a Flight Plan

When you select this button for the very first time you will be prompted to tell **PF3** where to find your FS9, FSX, P3D or MSFS flight plans. You will only have to do this once, unless you have more than one flight simulator installed, in which case if you change the version of flight simulator you are going to use for a particular flight then you would have to change your flight plan source folder at that time.

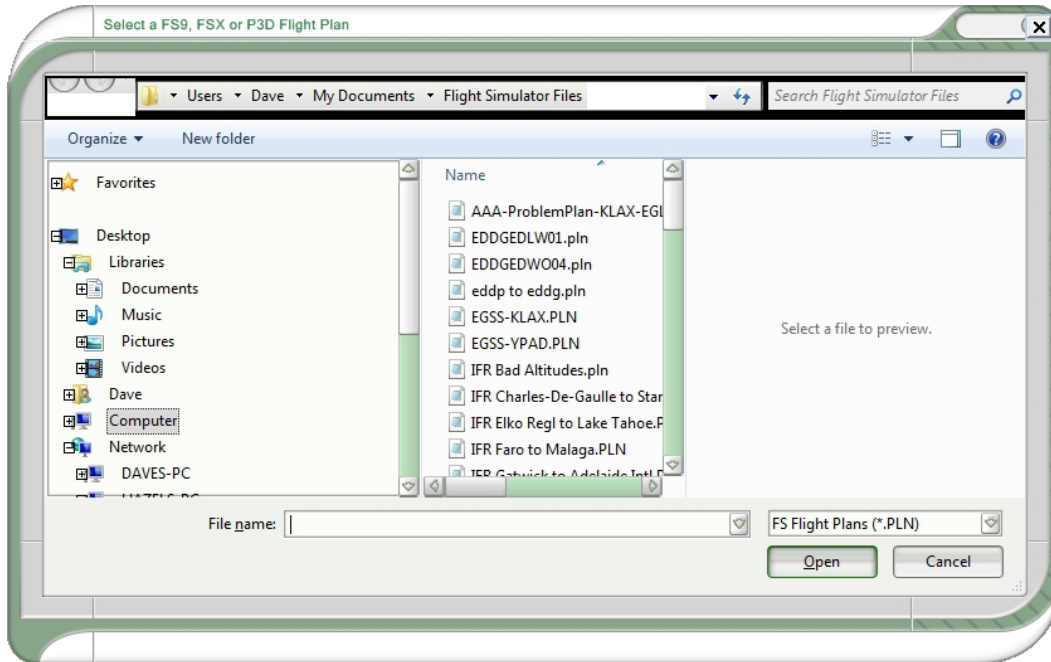
So this will be the screen you see first time into the program after hitting *Select a Flight Plan*



Click on OK and the *Select a Flight Plan* dialogue will be displayed:-

## PF3 User Guide

---



From here you just have to select your current flight simulator flight plan path by navigating to and selecting any flight plan.

**For FS9 users your flight plans will normally be found here:**

*C:\Documents and Settings\YourName\My Documents\Flight Simulator Files*

**For FSX users:**

*C:\Documents and Settings\YourName\My Documents\Flight Simulator X Files*

**For P3D (V3) users:**

*C:\Documents and Settings\YourName\My Documents\Prepar3D V3 Files*

**For MSFS users:**

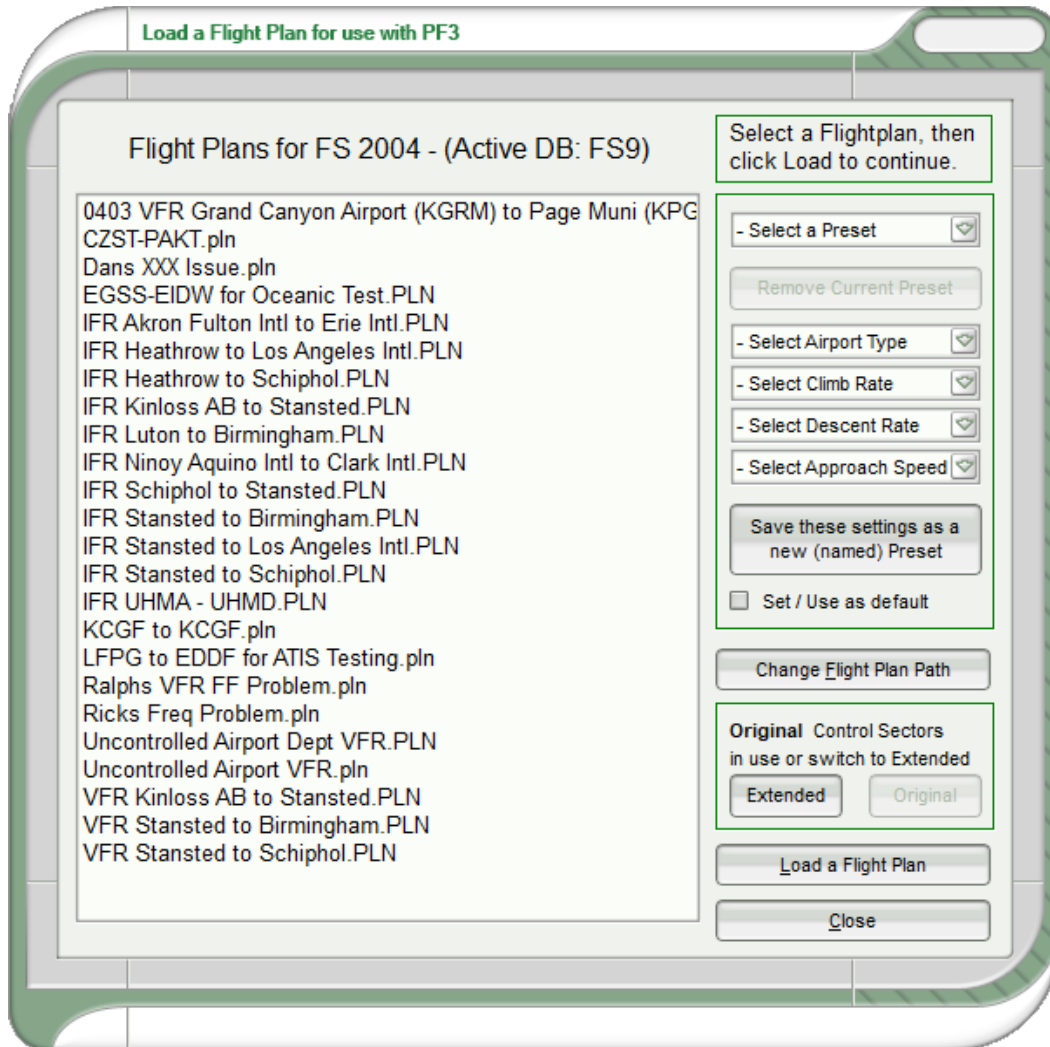
*...WpSystem\S-1-5-21-2506635614-967523915-2006091698-1003\AppData\Local\Packages\Microsoft.FlightSimulator\_8wekyb3d8bbwe\LocalState\*

Once into the correct folder simply select any one of the files listed (it doesn't matter what file it is at this stage) then select *Open* and the location will be saved ready for the next time you want to select a flight plan. This location can be changed at any time (*explained later*).



## PF3 User Guide

At all other times, when you choose the **Select a Flight Plan** button, it will take you directly to the following screen:



New for **PF3** ver 3.10 is the text just above the list of flight plans. This indicates which flight simulator the flight plans are for and also the name of the 'active' database. In the above example it shows the flight plans are for FS2004 and the 'active' DB is also for FS2004 (or FS9). If you only have one version of flight simulator on your system this title will not change. The main point here is to ensure the 'active' database is for the same flight simulator as the displayed flight plans.

This is the screen from where you will normally start each of your flights, unless there are some options you might want to change beforehand.

## PF3 User Guide

---

Select a flight plan by double-clicking the name from the listing, or single-click to highlight the name and then select **Load a Flight Plan**.

Loading any flight plan takes literally seconds and depending on the length of the flight you might see a *'Please wait... processing your flight plan...'* message and then you will be automatically returned to the main menu screen... unless you have chosen to be prompted for an alternate airport, but more about that later... for now, let's keep it simple.

However, just before we go back to the main menu screen, let's take a quick look at some of the other options available on the **Select a Flight Plan** screen.

**PF3** allows you to setup certain presets for your flight and/or save these as user profiles.

There are 5 drop down list boxes to the right of the flight plan files display and they are each described below:

**Select a Preset** – This is where each of your saved preset profiles will be listed by name and we would recommend you save each profile by giving it the name of the aircraft to which it pertains. eg. 737-400, 737-800, 747-400, etc, etc.

**Select Airport Type** – There are three *types* of airports available in **PF3**, Small, Medium and Large, and they are designated as such.

Small airports have runways from 1500' to 5000'

Medium airports from 5001' to 8000'

Larger airports with runways over 8000'

So this is where you select the type of airport you want to use for the aircraft type you are about to use for this flight. This is optional and if you don't select one then **PF3** will default to using *medium*.

**Select Climb Rate** – Select the climb rate for the aircraft type you are using for this flight. Options range from 500 fpm to 4000 fpm in 50 fpm increments. **PF3** will use this information when calculating flight profiles, TOC, TOD, etc.

**Select Descent Rate** – Select the rate of descent for your chosen aircraft. Again the options range from 500 fpm to 4000 fpm in 50 fpm increments. **PF3** will use this information when calculating flight profiles, TOC, TOD, etc.

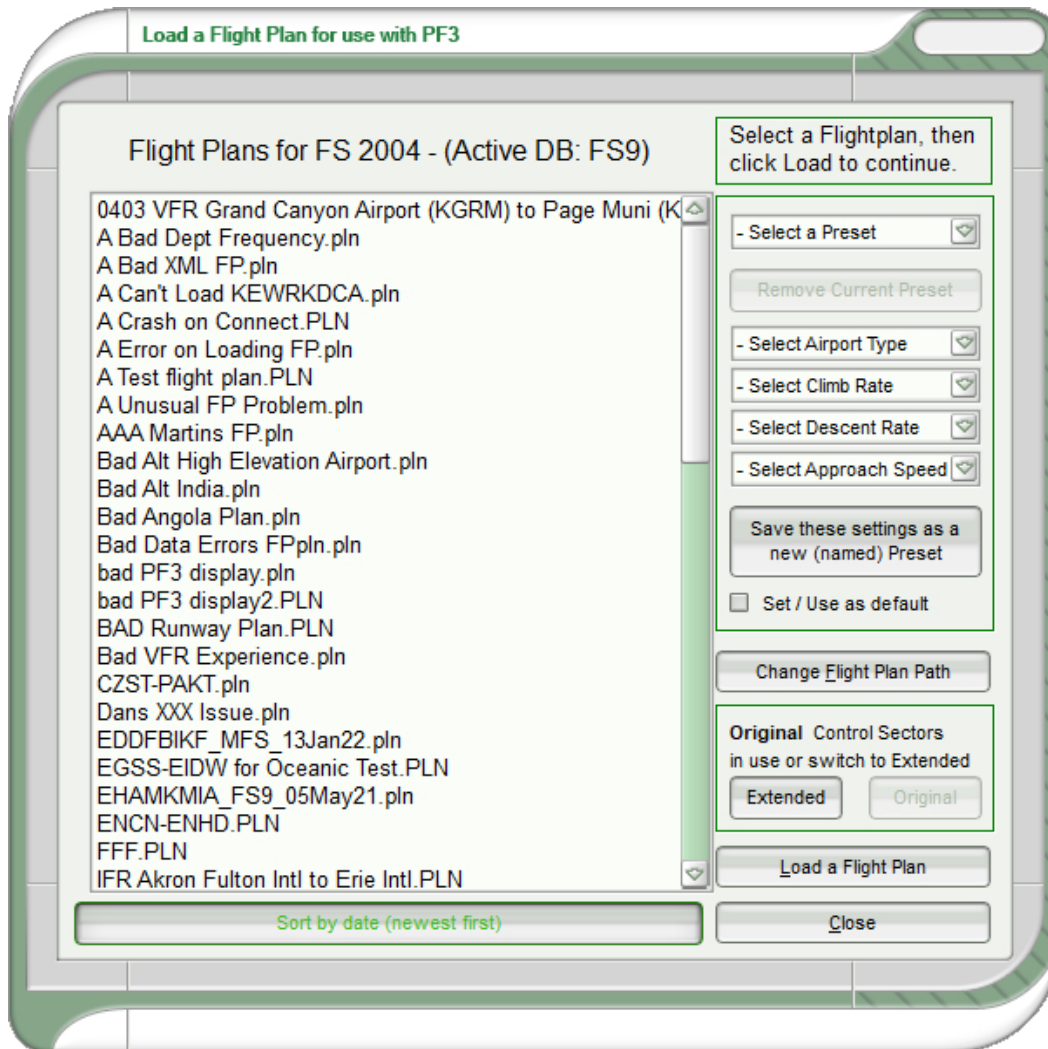
**Select Approach Speed** – This is the minimum approach speed you want to be given from ATC during your final approach. The options are from 50 IAS to 200 IAS. This is optional and if not entered **PF3** will use the value entered in the **Advanced Options and INI File Tweaks** - please see section 7.1.25 for further details.

## PF3 User Guide

Once you have chosen each of your presets you need select *Save these Settings as a Preset* and give it a name you will easily recognise.

You will also see a **Set/Use as default** which, as it says, will save the currently selected presets profile as the default and which **PF3** will use for each of your flights. Obviously you don't have to use this option in which case you would be expected to select a preset profile each time you load a flight.

**Change Flight Plan Path** – This button allows you to change the path pointing to where your FS Flight Plans reside. New to PF3 version 3.10, when you select this button you'll see a new display listing the 4 supported flight simulators by name. Obviously this would only be useful if you have more than one FS installed and if you do **PF3** will remember the paths for each one so you don't have to browse for the correct folder each time you switch paths.

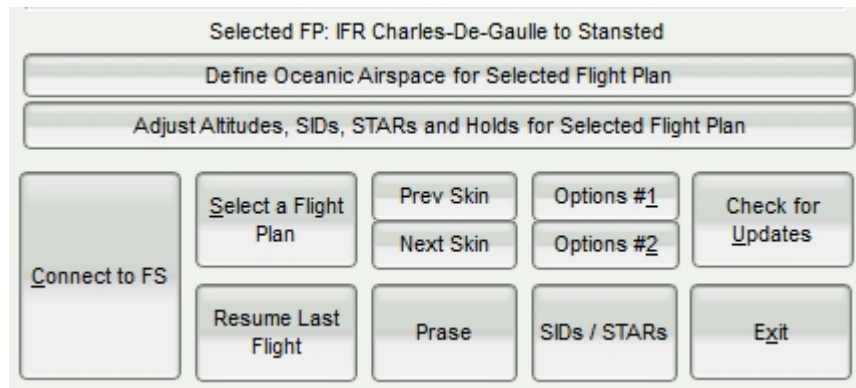


**Control Sectors in use** - Just above the 'Load a Flight Plan' button you will see some text referring to which Control Sector data is currently active and in use by PF3. This will either indicate **Original** or **Extended** and you may switch from one to the other here. Full details about the new Extended control sector file can be found in section 23. Extended control sector file

**New to 3.15.7 – Sort your flight plans** – At the bottom of the list of flight plans there's now a new option which allows you to sort your list either by name (the default) or by creation date. Simply click on the button to toggle between the two sort options

### 7.1.18 ... the remaining Main Menu Options

Now we go back to the main menu and the last few buttons, most of which are quite self-explanatory, but we'll go through them anyway.



**Options #2** – Please see section 7.1.19 for full details

**Check for Updates** - does just that and this feature can either be configured to run automatically each day to check for updates or you can run it manually at any time.

**Prev Skin** – **PF3** comes with over 40 different skins to allow you to choose the look that you prefer. This button selects and applies the previous available skin

**Next Skin** – **PF3** comes with over 40 different skins to allow you to choose the look that you prefer. This button selects and applies the next available skin

*Please Note: The button immediately below the **Next Skin** button has two functions. The first is to display the name of the currently displayed skin. However, if you select this button it will apply and display the original default*

## PF3 User Guide

---

*PFE V2 skin. So if you prefer **PF3** to look just like previous versions of PFE, just hit this button.*

**Select a Flight Plan** – Please see section 7.1.17 for full details

**SIDs / STARS** – Please see section 7.1.15 for full details

**Connect to FS** - Obviously once you've configured **PF3** you select this option to *Connect* to your flight simulator and begin your flight.

The two other buttons **Define Oceanic Airspace for Selected Flight Plan** and **Adjust Altitudes, SIDs, STARS and Holds for Selected Flight Plan** are explained in full detail a little later in this document.

### 7.1.19 Options #2 Main Display

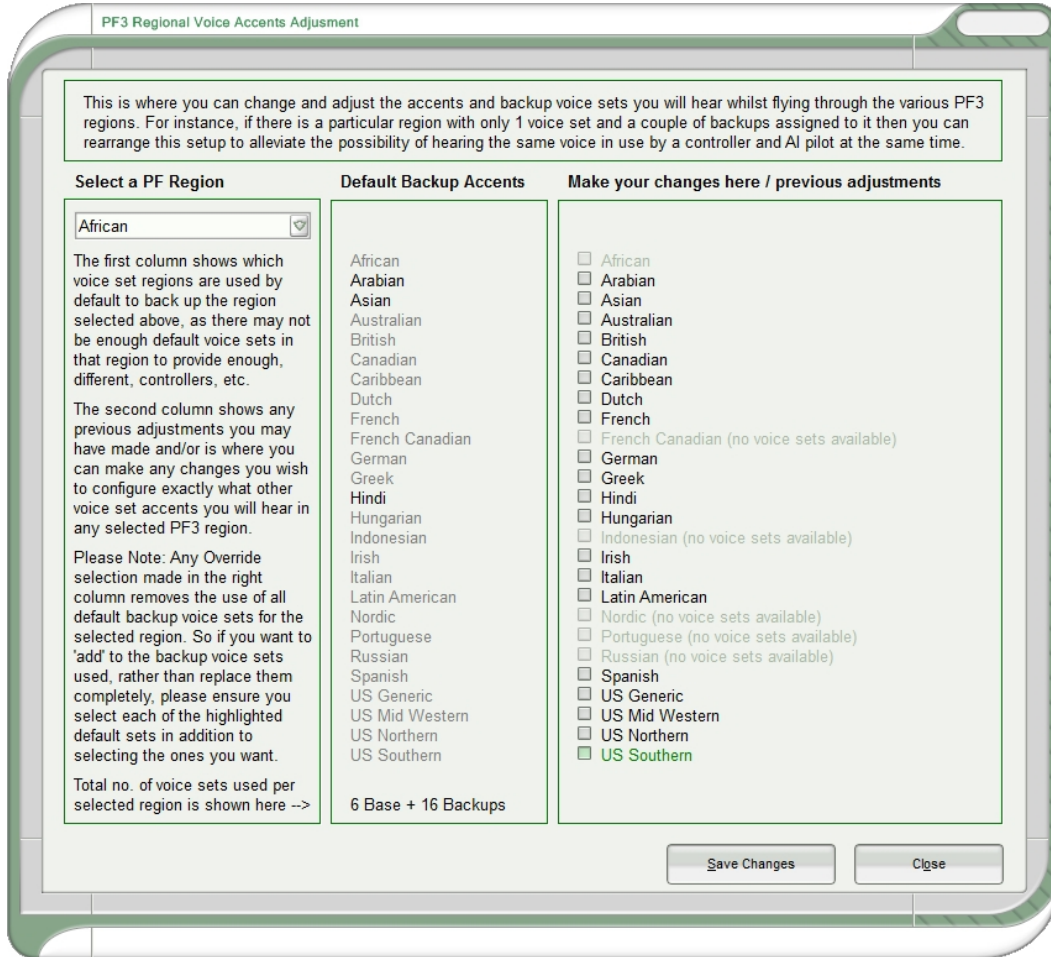
**Options #2** – displays another selection of options as shown here:-

## PF3 User Guide



### 7.1.20 Adjusting the Regional Voice Accent

Select **Adjust Regional Voice Accents Used** to display the following:-



I believe there is enough explanatory text on this screen for you to see how it works. In a nutshell if **PF3** cannot find a voice set for any particular region it uses its default backup voice set(s) instead. Equally if there are only one or two voice sets available for any region again we may have to use one of the backup sets. This feature simply allows YOU to decide which accents you would like to hear and where. You cannot change the main default accent... e.g. The default for British will always be British but you can change which voice sets are used to back them up. For instance, the British backup voice sets are Australian and Irish but you could change this to use German voice sets as a backup for British, then at some point in your flight, once all the

## PF3 User Guide

British voice sets have been used, you will hear a German accent. Not so realistic I know, but I just wanted to give you an example.

Again, no need for you to ever touch these settings if you are happy with the way **PF3** currently assigns voice sets.

### 7.1.21 Add a New Facility Frequency

As mentioned previously, **PF3** uses the COM frequencies from your chosen flight simulator and there may be occasions where this is not up to date, especially when using FS2004 which is quite old now. For instance, you may find an airport you want to depart from doesn't have ATIS available in FS, so using this **PF3** feature you are able to add ATIS to that airport.

When you first select this option you will be presented with the following:-

**Add a New Facility**

Enter the airport ICAO where you want to add a new facility. Then select the facility type you wish to 'add' and the required frequency. The SAVE button will complete the task and save these additions for later use.

Any frequencies shown below, when you enter a valid airport ICAO, pertain to items you added previously and NOT FS frequencies. To see current FS frequencies for the selected airport, use the button below the ICAO entry.

Please read the PF3 User Guide with regard to this utility and the limitations thereof.

**Enter Airport ICAO**

ICAO

then press Enter

Show FS Freqs for this airport

**Airport Facilities**

<input type="checkbox"/> ATIS	---	--
<input type="checkbox"/> Clearance	---	--
<input type="checkbox"/> Ground	---	--
<input type="checkbox"/> Tower	---	--
<input type="checkbox"/> Unicom	---	--
<input type="checkbox"/> Multicom	---	--
<input type="checkbox"/> FSS	---	--

Delete Entry      Save      Close



## PF3 User Guide

For this example we're going to use EGSS (*London Stansted*) which, in the base version of FS2004, does not have a Clearance facility available.

So, enter EGSS in the ICAO box and most of the options and buttons will now become 'active' (not greyed out), like this:-

**Add NEW Facility**

### Add a New Facility

Enter the airport ICAO where you want to add a new facility. Then select the facility type you wish to 'add' and the required frequency. The SAVE button will complete the task and save these additions for later use.

Any frequencies shown below, when you enter a valid airport ICAO, pertain to items you added previously and NOT FS frequencies. To see current FS frequencies for the selected airport, use the button below the ICAO entry.

Please read the PF3 User Guide with regard to this utility and the limitations thereof.

**Enter Airport ICAO**

EGSS

then press Enter

Show FS Freqs for this airport

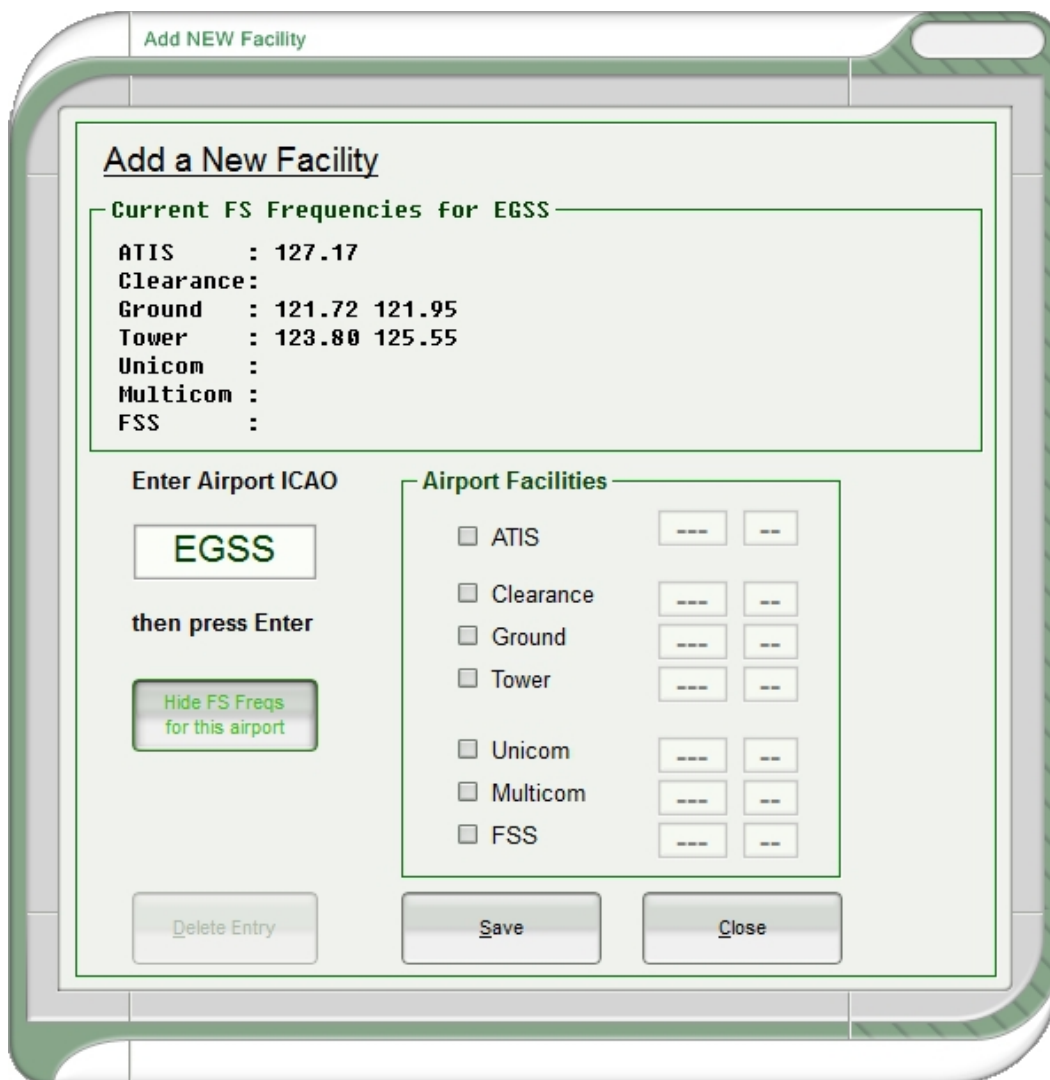
**Airport Facilities**

<input type="checkbox"/> ATIS	---	--
<input type="checkbox"/> Clearance	---	--
<input type="checkbox"/> Ground	---	--
<input type="checkbox"/> Tower	---	--
<input type="checkbox"/> Unicom	---	--
<input type="checkbox"/> Multicom	---	--
<input type="checkbox"/> FSS	---	--

Delete Entry      Save      Close

## PF3 User Guide

At this point you can select **Show FS Freqs for This Airport** button to display what FS frequencies are actually defined in FS2004 for EGSS:-



As you can see in the above example EGSS has two Ground, two Tower and an ATIS frequency.

So now just select the **Clearance** item under **Airport Facilities** then dial in the required frequency. This is done in the same way as you would change a frequency in FS. Then select **Save** and you're done. Next time you do a flight from EGSS you will have a Clearance facility available and it will be listed on the ACARS COMs display shortly after you *connect* to FS.

## PF3 User Guide

---

*Please Note: There are limitations when using this feature to add a facility that doesn't currently exist in FS because the AI traffic will not know anything about the new frequency. Therefore if you add a Ground facility you would not hear other traffic on that frequency when tuned to Ground. Adding frequencies to FS is not within the scope of this document.*

**Since PF3 3.4.0** there is a new feature which allows you to 'virtually' remove an FS facility. If, for instance, you select EGSS, which has two Tower frequencies in the default FS9, and enter a frequency of 137 against 'Tower', when you start your flight the COMS display will show that the Tower at EGSS is no longer available. This allows you to basically remove any facility for any airport.

Because PF3 does not allow duplicate frequencies you need to make each 137 frequency unique if you wish to remove more than one facility per airport. eg. 137.02, 137.05, etc.

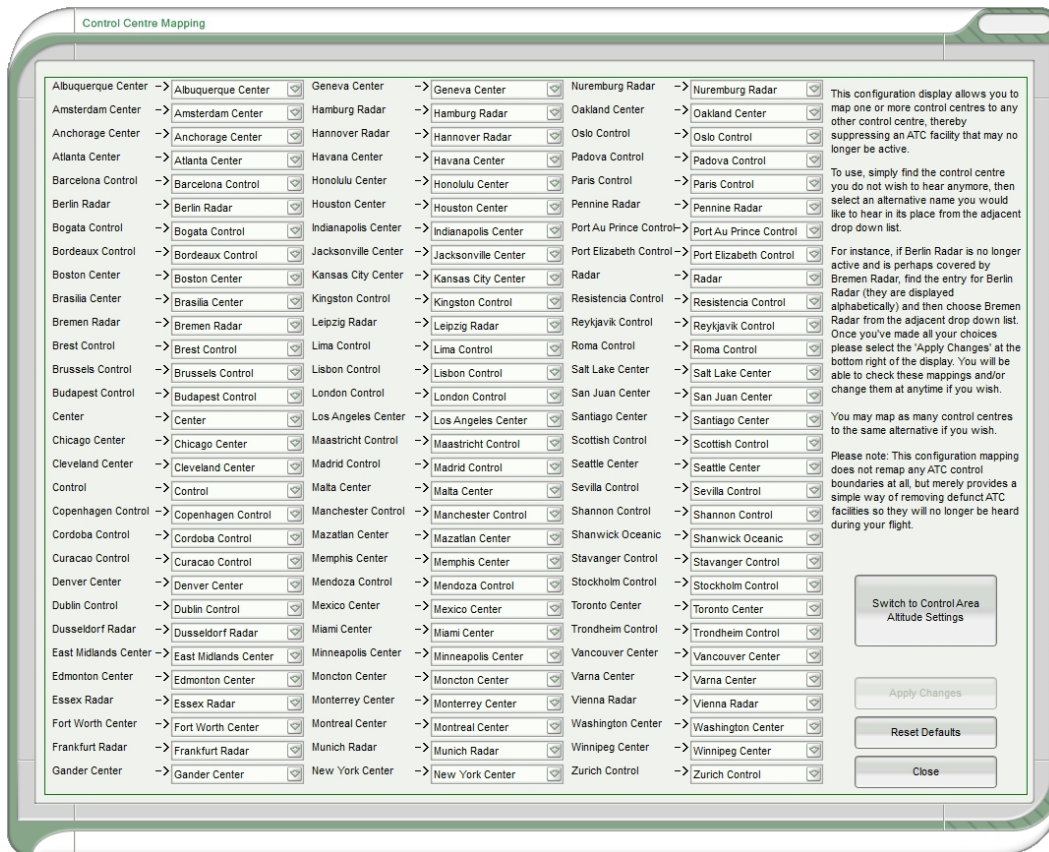
You cannot remove the ATIS, Departure or FSS facilities and we **do not** make **any** alterations to FS at all, this is merely a mask whilst **PF3** is running.

# PF3 User Guide

## 7.1.22 Control Center Mapping and Altitude Settings

This feature provides a means of mapping control centre names. This is purely for those users who may hear a particular control centre name that no longer exists and provided it is now covered by one of our other control centres it can be remapped.

Select the **Control Centre Mapping and Altitude Settings** button to display the following:-



As you can see in the above example all the current **PF3** control centres are displayed. From here you can easily map one or more control centres to any other control centre, thereby suppressing an ATC facility which may no longer be active.

To use, simply find the control centre you do not wish to hear anymore, then select an alternative name you would like to hear instead from the adjacent drop down list.

## PF3 User Guide

For instance, if Berlin Radar is no longer active and is perhaps covered by Bremen Radar, simply find the entry for Berlin Radar (*they are displayed alphabetically*) then choose Bremen Radar from the adjacent drop down list.

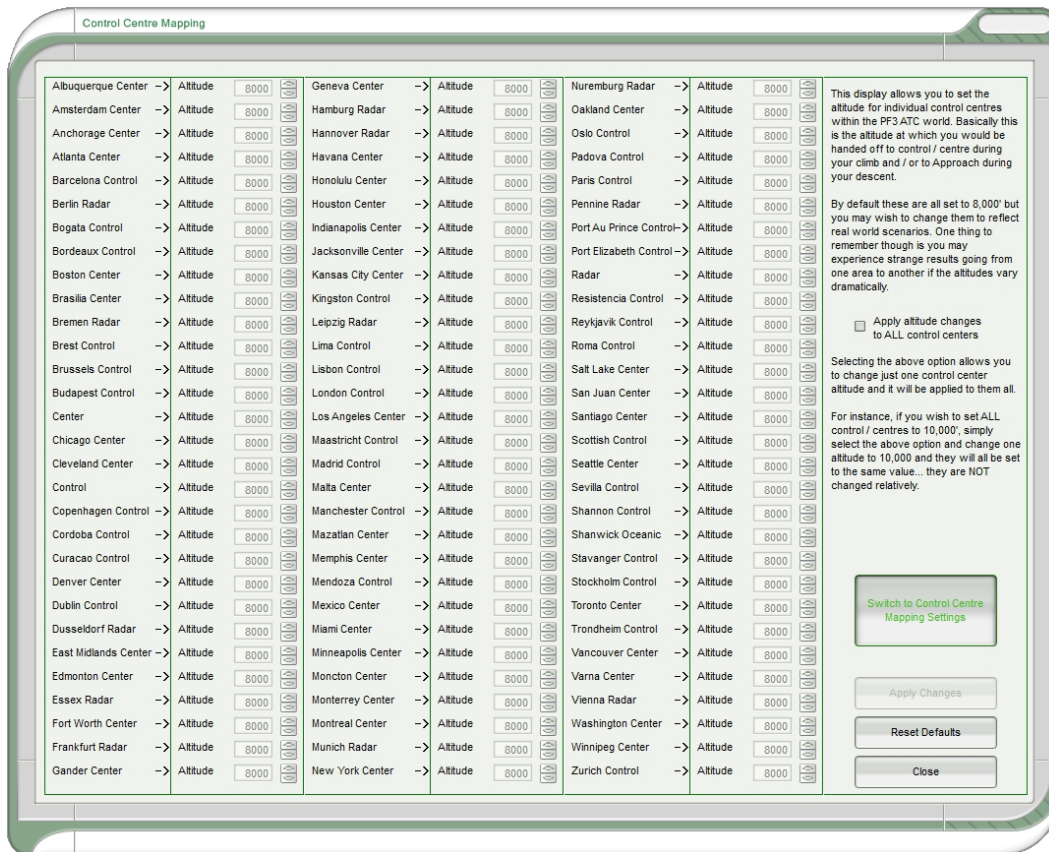
Once you've made all your selections please select **Apply Changes** at the bottom right of the display to save them. You will always be able to view and/or change any of your remaps at a later date if you wish.

