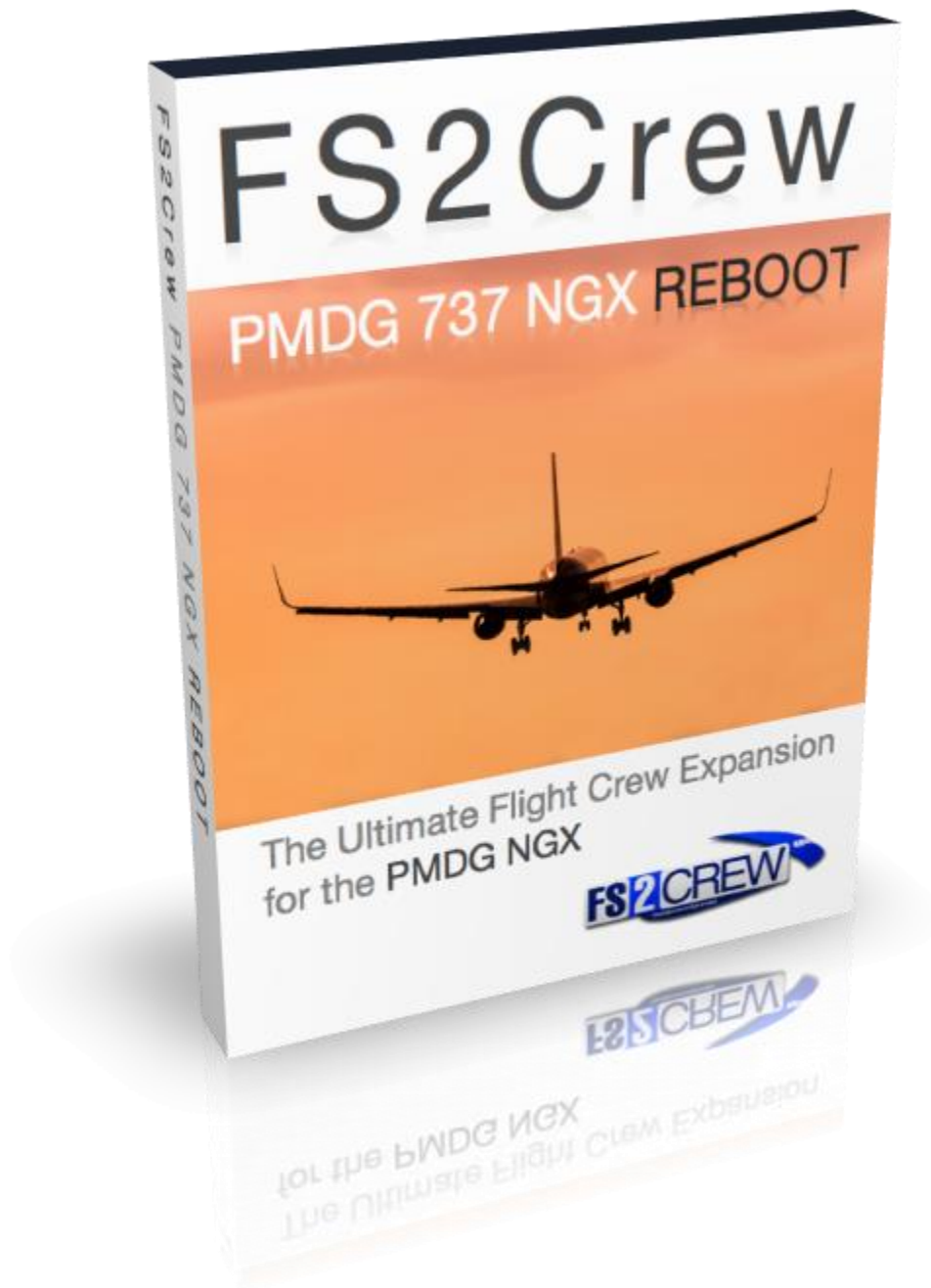# FS2CREW 737 NGX REBOOT

MAIN OPS MANUAL

REQUIREMENTS:

Minimums:

- Microsoft Flight Simulator X, Microsoft FSX: Steam Edition or Prepar 3D v2.5.
- Voice Control: A microphone.
- Windows 7, 8 or 10.   (It will work in XP, but we do not recommend XP)

Host Aircraft Requirements:

Required Aircraft: **PMDG 737NGX with SP1D or later. (Boxed Users may need to download SP1D from Aerosoft).**

For more information or if you do not own the host aircraft, please visit PMDG at: http://www.precisionmanuals.com

Speech Recognition Requirements:

- XP users must install SAPI if it's not already installed.
- Windows Vista, Windows 7, Windows 8 and Windows 10 users, particularly those from outside the United States, must be able to set their Speech Recognition language setting to **ENGLISH - US**. Please consult the **SPEECH RECOGNITION SETUP** section for more information.

Recommended:

- Headset (if using Voice Control). Using a built-in mic would not work well. USB headsets are easiest to work with.
- Windows 7, 8 or 10 - 64 bits.

Notes:

1. A generic, no-name brand USB headset is usually sufficient. An expensive, noise-cancelling headset is a plus, but it's hardly necessary. FS2Crew highly recommends USB headsets because they are much easier to configure and setup compared to the old style 'plug-in-a-jack' type headsets, but they're not absolutely necessary. Also, it's important to use a headset because you want to keep your microphone away from your speakers to avoid false speech command detection.

2. Windows 7, 8 and 10 (64 bit versions) handle memory much better than XP or Vista. If you're still using XP or Vista, FS2Crew recommends upgrading to the latest version of Windows. In addition, if you have a non-English version of Windows, FS2Crew recommends that you purchase Windows 8 or Windows 10 from Microsoft as it easily allows you to install the required English - US voice pack.

Important:

1. To avoid write permission issues we recommend that you run FSX with Administrator rights. It's also a very good idea of have FSX/P3D installed outside of the Program Files folder to help avoid write permission issues.

Credits:

FS2Crew NGX Reboot could never have happened without the great work of the following beta testers, voice actors, consultant and programmers!

B. York – Developer
A. Ridge
N. Andrews
S. Lear
M. Foor
A. Buchanan
V. Roos
K. Carty
R. Asberg
V. Howells (Who would like to dedicate NGX Reboot in memory of his Dad).
A. Kovacs
D. Weekes
P. Harris
M. Jamieson

SPEECH RECOGNITION SETUP:

WINDOWS XP ONLY

Step 1:

XP users may or may not have the required '**Speech Recognition API**' (SAPI) installed on their computer.

To check if you already have SAPI voice recognition software on your computer, open the 'Windows Control Panel' and click the 'Speech' icon if it's there. If you can see a 'Speech Recognition' tab, then SAPI is already installed on your computer.

If you're an XP owner and you do not have SAPI installed, you can download SAPI via the following link:

http://download.microsoft.com/download/B/4/3/B4314928-7B71-4336-9DE7-6FA4CF00B7B3/SpeechSDK51.exe

The file is called: **SpeechSDK51.exe**

Step 2:

How to install SAPI:

1. Create a temporary folder on your desktop. You can give it any name.
2. Double click the '**SpeechSDK51.exe**' file you just downloaded.
3. You will be asked to extract the contents of the exe to a folder.
4. Click the 'Browse' button and select your temporary folder, then press 'Unzip'.
5. Open your temporary folder, and double-click "**Setup.exe**".
6. When done, you can delete the temporary folder.

Step 3:

Your Speech Properties panel in XP should look