You may map as many control centres to the same alternative if you wish.

*Please note: This configuration mapping does not remap any ATC control boundaries at all, but merely provides a simple way of removing defunct ATC facilities so they will no longer be heard during your flight.*

*If you are aware of any major inaccuracies in **PF3's** control zone boundaries please let us know on our support forum, providing as much detail as possible (screen shots preferred) and we will do our best to rectify the issue in our next maintenance release.*

Also on this screen you will see a large button named **Switch to Control Area Altitude Settings** and that will display the following screen:-



## PF3 User Guide

---

In much the same way as the previous screen this display shows each of the **PF3** ATC control centres but this time beside each one you will see an entry marked *Altitude*.

From here you can set the desired altitude for each control center This is the altitude at which you will be handed off to the relevant ATC Control Center during your climb or to the Approach Controller during your descent.

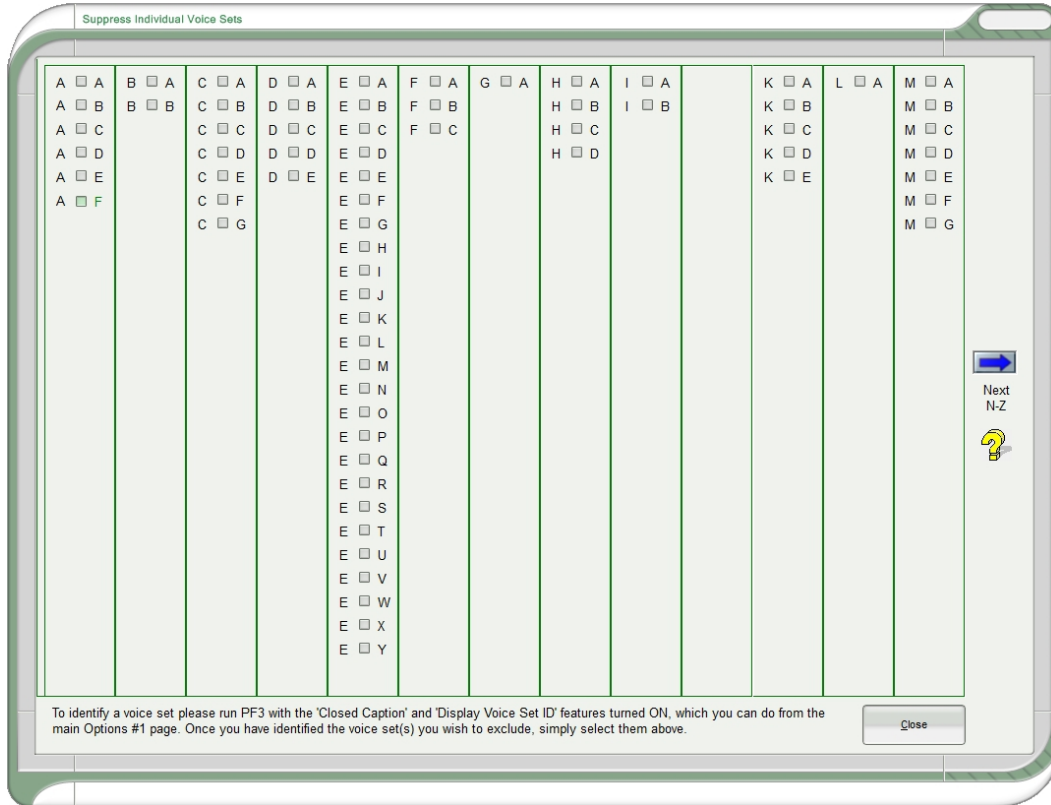
By default these are all set to 8000' but you may wish to change them to reflect real world scenarios. One thing to bear in mind though, you may experience strange results flying from one area to another if the altitudes vary dramatically.

If you wish to change all control centers to the same altitude just select the option **Apply altitude changes to ALL control centers**, then, as you change one altitude setting, the same changes will be automatically applied to all the listed controls.

Don't forget to select **Apply Changes** when you're done.

### 7.1.23 Excluding Individual Voices

This option displays a list of currently available voice sets from the **PF3** regions A thru M, which relate to the folder structure used under ...\\PF3\\Wav, although that is not really important to know at this stage. Here's a screenshot of the first display you will see:-



To see a snapshot of the voice sets in the **PF3** regions held in folders N thru Z you need to click on the blue arrow icon to the right of the screen. If you try this now and then click on it again to bring you back to the above display.

Now, any voice set you select on this page will be excluded from use as either an ATC controller or AI aircraft pilot.

Why would you want to do this? Well, if you've ever heard one or more controllers or AI pilots who's voice/accents you simply cannot understand or just dislike listening to, you can do something about it. But first you need to identify the actual voice set, which you can do by turning on 'closed caption' and the 'display voice set ID' options which are accessed from the main Options #1 screen.



## PF3 User Guide

With these options 'on', during your next flight, you will see the closed caption messaging prefixed with two letters, as shown below:-

"A-B Easy two one one is with you flight level two one zero"

"E-L Roger Easy two one one, radar contact"

So the first transmission you heard was using voice set ID A-B and the controller responding was using voice set ID E-L

Once you have the voice set ID's you can now easily mark them as '*please don't use this voice set again*' and you will then not hear it anymore. Please check it out... there is additional help on the selection screen but it should really be self-explanatory.

### 7.1.24 Designated Parking Control

The **Designated Parking Control** button displays the following:-

**Designated Parking**

### User Controlled Gate / Parking Designation

Enter the airport ICAO where you want to 'reserve' your own 'private' gate or parking area, then press enter. Provided a valid ICAO is entered the drop down list box will show all of the gate/parking areas available at that airport. Simply select the gate/parking area you want to 'reserve' then click SAVE. Next time you land at this airport and request taxi instructions the controller will direct you to this terminal gate or parking area.

Please note:- PF3 cannot guarantee this 'reserved' gate/parking area will actually be vacant upon your arrival. To do so you will need to make a small change to the AFCAD file for the selected airport. Full instructions on how to do this are contained in the 'PF3 User Guide.PDF' file, located in the ...PF3\Help folder. Look for the section named 'Designated Parking'

Enter Airport ICAO    Available Gates/Parking

then press Enter

**You are currently using FS9 data!**

If this is incorrect please exit back to the main screen and select 'Select a Flightplan' then 'Change Source' to select the location of your FS flight plans. You may also have to rebuild the PF3 database before continuing.

Delete Existing Reservations for this Airport only    Delete Existing Reservations for ALL Airports

Display Current Reservations

Save    Close



## PF3 User Guide

---

From this page you can reserve a particular terminal gate or parking area for any airport, so whenever you land at the configured airport ATC will always give you taxi instructions to that location.

Further options on this screen also provide for displaying any previously configured parking areas for all airports, plus options for deleting reservations from one airport or all airports.

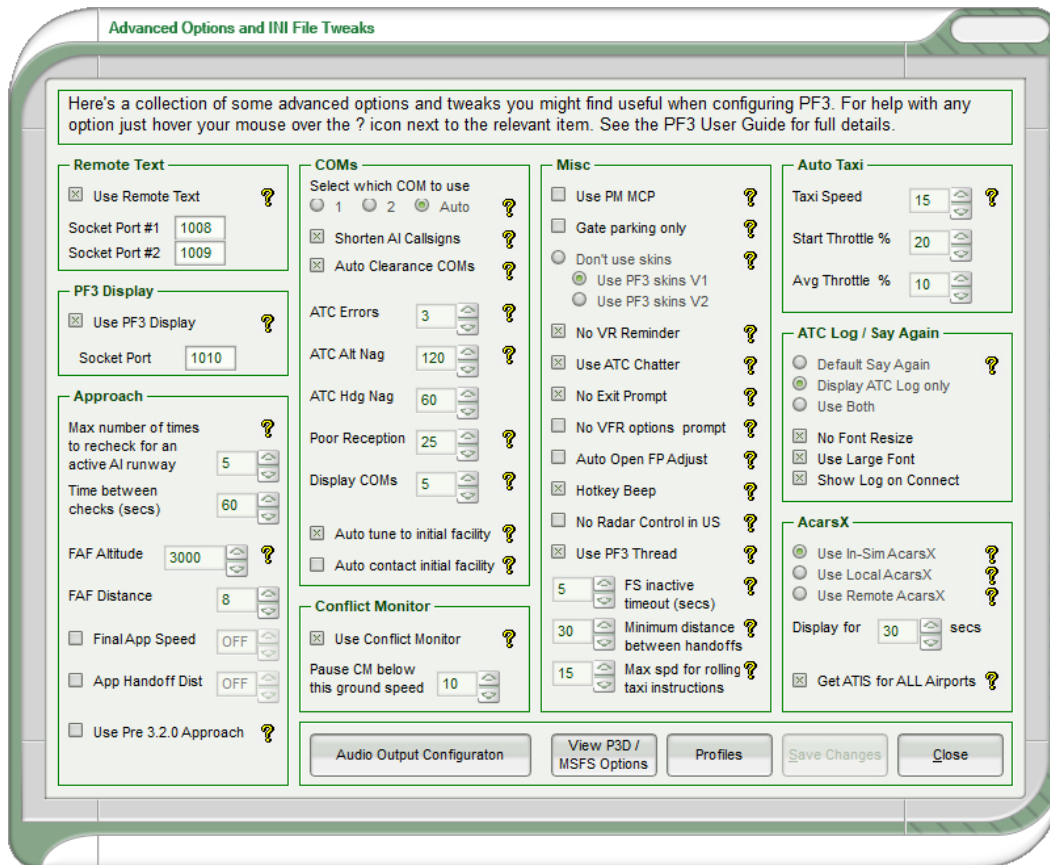
*Please Note: **PF3** cannot guarantee this 'reserved' gate/parking area will actually be vacant upon your arrival. To do so you would have to make a small change to the AFCAD file for the selected airport.*

Starting with **PF3** version 3.4.0 the designated parking feature can now be selected even during your flight and when connected to FS. The new option will appear just above the normal volume control sliders currently displayed on the main menu display during your flight. This was added to the system following a user request and will be useful if you use a third-party application that may select and reserve a particular gate at your destination. If you know which gate before landing you can use this new in-flight feature to set that gate so when you get your taxi instructions they will lead you to the correct gate. Alternatively, should you not know the actual gate until you land the best thing to do is to wait for **PF3** taxi instructions then access this feature, change your gate and then stop TGS (if it's running ) and request new taxi instruction, which will then be given using your newly accepted gate.

## PF3 User Guide

### 7.1.25 Advanced Options and INI File Tweaks

This selection displays a collection of some advanced options and tweaks that you might find useful when configuring **PF3** to suit your own particular requirements:-



If you hover your mouse pointer over any of the question-mark icons you will see popup help for that item(s).

Each item is explained in detail in the following pages.

### Remote Text

**Use Remote Text** - If you wish to use the RemoteText utility provided with **PF3** you need to make it active by selecting this option.

**Socket Port #1** - This where you can change the default Socket Port if required - this is used to communicate with the Remote Text program and the default setting should suffice for most users.

**Socket Port #2** - This is for those who would like to run the RemoteText utility on two networked pc's. Provided each copy of RemoteText is configured to match the two port settings here (which of course must be different) then **PF3** will transmit all ATC closed caption text to two copies of RemoteText running on the same network at the same time.

For full details about this utility please see section 14.

### PF3 Display

**Use PF3 Display** - Starting with **PF3** version 3.10 our PF3 Display utility no longer requires FSUIPC or WideFS to work. Just like Remote Text you can change the port number here if you wish but there should be no need to change the default.

### Approach

**Maximum number of times to recheck for an active AI runway** - when PF3 is trying to determine the correct active runway for your destination it will first try and detect any AI traffic that maybe currently taking off or landing. If it finds any then it will use the same runway for you approach. If not it will then determine the best runway to use according to the current weather and wind direction. In this scenario PF3 will then retry (a maximum of 5 times) every 60 seconds to see if AI has started using one of the runways. If it finds any it will issue a runway change command. New for version 3.8 provide you with the ability to change how this works. Here you can enter the number of times you would like PF3 to recheck for an AI active runway. You can enter 0 thru 9. E Selecting zero will in effect turn this feature off and PF3 will not recheck for an active runway and you will have to use the one PF3 initially assigns.

**Time between checks (secs)** is where you decide the time delay between PF3 rechecking for an active AI runway. This value is given in 'seconds' and you may select from 60 secs to 900 secs

**FAF Altitude** is the altitude (ASL) you wish to be at in order to capture the ILS. This can be overridden for individual airports if you wish

**FAF Distance** is the distance from the touchdown point of the runway that you would like to capture the ILS.

## PF3 User Guide

---

**Final App Speed** is the minimum final approach speed ATC will give you during your final approach. With this option turned OFF (*not selected*) the Final Approach Speed defaults to 190 knots for jet aircraft and 140 for props. With this option selected and the adjacent value set to zero **PF3** uses the *Flaps-Up-Stall-Speed* read from your Aircraft.CFG file. If you set it to any other value other than zero, **PF3** will add this value to your *Flaps-Up-Stall-Speed*.

*Please Note: This Final Approach Speed will be overridden should you choose to use the Final Approach Speed entry provided in Flight Profile Presets*

**Use Pre 3.2.0 Approach** - In **PF3** version 3.2.0 we slightly changed the way in which approach procedures are handled. The new procedures mean that if, when reaching your last waypoint, the radial from your aircraft to the assigned runway is +/- 90 degrees of the actual runway heading, then the resulting approach pattern will be simpler than it was originally... namely there should be fewer heading changes. Should you find this is not to your liking (for whatever reason) you can easily revert back to the original approach pattern procedures simply by selecting this option.

**App Handoff Dist** - This option controls when you will be handed off to Approach. You can set it between 0 and 25. Setting it to zero effectively turns the option OFF and thereby reverting to the normal process of the handoff to Approach occurring at the last waypoint, as it has done for many years. Should you wish to have the handoff happen earlier simply adjust the distance to your liking.

*Please Note: Whatever distance you apply here doesn't come into effect until you are actually heading to the last waypoint. Eg. If your penultimate waypoint is only 10 miles from the last waypoint and you have this feature set to 20, the handoff will occur when you reach the penultimate waypoint and not at 20 miles."*

### COMMS

**Select which COM to use** - here you will see three radio buttons to choose from, named '1', '2' and 'Auto'. Selecting '1' will set the default working radio to COM1. Selecting '2' will use your COM2 radio. Selecting Auto will tell PF3 to actually check internally which radio you are using. It should be noted, however, that on some high-end third-party aircraft this 'Auto' option may not be able to detect which radio you are actually using. Should you experience any issues with the 'Auto' option you would have to manually choose COM1 or COM2. Using the Auto option obviously lets you switch between COM1/COM2 on-the-fly.

**Shorten AI Call Signs** tells **PF3** to truncate AI traffic call signs, which basically makes AI transmissions a little faster.

Here's how it works

If the call sign includes the airline name and the numeric part of the call sign is more than 3 digits, only the last three are used. If the

## PF3 User Guide

---

Airline is not recognised, in which case **PF3** would normally use the first three characters of the Airline ICAO, with this option selected only the first character is used and again only the last three digits of the numeric part if that is longer than 3 digits.

Here's some examples with this feature turned ON:-

<u>Original</u>	<u>Truncated</u>
Pacific Express 791 ->	Pacific Express 791
Pacific Express 29791 ->	Pacific Express 791
N79362 ->	November 362
Echo Golf Hotel 39224 →	Echo 224

Now, before anyone emails me or posts on our support forum telling me how unrealistic this is and how it would never happen in the real world... I KNOW !!! This is something that I have added FOR ME because it's how I like it. I dislike listening to those long, drawn out call signs, especially for GA aircraft, so I decided to truncate them... *because I can!*

**ATC Errors** - This is the probability percentage with determines if the controller giving you initial clearance will make a mistake or not. ATC will always correct the error immediately but it's just another way **PF3** attains such a high level of realism. Setting this option to 0 (zero) turns the feature OFF.

**ATC Alt Nag** - If you fail to start your climb/descent to your cleared altitude within this specified time (*seconds*) ATC will give you a reminder to do so. The exception to this is when told to descend at pilot's discretion. In that scenario the time set here would be increased using the following calculation -  $ATC\ Alt\ Nag * 5 + 60$ . Additionally, if you have not reached your TOD this increased time delay would also be doubled. Eg. If you have this set to 120 seconds (*2 minutes*) and are instructed to descend to nnn' at pilot's discretion, **PF3** would set this *nag time* internally to 660 seconds (11 minutes). If you haven't yet reached your TOD this delay would then be increased further 12 1320 seconds (22 minutes). However, you will only be *nagged* if you're not currently climbing/descending

**ATC Hdg Nag** - If you fail to start your turn to the required heading within the specified time (seconds) ATC will give you a reminder. However, you will only be *nagged* if you're not currently in an active turn.

**Poor Reception** - This option sets the probability factor (between 1-100) of the reception from AI traffic being much lower than normal, due to poor reception. If you set this to 0 (*zero*) it will turn the function off completely.

**Display COMs** - With this option set to any value other than 0 (*zero*) there will be a simulated ACARS Communication as soon as you

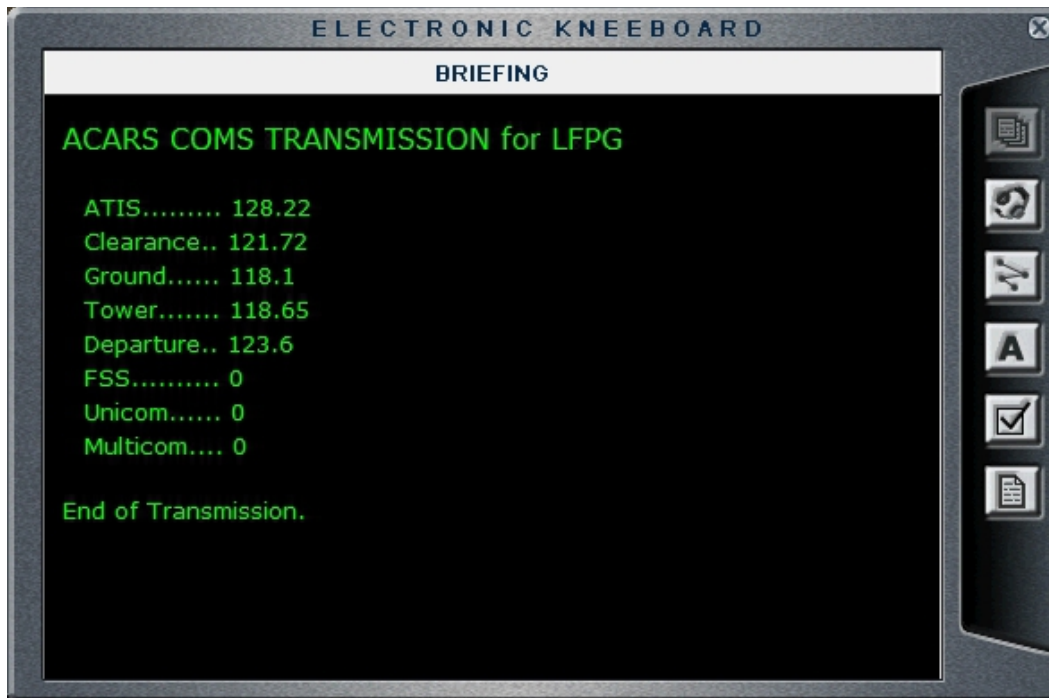
## PF3 User Guide

---

*connect* to FS , showing all the relevant ATC frequencies for your departure airport. This ensures you will always know the correct frequency to tune to in order to make initial contact with ATC. The value entered here is also the time delay before this information is displayed after you *connect* to FS. Eg. Setting this value to 300 (seconds) will delay the window from displaying for 5 minutes once you have *connected* to FS.

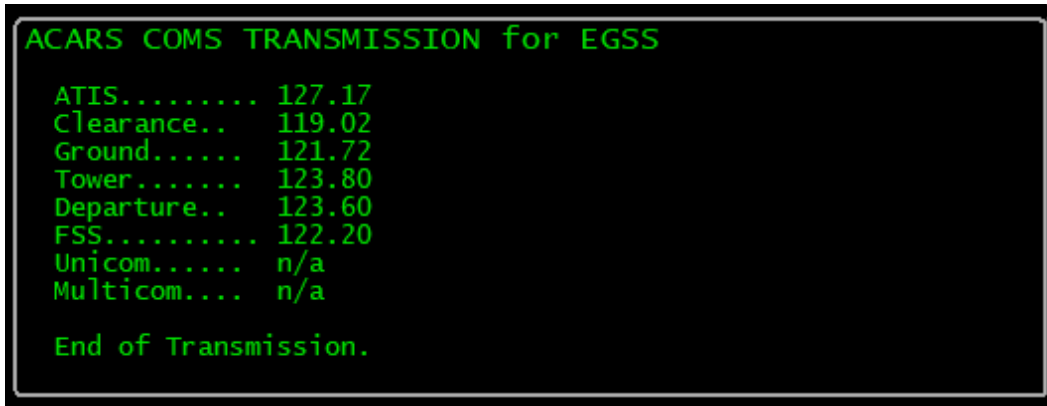
When using FS9 or FSX the ACARS transmission is displayed in your Kneeboard. For P3D and MSFS users this is displayed in one of our (new to version 3.10) In-Sim windows, which you need to activate within these Advanced Options (see further down).

Here's an example of how it looks in FS9:-



*Please Note: **PF3** actually goes into pause mode and will not do anything else whilst waiting for this ACARS window to be displayed, so if you add a silly value here I hope you have something to keep you amused whilst waiting.*

And here's how the new In-Sim window looks in P3D/MSFS:-



**Auto tune to initial facility** - Selecting this option tells **PF3** to automatically tune your COM radio to the correct ATC facility when you first connect to FS. This will be either Clearance, Ground, Tower or FSS.

**Auto contact initial facility** - Selecting this option tells **PF3** to automatically make contact with the initial ATC facility when you first connect to FS. However, this feature will only work if you have also selected the 'Auto tune to initial facility' option.

### Conflict Monitor

**Use Conflict Monitor** – Select this option if you wish to use the AI ground traffic Conflict Monitoring functionality. This feature should stop any AI aircraft about to taxi into your path. *Please see section 8.8 for full details about this exciting feature*

**Pause CM below this ground speed** - Conflict Monitoring will *pause* once your ground (taxi) speed drops below this value.

**Misc** – There are quite a few options under this heading

**Use PM MCP** - if you use Project Magenta's Boeing MCP you need to select this option. If not, just leave it off.

**Gate parking only** - This option will ensure ATC will always send you to a Gate rather than a Parking location when you receive taxi instructions at your destination airport.

*Please note: If you already have a gate/parking location 'reserved' for any airport then that will take precedence over this option. Also, please remember, if you select this option and arrive at an airport where (a) you haven't reserved a gate and (b) there are no free gates available, you will not be sent to a parking location but will instead simply receive the default taxi instructions 'Taxi to Terminal'*

**Don't use skins** - There are three options here regarding PF3 skins, the first being like a master switch and turning them off completely, leaving you with that standard (quite ugly) plan old Windows skin. With this option 'on' you can choose the style and look of **PF3's** GUI.

**Use PF3 skins V1** - This option enables the new **PF3** changeable skins that featured in the first release of PF3 (version 3). Some users unfortunately did experience some problems using these skins, which is why the option to turn them off was introduced. However, we believe since version 3.3.0 these problems have been addressed.

**Use PF3 skins V2** - This option turns on a new batch of simpler skins which you might enjoy. This new skinning engine will also allow any MSStyle skin file to be used... many of which can be found online. Simply copy the file into the new PF3\Data\Skins2 folder and rename it from name.msstyles to name.cjstyles. PF3 will do the rest.

**No VR Reminder** - If you decide to use a voice recognition program alongside **PF3** you will have to configure **PF3** in a certain way. When configured for VR use **PF3** will display a message each time you select a flight plan. This is just to remind you that you will not hear your pilot's voice during this flight (*well you will, but it will be you chatting to the computer. The first time my wife caught me doing that she thought I'd really flipped!*). If you prefer not to see this reminder before each flight you can select this option to suppress the message.

**Use ATC Chatter** - This option was added after we received a request to offer a way in which the AI chatter provided by PF3 could be turned off. This I believe is useful for those who prefer to listen to live ATC whilst flying. So, deselecting this option will render PF3 silent in that department. Please not, however, this option has no affect on receiving AI traffic advisories, by they can be deactivated from the main Options #1 display.

**No Exit Prompt** - has been included following another user request and this option simply turns off the 'Are you sure?' popup message when you hit the main PF3 Exit button on the main menu.

**No VFR options prompt** - Starting with **PF3** version 3.10 you can now choose between two VFR options. One we call the standard VFR and the other is the VFR Free Flight (these will both be explained in detail later in this guide). If you've loaded a VFR flight plan then just before you connect to FS you will be prompted to choose which type of VFR flight you wish to fly. If you always want to use one particular type you can select this option to disable the prompt.

**Auto Open FP Adjust** - If you select this option the altitude adjustments display will be opened automatically immediately after you open a flight plan. If you tend to view the adjustments page before each flight you will find this saves you some time and a mouse click.



**Beep whenever a Hotkey is detected** - If you've ever sat there thinking if PF3 has actually detected the hotkey you pressed then this option is for you. With this item selected you will hear an annoying 'beep' each time PF3 *detects* a hotkey has been pressed. This may not be instantaneous and depending on what PF3 is actually doing at the exact moment you hit the hotkey it may occur after a few seconds delay, so please remember the 'beep' will be heard the second PF3 *detects* the hotkey has been used.

**FS Inactive Timeout** - is the amount of time **PF3** will wait if not getting any response from FS, before closing down automatically. It should probably be set to a slightly higher value if/when running **PF3** on a networked PC.

**No Radar Control in US** – This is specifically for those flying VFR in the US and other FAA regions. If you select this option you will no longer be able to contact or be handed off to our (new to 3.10) Radar Control facilities. Instead you will be in contact with various Approach facilities during your VFR flight. When nearing your destination, or during a VFR FF flight when you use Hotkey #1, you will be handed off to Approach on a different frequency in readiness for landing. If you don't select this option then your VFR flights will continue as they do now and PF3 will use the 'Named' Radar Control facilities as it does now for both CAA and FAA regions.

**Minimum distance between handoffs** - Sometimes flight plans can be generated where ATC control sector boundaries are very close together, resulting in you being handed off from one controller to another in quick succession. This ping-ponging from controller to controller can be even more troublesome if you are not using VCP mode to set your radio and maybe take too long to make initial contact with the new controller. This feature will check your flight plan and basically merge control centers that are too close together. This buffer is known as the 'Minimum distance between handoffs'. We would suggest a setting of 25 miles as this was found to work very well during our testing but of course you are free to try whatever distance you like. Setting this value to ZERO will turn the feature off.

**Max Spd for rolling taxi instructions – New to version 3.15.0** – Normally, after vacating the active runway at your destination airport, you would be told to hold your position when contacting ground, in readiness to receive taxi instructions to the terminal/gate. With this new option you have the choice to set a maximum speed below which, or at, you will receive taxi instructions whilst still moving. The values available are 0 thru 30. Setting the option to 0 (zero) basically turns it off and you will be told to hold your position as normal. However, let's say you set this to 15, that means that provided you are 'at' or 'below' that speed (i.e. taxiing between 1 and 15 mph) ATC will provide you with taxi instructions.

## PF3 User Guide

---

Now, you must bear in mind this is not foolproof and may result in you receiving what might seem incorrect instructions. Let me try and explain further. Normally, you are stationary before **PF3** calculates the correct taxi path, so we know your exact starting position and your first turn onto another taxiway can be calculated without fear of you already being past it. But, and it's quite a big but (no offense madam) if you are still moving when **PF3** starts to calculate the route you may very well pass the first turnoff before the calculations are complete, especially if you're moving fairly quickly. So when you actually receive the instructions there maybe one or more taxi waypoints immediately behind you. Therefore you will have to pay attention to the taxiways ahead of you when first contacting ground. If it's just a single taxiway there shouldn't be a problem but if there are a few turn turnoffs/junctions ahead of you you would need to hold back till you know for certain which way ATC is going to send you.

This all sounds more complicated than it is really. It just takes a little common sense but if you get it right you will be able to continue moving after leaving the runway, receive instructions from ATC and continue onto the terminal/gate. Obviously this makes it more realistic.

**Auto Taxi** – This provides automatic taxi speed monitoring whenever TGS is active and is activated by using the default #8 hotkey

**Taxi Speed** – This is the ground speed you would like to maintain whilst taxiing to/from the runway.

**Start Throttle %** - To start any aircraft moving in FS you will often need to set a higher throttle setting and then reduce it as you reach your target taxi speed, this setting lets you decide how much throttle will be needed to get the aircraft moving.

**Avg Throttle %** - This is the average throttle setting you need to maintain your target speed.

Please Note: The default settings for Auto Taxi have been set using the default 737 in FS2004. You will obviously need to experiment with the aircraft you are using in your FS

### ATC Log / Say Again

**Default Say Again** - *with* this option selected, when you hit the *say again* hotkey, you will hear your request and ATC should then reply accordingly.

**Display ATC Log only** - displays the ATC log window, showing the last 10 ATC commands to you. In this mode you will not hear your normal request to *'say again'* as you would in the default setting.

## PF3 User Guide

---

**Use Both** - will display the new ATC log showing the last 10 ATC commands PLUS you will hear the normal 'say again' request/reply.

The ATC Log window can be positioned wherever you want and it will remember that position the next time it is displayed. Also the log will refresh every 5 seconds whilst displayed, so if you have the window permanently displayed you will see all new ATC communication to you appear automatically, with the older messages scrolling off the top of the display.

**No Font Resize** - With this option ON it will prevent the size of the text changing when/if you resize the ATC *say again* window. Turning this option OFF means the size of text will change in relation to the window size.

**Use Large Font** - This option allows you to choose a slightly larger font than the one set by default. Obviously you could use both of these options to show a larger font and keep it that size even when you resize the window. Or maybe you could have the larger font but have it resize when you make the window smaller to achieve *your* optimum display preference.

**Show Log on Connect** - The final option in this section enables this new ATC *say again* window to be displayed automatically as soon as you *connect PF3* to FS.

### AcarsX

**Use In-Sim AcarsX** - This is the default setting when you first run **PF3**. When this option is selected all ACARS Transmissions (e.g. ACARS ATIS Reports or ACARS Local Frequency Reports) will be displayed on the flight sim kneeboard if using FS9 or FSX and on the new PF3 popup window if using P3D or MSFS. This window can be displayed even when running P3D or MSFS in full screen mode.

**Use Local AcarsX** - Select this option to use the Local ACARS display window to show ACARS Transmissions (e.g. ATIS Reports or ACARS Local Frequency Reports). This is part of the **PF3** process and is displayed on the same PC where **PF3** is running, instead of using the standard FS kneeboard (FS9/FSX) or the new popup window (P3D/MSFS) and is designed to be used on a second monitor.

**Use Remote AcarsX** - Select this option to use the Remote ACARS display window to show ACARS Transmissions (e.g. ACARS ATIS Reports or ACARS Local Frequency Reports) This is part of the PF3 Display process and used instead of using the standard FS kneeboard (FS9/FSX) or the new popup window (P3D/FS2020) and is designed to be used on a second monitor and/or PC. *Please note:* you need to have the 'Use PF3 Display' option (also found on this page) selected in addition to this option.

**Display for** - Display for nn secs" & vbCrLf & String(20, "-") & vbCrLf & "This is the number of seconds the new display will remain on-

## PF3 User Guide

---

screen before automatically closing. Setting this value to zero turns all ACARS Transmission windows OFF except when using the In-Sim window display where setting this to zero means you want the window permanently displayed.

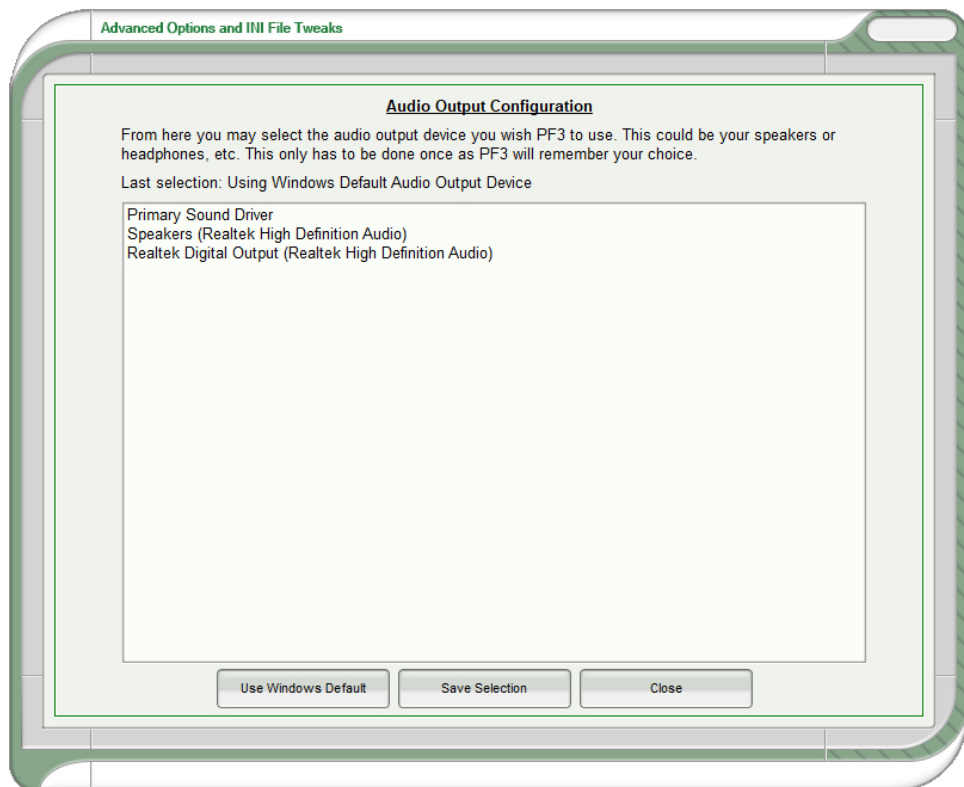
**Get ATIS for ALL Airports** – This option is new to version 3.10 and gives you the opportunity to receive ACARS ATIS reports for ANY airport, regardless of whether that airport has such an active facility.

### Audio Output Configuration (New in version 3.15.1)

**Firstly my thanks to the PF3 WEB Display author, Martin, without his input this would not have been possible.**

Selecting this option displays a list of all your current system audio output devices. From here you may select the device you wish PF3 to use. This may be your speakers or perhaps your headphones. Once you made the choice simply click on the *Save Selection* button to ensure PF3 remember your choice. PF3 will then use your chosen output device until such time as you may change it.

If you ever experience issue or believe you may have chosen an inactive device, all you need to do is select the *Use Windows Default* button to reset your previous selection and use the Windows default.

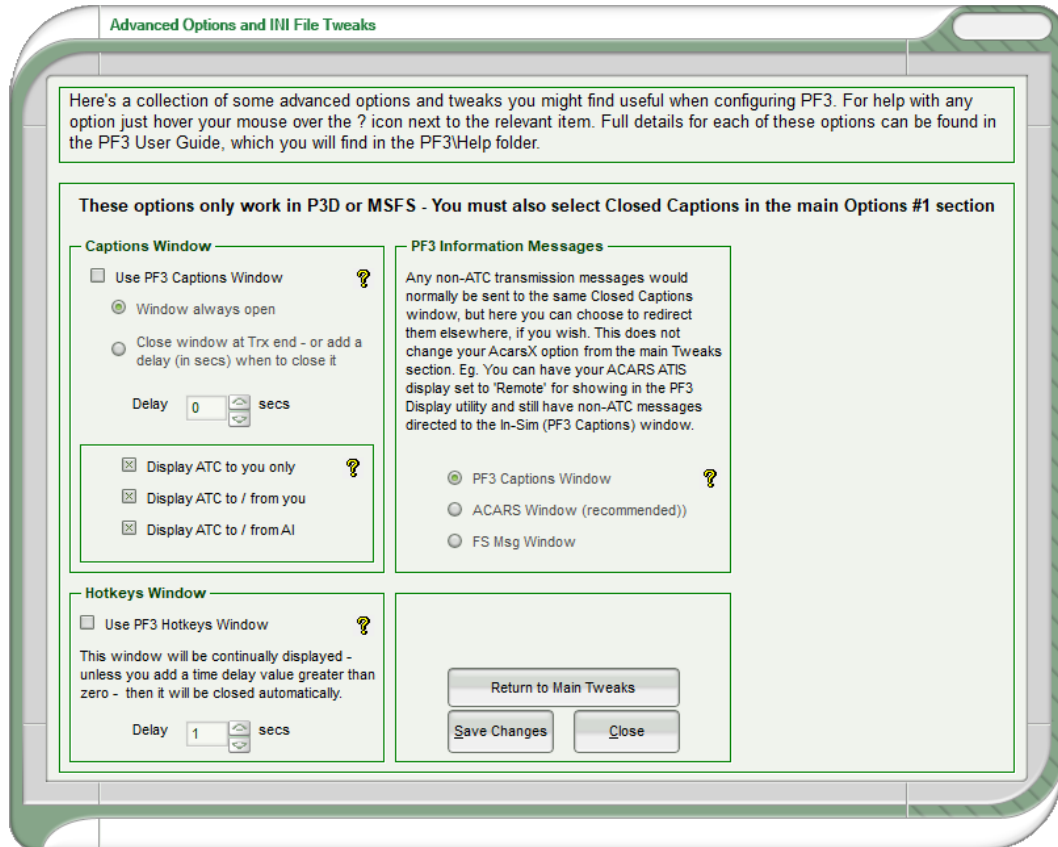


## PF3 User Guide

### View P3D/MSFS Options (New in version 3.10)

Selecting this button takes you to a completely new page of options specifically for the new In-Sim window features – **These options are for P3D/MSFS user only** and will simply not work in other flight simulators.

Here's the new display page:-



### Captions Window

**Use PF3 Captions Window** - This provides an In-Sim window to display Closed Caption text right inside your flight simulator window, whether in full screen mode or not. It's main purpose is for displaying ATC transmissions to/from you and/or AI aircraft. In order for this to work you must also have the Closed Captions option selected in the main Options #1 section.

**Window always open** - This option will leave the In-Sim Captions window displayed at all times... leaving the last transmission on-screen for reference purposes. This could be even more useful if you configure it to only show ATC messages to you!

## PF3 User Guide

---

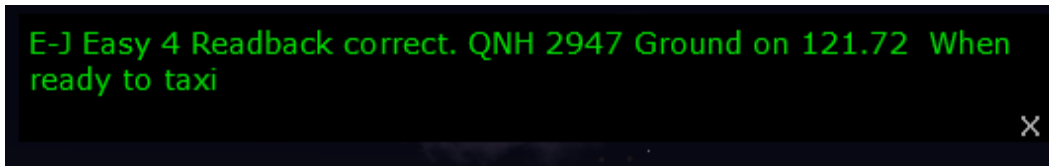
**Close window at Trx End** - This option displays the window as soon as an ATC transmission begins and closes it when the transmission ends. If you also set the delay here the window will remain open for this number of seconds after the transmission ends."

**Display ATC to you only** – Closed caption text will show only when ATC is transmitting to you

**Display ATC to/from you** – Closed caption text will include two way conversations between you and the ATC facility

**Display ATC to/from AI** – Displays Closed Caption text for ATC messages too/from AI traffic

And here's what the window looks like:-



*The window can be moved to any position on your screen and it will remember its last position. It can be closed whenever you wish by simply clicking on the small X at the bottom right of the window. The window cannot be resized.*

### Hotkeys Window

**Use PF3 Hotkeys Window** - With this option selected you will see a small window popup in your simulator showing a list of the current hotkeys available according to which ATC facility you are currently tuned. In order to keep the size of the hotkeys window as small and unobtrusive as possible, hotkey descriptions are brief and hotkey keying sequences abbreviated, but we're sure you will find this to be an extremely useful aid to the enjoyment of **PF3**. This window will be continually displayed unless you add a time delay, at which point it will close automatically.

**Please note:** *There has been a new hotkey introduced to support this Hotkeys display window. The default is Ctrl+Shift+T and its use will toggle the window between Current Hotkeys available / Global Hotkeys available / Close Window*

## PF3 User Guide

---

*And here's what the Hotkeys display looks like when tuned to Tower:-*



### PF3 Information Messages

Any non-ATC transmission messages would normally be sent to the same Closed Captions window, but here you can choose to redirect them elsewhere, if you wish. This does not change your AcarsX option from the main Tweaks section. Eg. You can have your ACARS ATIS display set to 'Remote' for showing in the **PF3** Display utility and still have non-ATC messages directed to the In-Sim (**PF3** Captions) window.

There are numerous messages that can be shown during a flight and you have a choice to filter these message to another output. This can either be the Captions window, the ACARS window (which we recommend) or the FS default message window, simply by selecting one of the following options

- **PF3 Captions Window**
- **ACARS Window (recommended)**
- **FS Msg Window**

Here's the ACARS window display:-

```
ACARS COMS TRANSMISSION for EGSS
ATIS..... 127.17
Clearance.. 119.02
Ground..... 121.72
Tower..... 123.80
Departure.. 123.60
FSS..... 122.20
Unicom..... n/a
Multicom... n/a

End of Transmission.
```

### 7.1.26 Validate your PF3 Installation

Selecting this option will start the **PF3** utility to check each of the files that should have been installed with **PF3**.

A log file is created in the **PF3/Logs** folder and will list the names of any missing file(s). If this utility confirms you have any missing files you should report this to OnCourse Software at :-

[PF3@oncourse-software.co.uk](mailto:PF3@oncourse-software.co.uk)

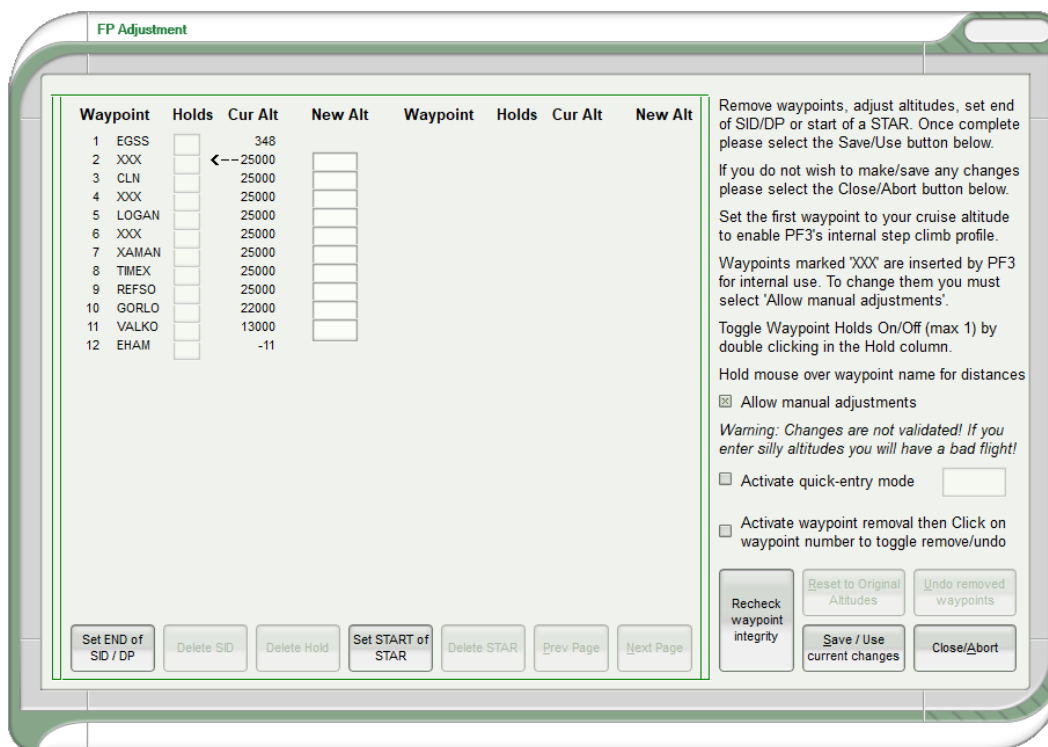
### 7.1.27 Deactivate your PF3 License on this PC

This is where you can deactivate your PF3 license, which will then allow you to activate it on another machine. You may install PF3 on as many computers as you wish, but you can only have it activated on one PC at any one time.



### 7.1.28 Adjust Altitudes, SIDs, STARs and Holds for Selected Flight Plan

From the main menu display, once you've selected your flight and are ready to connect to FS, there is another option of which you should be aware. Press the **Adjust Altitudes, SIDs, STARs and Holds for Selected Flight Plan** button and you will be presented with the following:-



This example shows a flight plan from EGSS to EHAM

Here you see each of the waypoints in your flight. If there are more than will fit on one screen you can use the Next/Prev buttons to scroll back and forth as necessary. From this screen you may alter any of your crossing altitudes, but remain aware of the capabilities of your aircraft!

Also on this screen you are able to configure and setup several other features for your flight. The most obvious change you might want to make will be waypoint altitudes and this can be done in a couple of different ways. Firstly you can simply enter the desired altitude against each waypoint, which is fine and dandy, but if you're in a hurry and your flight plan has a hundred waypoints you may want to consider using **PF3's Quick Entry Mode** which was designed to make the job even easier. Want to know more? Okay, read on...

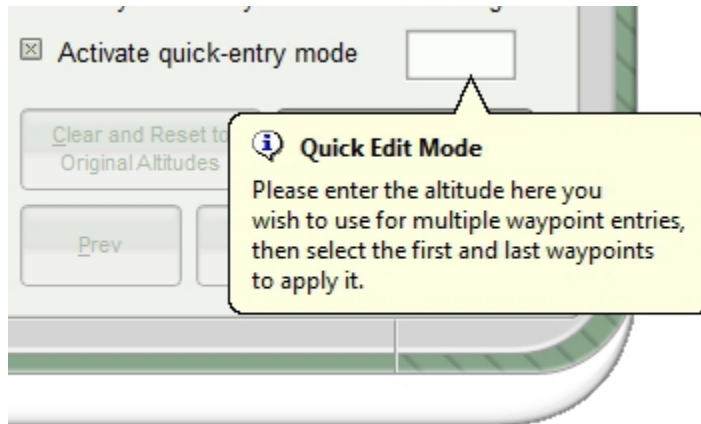
In the above screen shot you will see the cruise altitude is set at 25,000'. Let's imagine this is either incorrect or you require it to be 22,000 for whatever reason (*maybe you don't like heights*). Rather than having to

## PF3 User Guide

---

manually re-enter this for each waypoint all you have to do is select the option near the bottom right of the screen to turn the *Quick Entry Mode* ON.

A small *Help type Balloon* will then appear, prompting you to enter the new altitude you want to apply to selected waypoints:-

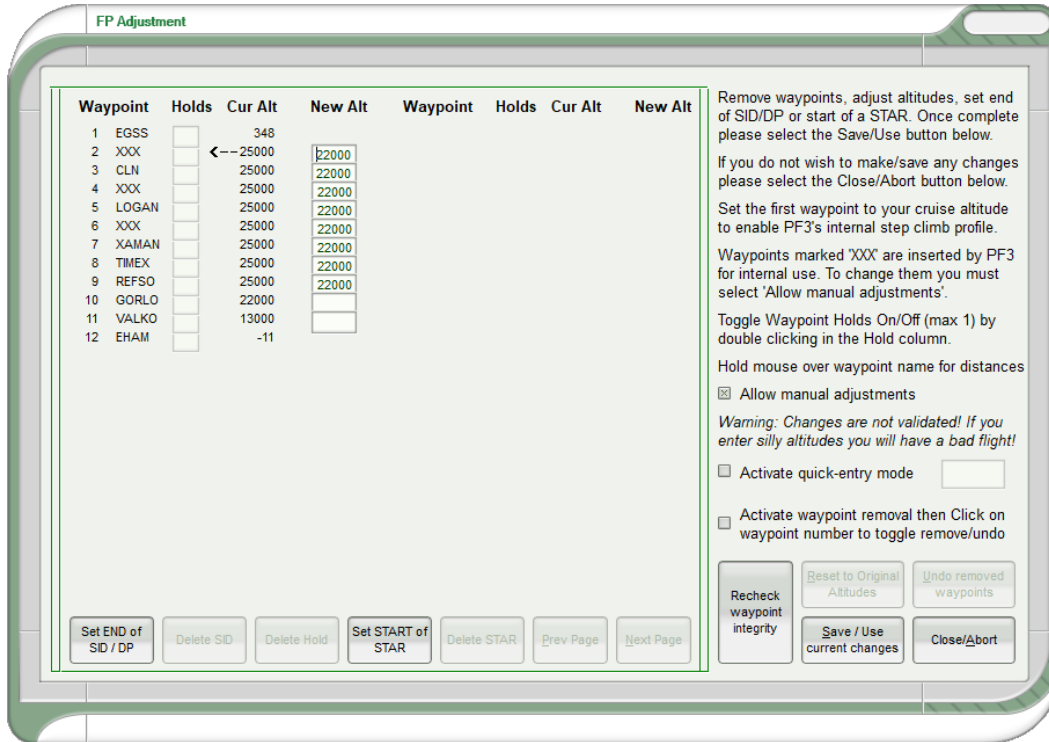


For this exercise enter 22000 for the new altitude

Now move your mouse to the left and **double-click** in the altitude box for the first waypoint you want to change... you'll see a small arrow displayed to the right of the altitude entry box when the double-click is recognized.

## PF3 User Guide

Now do the same for the last waypoint., at which point your new altitude will be copied into each of the waypoint's *New Alt* entry boxes. (see below)



The waypoints listed will be exactly the same as those in your original flight plan. **PF3** does NOT drop ANY flight plan waypoints. If you see any duplicates in this list that's because they are in your flight plan. **PF3** will, at times, insert waypoints designated as **XXX**. These are for internal use and usually indicate the point in your flight plan that you will reach the boundary of another ATC control zone and at which point you will be handed off to the new control facility (*if you are at the correct hand-off altitude of course*). However, if you are changing altitudes for all waypoints you will need to change these **XXX** waypoints also, otherwise your passengers will be in for an interesting flight. The way to achieve this is to select the **Allow manual adjustments** option which you will find just above the **Activate quick-entry mode** option. Once selected you will be able to change any **XXX** waypoints and thereby maintain a good flight profile.

On this page you can hover your cursor over the waypoint names and a popup display will show the distance to the previous and next waypoints as well as to your departure and destination airports. Checking the distance to neighbouring waypoints is particularly important should you decide to change any waypoint altitudes, because PF3 does NOT automatically adjust altitudes of nearby waypoints when you change the altitude of a waypoint or series of waypoints.

## PF3 User Guide

---

***Please Note: During extensive testing we have found it best to have your cruise altitude set from your very first waypoint and allow PF3 to handle its internal step climbs. This saves you the hassle of having to enter step climbs manually.***

Now on to SIDs and STARs, which you can now configure from this same waypoint altitude adjustment screen to complement and/or override the entries on the main SID/STAR display page.

New buttons below the waypoint listing allow you to set the end of a SID (DP) or the start of a STAR.

Now, before we all get confused let's explain a little more. Currently, if you setup a SID you set an altitude and **PF3** will *assume* your published departure is complete once you reach that altitude or reach the first waypoint in your flight plan (whichever occurs first) and at which point you are back under ATC control. However, using the **Set END of SID/DP** button you can select any waypoint in your flight plan to mark the end of your published departure. If you use this feature **PF3** will use the same altitude you may have set in the SID/STAR page and will also turn on the global SID Active option if it is currently off. Also, just like we do now, if you haven't set an altitude then **PF3** will automatically assign one at the time you receive clearance.

In much the same way a STAR works currently is this... you are automatically cleared to finals at pilot's discretion upon reaching the last waypoint in your flight plan. But from this screen you can also select any waypoint in your flight plan to commence flying your published approach.

When you reach that waypoint ATC will clear you to continue via your STAR...

*"Easy 211 continue via the Sierra Tango Approach... remain on this frequency, I'll have traffic for you".*

...and then, when you reach the last waypoint in the flight plan ATC will take over again and provided the STARs Active option (SID/STARs page) is set to OFF, they will vector you to the FAF. If the STARs Active option is set to ON you will not receive further vectors and will be expected to navigate to the FAF and then contact Tower control when established.

Whilst flying your published approach you may of course descend accordingly and indeed you are advised to ensure you reach the last waypoint in your flight plan at a suitable altitude in order to be able to complete your approach to the runway. If you leave your self too high please don't blame **PF3**.

One very important thing to remember... when you choose a waypoint to begin your STAR you will still be expected to navigate to each of the remaining waypoints in your flight plan.

The other feature you activate on this screen are Holds. In the Holds column you will see a *clickable* box next to each valid waypoint at which you can specify a Hold. Basically these are VORs or NDBs. You can only assign one hold location per flight plan and you do so by simply *double-clicking* the hold-

## PF3 User Guide

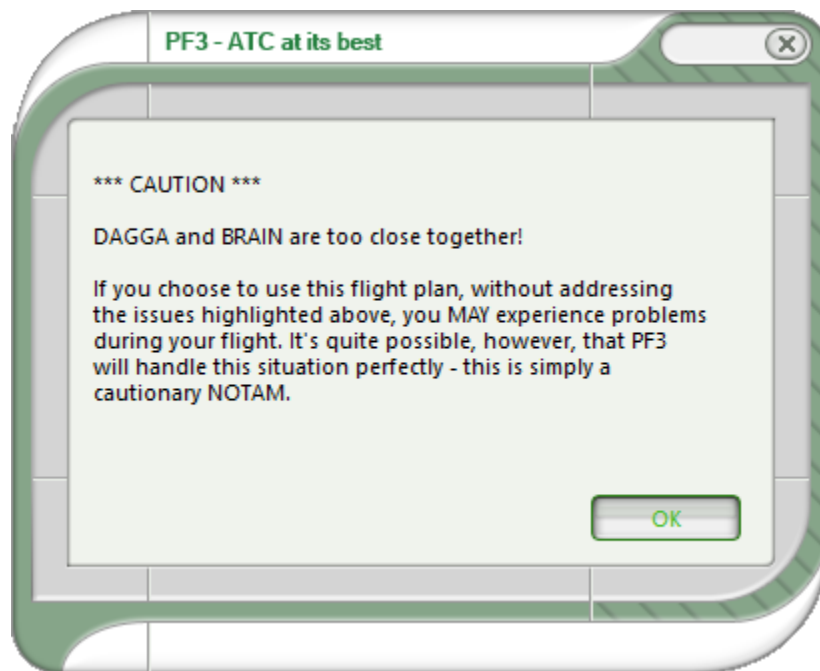
---

box next to the waypoint. When you do so the letter **H** appears in the box. If you later decide you don't want the hold there just *double-click* the **H** to remove it, or use the **Delete Hold** button.

*Please Note: When you designate a Hold it will only occur if you are at or below 10,000' at the holding point or are currently descending to 10,000' or below. Also you will be at the holding point for anything from 5 to 20 minutes so if you're in a rush to get your tea we would suggest you don't set a hold.*

Finally, we come to a new feature for **PF3** version 3.10... *Activate waypoint removal*. When you select this option you can then click on any of the waypoint numbers or names to remove/deactivate that waypoint from the list and from your loaded flight plan. If you make a mistake you can click on the number again to undo the remove operation.

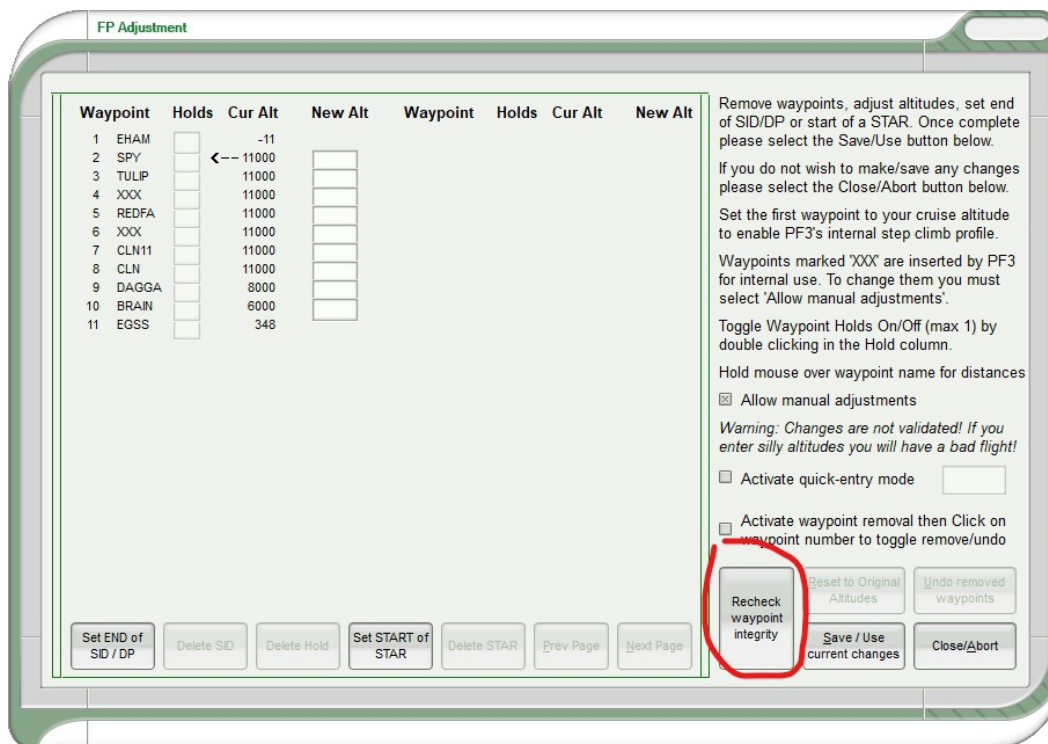
So why would you want to remove a waypoint I hear you ask. Well as mentioned earlier, **PF3** doesn't remove any waypoints from your flight plan, unlike earlier versions, but it does check to see if any of them are deemed to be too close to each other or to your departure or destinations airport. Being too close together *'could'* result in your flight not being as smooth as it could be, so we recommend you consider removing any such waypoints before continuing. **PF3** will warn you about these waypoints as soon as you select it from the *Load a Flightplan* display. See the following example for a flight plan loaded for EHAM to EGSS,



As you can see this is a cautionary NOTAM only and the choice is entirely yours what you do with the information. But for the purpose of this exercise

## PF3 User Guide

we're going to address the point raised. So let's go back to the *Adjust Altitudes* section to continue our journey.

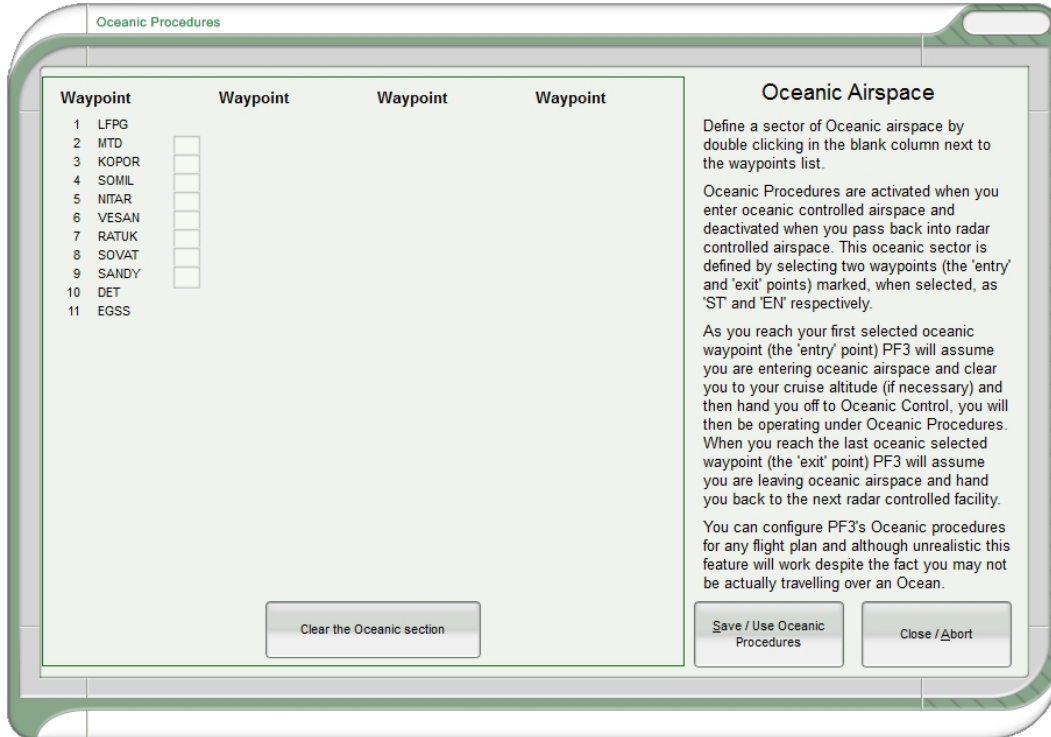


If you're anything like me, by the time you get back to this display you'll have already forgotten what waypoints the NOTAM mentioned... which is why I included this new button... *Recheck waypoint integrity*. Just hit the button and your cautionary NOTAM is re displayed. Not only is this handy for those with a short memory span but also for times when loading a long flight plan with several notifications. Then, as you make your way through adjusting the plan you can keep checking the current situation as the message is dynamic.

**Please note:** *PFE* doesn't actually 'change' your flight plan other than internally. This is just a way for you to be able to get on with your flight by simply removing those waypoints that 'may' cause an issue without having to go back to your flight planner to do so.

### 7.1.29 Define Oceanic Airspace for the Selected Flight Plan

From the main menu display, once you've selected your flight and are ready to connect, there is another option found just above the Waypoint Adjustment's button named **Define Oceanic Airspace for the Selected ADV Flight File**. Selecting this button will display the following screen:-



This feature expands on our North Track Atlantic Crossing procedures between Shanwick/Gander control centers, which is handled automatically by **PF3**. Following several user requests we also provide a means by which you can define Oceanic Airspace to any of your flight plans and thereby operate under Oceanic Procedure Control whilst flying through that defined area.

This is very different to our Shanwick/Gander feature, because that works with actual control centers from your flight plan, whereas this new feature requires the user to define the start and end points (using flight plan waypoints) as to where the oceanic airspace is. Now, this can be as realistic or unrealistic as you like. The flexibility of this new feature allows you to define oceanic airspace to ANY flight plan, so you could in fact simulate an oceanic crossing over land... but that's entirely up to you. And that is exactly how I tested this feature during development, as I obviously did not wish to, nor have the time to spend, actually flying over an ocean. So my tests were always flying over the English channel from the UK to France, operating under Oceanic Procedures whilst crossing the channel... *it was fun!*

## PF3 User Guide

---

You will see that this new screen is somewhat similar to the waypoint altitude adjustments display screen, inasmuch as it lists each waypoint in your currently selected flight plan, beside which is a new column containing open/blank text boxes.

Oceanic Procedures are activated when you enter oceanic controlled airspace and deactivated when you pass back into radar controlled airspace. This oceanic sector is defined by selecting two waypoints (*the 'entry' and 'exit' points*) marked, when selected, as '**ST**' and '**EN**' respectively. You define the sector simply by double clicking in the blank column next to the relevant waypoint... firstly to mark the starting point and then to mark the end point.

During your flight, as you reach your first selected oceanic waypoint (*the 'entry' point*) **PF3** will assume you are entering oceanic airspace and clear you to your cruise altitude (*if necessary*) and then hand you off to Oceanic Control, you will then be operating under Oceanic Procedures. This includes simulated HF radio transmissions using real world SELCAL sounds when ATC contact you. Your VCP will also radio through position reports at each intersection/waypoint as you progress through the flight.

See section 11 for more details on these procedures and how they work in the real world.

When you reach the last oceanic selected waypoint (*the 'exit' point*) **PF3** will assume you are leaving oceanic airspace and hand you back to the next radar controlled facility.

Obviously we don't have the necessary data for worldwide oceanic control areas, nor do we have any recorded oceanic control names (*other than Gander and Shanwick*) so when flying under oceanic control in any other area not covered by Gander/Shanwick the facility you tune to will simply be called 'Oceanic Control'.

### 7.1.30 PF3 Profiles

New to version 3.10.50 - This allows you to setup **PF3** for various different reasons... maybe you need a different setting when using **PF3** for VFR and IFR flights. Maybe you like a different setting per aircraft you use. Until now you would have to make those settings prior to using **PF3** for your flight. With this new **PF3** feature you can now create as many setup versions as you wish. It's all pretty self explanatory when you start the process. Profiles are accessed via either the main Options #1 page or the Options #2 Advance Options page. This seemed the best idea as it would only be after making changes to those options you would need to access the Profile section. The currently loaded Profile name will also appear on the main **PF3** screen just above where the currently loaded flight plan appears.



## 8. PF3 FEATURES IN MORE DETAIL

### 8.1 The TGS Gauge

**PF3's** unique TGS (Taxi Guidance System) provides full taxi instructions to/from the runway. When configured to do so you will hear your VCP giving instructions like... *"next left into delta... bear right into bravo two... straight on... gate two seven on the left..."*, and you will also be able to see the general direction of the next taxiway waypoint by using the *optional (original)* TGS gauge, the all new TGS2 gauge or the standalone TGS Display program. If you don't want to use either you could simply watch your FS heading bug.

The installation of this optional (original) gauge is explained fully in David Leesley's excellent tutorial – see section 22

*New to **PF3** version 3.10 is the TGS2 Gauge (see below for further details)*



This is your basic TGS directional gauge. There are a couple of important features that you should know:

1. Use of this gauge is entirely optional! Should you decide not to install it, it is recommended you enable the HDG BUG option, which will indicate the direction of the next taxi waypoint. *Be aware this (heading bug) feature may not work with all third party add-on aircraft.*
2. The green arrow (*gauge pointer*) points directly towards your next taxi waypoint. Remember you are responsible to avoid any intervening traffic or buildings!
3. Below the gauge pointer is a number that represents the remaining taxi waypoints to be crossed before reaching the runway/gate. This, naturally, is a descending number. Number 1 will always be the runway holding point or gate.
4. Down either side of the gauge pointer are 5 LED's, which illuminate to indicate the distance to the next taxiway waypoint. 5=Greater than 100 meters to go; 4=Less than 80 meters; 3=Less than 60 meters; 2=Less than 35 meters; 1=Less than 5 meters. If all the LED's are dark, you will possibly hear the audio prompt for the next turn (*if you've enabled this feature*). **PF3** will skip too many repetitive calls of the same instruction (eg. turn left, turn left, turn left).

## PF3 User Guide

---

Once installed and with TGS 'audio' enabled via options, you will be guided along your taxi route accordingly. We cannot guarantee this to be 100% accurate but would certainly like to think we get it right 99% of the time. We obviously haven't tested this at all 24,000 + FS airports so you may find one or two that cause TGS a problem, so don't forget your airport charts!

*Please Note: If 'Use TGS' is ON then TGS runs automatically once you have received your taxi instructions from ATC. Should you wish to deactivate TGS at anytime, simply use the #1 hotkey. Should you hit this key by accident whilst TGS is active just hit it again to reactivate. TGS will not actually catch up, so if you are some way into your taxi route you will have to use the new 'skip taxi waypoints' hotkey mentioned in section 12.2.7*

### 8.2 The Standalone TGS Display

Personally I have always found the original TGS Gauge a little temperamental, whilst others use it extensively without issue... *enter the standalone TGS Display.*

The TGS Display is ideally suited when running more than one pc or multiple monitors. It is a standalone program and therefore can be run on any pc provided you have WideFS/WideClient installed if running on a client.

It does not have to run on the same PC as FS nor **PF3**.... it is standalone!

The display can be resized to suit your own particular requirements and mine sits nicely beside the Project Magenta MCP on a client pc.

Install it wherever you want.

You'll find this new program in the TGS\_Gauge folder after installing **PF3** and is named TGS\_Display.exe. The display also shows a little more than our original gauge.



Above the little aircraft symbol is the name of the taxiway you are actually on or about to turn onto. Also you can configure the display to show when you're

## PF3 User Guide

---

braking or have the parking brakes on... rather than the annoying red/white signs displayed in FS. To use this feature, after you've run the TGS Display at least once, open the TGS\_Display.INI file and add...

### **ShowBrakes=1**

...to the **[CONFIG]** section. Once configured you will see BR for Brakes and PB for Parking Brakes displayed at the top left/right of the display when brakes are applied. There are of course other utilities available for download which enable you to turn the FS message for brakes off, but I find this useful.

Just beneath the aircraft symbol is the name of the last taxiway you taxied along.

That's it, you don't have to do anything else, other than remove the TGS gauge from your panel.cfg files should you decide to use this replacement.

**PF3** is configured to interact automatically with TGS in exactly the same way as it did for the original TGS gauge. This is basically a replacement so nothing else changes.

*For fine tuning the position and size of the TGS Display you can use Shift + Arrow Keys to move it and Ctrl + Arrow Keys to resize it.*

**New to 3.15.0** – We have added another indicator to the TGS display, in addition to the relative position of the next taxi waypoint it now displays the relative position of the one after the next. This is shown as a red dot. I find this really helps and can now see exactly the direction I will need to be turning, well ahead of time.



### 8.3 The TGS2 Gauge

Our new TGS2 Gauge (written by Chris Koegler) look almost identical to our standalone TGS Display utility. The main difference being it does not show any brake indicators. Other than that, functionality is the same. Here's what it looks like. The gauge is designed to work in FS9, FSX and P3D only. Sorry but it doesn't work in MSFS.



For my FS9 testing I added to the Panel.cfg as a separate window rather than inserting it as a gauge, using the following and I think it looks/works really well.

**[Window07] <-- you have to assign your own number here**

**Background\_color=2,2,2**

**size\_mm=251,251**

**position=1**

**visible=0**

**window\_size= 0.2, 0.3**

**ident=10101**

**gauge00=TGS2!TGS, 0,0,251,251**

### 8.4 Oceanic Procedures

**PF3** automatically switches to Oceanic Procedures when flying to/from the US (over the pond) and between Gander/Shanwick controlled areas. This includes simulated HF radio transmissions using real world SELCAL sounds when ATC contact you. Your VCP will also radio through position reports at each

intersection. See section 11 for more details on these procedures and how they work in the real world plus the exciting features offered to allow you to enable Oceanic Procedures anywhere in your flight sim world.

### 8.5 Traffic Advisories

**PF3** provides full AI traffic advisories during your flight. When AI aircraft are within the boundaries you set you will hear about them from ATC.

*'...traffic at 2 o'clock, altitude 5,000, heading west two seven zero'*

### 8.6 Requesting Higher/Lower Altitude

**PF3** allows you to request a higher/lower altitude during your flight. This is done by using the **H** and/or **L** default hotkeys. Obviously **H** to request a higher altitude and **L** to request a lower altitude. *All default hotkeys can be changed to a keying sequence of your choice should you wish.*

To make a request you hold down the relevant key (H or L) then press and release one of the number keys (top row of keyboard)... which must be 1 thru 9... then release the H or L key.

The numbered key indicates how many 'thousands' of feet you want to climb or descend. So, if you're currently at 20,000' and wish to climb to 25,000' just hold down the 'H' key then press and release the number '5' key. Equally, if flying at 15,000' and you require an altitude of 12,000' you would hold down the 'L' key then press and release the number 3 key. There is a 10% chance your request will not be authorised.

### 8.7 Auto Taxi Speed Control

**PF3** provides a simple feature to assist you in maintaining a set ground speed during taxi manoeuvres. This feature is part of the TGS system and is only available when TGS is running (i.e. during your taxi to/from the runway). Therefore, if you haven't turned the TGS feature ON then the Auto Taxi Speed Control will not be available.

Once you have received taxi instructions from ATC all you need do is hit the #8 hotkey to toggle this function on/off. A brief message will be displayed in your message window to indicate if the feature is active or not.

To stop the speed control at anytime just hit the #8 hotkey again.

There are only three settings you have to configure to *tweak* this facility to suit your own preference and these are fully described in section 7.1.25

### 8.8 AI Aircraft Conflict Monitoring

**PF3** does its best to keep ground AI aircraft well away from your taxi path to/from the runway. As you are aware, Flight Simulator controls all aspects of AI traffic and there is very little third party programs like **PF3** can actually do. That said I believe we have produced a very good and workable solution.

## PF3 User Guide

---

To enable this new functionality you **MUST** have the options **Use TGS** and **Visual Guidance** turned on (Main Menu Options #1).

How does it work... well... FS will still be controlling the AI aircraft and although we know where each aircraft is, their ground speed and heading, we have no way of knowing what their exact route is... unlike your aircraft, which we know the exact route you should be taking provided you follow ATC instructions and any TGS functionality you like to use. Because we don't know the exact route the AI traffic will be taking we have to make some assumptions... sometimes they're right but sometimes they're wrong... so don't expect perfection and you won't be disappointed. *Where have I heard that before...?*

Basically we set up a boundary along our taxi route, arcing at approximately 400 meters in front of your aircraft and from side to side at -90 to +90 degrees of your current heading. Any AI aircraft that seem to be moving toward this boundary or actually entering it are stopped. They are then restarted once they are deemed not to be on a conflicting path. This usually occurs as you pass by their stationary location. Unfortunately, due to timing issues and ground speed variations you may find an aircraft actually on your taxiway that has been stopped (this may have occurred at the maximum distance in front of you, perhaps even before you turned onto the actual taxiway in question. Should this happen, and the aircraft is heading in the same direction as you, simply stop your aircraft. When you do this, any aircraft that **PF3** has stopped will be automatically restarted, so the aircraft in front of you will continue with their taxi which will no longer cause you any issues and you can simply follow them. Whilst you are stationary no further monitoring will take place but it is resumed once you start rolling again.

Should an aircraft be on the same taxiway as you and heading straight toward you then you don't have many options, other than turning onto the grass (if there's room) or ZAPPING it. Personally I prefer to ZAP them and use a feature of FSUIPC to do so. Details on how to set this up can be found in the FSUIPC documentation.

Another point to make is as you are following another aircraft **PF3's** Conflict Monitoring may well stop that aircraft in its tracks and thereby block your route. You could of course stop your aircraft to make the one in front move on, but if you start taxiing too fast it will stop once more. This is because **PF3's** Conflict Monitoring is active whenever your ground speed goes above ten knots (this speed is user configurable). So this is something to remember, especially as you're nearing the runway or terminal. If you can keep your speed just below 10 knots you will be able to follow along in the queue without **PF3** stopping the aircraft in front of you. As I said before... not perfect but quite workable. In fact it's one of those features you can simply forget... it is quite transparent and for the most part does exactly what it says on the box.

The Conflict Monitoring process is completely separate from **PF3**, which allows for constant monitoring of AI traffic without the need to wait for **PF3** to do a 100+1 other things. A great deal of care has been taken to ensure there is no noticeable hit on your processing power.

Starting with PF3 version 3.10 you will now hear ATC telling any AI Aircraft stopped by the Conflict Monitor *'Hold position'* or *'Continue taxi'*

### 8.9 Other AI Traffic Detection

#### At your departure airport...

In addition to our Conflict Monitoring process **PF3** will also monitor any aircraft approaching the *active* runway. ATC will not issue instructions for you to enter the *active* runway whilst there are any aircraft close by and on final approach. The exact distance is set by default to 6 miles for Jet aircraft and 3 miles for smaller, prop, type aircraft. These distances, along with many other **PF3** options, are user configurable.

When lining up behind other aircraft on the taxiway you will be told something like this:-

*"Callsign, expect clearance in ten"*

When next in line for takeoff you will be instructed to *"Callsign, hold for traffic"* if there are any aircraft actually on the runway or on finals.

When awaiting the arrival of another aircraft you will be instructed to *"Callsign, line up and wait"* as soon as it's safe to do so after the other aircraft has landed.

Once all other aircraft have left the active runway you will receive takeoff/departure clearance.

#### En Route...

**PF3** provides real-time, two-way, traffic advisories en-route, based on the AI traffic flying nearby.

#### During your approach...

During the approach phase of your flight **PF3** will attempt to prevent any other aircraft from taxiing onto the *active* runway and should therefore prevent any annoying go-arounds caused by such things. **PF3** will also attempt to handle traffic separation between you and AI aircraft on route to the same airport and runway. However, due to interactive limitations with AI traffic this feature is not very elegant so we basically only deal with traffic behind you.

#### 8.9.1 Additional Ground Control Monitoring

**PF3** also monitors your taxi to/from the runway to ensure you don't enter an active runway without clearance to do so. As in the real world you should **not** cross **any** runway unless cleared to do so. With **PF3**, when reaching a runway intersection, ATC will either clear you to cross or tell you to *'Hold for traffic'*

If you reach a runway intersection and hear nothing from ATC you should HOLD SHORT of the runway! You may then request clearance to continue your taxi by hitting hotkey #0 (zero), but you must be stationary and with TGS 'active' for this request to work.

### 8.10 How we handle ATC Chatter Call Signs

**PF3** provides an Airline ICAO feature for our ATC chatter function. This is for those times when we don't find a match for the AI Traffic call sign (i.e. we don't have one recorded), so we use the Airline's ICAO code and flight number.

For instance, in the case of British Airways 1234 we use the call sign...

*'Speedbird 1234'*

...but if we didn't have that particular call sign we would use the British Airways ICAO and the result would be

*'Bravo Alpha Whiskey one two three four'*

If we still couldn't find a match to get the ICAO then we would use the first three characters of the airline name, so the result then would be

*'Bravo Romeo India one two three four'*

### 8.11 Step Climbs and Descents

**PF3** provides completely randomized stepped climbs and descents based on your flight plan profile. **This ensures no two flights, using the same flight plan, are ever *exactly* the same.**

**Also, following extensive testing, we strongly recommend you do not alter the waypoint altitudes pertaining to your departure, up to and including your TOC. So, when you see your waypoints listed with the very first waypoint showing your cruise altitude it really is best to leave it as it is and let PF3 handle everything for you.**

### 8.12 En-Route Control Centres

**PF3's** ATC control zones have been completely reconfigured to ensure boundaries are more accurate and some control centers that were never active in previous versions will now be heard.



### 8.13 How we determine the Active Runway

When we need to know which runway to assign you **PF3** will always use the same runway currently being used by any *detected* AI aircraft. In the case that there are currently no active AI aircraft we will then determine the correct runway to use using the local weather conditions, in particular wind direction.

Whenever we assign a runway using wind direction we always check periodically up to a certain point to see if we can detect any AI aircraft landing or taking off. If so ATC would then issue *change of runway* instructions.

E.g. '*Speedbird two six eight six... runway changed... expect vectors for....*'

Assigning the correct runway is also subject to the user configurable settings for individual runways whereby you may have configured a runway to be for takeoff or landing only.

### 8.14 Designated Parking

**PF3** also supports designated parking for your aircraft at any of the 24,000+ airports.

This new feature compliments **PF3's** Full Taxi Guidance and Taxi Guidance Systems... so now you can configure **PF3** to ensure you are always sent to a particular gate/parking location at specific airports.

There are two stages to configure this new feature.... Stage #1 is **very** simple, takes only a few seconds to complete and is **mandatory**... Stage #2 is slightly less simple, takes a few minutes to complete but is **optional**.

Stage #1 ensures you will always receive ATC instruction to the gate/parking spot of your choice and Stage #2 ensures that particular location will be free from AI aircraft parking in your reserved space!

#### 8.14.1 Stage 1

*Please Note: If you want to activate **PF3's** Designated Parking feature, this stage is **mandatory**!*

From **PF3's** main display page select **Option #2**, then **Designated Parking Control**.

Type in the Airport ID (ICAO code) for the airport of your choice (i.e. EGGW for London Luton) then hit enter. At this point, provided you have entered a valid ICAO code, the '*Airports Gates/Parking here...*' drop down list to the right of the ICAO will change from '*None*' to '*Select Gate/Parking here...*'

Now simply scroll down the list and highlight the gate/parking spot you wish to reserve, then select SAVE

That's it!

Next time you land at this airport ATC will give you full taxi instructions to your chosen gate.... every time! But as mentioned earlier you *may* find another aircraft already parked there when you arrive, which could be a little embarrassing! To prevent that happening please see the following instructions for Stage #2 to prevent this occurring.

### 8.14.2 Stage 2

*Please Note: This section is entirely **optional** but it does ensure your reserved gate/parking area will be vacant when you arrive!*

For this method you will need a utility like AFCAD, AFX, ADE or similar installed if using FS9 or FSX. At the time of writing we are unsure of any utility you could use with P3D.

**The following instructions pertain only to AFCAD. Also these instructions relate to AFCAD version 2.21 so they may well be very different if using a later version.**

Please follow AFCAD's installation instructions and do not be put off by what you see or read about this program... despite being a very powerful tool it is remarkably easy to use. So let's show you how....

For this example we will **MODIFY** an existing Parking Gate (50) at London Luton Airport... ICAO code EGGW.

1. Open AFCAD, select **File** and **Open Airport**. After AFCAD completes its initialisation search you will be able to enter the Airport ID (ICAO code)... **EGGW**... then select **OK**. The EGGW airport plan with assigned parking should then appear. You can now use your mouse scroll wheel, the +/- keys or the +/- icons on AFCAD's toolbar to zoom in/out to make the airport layout map larger/smaller.
2. Select the Parking Gate you want to modify. For this example it's Gate 50 which is the one situated furthest to the left of the displayed map. You can make the selection in a number of ways... if you know exactly where the parking spot is on the map simply double-click it or use a left-click to highlight it then right-click and select Parking Properties... please do ensure the popup window is the 'Parking Properties' one and not the 'Link Properties' display. If you're not sure where the gate is situated on the map please use the **List** menu in AFCAD to display all the available gate/parking locations for this airport then double click the one you want, which is Gate 50 for this example.
3. Whichever method you choose/prefer please ensure you have selected the correct gate/parking spot. You can do this by checking for the gate/parking name/number under the Identification label which is midway down the properties display window. For this example it should be Gate 50.

4. Change the value displayed in the small box marked **Radius** to **10**
5. Exit AFCAD and confirm you want to save these changes when prompted to do so
6. If you haven't already configured Gate 50 at EGGW within **PF3** please do so now.

That's it!

What we have done is create a unique Parking Space and because of the very small radius we chose it should restrict any AI Aircraft from using this Designated Parking location. Next time you land at EGGW you will be instructed by Ground Control to '*...taxi to gate five zero...*'

Obviously AFCAD allows you to do so much more and you could even create a completely new gate/parking spot if you so wished, but that is beyond the scope of this document *and the author*.

### 8.15 Resuming a Flight

Should you ever find you need to stop a flight midway through, or perhaps FS crashed or even **PF3** crashes (*hush your mouth*) mid-flight, **PF3** allows you to *resume* the flight, subject to certain conditions being met..

The first prerequisite is that you need to be able to start FS running from the point of failure, whatever that failure might have been. Basically you need a saved FS flight.

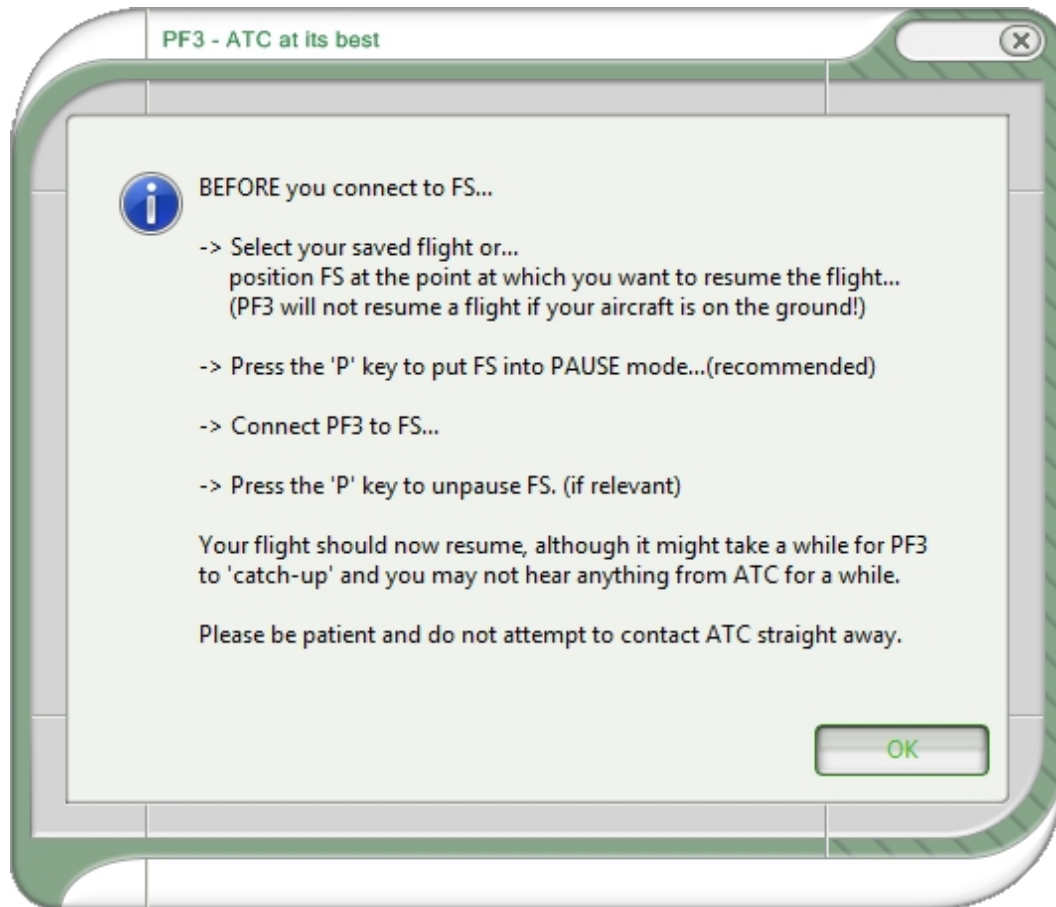
If your mid-flight stoppage was planned then one would assume you will have saved the flight in question and therefore can reload it at anytime. This is the easiest method and all you need to do after starting **PF3** would be to select the '*Resume Last Flight*' button from the main menu, confirm that you wish to resume your last flight and then follow the on-screen instructions (as detailed below).

## PF3 User Guide

---

If your flight stoppage was not planned and caused by an unforeseen error, the next time you start **PF3** you should be presented with a message giving you the option of restarting the flight from the point where it stopped. Again, once you confirm this message you need to follow the on-screen instructions:-

## PF3 User Guide



- The first two instructions you should have already done so now you should OK this message and then *connect* to FS
- Once **PF3** is *connected* to FS you should hit the 'P' key to take FS out of PAUSE mode and the flight should continue from where it left off.
- As the flight begins in this 'restart' mode things may be a little quiet as **PF3** plays *catch-up*. Please do not try contacting ATC immediately, just give **PF3** a little while and you should soon hear your PNF making contact with ATC, this is just to ensure we initialise things properly. This first communication you hear with ATC may sound *slightly* inaccurate, but things should soon return to normal.

If the cause of your mid-flight failure was not planned and was due to FS crashing (*or some other program but obviously not PF3*), and you do **not** have an FS saved flight situation file, then **PF3's** *resume* facility will be of little use, unless of course you are able to restart FS and position your aircraft back at the point where the problem occurred, because in a restart situation **PF3** will always assume your flight is starting near to the same altitude and in particular the same location as when the unplanned stoppage occurred, so

placing your aircraft at the wrong altitude or position could lead to a... er... interesting flight.

*Please Note: **PF3** does not save your FS flights and to do so you will need to use another utility, such as Pete Dowson's Auto Save program, which by the way is built into FSUIPC4 if you are using FSX*

If the cause of the mid-flight failure was a **PF3** problem (*I guess we have to cater for such improbabilities*) then of course our *restart* data will be available, so all you would have to do in this instance would be to Pause FS, then restart **PF3** and follow the instructions as shown above from item (b)

A few other things to remember about this feature –

**PF3** only starts saving its own *restart* data after you receive initial vectoring instructions from Departure Control and it stops at point of touchdown at your destination airport. **So restarting a flight on the ground is not available.**

If you *plan* a mid-flight stoppage but then load a different flight plan before *resuming* the previous flight, all of the previous flights data will be lost and you will not be able to resume that particular flight. So you only have the one shot at restarting the previous flight. If you choose NO from the initial message your restart data will be zapped!

This option is OFF by default.

### 8.16 Visual Connection Indicator

There may be times when you are not sure if **PF3** is still running, due to the fact that everything seems to be a little quiet on the radio. One way of ensuring **PF3** is still *connected* and *running* is to check the navigation lights on the aircraft picture displayed on **PF3's** main menu, as they will flash periodically whilst all is well.

### 8.17 Interactive Support for FDC users

**PF3** supports full interaction with OnCourse Software's **FDC** program. Provided you are running the latest version of **FDC**, each program will be fully aware of the other.

#### **How they work together...**

If **FDC** is currently playing a checklist and ATC initiate contact with YOU then the checklist will automatically pause and resume once the transmission from/to ATC is complete from both sides. However, if ATC is talking with another AI aircraft the checklist will not pause but the volume of ATC will be lowered, although that is optional.

Also, whereas **FDC** only has two transition altitude settings to work with it will now use whatever you have configured in **PF3**. In addition to that **FDC** will be made aware of the cruise altitude in your **PF3** flight plan, which will make some of the *cruise altitude* triggered calls more accurate and easier to implement.

## PF3 User Guide

---

Various other program elements will be passed back and forth between the programs to allow for further interaction both now and for future enhancements.... So watch this space.

*Please Note: **PF3** and **FDC** do **not** have to be running on the same pc for this interaction to work. Each program could be running on different client pcs, with the main pc running FS and all connected via WideFS*

Now I'm sure one of the questions asked will be "Do I have to do anything special to get **FDC** and **PF3** to 'interact'?"

The answer is, NO! Provided you are running **PF3** and the latest version of **FDC** (3.14 at the time of writing) or later, interaction between the two programs is automatic.

However, there are a few things I think need to be explained here plus I'll show you how I've found it best to set things up for both systems to help make them 'blend' together.

Firstly, it obviously sounds much better if your **FDC** co-pilot and **PF3** VCP sound the same.... so you have two choices.... *well you have three if you want to pretend you have a large flight deck and additional crew members...*

**FDC Voice set #11** and **PF3 US Mid West Pilot #2** are both the same author, Rick Schaefer.

The other option is to use an all new voice set we have had recorded for **FDC** (see the **FDC** section of our website for download details) by the same author of **PF3's British Pilot 12**. This new voice set has already been named as voice set #16, as that is the optional **FDC** voice slot and one which should already be vacant. Should you wish to replace one of the other voice sets then you will have to rename the new one yourself. As mentioned earlier this new **FDC** voice set matches **PF3's British Pilot 12**... the author is Graham Jackson. Graham has also done many other voice sets for LevelD and PMDG, to name but a few.

For the sake of simplicity let's say your **FDC** Voice16 folder is empty... just download and unzip the new voice set into your ...\**FDC\Wav\Voice16** folder and you're ready to go.

Run the programs and select either:

**FDC Voice set #11** and **PF3 Mid West Pilot #2** or

**FDC Voice set #16** and **PF3 British Pilot #12**

I think **FDC** sound sets are slightly louder than **PF3's** so here's how I found mine work best, but please remember these are my own personal preferences. These controls do **not** have to be set this way for **FDC/PF3** interaction to work.

### **FDC Volumes:-**

Captain=10

Co-Pilot=10

### **PF3 Volumes:-**

Set the VCP Volume one notch below maximum

Set the ATC volume 1 notch lower than the VCP volume

Set the background noise four notches down from maximum

Under TGS settings set TGS volume reduction to 50%

That's it!

## **8.18 ACARS ATIS**

**PF3** provides its own emulated ACARS ATIS data system. This uses the FS kneeboard in FS9 and FSX but the new In-Sim windows in P3D and MSFS to simulate receiving ATIS information for your destination airport via ACARS. We actually use the Nobrief.htm file found in the ...\\MainFS\\UIRES folder for FS9 and FSX, so if you already use one of the kneeboard browser type utilities it is quite possible this feature will overwrite it.

**PF3** ACARS is received by hitting Hotkey #2. This works at ANY time during your flight with the following limitations. It does NOT work if tuned to FSS, Multicom, Unicom or the destination Tower and once in contact with Approach it reverts to its normal functionality, which is to request an instrument approach. But you would normally have perused your destination ATIS long before that. Also it does NOT work whilst TGS is active (as that uses the same hotkey for skipping waypoints).

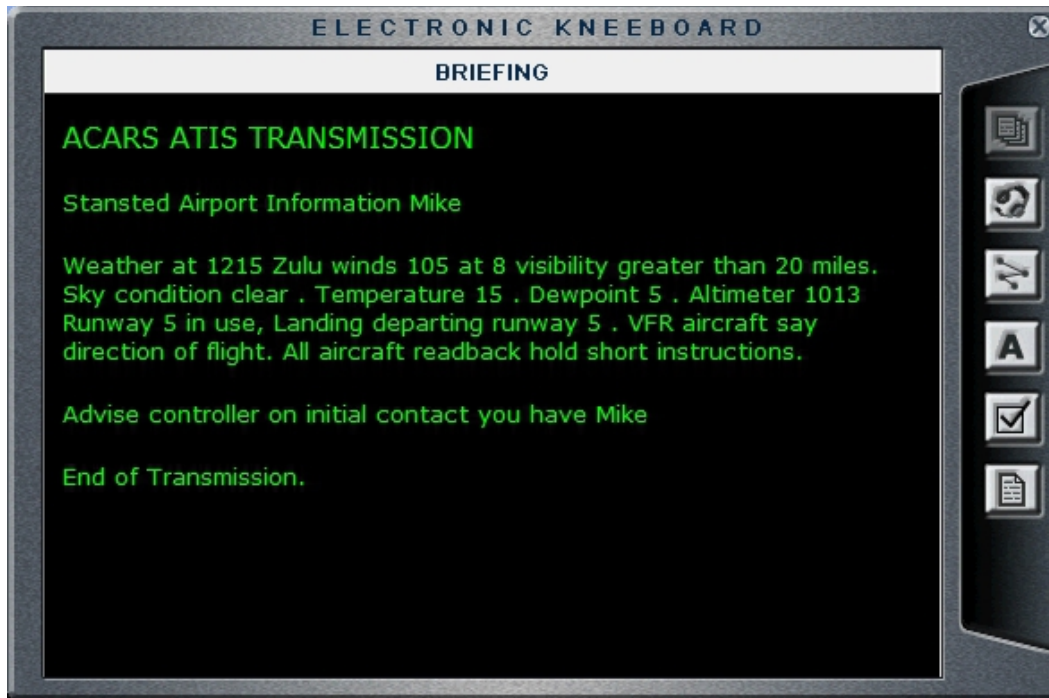
Unlike the normal ATIS you receive via your VHF radio, which is limited in **PF3** to a distance of around 200 miles, there is no such limitation with the digital ACARS display system.

Here's an example of how this appears in FS9:-



## PF3 User Guide

---



And here's how it appears in P3D and MSFS:-



```
ACARS ATIS TRANSMISSION

Los Angeles International Airport Information Victor

Weather at 2115 Zulu winds 255 at 1 visibility 10 kilometres
or more Sky condition clear - Temperature 14 - Dewpoint 0 QNH
1013 - ILS Runway 23 in use, Landing departing runway 23 - VFR
aircraft say direction of flight. All aircraft readback hold
short instructions.

Advise controller on initial contact you have Victor

End of Transmission
```

New to version 3.10.12 you can now request a list of all current frequencies by using the default hotkey #3, but only whilst at your departure airport and not tunes to Unicom, Multicom or FSS.

### 8.19 In-Flight Volume Adjustment

With **PF3** you can adjust the volume for ATIS, background noise, ATC or your VCP at anytime during your flight, using the new overlay displayed on PFE3s main menu display once you *connect* to FS.... see *screen shot below*.



## 8.20 VFR Flights in PF3

VFR flight support has been completely revamped in this version (3.10) of **PF3** and we now offer two distinctly different types of VFR in the **PF3** world.

### 8.20.1 Standard VFR

The normal (*we call Standard*) VFR flight where you are required to load and follow a flightplan, flying from one waypoint to the next until finally reaching your destination is much the same as it was in previous versions of **PF3**. The

main difference is the introduction of our new Radar Control facilities. Each of the **PF3** Control Center areas now have a Radar Control facility to cover that same area when you're flying below the Control Centers altitude. The new Radar Controls are also named, the same as the existing Control Centers. So for instance, you can contact London Radar, Essex Radar, Berlin Radar, Los Angeles Radar, Miami Radar or any of the 90 new control facilities.

In previous versions of **PF3** Departure would hand you off to Approach, and you would stay with them for the duration of your flight. In 3.10 Departure will hand you off to the appropriate Radar Control. They in turn will hand you off to the next Radar Control should your flight plan take you into another control area. This will continue until you reach your last waypoint, at which time Radar will hand you off to Approach.

### 8.20.2 VFR Free Flight

VFR Free Flight (or VFR FF) has been introduced for users to take full advantage of the glorious visuals in the new and outstanding MSFS whilst still being able to contact ATC as and when necessary. Of course this isn't only for use with MSFS and VFR FF flights can be used in all flight simulators supported by **PF3**.

So what is VFR FF exactly. Well, just like any other flight in **PF3** you still have to load a flight plan (*containing at least one waypoint*) but you will not be required to follow it. You will not have to hit each waypoint and you will only be expected to reach your destination. How you get there is entirely up to you. You will not be handed off from one Radar Control to another if you venture into other control areas, instead the radar service will be terminated and it will be up to you if you wish to make contact with the next control facility. The areas you fly through do not have to be areas in which your flight plan would normally take you... it can be anywhere along the way and **PF3** will detect within which area you are currently flying.

Departure control will terminate their service after your departure with the following call:-

*Call sign, radar service terminated, squawk nnnn*

At this point you can either continue your flight without further ATC contact until you arrive at your destination or you may choose to contact the local Radar Control for flight following or radar service (depending on the area you're flying i.e. FAA or ICAO). If you don't know the frequency to tune to simply tune to the default FSS frequency of 122.20 and hit Hotkey #5 to request it. Then you can tune to it and make contact with the local Radar Control. You'll remain with that Radar Control whilst you remain in their area, but once you fly beyond that they will terminate their service in the same way as Departure did and again it will be up to you what you do at that point.

When you get close to your destination you have a couple of options. If you're already in touch with Radar Control then you simply have to hit Hotkey #1 which will trigger a handoff to Approach. If you're not currently tuned to Radar Control then you can follow the instructions mentioned earlier to obtain the correct frequency. In both cases you can also choose to tune directly to Approach and contact them to advise of your landing intentions.

The correct Approach frequency can be found quite easily if you're using our PF3 Display utility, otherwise you would be best to contact Radar Control and then hit Hotkey #1 to trigger the handoff.

Whilst it may sound a little complicated, it really isn't. The whole idea of VFR FF is to allow you to fly wherever you want and explore the area, then, when you eventually decide you want to land you only have to hit a couple of keys to be handed off to Approach.

**Please note:** *As of version 3.10.50 VFR flight procedures, when flying in the US (FAA regions), has been changed as we've been informed that 'Radar Control' or a 'Named Radar Control' is not correct for the US and you would normally be in contact with Tracon (Departure/Approach).*

*However, since this issue has not been raised before I have decided NOT to make these changes the default nor are they obligatory. There is a new option now on the Advanced Options and Tweaks page, under the MISC tab, named 'No Radar Control in US'. If you select this option you will no longer be able to contact or be handed off to our (new to 3.10) Radar Control facilities. Instead you will be in contact with various Approach facilities during your VFR flight. When nearing your destination, or during a VFR FF flight when you use Hotkey #1, you will be handed off to Approach on a different frequency in readiness for landing. If you don't select this option then your VFR flights will continue as they do now and PF3 will use the 'Named' Radar Control facilities as it does now for both CAA and FAA regions.*

### 8.21 Local Transition Altitudes

The way local transition altitudes (TA's) are handled has changed in this latest release. If you have set a local TA for your departure airport, it will change to the region's TA at a distance of 30 miles from the airport, unless you are flying a SID that is still active at that time in which case airport TA will remain in effect until you complete your SID.

Destination airport TA is currently used once you reach the last waypoint and that process will remain unchanged.

### 8.22 Failing to Contact the next ATC Facility

In the busy world of the flight deck you may sometimes find yourself forgetting to check-in with the next ATC facility when handed off. In previous versions of **PF3** if you failed to contact the next Control Center your VCP (regardless of which mode you have selected) would tune to the correct frequency and make the initial call after a lapse of 3 minutes.

## PF3 User Guide

---

This feature now works with Departure, Control Center and Approach, with a slight change to what happens.

If you don't check-in to one of these facilities when instructed to do so, after a lapse of 1 minute one of the following will occur.

**(a)** if you haven't actually tuned to the new facility you will hear

'Callsign, contact 'facility name' on 123.45'

**(b)** if you tuned to the correct facility but just not actually 'checked-in' you will hear

'Traffic at 'altitude' squawking 4567 contact 'facility name' on 123.45'

The same scenario will repeat after another minute (total lapsed time 2 minutes). Then, after a further 60 seconds (total time 3 minutes) your VCP will tune to the correct facility and make contact with ATC, regardless of whether you have the VCP mode on or off.

## 9. SOME ATC INSTRUCTIONS

Here are some ATC instructions you may hear from time to time and what they mean and what is expected of you if/when you receive them.

### 9.1 Descending from TOD at Pilot's Discretion

ATC may give these descend instruction when reaching your TOD:-

*'Call-sign descend to xxxx at pilots discretion'*

*or*

*'Call-sign, when ready descend flight level xxx'*

This means you do NOT have to commence your descent immediately and may do so at YOUR discretion. This additional feature will hopefully be useful to those users who prefer to use their FMC's and have them programmed to commence their descent from a certain position. However, as in the real world, ATC may require you to descend earlier or later than you might be hoping for, in which case you should comply.

### 9.2 Variable Take-off Instructions

With **PF3** you may well be given a different takeoff instruction other than always being told to 'fly runway heading'. At times you may be given another heading to fly by Tower when you're cleared for takeoff... so listen carefully.

### 9.3 New Calls from Tower after landing

In **PF3**, after landing, you will be advised to '*contact ground when clear of the active*' and you will also be told which way to turn off the runway (*left/right*) dependant on where the gate is to which you will eventually be instructed to taxi to. So the call will go something like this:-

*'Easy two one one, exit right at next available taxiway, contact ground when clear of the active'.*

**PF3** will also try and determine that when you are actually clear of the runway... this includes your tail section too, so please ensure you clear the runway otherwise you will not be handed over to Ground control.

### 9.4 Entering a Holding Pattern

If you have a Hold selected for your flight plan this is the call you can expect from ATC as you approach the holding point:-

*"Easy 4, enter the hold at Bravo India Golf, descend to 6000, reduce speed to 220, expect clearance in fifteen"*

or it could be like this:-



*"Easy 4, at Bravo India Golf enter the hold, descend to 6000, reduce speed to 220, expect clearance in fifteen"*

You should receive this call as you're nearing the holding waypoint (usually within 10 miles of it) and you will obviously be expected to enter the hold at that point.

So what exactly do you have to do at this holding point. Well basically you just have to hang around until ATC clear you to continue. For those that know what they're doing they will have checked their charts and will fly a correct holding pattern. For those that don't know what they're doing they will probably zig zag about in the proximity of the holding point and hope for the best.

At the very least this is what you should do if you don't know what you're doing. Continue flying toward the next waypoint (the holding point) and as you reach it turn 180 degrees so you are now flying away from it. Keep that course for approximately 2 minutes then turn 180 degrees again to fly back toward the holding point. Just keep doing that till ATC clear you from the hold.

BUT, and there's always a BUT, there is one other thing you can do to make life even easier, albeit not the correct way. Provided you have your VCP mode set to 3 then your trusty co-pilot will fly the hold for you via the auto pilot and you can just sit back and watch the scenery.

If you really would like to know how to do it the correct way I would guess you could find such information online but for now that is about the extent of my knowledge.

At some point (hopefully) ATC will clear you from the hold and set you on your way. The call you hear will be something like this:-

*"Easy 4, at Bravo India Golf resume own navigation, cleared to Echo Golf Sierra Sierra"*

So what does this mean? Well, when you get to the holding point (*and when you get this call you should already be heading toward it anyway*) you should resume your own navigation, which means follow the remaining part of your flight plan and that you are in fact cleared to the next waypoint or perhaps that's your destination airport.

### 9.5 Requesting 'Direct to...'

With **PF3** you can request ATC to approve a 'direct to' any waypoint in your flight plan. This feature is activated using the same hotkey as you use to toggle ground AI traffic detection on/off (the default key being C\S\D). However, the original function of this hotkey is only available whilst your aircraft is on the ground... once airborne this key is then used to request a 'Direct To' waypoint.

Hitting this key during your flight will not display the next waypoint in your flight plan, as you should already be heading toward that one <G>, but the

## PF3 User Guide

---

one following the next one. The message window display will also prompt you to select 'Y' (C\S\Y) or 'N' (C\S\N).

If you choose No then the next waypoint in your flight plan, following the one you just discarded, will be displayed with the same options.

Choosing yes you will hear "*Call sign requesting direct to XXX*" and ATC will reply accordingly.

### **This feature is subject to a few conditions...**

1. It is only available whilst you're airborne
2. It is only available until you're actually on route to the last waypoint in your flight plan
3. It is not available until after you receive your final vector from Departure and a '*Resume own navigation*'
4. It is not available during Oceanic procedures

## 10. DECLARING AN EMERGENCY

### 10.1 Overview

When processing the loaded flight plan **PF3** will determine airports along your route, that meet the same criteria as you may have setup in the **PF3** Presets section, to ensure ATC will always know the closest airport to you as you progress through your flight plan.

During an emergency you will not be expected to choose an airport from a display list, because you will probably have more things to be worrying about, so ATC will handle that for you. All you really need to concentrate on is flying the aircraft, whilst your VCP (*if configured*) could handle all radio communication.

### 10.2 Mayday

**PF3** "Pan, Pan, Pan" and all emergencies are declared as "Mayday"

To declare an emergency you just have to use the default hotkey sequence **Ctrl + Shift + E**

You will hear your call:-

*"Mayday, mayday, mayday, Easy 4 cannot make final destination, request landing clearance"*

If you are more than halfway to your destination the response from ATC will be:-

*"Easy 4, squawk 7700"*

Shortly after ATC will give you the following instructions:-

*"Easy 4, descend and maintain xxxx. The airport is ABC, nn miles, headin nnn. Tower/Unicom frequency is 123.45"*

If you are less than halfway to your original destination ATC will respond:-

*"Easy 4, squawk 7700, can you make it back to your destination airport?"*

At this point you will see the following message displayed in whatever message window you are using:-

*"C/S/Y for Yes - C/S/N for No"*

You give the appropriate response by using the relevant default hotkey sequence Ctrl+Shift+Y or Ctrl+Shift+N

## PF3 User Guide

---

After this ATC will respond with the following:-

*"Easy 4, descend and maintain xxxx. The airport is ABC, nn miles, heading nnn. Tower/Unicom frequency is 123.45"*

Once nearing the assigned airport you should contact Tower and they will reply:-

*"Easy 4, cleared to land, runway at pilot's discretion"*

*What this means is you are cleared to land on whatever runway you think you can safely land*

## 11. OCEANIC PROCEDURES

### 11.1 About

Regular VHF COM Frequencies are only usable while line of sight. Over the ocean aircraft will lose line of sight from the coast quickly and have to move over to HF frequencies which do not have a line of sight limitation. HF radio bounces off of the ionosphere therefore the only limitation on the distance that an HF can travel is in the power of the radio transmitter. Therefore, once out of line of site from any of the oceanic FIR's HF is only used.

To couple that limitation, radar is also line of sight only. Once the aircraft is out of line of site positive control ATC is no longer possible, therefore there is no ATC over the Atlantic or Pacific flight routes. To ensure that traffic is managed properly NATs and PATs are used to ensure that traffic is managed by direction and altitude. However, each aircraft is responsible for maintaining vertical and horizontal separation and advising the Oceanic FIR on their position at regular intervals via HF.

HF radio is very noisy with white-noise always audible in the background and will drive everyone crazy if they had to listen to that noise for countless hours on end. The pilot can squelch the noise but in the same token will silence the voice also so that neither voice nor noise will be heard. Enter SELCAL.

SELCAL is a 4 letter code (two pairs) identifier that is slaved to every single SELCAL equipped aircraft and the code stays the same until the aircraft is sold and a new SELCAL code is acquired. Embedded in the SELCAL code is the aircraft's registration and airline. SELCAL is directly connected to the aircraft's HF radio and will turn down the squelch on the pilot's radio and allow oceanic radio to contact the pilot directly. Since each aircraft will have a different SELCAL code, the communication is heard by the targeted aircraft ONLY and other aircraft will NOT hear the communication... therefore there is very little radio chatter over the oceans.

### 11.2 Oceanic COM Procedures

SELCAL and HF is only used with the Oceanic FIRs. For instance on an aircraft flying a typical NAT from KJFK to EGKK will use SELCAL and HF procedures with Gander Radio and Shanwick Radio. As a rule, all of the FIRs with an "Oceanic" suffix are "radio" and it is a safe bet that they use HF and SELCAL because they are out of line of sight and control only oceanic flights. So, for instance, Gander Center will instruct the aircraft to contact Gander Radio on HF radio frequency on xxxx.x or xxxxx.x

Once contact is made with Oceanic, make contact with airline call sign, SELCAL code (i.e. AB-CD), Departure, Destination and registration number. Oceanic will then read back and roger and then give the HF frequencies for the route of flight which is typically a NAT or PAT. Oceanic will NOT hand off

## PF3 User Guide

---

the aircraft as done over land therefore the pilot is responsible for changing frequencies and advising the previous Oceanic that they are moving on.

During the time between changing frequencies, aircraft MUST contact Oceanic during the following:

1 - Crossing a waypoint:

So it should sound like this

- Continental 50 Gander Radio, position report.  
(series of beeps)
  - Gander Radio Continental 50 go ahead
  - Gander Radio Continental 50 at 20 North 30 West, FL 350, speed mach .83, expect 50 North 30 West at 2351Z, 50 North 40 West next.  
(series of beeps)
  - Continental 50 Gander Radio (reads back), roger.
- 2 - If over 45 minutes since last contact and have not reached next waypoint.  
3 - Changing flight level  
4 - Deviating from flight path

This will all continue all the way across the pond until hitting Shanwick Radio, where normal ATC will resume.

## 12. DEFAULT HOTKEY DETAILS

### 12.1 How to use Hotkeys

The following default hotkeys are used to interact with **PF3**

Please remember you have to use **Ctrl+Shift** with each hotkey with the exception of **0** thru **9**, the **PTT** key and the **H** and **L** keys, as these only require a single key press.

Eg. For Virtual C-Pilot mode use **Ctrl+Shift+V** but for initial check-in with ATC you only need to use the **ZERO** key.

### 12.2 Hotkey Functionality Explained

#### 12.2.1 Hotkey Ctrl + Shift + E

Use this key to declare an emergency during your flight. ATC will then direct you to the nearest emergency airport if you can't make it back to your departure airport.

This procedure will also require you to use the C\S\Y and/or C\S\N hotkeys (*explained later in this section*) to answer certain questions from ATC

Please see section 10. for full details on declaring an emergency.

#### 12.2.2 Hotkey Ctrl + Shift + =

You would use this key to ask ATC to '*Say Again*' should you ever need them to repeat their last instruction to you.

#### 12.2.3 Hotkey Ctrl + Shift + \

This key is used to '*Roger/Readback*' a call from ATC.

This is the backslash key which you will find at the lower left of a UK keyboard. If you have any problems using this key, as it does tend to cause problems on *some* keyboards you can easily change the default setting to something else you may prefer.

Please see section 7.1.14 for full details regarding changing the hotkey defaults

#### 12.2.4 Hotkey Ctrl + Shift + C

This hotkey is used to toggle **PF3's** Closed Caption mode ON/OFF and can be used at any time once you have connected to your flight sim

### 12.2.5 Hotkey Ctrl + Shift + D

This is a multi-functional hotkey, dependant on the current mode of your flight.

Whilst on the ground this will toggle **PF3's** AI ground traffic detection on/off. It's ON by default but if you ever find yourself in the situation where **PF3** believes there is an aircraft in front of you, and therefore will not clear you for takeoff, you can use this keying sequence to clear your way.

Once airborne this hotkey is used to request a 'Direct to....' a particular waypoint in your flight plan.

Please see section 9.5 for full details on requesting '*Direct to...*'

### 12.2.6 Hotkey Ctrl + Shift + V

This hotkey is used to change the current Virtual Co-pilot mode during your flight. Each time you use the key the VCP mode will change and a brief message will be shown in the FS message window (or whatever message window system you may be using) to show you which mode you have just switched to.

For details regarding the actual VCP modes available and their usage please see section 7.1.4

### 12.2.7 Hotkey Ctrl + Shift + W

This is a multi-functional hotkey dependant on the current mode of your flight.

When TGS is active (during your taxi to/from) the runway this hotkey provides the means to *skip* the next taxi waypoint. This was primarily provided for those rare occasions where you may find your first or subsequent taxi waypoints are behind you. Use of this hotkey alleviates the problem of having to do a 180 degree turn at the start of your taxi.

At your departure airport, after ATC has told you which runway to taxi to, you can use this hotkey to *request* another runway.

During the approach to your destination airport, immediately after ATC has told you which runway to expect for landing, you can use this hotkey to *request* an alternative runway.

During your flight this hotkey can be used to *Warp* your aircraft to any waypoint in your flight plan. This is useful for those times when you don't want to fly a long haul trip in real time.



### 12.2.8 Hotkey 'H'

This key is used to request a higher altitude during your flight.

Press and hold the **H** key then press and release one of the top row numeric keys (1 thru 9) to request a higher altitude. So if you are currently cruising at 25,000' and wish to climb to 30,000' you would press and hold down the **H** key then press and release the number **5** key (top row) to request 30,000' (eg.  $25,000' + 5 * 1,000' = 30,000'$ )

### 12.2.9 Hotkey 'L'

This key is used to request a lower altitude during your flight.

Press and hold the **L** key then press and release one of the top row numeric keys (1 thru 9) to request a lower altitude. So if you are currently cruising at 25,000' and wish to descend to 22,000' you would press and hold down the **L** key then press and release the number **3** key (top row) to request 22,000' (eg.  $25,000 - 3 * 1,000' = 22,000'$ )

### 12.2.10 Hotkey Ctrl + Shift + Y

Indicates 'Yes' or 'Affirmative'

This key is used whenever you need to answer an ATC question or to confirm you wish to choose a particular selection displayed in the FS message window (or whatever message window system you may be using)

### 12.2.11 Hotkey Ctrl + Shift + N

Indicates 'No' or 'Negative'

This key is used whenever you need to answer an ATC question or to confirm you do not wish to choose a particular selection displayed in the FS message window (or whatever message window system you may be using)

### 12.2.12 Hotkey ESC

This key is used as your PTT (press to talk) switch when using a Voice Recognition program alongside **PF3**. Basically it initiates a user configurable number of seconds delay during which time you can talk to ATC without **PF3** interrupting.

### 12.2.13 Hotkey Ctrl+Shift+T

New to **PF3** version 3.10 this key is used to toggle the new In-Sim Hotkey display window between *Current Hotkeys/Global Hotkeys/Off*

### 12.2.14 Hotkey '0' (zero)

A multifunctional key dependant on the ATC facility you're tuned to:-

#### **Clearance**

Used for initial check-in and to request clearances

#### **Ground**

Used for initial check-in and when you're ready to taxi

#### **Tower**

Used for initial check-in and when you're ready to taxi if there are no Ground facilities at your airport.

#### **Departure**

Used to initially check-in or if flying VFR to request Flight Following

#### **Center**

Used to initially check-in or if flying VFR to request Flight Following

#### **Approach**

Used to initially check-in or if flying VFR to request Flight Following

#### **FSS**

Used to request they Open your flight plan

#### **Multicom**

used for initial check-in (not on the ground)

#### **Unicom**

Used for initial check-in (not on the ground)

### 12.2.15 Hotkey '1'

A multifunctional key dependant on the ATC facility you're tuned to:-

#### **Ground**

If tuned to Ground Control **and** TGS is active this hotkey is used to turn TGS off. Also, should you hit this key accidentally you may hit it again to toggle TGS back on again, although if mid-way through your taxi you would then have to use the Ctrl+Shift+W hotkey to skip those taxi waypoints you have already passed because TGS will not play *catch up*.

#### **Tower**

If tuned to Tower, during the approach phase of your flight, this key is used to initially check-in with the Tower controller for permission to land.

#### **Control/Center and Approach**

If tuned to Control Center or Approach this key is used to request a '*Cleared to Finals...*' approach. If accepted then ATC will *Clear you to Finals on Pilot's*

*discretion* which means you should now fly direct to the FAF and then make contact with Tower once you are established on the ILS.

### **FSS**

When tuned to an FSS frequency this hotkey is used to request they Close your flight plan

### **Radar**

When tuned to Radar Control this hotkey triggers handoff to Approach.

## **12.2.16 Hotkey '2'**

A multifunctional key dependant on the ATC facility you're tuned to:-

### **Clearance**

Use of this key sends an automatic request for an ACARS ATIS report for your destination airport.

### **Ground**

Use of this key sends an automatic request for an ACARS ATIS report for your destination airport.

### **Tower**

Used to Report Downwind

### **Departure**

Use of this key sends an automatic request for an ACARS ATIS report for your destination airport.

### **Center**

Use of this key sends an automatic request for an ACARS ATIS report for your destination airport.

### **Approach**

Request an instrument approach

### **FSS**

Used to extend your ETA by 30 minutes

### **Multicom**

Used to announce entering Downwind

### **Unicom**

Used to announce entering Downwind

### 12.2.17 Hotkey '3'

A multifunctional key dependant on the ATC facility you're tuned to:-

**Tower**

Used to report turning Base

**Departure**

Request lower altitude due to clouds

**Center**

Request lower altitude due to clouds

**Approach**

Request lower altitude due to clouds

**FSS**

Used to request weather advisories

**Multicom**

Used to announce turning Base

**Unicom**

Used to announce turning Base

### 12.2.18 Hotkey '4'

A multifunctional key dependant on which ATC facility you're tuned to:-

**Tower**

Used to report turning to Finals

**Departure**

Used to request a higher altitude due to clouds

**Center**

Used to request a higher altitude due to clouds

**Approach**

Used to request a higher altitude due to clouds

**FSS**

Used to request the control center's frequency

**Multicom**

Used to announce turning to Finals

**Unicom**

Used to announce turning to Finals

### 12.2.19 Hotkey '5'

A multifunctional key dependant on the ATC facility you're tuned to:-

**Ground**

Used to announce you are clear of the runway and request taxi instructions

**Tower**

Used to request the option (touch 'n' go)

**Departure**

Used to request a lower altitude due to turbulence

**Approach**

Used to request a lower altitude due to turbulence

**Multicom**

Used to announce you are clear of the runway

**Unicom**

Used to announce you are clear of the runway

**FSS**

Used to request the Local Radar Control Frequency

### 12.2.20 Hotkey '6'

A multifunctional key dependant on the ATC facility you're tuned to:-

**Ground**

Used to request a radio check

**Tower**

Used to initially check in with Tower and request permission to takeoff

**Departure**

Used to request a higher altitude due to turbulence

**Center**

Used to request a higher altitude due to turbulence

**Approach**

Used to request a higher altitude due to turbulence

**FSS**

Used to toggle your flight plan IFR/VFR

**Multicom**

Used to announce you are taking the runway

**Unicom**

Used to announce you are taking the runway

### 12.2.21 Hotkey '7'

A multifunctional key dependant on the ATC facility you're tuned to:-

#### **Ground**

Used to request the altimeter setting

#### **Tower**

Used to request field advisories

#### **Departure**

Used to request vectors

#### **Center**

Used to request vectors

#### **Approach**

Used to request vectors

#### **FSS**

Used to request airport advisories

#### **Unicom**

Used to request field advisories

### 12.2.22 Hotkey '8'

A multifunctional key dependant on the ATC facility you're tuned to:-

#### **Ground**

Used to toggle the Auto Taxi speed function (only when TGS is active)

#### **Tower**

Used to report you are diverting to your alternate airport or pressed a second time would cancel the diversion and revert to you landing at your original destination.

#### **Center**

Used to report you're diverting to your alternate airport or pressed a second time would cancel the diversion and revert to you landing at your original destination. This key is also used to report airport in sight when relevant.

#### **Approach**

Used to report the airport is in sight

#### **FSS**

Used to amend your flight plan to land at the next available airport

**Multicom**

Used to announce you are leaving the area

**Unicom**

Used to announce you are departing the area

### 12.2.23 Hotkey '9'

This is a multifunctional key dependant on the ATC control facility you are currently tuned to:-

**Tower**

Used to report a go-around/missed approach

**Departure**

Used to report your position

**Center**

Used to report your position

**Approach**

Used to report your position

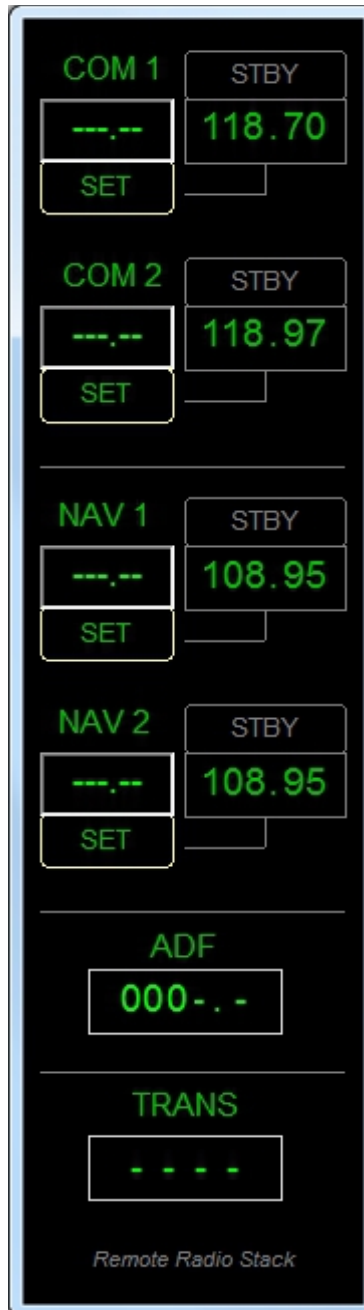
**FSS**

Used to report your position

## 13. REMOTE RADIO STACK PROGRAM

### 13.1 Overview

This program has nothing to do with **PF3** and can even be used if **PF3** is not running. The idea for this came about when I expanded my flight sim system by adding a TripleHead2Go, Project Magenta Software and several monitors. I then found a need to be able to easily view/change my radios.





## PF3 User Guide

---

The Remote Radio Stack program is supplied FREE with **PF3** and can be found in your **PF3\PF3\_Displayer** folder. It can be installed on any pc and was designed to be run on a client PC running the WideClient application from WideFS.

Installation is simply copying the **RemoteRadioStack.exe** file to wherever you wish to use it.

Just install It and run it... that's it!

## 14. REMOTE TEXT PROGRAM

### 14.1 General

This FREE utility comes with **PF3** and you will find it in your  
... \PF3\PF3\_Displayer folder.

This program is very much like the utility called *Show Text* by *Rob van der Wiele*. However, developing our own utility allows us to add whatever features we want and tailor it specifically for use with **PF3**. So, you will find RemoteText has some additional **PF3** specific added features.

RemoteText can only be used with **PF3**.

### 14.2 Installation

RemoteText can be installed on any PC which is on the same Network as **PF3**. It does not require WideFS/WideClient. When you first run the program it will ask you to enter the name or the IP address of the PC where **PF3** is installed.

To ensure RemoteText functions correctly you will also have to turn **Closed Captions ON** in the main Options #1 page of **PF3**.

Also, you need to activate RemoteText in **PF3**. To do this please see section 7.1.25

That's it!

### 14.3 Features

Here's a few of the available features. The main noticeable change is there is no limit to the amount of text (*within reason*) you can have displayed., unlike *Show Text* which was limited to the FSUIPC buffer of about 128 characters, which is why long messages (*or ATIS*) had to be displayed on two or more cycles.

With RemoteText you can:-

- Move and resize the window in the normal way
- Use Shift + arrow keys for minor movement
- Use Ctrl+Arrow keys for minor resizing
- You can change the main font
- You can change the text colour and background colour
- You can toggle the window border off/on
- You can add highlighted text/background colours which are displayed only when ATC are talking to you
- You can show all ATC COMs or only show ATC COMs between you and ATC

## PF3 User Guide

---

- You can choose to suppress your COMs and only show ATC COMs.

For instance, you may decide you don't want to see closed caption text from ATC when they are talking to other aircraft, or you may decide to see all ATC chatter but then have the display suddenly change from green on black to yellow on red to signify the message is for you (*so pay attention*).

Other options allow you to select that the last message from ATC to you remains on the display until removed by another message. You can also configure how many seconds to allow any other messages to remain displayed.

Obviously this utility is only of use to those running more than one PC although it could be used on a second monitor connected to your FS PC.

New to 3.8 – PF3 now supports the use of two instances of RemoteText on the same network. All you need to do is ensure each instance uses it's own unique Socket Port Number. This is configured in the Advanced Options and INI File Tweaks. Please see section 7.1.25 Advanced Options and INI File Tweaks for more details on configuring RemoteText

## 15. TGS GAUGE REPLACEMENT PROGRAM

### 15.1 Overview

Personally I have always found the original TGS Gauge a little temperamental, whilst others use it extensively without issue... *enter the standalone TGS Display.*

### 15.2 The Program

The TGS Display is ideally suited when running more than one pc or multiple monitors. It is a stand-alone program and therefore can be run on any pc provided you have WideFS/WideClient installed if running on a client.

It does not have to run on the same PC as FS nor **PF3**.... it is stand-alone!

The display can be resized to suit your own particular requirements and mine sits nicely beside the Project Magenta MCP on a client pc.

Install it wherever you want.

You'll find this new program in the TGS\_Gauge folder after installing **PF3** and is named TGS\_Display.exe

Oh yes, this display shows a little more than our original gauge.



Above the little aircraft symbol is the name of the taxiway you are actually on or about to turn onto. Also you can configure the display to show when you're braking or have the parking brakes on... rather than the annoying red/white signs displayed in FS. To use this feature, after you've run the TGS Display at least once, open the TGS\_Display.INI file and add...

**ShowBrakes=1**

## PF3 User Guide

---

...to the **[CONFIG]** section. Once configured you will see BR for Brakes and PB for Parking Brakes displayed at the top left/right of the display when brakes are applied. There are of course files available for download which enable you to turn the FS message for brakes off.

Just beneath the aircraft symbol is the name of the last taxiway you taxied along.

That's it, you don't have to do anything else, other than remove the TGS gauge from your panel.cfg files should you decide to use this replacement.

**PF3** is configured to interact with TGS in exactly the same way as it did for the original TGS gauge. This is basically a replacement so nothing else changes.

For fine tuning the position and size of the TGS Display you can use Shift + Arrow Keys to move it and Ctrl + Arrow Keys to resize it.

## 16. PF3 DISPLAY UTILITY PROGRAM

### 16.1 General

This little program will display all the relevant **PF3** hotkey commands dependant on which ATC facility you are currently tuned to (eg. Ground, Tower, etc). The utility will probably be more useful to those users running more than one pc or multiple monitors, but it can also be used on a single pc running FS/PF3, but if you're running FS in full screen mode you won't see it!

The display utility will be found in your `... \PF3 \PF3_Display` folder. Inside this new folder you will see two files. One named **PF3\_Display.exe** and one named **PF3\_Dispatch.dat**

To run PF3\_Display simply *double-click* on it.

You may run this utility from any client PC and you don't need WideFS to do so now in **PF3** version 3.10. When first running it you will be asked to enter the IP Address or Computer name of the PC where **PF3** will be running. If you're unsure about IP Addresses or indeed how to find the name of your PC then all is not lost. If you go to your PF3 folder you should find a small text file named ComputerName.txt. Open it with Notepad and you'll see the name of your computer. Enter that when prompted by PF3 and bingo, everything should now work. You can run it from any folder provided you copy the PF3\_Dispatch.dat file over with the main PF3\_Display.exe program.

One small point that needs mentioning for those running this application and/or **PF3** on a client machine:-

**PF3** needs to create one folder under the main FS folder named **PF3\_Display**, into which it will write a small text file when connected to flight simulator. This file (named **PF3\_Freqs.dat**) contains various facility frequency information used by the **PF3 Display** program. Consequently, if running **PF3** and/or the **PF3 Display** utility they will need access to the main flight simulator folder. Therefore your FS folder requires sharing and also the option to 'Allow network users to change my files' must be turned ON.

MSFS user may find it difficult finding the folder where the PF3\_Display folder needs to be written... on my system it's written to the following:-

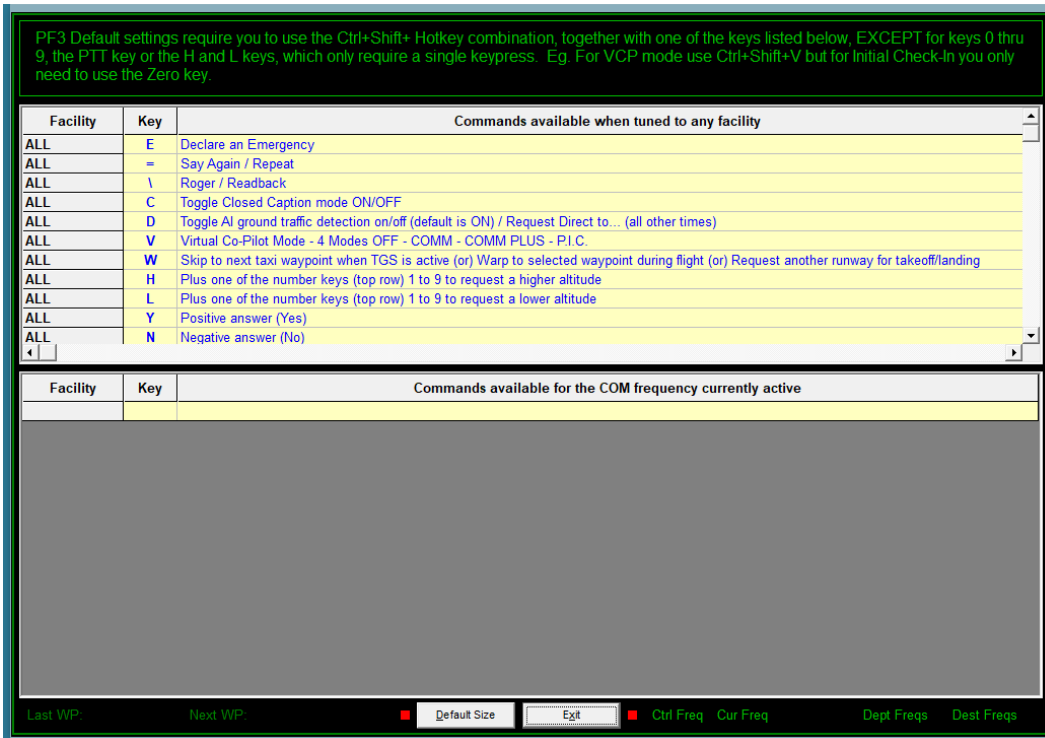
[D:\WpSystem\S-1-5-21-2506635614-967523915-2006091698-1003\AppData\Local\Packages\Microsoft.FlightSimulator\\_8wekyb3d8bbwe\LocalCache\Packages\PF3\\_display](D:\WpSystem\S-1-5-21-2506635614-967523915-2006091698-1003\AppData\Local\Packages\Microsoft.FlightSimulator_8wekyb3d8bbwe\LocalCache\Packages\PF3_display)

# PF3 User Guide

## 16.2 The Program

After you run it you should see the following:-

As you can see the main screen is split into two main sections. The top half shows those general keys which remain unchanged throughout your flight, whereas the lower section is reserved for those hotkeys that changed dependant on the facility you are currently tuned to. In the example below you will notice two small red lights, one either side of the 'exit' button, these indicate that the PF3\_Display program has not yet made a connection with **PF3**.



## PF3 User Guide

Once **PF3** is running and has actually 'connected' to your flight simulator these indicator lights will turn green.

PF3 Default settings require you to use the Ctrl+Shift+ Hotkey combination, together with one of the keys listed below, EXCEPT for keys 0 thru 9, the PTT key or the H and L keys, which only require a single keypress. Eg. For VCP mode use Ctrl+Shift+V but for Initial Check-In you only need to use the Zero key.

Facility	Key	Commands available when tuned to any facility
ALL	E	Declare an Emergency
ALL	=	Say Again / Repeat
ALL	\	Roger / Readback
ALL	C	Toggle Closed Caption mode ON/OFF
ALL	D	Toggle AI ground traffic detection on/off (default is ON) / Request Direct to... (all other times)
ALL	V	Virtual Co-Pilot Mode - 4 Modes OFF - COMM - COMM PLUS - P.I.C.
ALL	W	Skip to next taxi waypoint when TGS is active (or) Warp to selected waypoint during flight (or) Request another runway for takeoff/landing
ALL	H	Plus one of the number keys (top row) 1 to 9 to request a higher altitude
ALL	L	Plus one of the number keys (top row) 1 to 9 to request a lower altitude
ALL	Y	Positive answer (Yes)
ALL	N	Negative answer (No)

Facility	Key	Commands available for the COM frequency currently active
----------	-----	---

Last WP:      Next WP:       Default Size       Ext       Ctrl Freq      Cur Freq 122.95      Dept Freqs      Dest Freqs



## PF3 User Guide

The next change you will notice is when you tune the FS COM radio to an active ATC facility. In the following example we've tuned to Ground Control:-

PF3 Default settings require you to use the Ctrl+Shift+ Hotkey combination, together with one of the keys listed below, EXCEPT for keys 0 thru 9, the PTT key or the H and L keys, which only require a single keypress. Eg. For VCP mode use Ctrl+Shift+V but for Initial Check-In you only need to use the Zero key

Facility	Key	Commands available when tuned to any facility
ALL	E	Declare an Emergency
ALL	=	Say Again / Repeat
ALL	\	Roger / Readback
ALL	C	Toggle Closed Caption mode ON/OFF
ALL	D	Toggle AI ground traffic detection on/off (default is ON) / Request Direct to... (all other times)
ALL	V	Virtual Co-Pilot Mode - 4 Modes OFF - COMM - COMM PLUS - P.I.C.
ALL	W	Skip to next taxi waypoint when TGS is active (or) Warp to selected waypoint during flight (or) Request another runway for takeoff/landing
ALL	H	Plus one of the number keys (top row) 1 to 9 to request a higher altitude
ALL	L	Plus one of the number keys (top row) 1 to 9 to request a lower altitude
ALL	Y	Positive answer (Yes)
ALL	N	Negative answer (No)

Facility	Key	Commands available for the COM frequency currently active
Ground	0	Initial Check-in... ready to TAXI to RUNWAY / Request to Continue Taxi
Ground	1	Deactivate/Reactivate toggle for TGS
Ground	2	Request ACARS ATIS for your destination
Ground	5	Clear of the runway... request TAXI to TERMINAL
Ground	6	Request Radio Check
Ground	7	Request Altimeter Setting
Ground	8	Toggle Auto Taxi Speed On/Off when TGS is active

Last WP    Next WP    Default Size    Exit    Ctrl Freq    Grd Freq    121.72    Dept Freqs    Dest Freqs

As you can see the lower section of the display now shows those keys which are active when tuned to Ground control and what each of them is used for.

For contacting Ground control there are 7 active **PF3** hotkeys. When you tune to other ATC facilities this will change accordingly.

At the bottom of the display you will see some additional data:-

When you first start the program (*and PF3*) there will be no additional data next to each of the labels. However, as your flight progresses so will the information displayed in this area.

**Last WP** – will show the ICAO of the last waypoint in your flight plan

**Next WP** – will show the next waypoint in your flight plan

**Ctrl Freq** – selecting this label (left or right click) will popup a window showing all the Control Center frequencies you will be handed off as your flight progresses (assuming IFR). If you click inside this popup window the display will toggle between showing Control Center frequencies and Radar Control frequencies, the later being used for VFR flight (much more about those later)

**nnn Freq** - will show the frequency for the facility you are either currently tuned to or should be tuned to and the label name (nnn) will change accordingly. eg. Twr Freq, Grd Freq, etc.

**Dept Freq** – Nothing is actually displayed against this label at anytime during your flight. However, if you *right-click* or *left-click* on the label you will be presented with a small popup window showing all the relevant frequencies for your departure airport.

**Dest Freq** – Nothing is actually displayed against this label at anytime during your flight. However, if you *right-click* or *left-click* on the label you will be presented with a small popup window showing all the relevant frequencies for your destination airport.

### 16.3 Customising the Data File

If you have chosen to change any of your **PF3** default hotkeys for different keying sequences you will notice that the **PF3** display utility does not reflect those changes. However, it is fairly simply to change this display by editing the **PF3\_Disp.dat** file.

The default content of this file is shown in section 16.3.2 below

#### 16.3.1 Changing the Data file

Let's imagine you have changed the default hotkey #1 to use the Z. I know, I know, highly unlikely, but this is just an example to show you what to change in the file and what not to change.

For all those places where the hotkey #1 is shown (i.e. all facilities except Clearance) you would need to change the '1' to a 'Z'

The line → Ground,**1**,Deactivate/Reactivate toggle for TGS

Would become → Ground,**Z**,Deactivate/Reactivate toggle for TGS

The line → FSS,**1**,Request to Close Flight Plan

Would become → FSS,**Z**,Request to Close Flight Plan

..and so on.

Remember, if you add the wrong character it will make no difference to **PF3**, this is purely for display purposes only and nothing else.

#### **Important Note:**

There are two comma characters on each of the (facility) data lines within this file and they must NOT be removed or moved. They delimit the hotkey from the facility name and hotkey description.

If you change the hotkey usage do NOT... and I repeat **DO NOT** include **any** comma characters within the description. If you do the **PF3** Display utility will simply not work, as it will not be able to read the data file correctly.

### 16.3.2 Data File Content (default)

Please Note: Do NOT change anything marked in **RED**

**Header:**PF3 Default settings require you to use the Ctrl+Shift+ Hotkey combination, together with one of the keys listed below, EXCEPT for keys 0 thru 9, the PTT key or the H and L keys, which only require a single keypress. Eg. For VCP mode use Ctrl+Shift+V but for Initial Check-In you only need to use the Zero key.

ALL,E,Declare an Emergency

ALL,=,Say Again / Repeat

ALL,\,Roger / Readback

ALL,C,Toggle Closed Caption mode ON/OFF

ALL,D,Toggle AI ground traffic detection on/off (default is ON) / Request Direct to... (all other times)

ALL,V,Virtual Co-Pilot Mode - 4 Modes OFF - COMM - COMM PLUS - P.I.C.

ALL,W,Skip to next taxi waypoint when TGS is active (or) Warp to selected waypoint during flight (or) Request another runway for takeoff/landing

ALL,H,Plus one of the number keys (top row) 1 to 9 to request a higher altitude

ALL,L,Plus one of the number keys (top row) 1 to 9 to request a lower altitude

ALL,Y,Positive answer (Yes)

ALL,N,Negative answer (No)

ALL,ESC,This is your PTT switch, used to initiate a pause in PF3 when using Voice Recognition

ALL,T,Toggle the Hotkeys window between Active Hotkeys/Global Hotkeys/Off

Clearance,0,Initial Check-in... request CLEARANCE

Clearance,2,Request ACARS ATIS for your destination

Clearance,3,Request ACARS Local Frequencies

Ground,0,Initial Check-in... ready to TAXI to RUNWAY / Request to Continue Taxi

Ground,1,Deactivate/Reactivate toggle for TGS

Ground,2,Request ACARS ATIS for your destination

Ground,3,Request ACARS Local Frequencies

Ground,5,Clear of the runway... request TAXI to TERMINAL

Ground,6,Request Radio Check

Ground,7,Request Altimeter Setting

Ground,8,Toggle Auto Taxi Speed On/Off when TGS is active

FSS,0,Request to Open Flight Plan / Obtain IFR clearance from uncontrolled airport

FSS,1,Request to Close Flight Plan

## PF3 User Guide

---

FSS,2,Extend ETA by 30 minutes  
FSS,3,Request Weather Advisories  
FSS,4,Request Departure or Center Frequency  
FSS,5,Request Local Radar Control Frequency  
FSS,6,Change Flight Plan to IFR/VFR (toggle)  
FSS,7,Request Airport Advisories  
FSS,8,Amend Flight Plan to land at next available airport  
FSS,9,Report Position

Multicom,0,Initial Check-in (in the air only)  
Multicom,2,Announce entering DOWNWIND  
Multicom,3,Announce turning BASE  
Multicom,4,Announce turning FINAL  
Multicom,5,Announce CLEAR of the RUNWAY  
Multicom,6,Announce TAKING the RUNWAY  
Multicom,8,Announce DEPARTING the AREA

Unicom,0,Initial Check-in (in the air only)  
Unicom,2,Announce entering DOWNWIND  
Unicom,3,Announce turning BASE  
Unicom,4,Announce turning FINAL  
Unicom,5,Announce CLEAR of the RUNWAY  
Unicom,6,Announce TAKING the RUNWAY  
Unicom,7,Request Field Advisories  
Unicom,8,Announce DEPARTING the AREA

Tower,0,Initial Check-in... ready to TAXI to RUNWAY / Request to continue taxi  
Tower,1,Initial Check-in for LANDING  
Tower,2,Report entering DOWNWIND  
Tower,3,Report turning BASE  
Tower,4,Report turning FINAL  
Tower,5,Request the Option (Touch 'n Go)/Clear of the runway... request Taxi to Terminal  
Tower,6,Initial Check-in... ready for TAKEOFF  
Tower,7,Request Field Advisories  
Tower,8,Report going to ALTERNATE Airport  
Tower,9,Report Go-Around/Missed-Approach  
Tower,W,Request other Runway  
Tower,N,Show another Runway  
Tower,Y,Accept that Runway

## PF3 User Guide

---

Departure,0,Initial Check-in (if VFR request Flight Following)

Departure,1,Request Cleared To Final At Pilot's Discretion/Trigger handoff to Approach (VFR Free Flight only)

Departure,2,Request ACARS ATIS for your destination

Departure,3,Request lower altitude due to clouds

Departure,4,Request higher altitude due to clouds

Departure,5,Request lower altitude due to turbulence

Departure,6,Request higher altitude due to turbulence

Departure,7,Request vectors

Departure,9,Report position

Center,0,Initial Check-in (if VFR request Flight Following) **\*\*\* Please note, this is the only key available during Oceanic Flights and is used for checking in and position reports**

Center,1,Request Cleared To Final At Pilot's Discretion

Center,2,Request ACARS ATIS for your destination

Center,3,Request lower altitude due to clouds

Center,4,Request higher altitude due to clouds

Center,5,Request lower altitude due to turbulence

Center,6,Request higher altitude due to turbulence

Center,7,Request vectors

Center,8,Toggle/Amend Flight Plan to land at Alternate/Origin (or) Report airport in sight

Center,9,Report position

Approach,0,Initial Check-in (if VFR request Flight Following)

Approach,1,Request Cleared To Final At Pilot's Discretion

Approach,2,Request an instrument approach

Approach,3,Request lower altitude due to clouds

Approach,4,Request higher altitude due to clouds

Approach,5,Request lower altitude due to turbulence

Approach,6,Request higher altitude due to turbulence

Approach,7,Request vectors

Approach,8,Report airport in sight

Approach,9,Report position

Radar,0,Initial Check-in (if VFR request Flight Following)

Radar,1,Trigger handoff to Approach (VFR Free Flight only)

Radar,2,Request ACARS ATIS for your destination

Radar,7,Request vectors

## PF3 User Guide

---

Radar,8,Amend Flight Plan to land at Alternate (or) Report airport in sight

Radar,9,Report position

-----DO NOT CHANGE OR INSERT ANYTHING BELOW THIS LINE-----

[Config]

Version=8

## 17. WHICH MESSAGE WINDOW TO USE?

### 17.1 What we recommend

To get the best possible message display from **PF3** we recommend you use our new In-Sim Captions window if using P3D or MSFS. For FS9 and FSX users we recommend our FREE **RemoteText** program, which is included in the **PF3** installation and installed in the PF3\_Displayer folder. However, this does ideally require it to be running on another PC or at the very least using a second monitor and we are aware that not all users would have such a setup.

### 17.2 Setting up RemoteText

Please see section 14 for full details regarding RemoteText.

### 17.3 Setting up the FSUIPC Message Window

If you only have the one PC, or simply don't wish to use RemoteText, please see the following instructions on setting up the FSUIPC message window as an alternative.

From your FS Add-ons menu select FSUIPC and then from the main FSUIPC display page.....

1. Select '*FSUIPC Multi-line Display Window*'.
2. Deselect '*Hide all Single line messages*'.
3. I also select the Misc. options tab and then select '*Scrolling message to be in white*' (but that's my own preference).

For more detailed information we recommend you check out the documentation included with FSUIPC.

## 18. USING VR SOFTWARE WITH PF3

### 18.1 Overview

There are no restrictions as to which Voice Recognition software you use with **PF3** and to the best of our knowledge there are no major compatibility issues with any of them.

### 18.2 Setting up PF3

This section is aimed directly at how you must setup **PF3** in order to use it alongside voice recognition software. We neither have the time or knowledge to describe how you should configure your VR program.

There are two methods you can use when using VR and each one requires a slight different setup.

#### 18.2.1 Using VR for all ATC communications

The first thing you need to do is go to the Main Menu Options #1 page and select '**None**' for the Pilot's voice. You will find further details on how to do this in section 7.1.3 which you may already have read.

Next you need to select VCP mode 1, or even turn it off completely. Again you will find details about this in section 7.1.4

The you have to activate the hotkey you will use as your PTT switch, the default key is not activated when you first install **PF3**

Finally you have to set the PTT 'pause' interval on the Options #1 to a value greater than zero.

When using VR to communicate with VR you need to press the PTT hotkey to ensure **PF3** waits X number of seconds to give you chance to speak directly to ATC via your VR program.

#### 18.2.2 Switching between using VR and your VCP for ATC communication

Unlike the previous method with this one you should **not** set the pilots voice to *None* and if you do this method simply doesn't work. So please ensure you have a pilots voice selected on the Options #1 page.

Next you must set your VCP mode to either 0 (zero) or 1. Again if you don't this method will not work

From the Options #1 page please set your **PTT pause interval** to a value greater than zero. You might have to experiment with the value used here.

Select the Auto Mute option which you will find on the Options #1 page just to the right of the VCP mode selection options.



## PF3 User Guide

---

Now, if you want to speak to ATC directly you should hit the PTT key followed immediately after with the relevant ATC communications hotkey. You will not hear your VCP talking to ATC provided you complete the keying sequence before the PTT pause interval expires.

If you then decide you would like your VCP to chat with ATC you simply use the relevant hotkey without using the PTT key, in which case you will hear your VCP chatting to ATC

## 19. TIME TO FLY

### 19.1 The PF3 Quick-Start Tutorial

Start your flight simulator, create a flight plan and place your aircraft at the departure airport.

Start **PF3**, select Options #1 from the main menu and then set your CP Mode to 3. This will tell your VCP to handle all frequency changes, COMs and adjust the AP accordingly on ATC instructions and is by far the easiest way to get used to the way **PF3** works, without having to worry too much about the fine detail.

Select *Close* to return to the main menu and then, assuming you have previously read this user guide and configured **PF3** to your liking, click the *Select a Flight Plan* button and... yeah, you guessed it... select the flight plan you've just created.

We won't go into adjusting waypoint altitudes during this quick-start tutorial but you can read how to do that in section 7.1.28 at a later date.

Now select *Connect to FS*

You should see a couple of messages displayed on whichever message window you chose to use.

Shortly after connecting to FS you will see a window popup showing all the active facility frequencies available at your departure airport.

Dial in the frequency for Clearance (or Ground/Tower if not Clearance is not available) then hit the default hotkey #0

You will now hear your VCP making initial contact with ATC and their subsequent reply and instructions. Your VCP, as mentioned before, will handle all COMs, etc., and you will shortly be handed off to Ground control and receive your taxi instructions to the active runway.

Once cleared to taxi you should proceed to the runway as instructed. If you've configured **PF3**'s TGS system then you will hear your VCP guiding you along each taxi way to the runway, much the same as your in-car navigation system.

As you approach the runway you will be handed off to Tower control and your VCP will then request permission to depart.

Shortly after takeoff you will be handed off to Departure control and will then be given further instructions as they guide you away from the airport and

## PF3 User Guide

---

toward your first waypoint. At some point you will be told you can '*Resume own navigation*' and at that point it is your responsibility to fly the correct route according to your flight plan. It is not within the scope of this document to tell you how to do this but you could use your FMC or GPS to handle directional flight and let your VCP handle any altitude changes given by ATC via your aircraft's auto-pilot. Suffice to say, **PF3** does expect you to navigate to each waypoint in your flight plan and you should certainly get to within a couple of miles of each one before turning to the next.

Once you've reached your TOD ATC will start you on your descent. Eventually, as you descend below the current Control Center's altitude you will be handed off to Approach control. They will then vector you to your destination airport and the active runway's FAF. Shortly after reaching the FAF you will be handed off to Tower and hopefully then given permission to land.

Once on the ground Tower will tell you which direction to exit the runway (left or right) and will then monitor your aircraft and wait until you are clear of the active before handing you off to Ground control.

Ground control will give you taxi instructions to your assigned gate and the TGS system will kick in again and you should then taxi to your assigned gate.

On arrival at the gate simply apply your parking brakes and **PF3** interaction will be complete.

So that's about it... but we have only scratched the surface here and of course using **PF3** in this VCP mode makes your life a lot easier. If you later decide to action all ATC communications yourself you will have to remember to listen out to all ATC instructions to ensure you don't miss one meant for you. Also you will have to get used to *Rogering* all communications from ATC. It's also worth pointing out here that just as in the real world you should not expect an instant response from ATC... they are busy guys (*and gals*) and have more to worry about than just you!

## 20. HINTS AND TIPS

This section is where we try to explain how you do certain things in **PF3**.

*Please note: Screen shots in these sections may look different than those in the rest of the user guide, due to the author's personal choice of program skin.*

The first two sections (20.1 and 20.2) explain how to get the very best out of **PF3** by Nicholas Weber and covers flight planning and executing Holding patterns. Nicholas was on the beta team for many years and was also an Examiner for ENAC, The Italian Aviation Authority. Sadly Nicholas passed away.

Section 20.5 was written by Daniel Katz, one of our longest serving Beta testers and provides an insight into using SIDs and STARs in **PF3**.

### 20.1 Executing a Flight Plan

Whilst **PF3** does an amazing job in providing a workable solution to any flight plan thrown at it, it may not always be the best or the one that you are looking for if the intention is to simulate a real life flight plan as closely as possible. So, here are some tips and recommendations for you to achieve that goal and get the best out of **PF3**.

Obviously the first step is to create an IFR flight plan from a good flight planner or within FS9, FSX or P3D. A major enhancement in **PF3** is its ability to allow inclusion of a SID within the actual flight plan used for aircraft navigation. So lets look at what **PF3** is actually capable of.

This following shows the ROKIB 6J Departure from LIPZ Venezia Tessera.



As you can see it consists of tight turns and **PF3** will actually vector you if you wish. Something that was not possible at all in PFE. That said outside of N. America all SIDs are flown by the aircraft and ATC rarely if ever vector you.

Some of the waypoints will not be in the sim database but for FS9 one can download 'Facility Editor' from the Avsim library:

## PF3 User Guide

<http://library.avsim.net/search.php?SearchTerm=facility+editor&CatID=root&Go=Search>

You will see that it's a relatively easy SID in that there are few constraints. All the altitude constraints being at or above. So all you need to worry about is your aircraft's performance. In other words "Just how quickly can I get up to FL140?"

**ROKIB 6J (a discrezione ATC)**

Effettuata la procedura di salita iniziale procedere via PZ488 - PZ491 - PZ492 - PZ493 - PZ484 - ARLUK - PZ485 - ROKIB.

**ROKIB 6J (ATC discretion)**

Initial climb procedure executed proceed via PZ488 -PZ491 - PZ492 - PZ493 - PZ484 - ARLUK - PZ485 - ROKIB.

MCL PZ493 FL 100; ARLUK FL 110; PZ485 (RDL 333/52.5 NM CHI VOR/DME) FL 130; ROKIB FL 140

Path Terminator	Waypoint Name	Fly Over	Track °Mag	Turn Direction	Altitude Constraint (MCA)	Speed Limit (IAS)	Recommended Navaid	Bearing/ Range to Navaid	Navigation Performance
CA	THR04	-	-	-	+410 FT	-	-	-	P-RNAV
DF	PZ488	-	044°	-	+750 FT	200 KT**	-	-	P-RNAV
TF	PZ491	-	096°	-	-	-	-	-	P-RNAV
TF	PZ492	Y	210°	R	-	-	-	-	P-RNAV
CF	PZ493	Y	310°	R	+FL100	-	VIC VOR/NDB/DME	RDL/QDR 116°/D20	P-RNAV
TF	PZ484	-	310°	-	-	-	-	-	P-RNAV
TF	ARLUK	-	333°	-	+FL110	-	-	-	P-RNAV
TF	PZ485	-	333°	-	+FL130	-	-	-	P-RNAV
TF	ROKIB	-	333°	-	+FL140	-	-	-	P-RNAV

\*\* Bank Angle 20° or rate of turn 2°/s whichever requires a lesser bank

This SID is in fact the first segment of a flight plan from Venezia to Innsbruck LOWI. The entry STAR from Italian airspace at Innsbruck, BRENO 2A allows for a change in wind direction (common in the Alpine valleys) giving the crew the option to go for RWY 26 or circle to land RWY 08.

So in fact **PF3** will accept a flight plan that includes a SID and a STAR as integral parts. The only drawback currently is for flight plans that terminate in areas that have high terrain as it is sometimes required to have waypoints after the end of STAR waypoint. Therefore in these isolated cases it may be necessary to create an additional flight plan for aircraft navigation as well. That said **PF3** still knows where you are and will issue the correct instructions.

The entire flight **PF3** plan for LIPZ to LOWI is thus:-

*LIPZ->PZ488->PZ412->D112I->PZ492->PZ493->PZ484->ARLUK->ROKIB->GIKEB-EKPEB->BRENO->INN->RTT->RTT->LOWI.*

The aircraft navigation flight plan however, is thus:-

## PF3 User Guide

---

LIPZ->PZ488->PZ412->D112I->PZ492->PZ493->PZ484->ARLUK->ROKIB->GIKEB-EKPEB->BRENO->INN->RTT->RTT->AB->INN->LOJV8->LOWI.

The occurrence of RTT twice is because it is a published hold and if selected **PF3** will not only hold you there but will step down your altitude within the hold as well! More on that later though when we examine how this flight plan and others will look in **PF3**.

Now that the flight plan has been saved the next recommended step is to set-up your aircraft profile. How to do this is documented in the User Manual, but



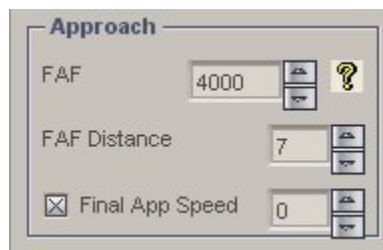
a key element is the Approach Speed setting. If you do nothing **PF3** takes the flaps-up stall speed from the aircraft.cfg file. Changing the approach speed in this profile box overrides that setting, however. So why is it necessary? You will almost always find in the aircraft flight/technical manual recommendations for approach speed optima depending on weight etc. These settings are fine for an aircraft landing without ATC control or for example at a military base. But for well frequented civil airports the practice is quite different and **PF3** will reflect that very well too. ATC at active civil

airports don't surprisingly carry a pile of aircraft manuals so that they can advise optimum speeds for each landing aircraft. Their main concern is safe separation and wake turbulence. Most jet transports with the exception of Concorde will have similar flight envelopes at low speeds. Some slightly better than others. However they are all capable of safe flying speeds between 200kts and Vat+5.

ATC's aim is to get as many aircraft down as safely and as quickly as possible. So the slower you fly the closer you can be to other aircraft. There are three stages; firstly to get you to reduce your speed from that of the STAR to one that safely establishes you on the localiser without swanning all over the landscape! This is typically 180kts. The second step is to reduce your speed to safely capture the glide slope and this is typically 160kts. Which is what you can see in the profile illustrated above. An aircraft landing at max auw however might ask for a higher speed of 170kts as an extra safety margin especially in windy conditions. The third phase - not advised by ATC - is your own speed reduction in order to be at Vat+5/10/15 by screen height. This phase is your personal responsibility. And in the real world ATC would likely say *'[Callsign] reduce speed to 160 to 6DME'*. Thus giving you 6nm to slow your aircraft down for landing. So my suggestion is to try this out as it is very much real world practice. If you are flying a turbo-prop then take 10-15kts off. If you are flying Concorde then set 190kts. If you are flying a piston engine aircraft then these speed reductions don't apply. Except in a real word situation ATC would ask you to fly as fast as you can. This happened to me many years ago when flying a TB into London Gatwick. I had to fly the glide-slope at full throttle with a marked nose down attitude in order to descend. It was quite interesting!

## PF3 User Guide

The next step before getting **PF3** to generate its flight plan is to check the setting for the FAF/FAP height and distance. Which can be changed in the "Advanced Options and INI file tweaks" selected by <Options #2>. Note that the FAF/FAP height can also be changed in the SID/STARS page for the specified airport ICAO code. These entries will override the setting on the tweaks page. The FAF/FAP distance however can only be changed on the tweaks page.



The setting for FAF distance is critical in that it tells **PF3** when to issue speed reduction calls. So this needs to be checked and if necessary changed to suite your destination.

**PF3** calculates the FAF/FAP from the outer marker or from the rwy threshold if there is no OM shown on the AFCAD/ADE. It then measures your distance from this point and

issues speed calls accordingly. The example shown on the left is the setting for LIMF Torino Caselle. The airport has an elevation of 1,000ft and a glide slope angle of 3deg. So the FAF/FAP altitude is set to 4,000ft. As far as the FAF/FAP altitude goes I could just as easily set this in the SID/STAR page for LIMF which would as has already been pointed out override any value input here. But the FAF distance can only be set on this page. The LIMF OM is at 3.74nm so bearing in mind that a 3dg glide slope intersects a height of 3,000ft at 10miles, I need to add 6nm to the OM distance. Plus one i.e. 7, gives me time to slow down before actual glide slope capture. At EGLL London Heathrow the FAF distance would be between 5 and 8 depending on whether the afcad shows an OM (my afcad doesn't). Because the FAF/FAP altitude would be 2,500ft QNH.

It's important to remember that **PF3** adds the value entered in the FAF box on the tweaks page to the airport elevation for "safety" reasons. This figure however, is overridden by the FAF/FAP value entered in the SID/STAR page of the relevant airport. So the value entered on the SID/STAR page should coincide with the altitude given on the relevant charts. Keep in mind that altitude=QNH=above sea level. Not height, which equals above ground.

The final step before getting **PF3** to generate its FPL profile is to tell it what SIDs and STARS we want to use and then activate them. So click on the SIDs /STARS button on **PF3**'s main panel. Then enter the ICAO code for the departure airport.



From your charts choose the transition altitude and FAF/FAP minimum altitude and select them by pressing the up/down arrows. In this case the numbers have been converted from metres to feet for **PF3**. The minimum FAF shown here overrides that on **PF3**'s tweaks page and is the altitude the **PF3** controller on duty will descend you to at the end of the STAR approach.

## PF3 User Guide

---

Next, enter the SID name with a maximum of 7 characters with no spaces followed by the SID altitude ceiling.

Use	Rwy	ILS	Hdg	Alt	Len	SID			STAR Name
						Name	Alt Comp	MAp Alt	
<input checked="" type="checkbox"/>	8	109.50	83	92	11155	GIVIL2D	7000	0	
<input checked="" type="checkbox"/>	26		263	92	11155	GIVIL11	7000	0	

Finally

check the SIDs active box

<input checked="" type="checkbox"/> SIDs (DPs) Active  <input checked="" type="radio"/> If no SID (DP) name entered use the default 'Delta Papa'  <input type="radio"/> If no SID (DP) name entered use <input style="width: 50px;" type="text"/>	<input checked="" type="checkbox"/> STARs Active (automates 'cleared to final' request)  <input type="radio"/> If no STAR name entered use the default 'Sierra Tango'  <input checked="" type="radio"/> If no STAR name entered use <input style="width: 50px;" type="text"/>
---	---

For the STAR it is exactly the same process:-

Enter the name of the STAR and the missed approach altitude that the controller will send you to.

Use	Rwy	ILS	Hdg	Alt	Len	SID			STAR
						Name	Alt Comp	MAp Alt	Name
<input checked="" type="checkbox"/>	13	111.90	136	0	11230		0	6000	SIKOU
<input checked="" type="checkbox"/>	31	109.90	316	0	11230		0	6000	SIKOU

Not forgetting to check the STARs active box!

<input checked="" type="checkbox"/> SIDs (DPs) Active  <input checked="" type="radio"/> If no SID (DP) name entered use the default 'Delta Papa'  <input type="radio"/> If no SID (DP) name entered use <input style="width: 50px;" type="text"/>	<input checked="" type="checkbox"/> STARs Active (automates 'cleared to final' request)  <input type="radio"/> If no STAR name entered use the default 'Sierra Tango'  <input checked="" type="radio"/> If no STAR name entered use <input style="width: 50px;" type="text"/>
---	---

So, we've created a flight plan file ready for **PF3**, checked our final approach speed set our FAF/FAP distance and altitude and set-up our STARs and SIDs in the relevant SID STAR pages. Accordingly, we're ready now for **PF3** to generate its flight plan profile. Unfortunately **PF3** won't tell us automatically what it's done so we have to open the "Adjust Altitudes, SIDs STARs and Holds" anyway to see what has been generated by **PF3**. Now you can see why the previous steps were necessary as **PF3**'s flight plan generation is in fact the final step not the first!



# PF3 User Guide

Let's look at some examples and I'll show you how to refine them in order to get a super accurate flight profile. Let's start with the flight plan from the beginning:-

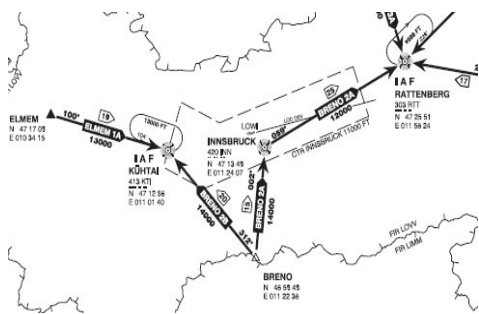
## LIPZ -> LOWI

Waypoint	Holds	Cur Alt	New Alt
1 LIPZ		0	
2 PZ488	←←	24000	
3 PZ412		24000	
4 D1121		24000	
5 PZ492		24000	
6 PZ493		24000	DP
7 PZ484		24000	
8 ARLUK		24000	
9 ROKIB		24000	
10 GIKEB		24000	
11 EKPEB		20000	20000
12 BRENO		14000	ST 14000
13 XXX		24000	
14 INN		12000	12000
15 RTT		12000	12000
16 RTT	H	9500	9500
17 LOWI		1900	

Oh No! ☹ I don't want to fly to FL240 within 3 miles after take-off! Don't worry you won't. **PF3** will step climb you nicely. However you can of course override these values as I'll show you in a later example. In this FPL these values are also overridden by the insertion of "DP" and the selection of the ROKIB 6J SID. Note that I have not placed it against ROKIB in spite of ROKIB being the end of the ROKIB 6J SID. Why not? Because DP is actually the point where I expect to be already at FL140 as permitted by the SID. The values from

EKPEB are the same as the new ones because they were previous adjustments that **PF3** remembered. Waypoint 13 xxx is the boundary between Italian and Austrian airspace.

"ST" is the start of the BRENO 2A STAR which is at FL140 so you can see I have told **PF3** to step down to FL200 at the previous waypoint. Note that BRENO 2A takes me all the way to Rattenburg after having descended to FL120.



Waypoint	Holds	Cur Alt	New Alt
1 LIPZ		0	
2 PZ488	←←	24000	
3 PZ412		24000	
4 D1121		24000	
5 PZ492		24000	
6 PZ493		24000	DP
7 PZ484		24000	
8 ARLUK		24000	
9 ROKIB		24000	
10 GIKEB		24000	
11 EKPEB		20000	20000
12 BRENO		14000	ST 14000
13 XXX		24000	
14 INN		12000	12000
15 RTT		12000	12000
16 RTT	H	9500	9500
17 LOWI		1900	

At RTT I have a problem in that I am now at FL120 but must turn round to intercept the localiser for RWY26 at FL95 or 9,500 QNH. So this is why I have entered RTT twice in the FPL. You can see in this instance I have elected to hold at RTT. So **PF3** will first tell me to hold (Note that it is a published hold and not a discretionary hold so ATC will only tell me to "hold at Romeo Tango Tango" giving me a speed limit and expected

## PF3 User Guide

---

release time) and then tell me to descend to 9,500ft. If I don't elect to hold, **PF3** will nonetheless tell me to descend once I have reached RTT. Remember in this instance because RTT is a hold I still have to execute the correct procedural turns within its boundaries to get back to the localiser intercept heading. If I wanted to fly to rwy08 I could have chosen BRENO 2B. But if there's a runway change it's a long flight from Kühtai to Rattenburg and then back to Innsbruck. By the way, if you fly to Innsbruck in a 737 or Airbus or equivalent sized aircraft, remember that you should fly with gear down and flaps all the way from RTT and then full flaps before Absam. This is the current airline practice. The difficulty is not surprisingly the circle to land approach for RWY08, but it is in fact the missed approach procedure. So if you are not capable of a full power 210 degree climbing turn at no more than 155kts executed within a radius of 1,700 metres then you are prohibited from flying into Innsbruck.

### ZJSY-> VHHX

Waypoint	Holds	Cur Alt	New Alt
1 ZJSY		91	
2 AL	<input type="checkbox"/>	37000	<input type="text" value="6700"/>
3 WL	<input type="checkbox"/>	37000	<input type="text" value="24000"/> DP
4 CIVIL		37000	<input type="text" value="24000"/>
5 NYB	<input type="checkbox"/>	37000	<input type="text" value="24000"/>
6 SIKOU		37000	<input type="text" value="24000"/>
7 RAGSO		37000	<input type="text" value="24000"/>
8 CHALI		18000	<input type="text" value="16000"/> ST
9 CH	<input type="checkbox"/> H	4000	<input type="text" value="8000"/>
10 VHHX		0	

Here's a nice easy flight plan with a popular destination. Departing from Sanya, Hainan Island in China. The flight time is about one and a half hours including the holding time. The main difference between this and the previous flight plan is the constraint at AL. I must fly to 2,000 metres and wait for ATC clearance (**PF3** doesn't do it yet, but it is on the wish list for Russian, Chinese and associated state

ATCs to give altitudes in metres). Tip—at 2,600ft after take-off from rwy 08 go direct to waypoint 3. Set your FAF Distance to 14 and in the SID/STAR page for VHHX set your FAF/FAP altitude to 4,500. Also make sure you check that the METAR for VHHH has wind bearings of not less than 050deg and not greater than 210deg otherwise rwy 31 will be in use. As an alternative set the winds in the sim to 135deg 10 kts. A point to remember and why you must set your FAF/FAP altitude to 4,500, is that once released from the holding pattern at Cheung Chou ATC will clear you down to that altitude which is the published figure for the Kai Tak IGS approach.

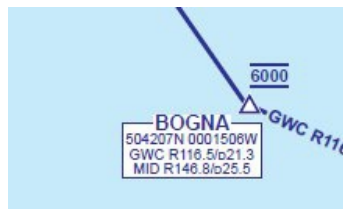
Waypoint	Holds	Cur Alt	New Alt
1 LIMZ		1265	
2 OM21		4500	<input type="text" value="4000"/>
3 MZ504		4500	<input type="text" value="4000"/> ST
4 MF503		4500	<input type="text" value="4000"/>
5 LIMF		2000	
6 VHHX			

Here is an insanely short IFR flight plan, but if the weather's bad necessary all the same. This FPL was not possible in the old PFE! In the SID/STAR page for LIMZ the transition alt is 6,000, minimum FAF is 4,000 and the SID for both rwy

03/21 is TOP7Q at 4,000ft. For LIMF set the same trans alt and FAF. The STAR is VEROB1A. Check that the FAF distance in **PF3**'s Tweaks page is set to 7.

If the weather's bad go to your alternate! Yes, **PF3** will vector you there!!

This is the first part of a FPL from EGKK to LIMF. The routing has changed since this was done. However this is an example of an altitude constraint all the way to BOGNA. This is the BOGNA 1M SID and you can see I am constrained to 6,000ft unless ATC release me, which **PF3** may do too!



Waypoint	Holds	Cur Alt	New Alt
1 EGKK		202	
2 MW2		37000	6000
3 KKS06		37000	DP 6000
4 30DME		37000	6000
5 BOGNA		37000	6000
6 BENBO		37000	
7 HAWKE		37000	
8 XAMAB		37000	
9 XXX		37000	

## 20.2 Holding Patterns

First let's start by saying that there is already a lot of information regarding how to fly holding patterns available on the Web. So, this review is just to help you with the salient points in relation to **PF3**.

*[Callsign] hold East on the 105 radial inbound to Mike Alpha Uniform maintain Flight Level 195 expect Clearance at 50'*

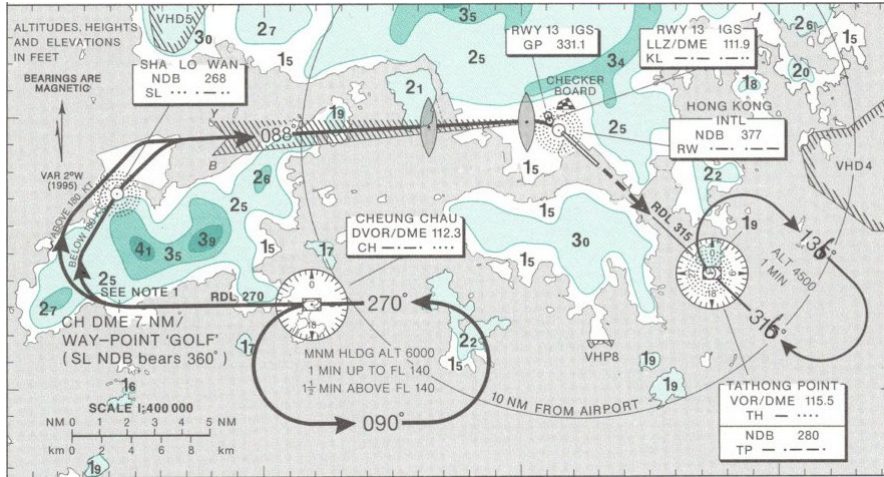
"What the 6th letter expletive deleted!" is the kind of comment one would expect from most simmers who are not experienced pilots. To them it may as well be a message from Mars. Well, this is how it was in PFE, and is an example of a "Discretionary Hold". Whereby ATC can hold you here, there or anywhere at 'their' pleasure, (though not yours). But, as a qualified pilot you must be familiar with this method. Having said that, the majority of holding patterns are published as part of a STAR, final approach or missed approach. So the ATC instructions will therefore be much more understandable and clearer.

Whenever PFE issued a discretionary hold instruction, actually being held at a published hold was as rare as a hen's tooth. So rather pointless, seeing as the majority of holding patterns are published. This has now been addressed in **PF3** with the added bonus being that the ATC instruction is also now simpler and clearer.

"So, what do 'I' have to do?" you may ask. Well, you could, as has been suggested in the User Manual just swan around for a bit until ATC release you. That though is not such a good idea because in the process you will almost certainly lose situational awareness and at the very least be at totally the wrong heading or position to continue safely.

# PF3 User Guide

Let's then have a look at a typical published hold:-

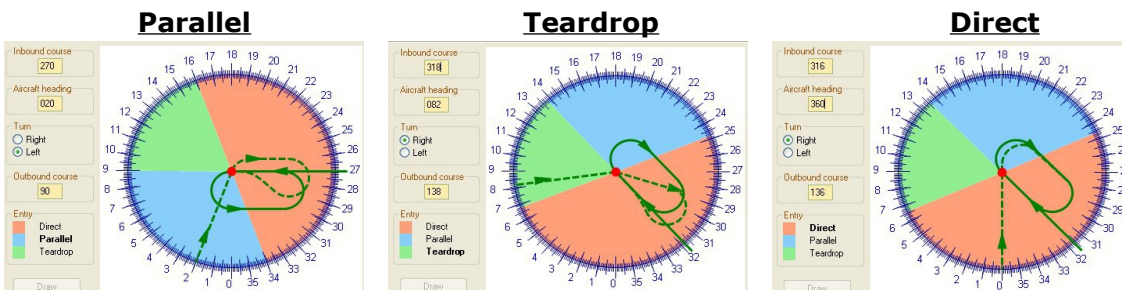


Well, this is at least a start. It does contain important information, i.e. the direction of flight, for how long and to what facility it is attached. In both these cases the facility is a VOR. Holds can be at facilities such as VORs or NDBs but also they can be at GPS fixes. Currently though **PF3** only allows holds at VORs and NDBs. Note also in this example that both holding patterns contain the phrase '1min'. This is an instruction to fly one minute legs for both the inbound leg going towards the facility and the outbound leg going away. Don't worry about 1½ minute legs. Because **PF3** will only activate a hold at or below 10,000ft.

To help pilots, holds are constructed out of set components. Imaginary Lego if you like. Though some of these components can be varied. Which we'll see a little later on. The basic components are: an entry procedure, inbound leg, outbound leg, procedural turns to and from the inbound leg, and an exit point.

## 20.2.1 Entry Procedures

There are three types of entry procedure depending on the direction of your approach to the holding pattern and whether it has left or right turns.



You can if you wish sit down and calculate which entry procedure might apply to the hold that you are expecting. But it is much quicker to use a pattern computer as I have done above. This one is a free download and can be found here at:

<http://www.flightutilities.com/HPC.aspx>

Play around with it and you'll begin to see how it's done. In addition it is useful also to have a pattern computer that also calculates the wind drift and turn rate. For this I use adacalc.exe from here:

<http://www.aero.sors.fr/adacalc.html>

This will allow you to fly very accurate holds.

### 20.2.2 Inbound Leg

In a totally windless situation your heading and bearing will be the same and therefore must be the same as published. In example 1 (left) above I must aim for a bearing of 270deg even accounting for wind drift so that I pass directly over the facility at the turn point. The timing for this leg in a calm wind is 1 minute unless otherwise stated. Though the easiest method, is to do all the crazy stuff on the outbound leg so that your inbound leg is always on the nail so to speak.

### 20.2.3 Outbound Leg

Again, in calm conditions, this leg should be a direct reciprocal of the inbound heading and again timed to 1 minute unless otherwise stated. I tend to fly with a 1 minute outbound leg correcting for wind drift and then adjusting the last part of the turn onto the inbound leg so that I am always on the correct bearing toward the facility.

### 20.2.4 Procedural Turns

In calm conditions these are usually also 1 minute i.e. 3 degrees a second. This is known as a rate one or standard rate turn. However, unless specifically stated you can change the turn rate to suit the conditions. **PF3** controllers will request an entry and holding speed of 220kts for jet transports. At this speed your bank angle will be all but 30 degrees each time you turn and that is uncomfortable and unnerving for the passengers to experience every 60 seconds! It's the same bank angle you need to turn onto finals for the rwy08 circle to land approach at Innsbruck! So, you are allowed to turn at a reduced rate, e.g. half standard rate or limit the bank angle to 20 degrees. The latter is best for jet transports because most autopilots are limited to a 20deg bank angle. All it means is that you are flying a fatter sausage shape than expected. And, as a spin-off you spend less time going round and round!



# PF3 User Guide

## 20.2.5 Exit Point

You must always leave the pattern via the facility. Simple!

Here is a typical RT exchange between **PF3** ATC and the aircraft about to be held.

Entry:-

ATC *[callsign] at Romeo Tango Tango Enter the hold maintain Flight Level 120 expect Clearance in 16*

You *Roger hold at Romeo Tango Tango maintain Flight Level 120 [callsign]*

Exit:-

ATC *[callsign] at Romeo Tango Tango resume own navigation cleared to Lima Oscar Whiskey India*

You *at Romeo Tango Tango cleared to Lima Oscar Whiskey India resume own navigation [callsign]*

ATC *[callsign] at Romeo Tango Tango maintain 9 thousand 5 hundred Cleared to final for runway 8 at pilot's discretion Contact Tower on 120.1 when established.*

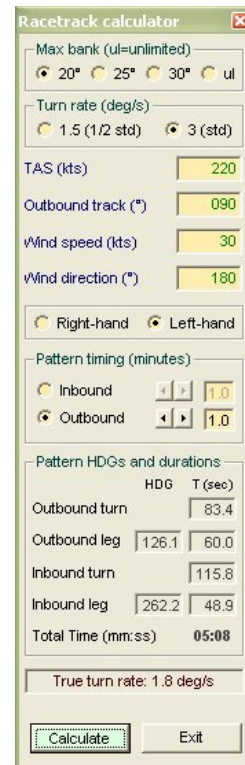
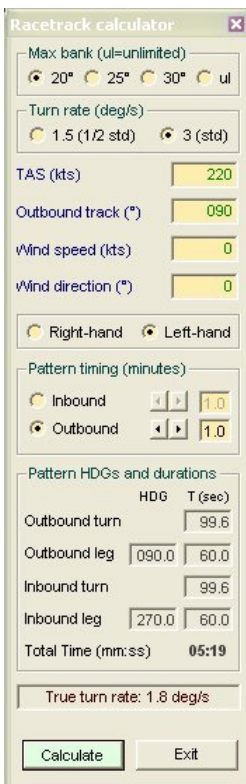
You *at Romeo Tango Tango maintain 9 thousand 5 hundred Cleared to final for runway 8 at pilot's discretion Contact Tower on 120.1 when established. [callsign]*

That, if I may say, is much simpler than the example shown at the beginning and it is what controllers will say. So it's accurate too.

Finally let's look at examples where wind has an affect. In reality the 'norm'!

The calculation on the left assumes no wind at the CH Cheung Chau hold at Kai Tak. We are flying at 220kts and our bank angle is 20deg. So in this perfect situation both the inbound and outbound leg will be for one minute. Notice however that the turns are about 1 minute 40 seconds. So instead of one revolution of the hold being 4 minutes we take just over 5 minutes. Our headings are spot on. Easy as cake as they say!

Now look what happens on the right when we introduce a 30kt wind from the South. Not unusual at Hong Kong! We have a totally different situation. Everything has changed except the outbound leg timing. Look at the



## PF3 User Guide

---

different effect of the tail wind on the inbound leg and the headwind on the outbound leg. A deviation of -8deg inbound and +36deg on the outbound!!!! Notice though that the time for one revolution of the pattern is not dissimilar to no-wind on the left. I highly recommend this tool!

Again the intention of this commentary is not to give you a detailed lesson but just to highlight the change in **PF3** from PFE and to help you understand that change and encourage you to practise holding patterns whenever you can. Practise in low wind or calm conditions first though.

Finally, trust in **PF3**. Its controllers are well trained and will do their best to issue instructions at convenient points. For example they will try to release you from the hold on the inbound leg. I wish that happened more often in real life!!!!

### 20.3 Uncontrolled Airports

Should you find yourself departing from an uncontrolled airport, without Clearance, Tower or Ground control facilities you could be excused for asking 'how on earth do I obtain IFR clearance in such a situation'?

Well, here's how it works in **PF3**...

First you need to tune to FSS and hit hotkey #0, this is your 'wake up' call to FSS... there could be a delay of up to 30 seconds so be patient, they're not ATC controllers. Once they put their coffee down they will ask you to 'go ahead' at which point, if you're using VCP mode 1, otherwise it will be automatic, you can either hit the 'Roger' hotkey or hotkey #0 again.

On doing so your VCP will provide the necessary details regarding your flight plan to FSS, after which they will clear you as filed, give you an initial altitude and also the frequency for Departure, which of course you should contact asap after takeoff. Obviously this new feature is only available when your are at your departure airport.

### 20.4 Using PF3 with MCE

Over time we hope to expand on this particular section, so if there's anything in particular you would like covered feel free to drop us an email and we'll see what we can do.

Recently the MCE developers have offered a new feature that allows you to have the MCE FO voice talking to **PF3**'s ATC, making the whole experience even more realistic. However, to use this new feature you would normally have to turn the **PF3** Closed Caption option 'on', and whilst this works just fine some users prefer not to have to use closed captions. In view of this we have worked with the MCE developers to provide an alternative way for them to provide this exciting new feature.

## PF3 User Guide

---

As from **PF3** version 3.5.0 there will be a new file created in the main **PF3** folder, named **PF3\_MCE.INI**. If you open this file using Notepad you will see three entries name '*Active*', '*Logged*' and '*PF3Transmitting*'. To activate this new feature simply change the *Active=0* to *Active=1* and then save the file. You don't have to do anything else but now, if you wish, you can turn off **PF3**'s closed captions and still enjoy the new MCE feature of hearing their FO chatting with PF3's ATC.

With this option active all that happens is **PF3** will write certain ATC messages to a new file, created in your PF3/Logs folder, named **Clearance.log**



## 20.5 A word about SID/STAR use in PF3

SIDs and STARs are optional in **PF3**, and there is no requirement to purchase a subscription for navigational data to use the program. If you choose to use SIDs and STARs, your flight planning technique will likely depend on the geographical region where you are flying.

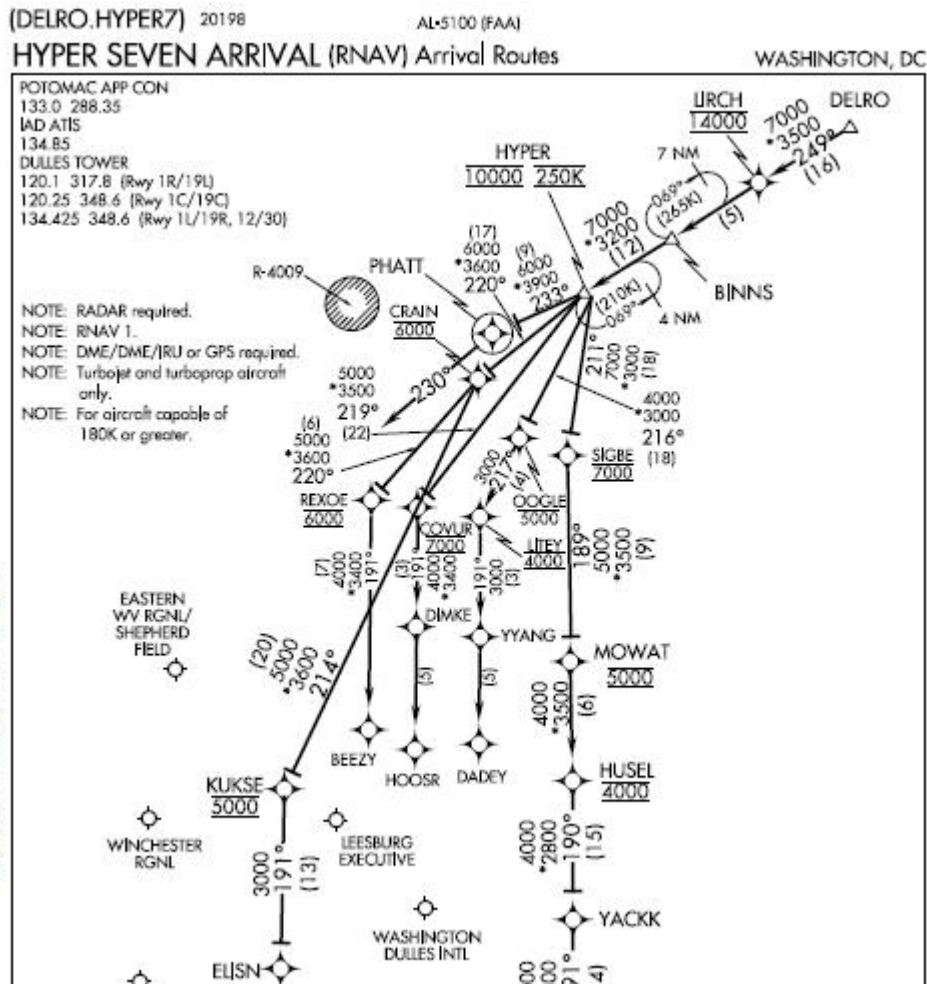
When flying in Europe and most ICAO regions it is usually best to leave the SID and/or STAR out of the flight plan you load into **PF3**. The reason is that SIDs/STARs in these regions are usually short and runway-specific; that is, they depend on which runway is active at the time, and you often do not know this information in advance. For example, departing EGPH with GOSAM as your first waypoint, you can leave the SIDs box on the SID/STAR page unchecked and allow **PF3** to vector you to your first waypoint, or check the SIDs box to turn off vectoring if you prefer to fly a departure procedure. If you choose to fly a procedure rather than a vectored departure, you can fly it by hand or load the appropriate procedure in your FMC based on the active runway at the time of your departure.



In the U.S. and Canada, SIDs and STARs are usually much longer, often more than one hundred miles long, and are used for multiple runways. When flying in these areas you will probably want to include much of the SID/STAR (all except parts close to the airport or that apply to a specific runway) in your **PF3** flight plan. Those who have flown on VATSIM are probably familiar with this concept. When flying in Europe you usually do not file SIDs or STARs with your flight plan; they are assigned by ATC when you get your runway assignment. When flying in the U.S. and Canada you are expected to file your SID and STAR as part of your flight plan.

# PF3 User Guide

In **PF3** version 3.10 you can deactivate/exclude specific waypoints from your flight plan (see section 7.1.28) before connecting to FS. This will come in handy when you have included a long SID or STAR in your flight planner output, but need to deactivate some waypoints because they are too close to the airport or are runway-specific. For example, for the HYPER7 arrival, handling arrivals into Washington Dulles from the northeast, you would most likely include the STAR waypoints up to and including HYPER in your flight plan, excluding any waypoints after HYPER. When you reach HYPER, which is the last active waypoint in your flight plan, you can either allow PF3 to vector you to the final approach course for the active runway, or request clearance at pilot's discretion which will disable vectoring and allow you to complete the approach to the assigned runway using your FMC and/or by hand.



## PF3 User Guide

---

The main function of the SID and STAR checkboxes at bottom of the SID/STAR page is control of vectoring, before your first waypoint and after your last. With the boxes unchecked, you will get vectors; if the boxes are checked you will not, allowing you to fly from the runway to your first waypoint (or from your last waypoint to the runway) using a procedure if you wish. You can include STAR waypoints in your flight plan, as in the HYPER7 example, and leave the STARs box unchecked and PF3 will provide vectors from your last waypoint to the active runway. If you check the STARs box you will not get vectors after your last waypoint.

## 21. PF3 GENERAL FAQ SECTION

***If you don't find the answer to your problem here please ensure you check the PF3 FAQ section on our website for more up to date information:***

***[http://www.oncourse-software.co.uk/PF3\\_faqs.htm](http://www.oncourse-software.co.uk/PF3_faqs.htm)***

**Q:** *When using MSFS and PF3's Auto Pause to pause the FS xx miles from the runway, etc., how do you 'un-pause' the sim?*

**A:** PF3 uses the 'Set Pause ON' facility so you need to bind keys or buttons from within MSFS Controls to take advantage of this feature when using MSFS. Look for 'Set Pause ON' and 'Set Pause Off'. Unfortunately you can't configure a toggle key in MSFS for this pause mode.

+ + + + +

**Q:** *Doesn't matter what setting I try I just can't get the PF3 in-sim Captions window to display*

**A:** Please delete the **Display.INI** file from your main PF3 folder

+ + + + +

**Q:** **PF3** *doesn't seem to be running. I can see it on the taskbar but there's no menu screen.*

**A:** It would seem you have managed to somehow move PF3 off-screen. Here's how to get it back. Hold your Shift key down and Right-click on the PF3 taskbar icon, then select 'Move' from the popup menu. Release the Shift key and use one of your keyboard Arrow keys. Now move your mouse and PF3 should appear on screen again.

+ + + + +

**Q:** *Something went wrong and PF3 crashed... now I still have the In-Sim ACARS and Captions windows showing on screen. How can I get rid of them.*

**A:** Just re-start PF3 and the windows will be closed.

+ + + + +

**Q:** *When using P3D with Closed Captions 'ON' and an ATC message comes through, P3D will jump to the foreground as the active window, even though you may be using another program at the time.*

**A:** *This is probably due to you using the default P3D message window to display captions. If you used our In-Sim Captions window or the RemoteText*

## PF3 User Guide

---

*utility (if you have a second monitor or PC) this shouldn't happen. Equally you could use the FSUIPC ADVDisplay window for captions.*

+ + + + +

**Q:** *My PF3 Display utility does not show any frequencies*

**A:** Please check (a) you have a folder inside your main FS folder named PF3\_Displayer and if not please create one. (b) If you see the PF3\_Displayer folder please ensure it is not set as 'Read-Only'. The PF3 User Guide has full details about this and where to find the correct location for MSFS users.

+ + + + +

**Q:** *I'm using FS2020 and don't hear any radio frequencies in 8.33Khz format. Why?*

**A:** Currently, as of version 3.10, **PF3** doesn't support 8.33 format radio frequencies. However, we plan to introduce them in our next release (3.11). At that point we will be offering the option to use either the new 8.33Khz format or the old 25Khz format. The later will obviously be favored by those using hardware radios that do not support 8.33.

+ + + + +

**Q:** *Just lately my co-pilot and ATC voices sound ok to start with but then the voice volumes get very soft and almost inaudible. Per your FAQs, I've set Sound, Communicatons to "Do nothing". This did not solve the problem.*

**A:** Try toggling the windows communication setting to something other than "do nothing", hit apply, and then switch it back to "do nothing" and then selecting Apply should fix it. This may have to be repeated next time you start Windows.

+ + + + +

**Q:** *When using P3D with Closed Captions 'ON' and an ATC message comes through, P3D will jump to the foreground as the active window, even though you may be using another program at the time.*

**A:** This is probably due to you using the default P3D message window to display captions. If you used our In-Sim Captions window or the RemoteText utility (if you have a second monitor or PC) this shouldn't happen. Equally you could use the FSUIPC ADVDisplay window for captions.

+ + + + +

**Q:** *Something went wrong and PF3 crashed... now I still have the In-Sim ACARS and Captions windows showing on screen. How can I get rid of them.*

**A:** Just re-start PF3 and the windows will be closed.

+ + + + +

## PF3 User Guide

---

**Q:** *I heard a controller and AI pilot using the same voice set. Surely this is a bug?*

**A:** No, it's not a bug. Although **PF3** provides you with 119 voices sets they are split into 26 geographic regions. Some regions may only have a couple of voice sets available. To try and avoid this problem we use certain back-up voice sets for each region, but even then we could run out of unused voices. An easy way to avoid this problem occurring is to use **PF3's** *Adjust Regional Voice Sets Used* to add additional back-up voice sets to the area you experienced the problem.

+ + + + +

**Q:** *I was watching AI traffic and noticed an aircraft taking off before ATC gave it instructions to do so*

**A:** Well there are a couple of points to make here. Firstly, **PF3** does NOT control AI traffic, FS does that. Yes we can stop/start AI aircraft, even change their heading to a degree (*excuse the pun*), amongst other things, but we don't actually control AI traffic. Secondly, to take more control of AI traffic would mean diverting processing away from **PF3's** many other tasks, so it's really a question of balance. The third and final point is this, due to the fact that **PF3** is not in total control of AI traffic we have to react *after the event*. When **PF3** detects an aircraft is taking off we give the command from ATC to make it look like we're in control. It's all a matter of timing. Sometimes it will look good, other times it won't. If you want to spend your time just watching AI traffic and listening to ATC then **PF3** is not the program you need and you might just as well listen to the default ATC.

+ + + + +

**Q:** *I'm using P3D and I don't see the kneeboard display with the departure airport ATC frequencies*

**A:** That function is not available when using P3D, as it uses a different method for displaying its kneeboard, which is not accessible at this time by **PF3**.

+ + + + +

**Q:** *I'm using P3D and I can't seem to get the ACARS system to work at all.*

**A:** That function is not available when using P3D, as it uses a different method for displaying its kneeboard, which is not accessible at this time by **PF3**.

+ + + + +

**Q:** *I saw a message about waypoints being too close. How do I know how close they are?*

## PF3 User Guide

---

**A:** If you go to the 'adjust waypoint altitudes' page and hover your mouse over any waypoint it will show you the distance from your departure and destination. You can use this information, together with some simple maths, to determine the distance between waypoints.

+ + + + +

**Q:** *I sometimes get a warning that waypoints are too close together. What does this mean and what should I do.*

**A:** This is simply a cautionary message and you don't actually have to do anything. **PF3** is simply telling you that one or more waypoints are very close to each other of your departure/destination airport. This will usually be okay and **PF3** will handle the situation correctly. However, if you do have problems with the flight it could well be due to the close proximity of these flagged waypoints. In which case it would be wise to perhaps change the flight plan accordingly before taking your next flight.

+ + + + +

**Q:** *Sometimes **PF3** ATC spills out the entire airline name rather than use the call sign.... other times it's correct.*

**A:** The problem can occur when using Super Traffic Board and telling the aircraft to 'depart now'. If you leave aircraft to depart at their correct times this problem does not occur.

+ + + + +

**Q:** *Few seconds after starting **PF3** it locks up and doesn't respond to anything, I have to close it via task manager.*

**A:** **(1) Go to the main PF3 folder (2) Open the PF3.ini file (3) Look for AutoUpdates=1 and change it to AutoUpdates=0 (4) Save the file**

+ + + + +

**Q:** ***PF3** has started to lock up on me and/or it takes an unusually long time to respond.*

**A:** If you are using multiple security protection programs try disabling the default Windows Firewall. If that doesn't work try disabling the others one by one, simply as process of elimination. Whatever system you use you must ensure that the **PF3.exe** and Updates.exe programs have access to the internet, which is required for the auto updates feature to work.

+ + + + +

**Q:** *Can **PF3** be used on a networked pc?*

**A:** Yes it can by using Pete Dowson's WideFS utility... available from <http://www.schiratti.com/dowson.html> . When using **PF3** on a networked PC

## PF3 User Guide

---

please remember to use the client's keyboard when making any changes to **PF3**'s options but use the main FS keyboard to communicate with ATC when **PF3** is connected to FS during your flight

+ + + + +

**Q:** *Why do I hear ATC calling the aircraft make rather than the actual airline call sign?*

**A:** Please check under the Technical Tab in FSUIPC (or look under the GENERAL section the FSUIPC.INI file) and set the TCASid entry to FLIGHT. Programs such as AIBlast and FSHotSeat appear to change these settings which make them incompatible with **PF3**

+ + + + +

**Q:** *I tune to ATIS but all I hear is static noise... what's wrong?*

**A:** One user found that this only occurred when using a particular aircraft. Try the same frequency using another aircraft and if that does not help please email support at [PF3@oncourse-software.co.uk](mailto:PF3@oncourse-software.co.uk)

+ + + + +

**Q:** *When running Spyware Terminator it identifies and removes a file named SCLabel.ocx. After that **PF3** will not run!*

**A:** Do NOT remove this file. It is NOT spyware and is an ActiveX control for displaying most of the text that appears on the **PF3** screens. Without it **PF3** will NOT run! You can configure Spyware Terminator to ignore it rather than remove it. If you have removed it you will need to reinstall **PF3**.

+ + + + +

**Q:** *I'm using Copilot Mode 2 but **PF3** doesn't detect when I get near to the active runway and so doesn't tell me to switch to the Tower.*

**A:** **PF3** waits for you to be within 700' feet of the active runway before issuing a 'Contact Tower on...' command. If you happen to be taking off from a position other than the end of the active runway you may well be more than 700' away from that detection point. Should this be the case you would need to manually switch to the Tower frequency and then use Hotkey 6 to contact Tower and request takeoff clearance.

+ + + + +

**Q:** ***PF3** ATC routed me to fly right into a mountain.*

**A:** In such hazardous areas it is vitally important to create a good flight plan to ensure **PF3** delivers safe approach vectoring. **PF3 is not aware of mountains or obstacles on your approach route so you, as the pilot, must ensure you plan your flights correctly.** Remember also that YOU are the Captain in charge and if, during approach vectoring, you consider ATC



## PF3 User Guide

---

to be issuing a bad and dangerous turn you should ignore it and **use the #1 hotkey to request a 'Cleared to Final Approach'**.

+ + + + +

**Q:** *I never got handed over to any Control Center during my flight.*

**A:** **PF3** determines which control centers to hand you off to dependent on your altitude (and geographic position of course). If you don't reach a center's specified *altitude* you will remain under the control of a Departure or Approach controller.

+ + + + +

**Q:** *PF3 is working and I can hear the controllers talking to me but I can't hear the pilot's voice.*

**A:** Check the **PTT pause interval** in **PF3** options to ensure it is set to ZERO (OFF)

+ + + + +

**Q:** *I'm using ActiveSky. ATC vectors me to land VFR on runway 21. At the same time all AI were landing and departing runway 03, the opposite end. Why?*

**A:** This can happen when using an external weather program such as ActiveSky. **PF3** ATC reads the weather and chooses the correct runway, but Active Sky (or similar) may update the weather forcing a change of the active runway. FS9/FSX ATC will change the active runway, but **PF3** has already made its choice, hence the incursion. **To avoid this, it is necessary to use the "suppression" options according to the type of flight/aircraft.**

Using the New Route and Navigation Log will be helpful too. Please see your ActiveSky manual for details and how to use these powerful features.

If you choose not to take these extra steps in ActiveSky, then using the default FS9/FSX real weather instead of ActiveSky will prevent this issue from happening while using **PF3** ATC.

+ + + + +

**Q:** *The approach to my destination was rubbish. I was far too high when cleared for the approach!*

**A:** **Adjust your flight plan descent profile in PF3.** Remember, your flight will only be as good as your flight planning, just as in the real world.

+ + + + +

**Q:** *After PF3 had a problem and crashed my Regional Settings appear to be wrong and numbers are not being displayed correctly?*

**A:** Restart **PF3** then immediately close it using the *Exit* button - That should reset your numeric regional settings to their original state.

## 22. TGS GAUGE INSTALLATION INSTRUCTIONS

By Dave Leesley

### 22.1 How to Install the optional Gauge onto a panel

***Please Note: Installation of this gauge is entirely optional and you may want to read section 7.1.5 first, which explains all about PF3's Taxi Guidance System, prior to making your decision***

I have hopefully made these instructions as clear and as easy to follow as possible, as I'm hoping to avoid any "pulling of hair out" and "throttling the living daylight out of your PC" because you can't get it to work.

It's very important that you **read** these instructions to avoid any unnecessary problems and wasting valuable flying time so let's begin installing the gauge into Flightsim. It is always wise to save your work before altering any CFG files so that if things don't go as expected, you will be able to start again from the beginning, and also when finished otherwise you will lose your changes.

Within your main **PF3** folder you will see a folder named **TGS\_Gauge** containing the gauge files. As from **PF3** version 2.6 the gauge named **TGS\_Position\_Tester** is no longer required, so you may disregard and/or even delete that file now if you wish. I would recommend you drag the file named TGS.GAU to your desktop, as this will make life easier.

You also need the following line to put into your panel.cfg when the time is right:

**gauge??=TGS!TaxiGuidanceSystem, XXX, YYY, 100, 64,Autohide OFF**

This line will be used later on in the tutorial and will need to go into your panel.cfg, after everything is installed and **POSITIONED** correctly and not before!

Time to put kettle on for a cup of coffee before we start (optional).

**This Gauge was designed for the 2D Cockpit but will also work in most Virtual Cockpits, although this tutorial will assume the former.**

**Now you are ready to begin!**

First of all you need to find your Flightsim folder, by default located at C:\Program Files\Microsoft Games\FS9 (or FSX) depending what sim you want to use **PF3** with, or wherever else you may have installed it on your hard drive.

Okay, you have now found your Flightsim folder, let's use FS 9 for this part.

## PF3 User Guide

---

Open your FS folder, now look for the folder called Gauges. Now you will need to go back and open your **PF3** folder and Copy the gauge file **tgs.gau** into your Gauges folder (or Drag and Drop if you prefer – easier if located on your desktop as I suggested). *It is important this gauges is in the Gauges folder of FS.* You may now close the Gauges folder as you don't need it anymore.

Now let's move onto your Aircraft folder. Locate an aircraft into which you wish to install the TGS gauge. Find the subfolder called Panel, open that folder and find the panel.cfg file. MAKE A COPY and keep it in the panel folder. This where you will now add the line from above by Copying and Pasting:

```
gauge??=TGS!TaxiGuidanceSystem, XXX, YYY, 100, 64, 64,Autohide OFF
```

So we'll use the default Boeing 737-400 Panel.cfg for this example.

For the default aircraft you need to find "Window00" as shown in this example.

```
[Window00]
file=Main_640.bmp
file_1024=Main_1024.bmp
size_mm=640
position=7
visible=1
ident=MAIN_PANEL
```

```
gauge00=737-400!Airspeed, 0, 64
gauge01=737-400!Flaps, 586, 64
gauge02=737-400!Altimeter, 237, 45
gauge03=737-400!Vertical Speed, 238, 128
gauge04=737-400!Fuel Quantity, 236, 204
gauge05=737-400!Main Set, 335, 85
gauge06=737-400!OMI Lights, 1, 153
gauge07=737-400!Oil, 468, 85
gauge08=737-400!Clock, 17, 147
gauge09=737-400!RMI, 1, 211
gauge10=737-400!HSI, 86, 162
gauge11=737-400!ADI, 85, 39
gauge12=737-400!Gear Lever, 586, 217
gauge13=737-400!Nose Gear Light, 594, 180
gauge14=737-400!Left Gear Light, 579, 198
gauge15=737-400!Right Gear Light, 609, 198
gauge16=737-400!Reverser Unlocked Left, 354, 68
gauge17=737-400!Reverser Unlocked Right, 416, 68
gauge18=737-400!AT Lim, 385, 68
gauge19=737-400!Low Oil Left, 458, 68
```

## PF3 User Guide

---

```
gauge20=737-400!Low Oil Right, 519, 68
gauge21=737-400!Start Valve Left, 489, 68
gauge22=737-400!Start Valve Right, 549, 68
gauge23=737-400!Flaps Ext, 609, 115
gauge24=737-400!Flaps Transit, 579, 115
gauge25=737-400!Autopilot, 336, 11
gauge26=737-400!Pitch Trim, 305, 144
gauge27=737-400!Aileron Trim Indicator, 242, 261
gauge28=737-400!Aileron Trim Switch, 248, 276
gauge29=737-400!Rudder Trim Indicator, 285, 261
gauge30=737-400!Rudder Trim Knob, 290, 276
gauge31=737-400!Nav GPS Switch, 306, 17
gauge32=737-400!Avionics Master Switch, 239, 300
gauge33=737-400!Autobrake, 581, 134
gauge34=SimIcons!Kneeboard Icon, 181, 10
gauge35=SimIcons!ATC Icon, 194, 10
gauge36=SimIcons!Compass Icon, 264, 10
gauge37=SimIcons!ECU Icon, 250, 10
gauge38=SimIcons!Map Icon, 208, 10
gauge39=SimIcons!Avionics Icon, 222, 10
gauge40=SimIcons!GPS Icon, 236, 10
```

Now Copy and Paste that line directly under gauge40, so the bottom line now looks like this:

```
gauge39=SimIcons!Avionics Icon, 222, 10
gauge40=SimIcons!GPS Icon, 236, 10
gauge41= TGS!TaxiGuidanceSystem XXX, YYY, 100, 64,Autohide OFF
```

(Now SAVE it)

XXX and YYY and the co-ordinates on your FS screen, change them to 140, 130, 100 (leave 100 as it is). You should see the gauge on your screen, now you can alter the co-ordinates as you please to find the right position in your cockpit.

The last parameter (**Autohide OFF**) ensures the gauge remains visible at all times. Should you prefer to have this gauge only popup when TGS is active (during your taxi to/from the runway) you can change this parameter to **Autohide ON**

Now we move onto 3<sup>rd</sup> Party add-on aircraft such as PMDG, PSS, LevelD and such. You will still need to do the same as above with the default aircraft, except that the panel.cfg is slightly different from the default as in some add-on aircraft you may have to use "Window01". Anyone who has either PSS or JustFlight's Concorde will have to install it into "Window00", and the CFG will look like this:

```
//-----
[Window00]
```

## PF3 User Guide

---

```
file=wiper.bmp
size_mm=2048,1536
(My example is PSS's Concorde)
window_size_ratio=1.000
position=1
visible=1
ident=8100
render_3d_window=1
child_3d=1
```

```
gauge00=PSS-concorde!Wipers, 0,0,2048,756
gauge01=TGS!TaxiGuidanceSystem, 140, 130, 100, 64,Autohide OFF
```

If you install it into "Window01" it will be hidden completely, even though it has more gauges, and I have noticed with PSS aircraft the gauge will be shown in one position on the screen, even if you change the co-ordinates (it is beyond our control - sorry).

Another example of a panel.cfg is Flight One's ATR 72-500:

```
[Window00]
file=F1ATR_MAIN_W.bmp
size_mm=1024
window_size_ratio=1.000
position=0
visible=1
ident=MAIN_PANEL
window_size=1.000, 1.000
window_pos=0.000, 0.000
```

(There are 60 lines of gauges above this, left out for the sake of brevity)

```
gauge61=Atrvesi!stopvesi, 137,287,20,20
gauge62=Atrvesi!vesitimer, 209,280,20,20
gauge63=TGS!TaxiGuidanceSystem, 140, 130, 100, 64,Autohide OFF
```

The main thing you are looking for is "Window00" and/or Main Panel or "Window01" and/or Headup. Again you should remember to SAVE any changes to your CFG.

One very important note is that you must assign a number and co-ordinates to your gauge or it won't show up in FS.

Now we move onto this part installing into FSX:-

It's very similar to installing into FS9 but the layout is just slightly different, so here goes!

## PF3 User Guide

---

When you have opened up your FSX folder, you will need to find your Simobjects folder and Airplanes subfolder, and then the aircraft of your choice. For this example we will use the default A321 Airbus Panel.cfg.

[Window00]

file\_1024=airbus\_a321\_panel\_background.bmp

file\_1024\_night=airbus\_a321\_panel\_background\_night.bmp

size\_mm=1024

position=7

visible=1

ident=MAIN\_PANEL

gauge00=Airbus\_A321!altimeter\_backup, 676,505

gauge01=Airbus\_A321!annunciator\_panel\_1, 24,357

gauge02=Airbus\_A321!attitude\_backup, 651,628

gauge03=Airbus\_A321!autopilot, 677,346

gauge04=Airbus\_A321!hsi\_backup, 517,609

gauge05=Airbus\_A321!ias\_backup, 581,506

gauge06=Airbus\_A321!pfd, 23,521,215,214

gauge07=Airbus\_A321!mfd, 264,521,215,214

gauge08=Airbus\_A321!ecams,

788,521,215,214

gauge09=Airbus\_A321!pfd\_mfd\_select\_panel, 470,345

**gauge10=TGS!TaxiGuidanceSystem, 140, 130, 100, 64,Autohide OFF**

gauge26=SimIcons1024!ECU Icon, 790,  
745

gauge27=SimIcons1024!Overhead Icon, 812, 745

gauge28=SimIcons1024!Kneeboard Icon, 834, 745

gauge29=SimIcons1024!ATC Icon, 856, 745

gauge30=SimIcons1024!Map Icon, 878, 745

gauge31=SimIcons1024!GPS Icon, 900, 745

gauge32=SimIcons1024!Radio Icon, 922, 745

gauge33=SimIcons1024!Other Controls Icon, 944, 745

gauge34=SimIcons1024!Engine Instruments Icon, 966, 745

gauge35=SimIcons1024!Clock Icon, 988, 745

gauge36=n\_number\_plaque!n\_number\_plaque, 258,429,67,19

This how I did it for this aircraft and it shows up on FS screen.

Now test your changes in FSX. When initially loading FS, as you would normally you will be presented with a Warning Screen. It is warning you that tgs.gau is from an unknown publisher and do you want to run it. If you want to use it say YES and at the next warning screen again say YES, otherwise you won't be able to use it

We now move onto installing 3<sup>rd</sup> party aircraft. I'm choosing the LevelD 767-300 panel.cfg for this one.

## PF3 User Guide

---

```
[Window01]
file=B767forward.bmp
size_mm=1280, 680
position=6
visible=1
ident=12
zorder=2
```

```
gauge00=LVLDB767main!light,      0,  0
gauge01=LVLDB767Afds!Nav1,      535, 0
gauge02=LVLDB767Afds!MCP,       736, 0
gauge03=LVLDB767Afds!SMC,       824, 180
gauge04=LVLDB767Afds!Autoland,   620, 163
gauge05=LVLDB767Afds!MasterSwitch, 485, 37
gauge06=LVLDB767Afds!RadarAltimeter, 561, 255
gauge07=LVLDB767Afds!AltAlert,   722, 250
gauge08=LVLDB767Afds!InstrSelect,  0, 398
gauge09=LVLDB767Afds!GASwitch,  1075, 632
gauge10=LVLDB767Afds!FOSwitch,   1105, 632
gauge11=LVLDB767Afds!Gear,      1179, 224
gauge12=LVLDB767Afds!Autobrakes,  769, 518
gauge13=LVLDB767Afds!OMI,       703, 403
gauge14=LVLDB767at!AT,          0,  0
gauge15=LVLDB767FMC!FMS,        0,  0
gauge16=LVLDB767FMC!XNAV,       0,  0
gauge17=LVLDB767main!airspeedL,   92, 224, 168
gauge18=LVLDB767main!altimeterL,  607, 245, 148
gauge19=LVLDB767main!vsiL,      556, 406, 136
gauge20=LVLDB767main!rmiL,      90, 404, 176
gauge21=LVLDB767main!clockL,    547, 549, 146
gauge22=LVLDB767ehsi!EHSI,     289, 408, 227,, CP
gauge23=LVLDB767ead!EADI,      291, 172, 221,, CP
gauge24=LVLDB767eicas!EICAS,   934, 180, 225,, CP
gauge25=LVLDB767leicas!LEICAS, 934, 409, 225,, CP
gauge26=LVLDB767main!ecuL,     700, 601, 197
gauge27=LVLDB767main!ENG,      767, 363
gauge28=LVLDB767main!OILW,     790, 498, 95
gauge29=LVLDB767main!ESW,     925, 629, 150
gauge30=LVLDB767main!warn,     760, 239, 150
gauge31=LVLDB767main!TRP,     1178, 168
```

**gauge32=TGS!TaxiGuidanceSystem, 140, 130, 100, 64,Autohide OFF**

The script is in bold to make it easier to find. You don't need to add it in bold. Again you are using either "Window00" or "Window01" depending on the type of add-on aircraft you are using. Some high end 3<sup>rd</sup> party aircraft use two panels like FlightOne's ATR 72-500, and so it must be installed into the folder called Panel **not** Panel W, as if you do you may not see the gauge. The gauge installation is the same as FS9 as it is for FSX.

### 22.2 Backing Up Your Hard Work

After you have installed your gauge to your favourite aircraft wouldn't it be nice to remember which "Window" you installed it in within your panel.cfg? So what I have done is to create my own "Reference" of where the TGS resides.

I have done this so it will make life easier should I ever have to do a re-install of flight sim. Here are some of my examples:

Basically what I have done is taken the "Window" where TGS resides and condensed it, so when I come to reinstalling TGS I can instantly see where it has to go, including the gauge number. All I have to do is copy and paste the line into the panel.cfg of my aircraft.

You can make copies of these condensed windows and store them onto a floppy using "notepad" of all your aircraft in your hangar.

Now I suggest you only do this if you feel comfortable in copy/pasting and messing with your panel.cfg and as always make a copy of your panel.cfg first, just in case you make an error.

Oh yes, I have deleted the lines of other gauges in the panel.cfg because I really don't need them, all I want is to see where the TGS gauge fits in and that is it!

Please see some example below.

#### 22.2.1 This one is for a third party aircraft in FS9

PSS Airbus A330/A340

[Window01]

file=headup.BMP

size\_mm=1024

visible=1

position=7

ident=MAIN\_PANEL

gauge10=TGS!TaxiGuidanceSystem, 140, 130, 100

#### 22.2.2 This is for the default Cessna in FS9:

[Window00]

file=panel\_background\_640.bmp

file\_1024=panel\_background\_1024.bmp

size\_mm=640

position=7

visible=1



```
no_luminous=1  
ident=MAIN_PANEL
```

```
gauge45=TGS!TaxiGuidanceSystem, 000, 000, 100
```

### 22.2.3 This is the default 737-800 FSX

```
[Window00]  
file_1024=737-800_panel_background.bmp  
file_1024_night=737-800_panel_background_night.bmp  
size_mm=1024  
position=7  
visible=1  
ident=MAIN_PANEL
```

```
gauge35=TGS!TaxiGuidanceSystem, 000, 000, 100
```

### 22.2.4 The default 747-400 in FSX

```
[Window00]  
file_1024=747_Background_1024.bmp  
size_mm=640  
position=7  
visible=1  
ident=MAIN_PANEL  
gauge58=TGS!TaxiGuidanceSystem, 000, 000, 100
```

### 22.2.5 Installing TGS into the PMDG747-400 Queen of the Skies for FSX.

Just locate Window01 of your panel.cfg and insert the line as shown in my example.

This method is slightly different from the normal procedures of just installing into the panel.cfg you also need to COPY the same line from your panel.cfg to your VC panel.cfg to be able to see and use the gauge.

```
[Window01] // PMDG_MAIN_PANEL  
file=747400_Main_Background_1600.bmp  
file_1024=747400_Main_Background_1600.bmp
```

## PF3 User Guide

---

size\_mm=1600,1200

position=7

visible=1

ident=20

zorder=1

window\_size= 1.000, 1.000

window\_pos= 0.000, 0.000

background\_color=0,0,0

gauge00=PMDG\_747400\_Main!Windshield,0,0,1600,451

gauge01=PMDG\_747400\_Main!GearLever, 1419,739,229,461

gauge02=PMDG\_747400\_Main!DSP, 0,684,809,125

gauge03=PMDG\_747400\_Main!PFDBg, 0,809,405,391

gauge04=PMDG\_747400\_Main!NDBg, 405,809,400,391

gauge05=PMDG\_747400\_Main!EICASBg, 1010,807,409,393

gauge06=PMDG\_747400\_Main!CRTScreen, 32,842,340,340,OUTBD CAPTAIN  
CRT

gauge07=PMDG\_747400\_Main!CRTScreen, 436,844,340,340,INBD CAPTAIN  
CRT

gauge08=PMDG\_747400\_Main!CRTScreen, 1046,842,340,340,UPPER CRT

gauge09=PMDG\_747400\_Main!EFIS,274,451,319,233

gauge10=PMDG\_747400\_Main!MCP,592,451,1059,233,MAIN

gauge11=PMDG\_747400\_Main!EICASCtrl,1010,684,409,123

gauge12=PMDG\_747400\_Main!MasterCaution, 125,451,149,233

gauge13=PMDG\_747400\_Main!GlareshieldEnd,0,451,125,233

gauge14=PMDG\_747400\_Main!SbyADI, 810,684,200,180

gauge15=PMDG\_747400\_Main!SbyAltimeter, 810,1032,200,168

gauge16=PMDG\_747400\_Main!SbySpeed, 810,864,200,168

gauge17=PMDG\_747400\_Main!AboveGear, 1419,684,229,55

gauge18=PMDG\_747400\_Main!Whiskey, 1308,0,92,54

//gauge19=PMDG\_747400\_Main!TestDIB,50,50,340,340

gauge20=TGS!TaxiGuidanceSystem, 500, 000, 100,AutohideOFF

## PF3 User Guide

---

Please note: with any future PMDG release, if you cannot see the gauge in the panel.cfg as described in my tutorial please install it in the VC panel.cfg as well to see if that brings up the gauge.

```
=====
=====
=====
```

Installing the TGS gauge into PMDG 747-400 Queen of the Skies for FS2004

Just locate Window01 of your panel.cfg and insert the line as shown in my example.

This does NOT need to be installed into the VC panel.cfg

```
[Window01] // PMDG_MAIN_PANEL
file=747400_Main_Background_1600.bmp
file_1024=747400_Main_Background_1600.bmp
size_mm=1600,1200
position=7
visible=1
ident=20
window_size= 1.000, 1.000
window_pos= 0.000, 0.000

gauge00=PMDG_747400_Main!Windshield,0,0,1600,451
gauge01=PMDG_747400_Main!GearLever, 1419,739,229,461
gauge02=PMDG_747400_Main!DSP, 0,684,809,125
gauge03=PMDG_747400_Main!PFDBg, 0,809,405,391
gauge04=PMDG_747400_Main!NDBg, 405,809,400,391
gauge05=PMDG_747400_Main!EICASBg, 1010,807,409,393
gauge06=PMDG_747400_Main!CRTScreen, 32,842,340,340,OUTBD CAPTAIN
CRT
gauge07=PMDG_747400_Main!CRTScreen, 436,844,340,340,INBD CAPTAIN
CRT
gauge08=PMDG_747400_Main!CRTScreen, 1046,842,340,340,UPPER CRT
gauge09=PMDG_747400_Main!EFIS,274,451,319,233
```

## PF3 User Guide

---

gauge10=PMDG\_747400\_Main!MCP,592,451,1059,233,MAIN  
gauge11=PMDG\_747400\_Main!EICASCtrl,1010,684,409,123  
gauge12=PMDG\_747400\_Main!MasterCaution, 125,451,149,233  
gauge13=PMDG\_747400\_Main!GlareshieldEnd,0,451,125,233  
gauge14=PMDG\_747400\_Main!SbyADI, 810,684,200,180  
gauge15=PMDG\_747400\_Main!SbyAltimeter, 810,1032,200,168  
gauge16=PMDG\_747400\_Main!SbySpeed, 810,864,200,168  
gauge17=PMDG\_747400\_Main!AboveGear, 1419,684,229,55  
gauge18=PMDG\_747400\_Main!Whiskey, 1308,0,92,54  
gauge19=TGS!TaxiGuidanceSystem, 1500, 000, 100,AutohideOFF

## 22.3 Installing the TGS Gauge into a Window

We are now giving you another option of installing this gauge rather than having it fixed in one position in your panel. So again you need to open your panel.cfg file of the aircraft you intend to add the gauge to.

If you would rather use this 'window' method than the 'fixed' position then you will need to delete all entries in the gauge section (usually in window 00 or 01) relating to the TGS gauge in the panel.cfg, otherwise you will have 2 gauges in your panel.

### 22.3.1 Install the gauge into a window for the FS2004 default 747-400

```
// Panel Configuration File
// Boeing 747-400
// Copyright (c) 1999-2003 Microsoft Corporation. All rights reserved.
```

```
[Window Titles]
Window00=Main Panel
Window01=Radio Stack
Window02=GPS
Window03=Throttle Quadrant
Window04=Overhead Panel
Window05=Clock
Window06=Mini Panel
Window07=TGS ←-----Enter this line here.
```

```
...
...
...
```

```
[Window06]
position=7
size_mm=350,200
child_3d=1
background_color=0,0,0
ident=MINIPANEL
gauge00=Boeing747-400!Primary Flight Display, 0, 0
gauge01=Boeing747-400!Multi-Function Display, 177, 0
```

Then enter the following section below the last window section:-

```
[Window07]
Background_color=0,0,0
size_mm=100,100
window_size_ratio=1.000
position=7
visible=1
ident=5000
window_size_ratio=1.0
gauge00=TGS!TaxiGuidanceSystem, 0,0,100,100,Autohide OFF
```

### Now **SAVE Your Work**

You should now be able to see the gauge in your 2d cockpit. The gauge will also be seen in Virtual Cockpit and Spot View (just go to Views/Instrument Panel/TGS and make you place a *tick* is next to it.)

### 22.3.2 Install the gauge into a window for a 3<sup>rd</sup> party aircraft in FS2004

```
// Airbus Generic "340 Pro Panel"  
// COPYRIGHT Phoenix Simulation Software 2003 (c)
```

```
[Window Titles]  
Window00=Wipers  
window01=VFR Panel  
window02=IFR Panel  
window03=MCDU  
window04=Pedestal  
window05=Big PFD  
window06=Big ND  
window07=Big upper ECAM  
window08=Big lower ECAM  
window09=GPS
```

```
Fixed Window37=OVERHEAD - USE KEYPAD 5  
Window09=Reality XP Wx500 Radar - RXP_CONFIG_TOOL - DO NOT CHANGE  
Window10=Reality XP DropStack  
Window11=Extended Flight Info  
Window12=Flight Info Icon
```

```
Window13=TGS ←-----Enter this line here.
```

```
...  
...
```

Then enter the following section after the Window12 section:-

```
[Window13]  
background_color=16,16,16  
size_mm=50, 23  
window_size_ratio=1.0  
position=6  
visible=1  
ident=12013  
gauge00=EFinfoH!Icon, 0, 0, 50, 23
```

```
[Window13]  
Background_color=0,0,0  
size_mm=100,100  
window_size_ratio=1.000  
position=7  
visible=1  
ident=5000
```

```
gauge00=TGS!TaxiGuidanceSystem, 0,0,100,100,Autohide OFF
```

**Now SAVE Your Work**

### 22.3.3 Install the gauge into a window for a 3<sup>rd</sup> party aircraft in FSX

For this example we are using the PMDG 747-400X so again go to your panel.cfg (simobjects/airplanes)

So again under windows titles add the following under your last window,

**Window23=TGS**

Now add this section under the last window section in the panel.cfg

```
[Window23]  
Background_color=0,0,0  
size_mm=100,100  
window_size_ratio=1.000  
position=7  
visible=1  
ident=5000  
window_size_ratio=1.0
```

```
gauge00=TGS!TaxiGuidanceSystem, 0,0,100,100,Autohide OFF
```

**Now SAVE Your Work**

### 22.3.4 Install the gauge into a window for a default aircraft for FSX

For this example we will use the A321 Airbus

All you need to do is just add everything as before...

```
[Window Titles]  
Window00=Main Panel  
Window01=Radio Panel  
Window02=GPS  
Window03=Throttle Panel  
Window04=Overhead Panel  
Window05=Gear Panel  
Window06=Clock  
Window07=Glass Panel  
Window08=PFD  
Window09=MFD  
Window10=Primary ECAMS  
Window11=Secondary ECAMS  
Window12=Mini Panel  
Window13=TGS ←-----Enter this line here.
```

Now add this section under the last window section in the panel.cfg

```
[Window13]  
Background_color=0,0,0  
size_mm=100,100  
window_size_ratio=1.000  
position=7  
visible=1  
ident=5000  
window_size_ratio=1.0
```

```
gauge00=TGS!TaxiGuidanceSystem, 0,0,100,100,Autohide OFF
```

**Now SAVE Your Work**

### 22.3.5 A Few Useful Notes:

You can adjust the size\_mm= to whatever size you want, personally I leave it on the sizes shown in the previous examples.

Don't forget to **save** any changes you make to the panel.cfg.

In some 3<sup>rd</sup> party aircraft you may need to re-load the gauge again to get it to show, this depends on how complex the panel is. This is not a problem with the TGS gauge file but unfortunately due to the fact that all 3<sup>rd</sup> party add-on gauges are usually hidden behind your aircraft's panel. Also with some 3<sup>rd</sup> party aircraft the gauge may be hidden behind the 2D panel on startup, in which case you may want to switch to Spot view or VC to adjust it, but this mostly only occurs in FSX.

As with any changes you make to your panel.cfg it is advisable to make a copy of your panel.cfg before making such changes.



## 23. EXTENDED CONTROL SECTOR FILE

The control sector file used by **PF3**, which resides in the PF3\Data folder, named CenterSectors.dat, holds numerous elements of data to define the ATC control boundaries worldwide, along with other things such as the regional voice accent to be used. There have been many anomalies discovered with this data along the way and we have endeavoured to correct any problems found as and when reported. However, one of our users, Christopher Sargeant, took it upon himself to check all these elements and add any he found missing, correcting any anomalies and adjusting overlaps and gaps between the boundaries. An enormous task to say the least! Thankfully Christopher chose to share his hard work with the rest of us and so the Extended Control Sector file was born

The following is Christopher's overview

### 23.1 Overview

This revised CenterSectors.dat file essentially ports the default bvcf.bgl file into the PF3 CSV format.

- Data was gathered from stock files using PlanG and LittleNavMap.
- Total number of sector records increased from 486 to 4191.
- Improvements include:
  - Removal of all gaps and overlaps worldwide.
  - Much greater sector density particularly in USA, Canada, France, Saharan Africa, Arabia, central and southeast Asia, India, China and Australia.
  - Better distribution of voice sets (i.e. no specification of "US Generic" in Asia, etc.).
- Modifications were made, where practical, to meet current FIR/UIR boundaries as depicted in Navigraph charts. Some inaccuracies would have caused significant effort to correct and as such were ignored; however, it is generally accurate and representative.
  - All worldwide ATC sectors are believed represented except ZJSA Sanya, which is split mostly between VHHK Hong Kong and ZGZU Guangzhou and not easily separated as it would require a rebuild of several neighboring sector boundaries to match current charts.
- No guarantee is made as to frequencies matching their current real world counterparts.

## 23.2 Argentina-Chile Antarctic Peninsula Dispute

- Default bvcf.bgl has overlapping sectors in this area. By default, the Chilean claim is recognized out of convenience. If preferred, area can easily be switched to Argentinian control by changing the frequency of sector 4353 from 119.700 to 125.500.

## 23.3 Unused Sector Names

Almost all default PF3 sector names have been used. Several are not included in situations where the sector layout in the bvcf.bgl file did not lend itself to convenient subdivision and/or Navigraph Charts did not seem to indicate usage of such sector name. These include the following, with the most appropriate sector numbers for manual re-inclusion if desired:

- 25 East Midlands Center – 1527(?)
- 27 Essex Radar – 1523(?)
- 46 Maastricht Control – 1534-1535 or 1414
- 49 Manchester Control – 1524, 1527
- 64 Padova – 3155-3157
- 78 Sevilla – 3055-3056, 3060-3062
- 81 Stavanger – 1572, 1573
- 84 Trondheim – 1571, 1574, 1579(?)

## 24. TGS GENERAL FAQ SECTION

**Q** "I can't see my gauge"

**A** Have you installed the gauge into the correct folder?

**Q** "I have installed the gauge into the folder and copy and pasted the line into my CFG and I still can't see the gauge"

**A** Have you assigned a gauge number and co-ordinates as shown in the readme?

**Q** "My gauge doesn't work, the pointer or L.E.Ds don't move or light up"

**A** Have you changed the line in panel.cfg to the correct one for the TGS.gau or deleted the wrong gauge by mistake?

**Q** "I have FS running and the gauge isn't there, it's not working"

**A** You won't see the gauge, it's hidden until you connect to **PF3**, unless you use the Autohide OFF parameter in the PANEL.CFG file (see instructions above)

**Q** "I get the warning messages that do I trust it when I start FSX for the first time after installing it"

**A** If you say Yes to both messages you will be able to use the gauge, if the answer is NO because you are worried that the file might be corrupt, you will not be able to use it.

**Q** "I altered the panel.cfg and didn't save changes, now it doesn't work"

**A** You should always save your changes.

**Q** "It won't work in my Virtual Cockpit"

**A** Quite simply, it won't as it's only designed for the 2D Cockpit.

**Q** "The TGS Gauge doesn't show, even after receiving full taxi instructions?"

**A** That could be due to a number of reasons:-

1: You are using a 3rd party aircraft that needs to be re-loaded again and hopefully the gauge will then show.

2: You are using 3rd party scenery addon with the settings very high, in which case you may need to re-load your aircraft or turn some settings down, especially with high end aircraft.

3: It may be hidden by another gauge, try relocating it using 000, 000 co-ordinates as all 3rd party aircraft are different.

Well I hope you enjoy using the TGS gauge as much as I have enjoyed putting this tutorial together!

**Dave Leesley**

## 25. KNOWN ISSUES

### 25.1 Your Skin

No we're not trying to be personal, we mean your choice of **PF3** skin.

As you must be aware of by now **PF3** comes complete with an assortment of different skins that can be applied to the program to change its look and feel. Some are, shall we say, *different*, and others are really nice (*in my opinion*) and besides they say a change is as good as a rest. So the nice folk at OnCourse Software provide a means by which you can experience a rest!

Now that said, we have to be completely honest and say for some of our testers these news skins did cause some problems... namely the GUI would crash at random times when selecting different buttons. Personally I haven't had the problem at all, but then I only run **PF3** on my development rig which comes complete with all the necessary, but more often unnecessary, gadgets, gizmos and drivers that I've collected along the way and this machine is about 12 years old now. So not really a good test!

So, if you don't like the look of any of these skins or you're one of the unfortunate users who have more than your fair share of skin related problems, namely **PF3** will simply disappear when you click on something without even a goodbye message, we have provided a way for you to turn off the skins completely.

Please see section 7.1.25 for further details

### 25.2 Senior Moments

Sorry... clean forgot what I was going to put here!

### 25.3 In the Unlikely Event

In the unlikely event that **PF3** has a problem, that it's unable to recover from, we want to know about it as soon as possible. In fact we'd like to know about it as soon as it happens. No one likes it when something goes wrong but unfortunately that's life and these things can and do happen. Our aim is to ensure such things don't happen, ever, but there's this guy I know who goes by the name of Murphy, who has a nasty habit of interfering when you least expect it.

So, to make your life and ours a little easier **PF3** will attempt to collate all the information we need to investigate and fix the problem.

If such a problem should arise (*thanks to Murphy*) you should see the following display:-

## PF3 User Guide

---

**PF3 ERROR DETECTED!**

An unforeseen error has occurred and PF3 is unable to continue. To assist us in rectifying this problem we would like you to send an error report using the button below. PF3 will not send any personal information but we will collate all the log files required for our support personel to identify and fix this problem.

You do not need an email client on this machine but you will need an internet connection. In the unlikely event that you receive a message indicating that the email failed you will find the zip file containing all the logs pertaining to this problem in your main PF3 \ Logs folder. We would appreciate it if you could forward this to [PF3@oncourse-software.co.uk](mailto:PF3@oncourse-software.co.uk)

The name of this log file is - **PF3\_ERROR\_REPORT\_20160117\_152308.ZIP**

Thank you for your assistance and we apologise for any inconvenience.

Please add any information here that might be helpful to us in identifying the cause of this problem...

Your Email:

Send Status:

**Delete Log file on successful send**

SEND Error Report

Do NOT send Report

As you can see this looks quite alarming, with the red title and black background, but we didn't want you to miss it, although the clue that something's amiss will probably be quite evident because **PF3** will have gone rather quiet.

The important thing to note here before going any further is the location **PF3** has created the error log zip file... as shown on this message it can be found in the ...PF3/Logs folder, should you need it.

You will also notice a grey box with some text already entered that starts *'Please add any information here that might be helpful'* and it really would be helpful if you would kindly add as much information here as you could, regarding exactly how the error occurred. e.g. What you were doing, what

## PF3 User Guide

---

you heard, what you saw, whereabouts in your flight you were at the time, etc., etc.

Finally it would be nice to have YOUR email address so please do take the time to enter it.

Then decide if you wish to save a copy of the error logs zip file or if you would like to have it deleted once you have sent it to us, which you can do by selecting the '*Delete log file...*' option or not.

Then just hit the '*SEND Error Report*' to email the zip file containing all the various log files to us.

*Please note: you do not require an email client on your **PF3** computer for this to work but you would need an internet connection. If you're running **PF3** on a PC with no internet connection then of course you would need to copy the generated error log zip file to a PC with an email client and send it to us that way.*

## 26. SUPPORT

**The latest support information can be found on our website:**

<http://www.oncourse-software.co.uk/contactus.htm>

Should you experience problems installing or using **PF3** please ensure you are using the most recent version before asking for assistance. You can easily check you have the current release of **PF3** by using the *Check for Updates* button on the main menu.

***Please Note: We only offer support for the latest released version of our software and any requests for support for earlier versions will be politely ignored.***

**All requests for PF3 support should initially be requested via our support forum, unless instructed otherwise.**

For support with **PF3** please visit our support forum at:

<http://www.ocs-support.co.uk/forums>

*The latest support information (with links to our forum) can always be found by visiting our website:*

<http://www.oncourse-software.co.uk/contactus.htm>

## 27. CREDITS

I would like to thank the following for their help and support during the development, testing and production of this and previous versions of **PF3**. We have been really fortunate to also have a few real world experts on board for this trip and their help and guidance has been invaluable. If I've missed anyone it was not intentional.

### 27.1 Beta Testers

Bruce Leehan  
Charlie Kettlewell  
Daniel Katz  
David Leesley  
Kevin Hardy  
Les Parson  
Nicholas Weber  
Patrick Maeyens  
Peter Schluter  
Radu Mares  
Ralf Kessel  
Stephen Molsher  
Thomas Arendsen Hein

### 27.2 PF3 Program Design and Development

Dave March

Copyright (c) 2007-2020 OnCourse Software

### 27.3 PF3 Documentation

Dave March  
David Leesley  
Nicholas Weber  
Daniel Katz

### 27.4 Special Thanks...

Charlie Kettlewell – voice set editing  
Islam Elshaarawy - Geospatial programming  
Pedro R – voice set editing  
Stephen Molsher - voice set editing

### 27.5 Additional Work

Hazel March - Advertising, research and finance



## PF3 User Guide

---

Christopher Sargeant – Compiling the extended Control Sectors file, providing a more accurate and detailed database of ATC control boundaries and also correcting various anomalies.

### **Almost Last:**

To you dear user, without whom there would be no **PF3**, thank you for your support.

### **Last but not Least:**

*To my dear wife, Hazel, for all your help and support during this, my latest journey.*

*Thank you darling. X*

## 28. COPYRIGHT AND LICENSING

### 28.1 Copyright

PF3 - Copyright (c) 2007-2020 by OnCourse Software

### 28.2 Acknowledgements

Any reference to trademarks, registered or otherwise, of Microsoft or Lockheed Martin are hereby acknowledged.

### 28.3 Software License Agreement

#### **NOTICE -- READ THIS BEFORE INSTALLING OR USING THE SOFTWARE.**

INSTALLING AND USING THE SOFTWARE ACCOMPANYING THIS LICENSE INDICATES YOUR ACCEPTANCE OF THESE TERMS AND CONDITIONS. READ ALL OF THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT PRIOR TO INSTALLING OR USING THE SOFTWARE. IF YOU DO NOT ACCEPT THESE TERMS, YOU MUST DELETE THE SOFTWARE FROM YOUR HARDWARE. PLEASE NOTE THAT YOU MAY NOT USE, COPY, MODIFY OR TRANSFER THE SOFTWARE OR DOCUMENTATION OR ANY COPY, EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT.

IMPORTANT -- READ CAREFULLY: By installing PF3 (the "Software"), You ("Licensee") agree to be and are hereby bound by the terms of this Software License Agreement (this "Agreement"). If Licensee does not agree to the terms of this Agreement, Licensee must promptly destroy all copies of the Software and accompanying documentation ("Documentation").

#### **I. GRANT OF LICENSE:**

ONCOURSE SOFTWARE hereby grants to Licensee a non-exclusive license to use the Software and Documentation subject to the following terms:

Licensee agrees not to cause or permit the reverse engineering, disassembly, or decompilation of the Software.

Licensee may: install the Software on one computer.

Licensee may not:

- (i) use or permit other individuals to use the Software except under the terms listed above;
- (ii) modify, translate, reverse engineer, decompile, disassemble (except to the extent that this restriction is expressly prohibited by law) or create derivative works based upon the Software or Documentation;
- (iii) copy the Software or Documentation (except as described above);

## PF3 User Guide

---

(iv) rent, lease, sell, offer to sell, distribute, or otherwise transfer rights to the Software or Documentation or

(v) remove any proprietary notices or labels on the Software or Documentation.

### **II. SOFTWARE:**

This license does not grant Licensee any right to any enhancement or update of the Software.

### **III. TITLE:**

Title, ownership, rights, and intellectual property rights in and to the Software and Documentation shall remain in ONCOURSE SOFTWARE and/or its suppliers and licensors. The Software is protected by the copyright law of the United Kingdom and international copyright treaties. Title, ownership rights, and intellectual property rights in and to the content accessed through the Software, including the content contained in the Software media demonstration files, is the property of the applicable content owner and may be protected by applicable copyright or other law. This license gives Licensee no rights to such content.

### **IV. DISCLAIMER OF WARRANTY:**

THE SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ONCOURSE SOFTWARE AND ITS LICENSORS AND SUPPLIERS FURTHER DISCLAIM ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND ON INFRINGEMENT. THE ENTIRE RISK ARISING OUT OF THE USE OR PERFORMANCE OF THE SOFTWARE AND DOCUMENTATION REMAINS WITH LICENSEE. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ONCOURSE SOFTWARE OR ITS SUPPLIERS OR LICENSORS BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR OTHER DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, LOSS OF DATA OR OTHER PECUNIARY LOSS) ARISING OUT OF THIS AGREEMENT OR THE USE OF OR INABILITY TO USE THE SOFTWARE, EVEN IF ONCOURSE SOFTWARE OR ITS SUPPLIERS OR LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

### **V. TERMINATION:**

This license shall terminate automatically if Licensee fails to comply with the limitations described in this license. No notice shall be required from ONCOURSE SOFTWARE to effectuate such termination. On termination Licensee must destroy all copies of the Software and Documentation. Without limiting the foregoing, ONCOURSE SOFTWARE may terminate this Agreement immediately for any breach by Licensee of the Agreement.

### **VI. ENTIRE AGREEMENT:**

This Agreement constitutes the complete and exclusive agreement between ONCOURSE SOFTWARE and Licensee with respect to the subject matter hereof and supersedes all prior oral or written understandings, communications or agreements not specifically incorporated herein. This Agreement may not be modified except in writing duly signed by an authorized representative of ONCOURSE SOFTWARE and Licensee.

### **VII. ASSIGNMENT:**

Neither this Agreement nor any rights or obligations of Licensee hereunder may be assigned by Licensee in whole or in part without the prior written approval of ONCOURSE SOFTWARE. Any assignment in derogation of the foregoing shall be null and void.

### **VIII. SEVERABILITY:**

If any part of this Agreement is for any reason found to be unenforceable, all other parts nevertheless remain enforceable as long as a party's rights under this Agreement are not materially affected. In lieu of the unenforceable provision, the parties will substitute or add as part of this Agreement a provision that will be as similar as possible in economic and business objectives as was intended by the unenforceable provision.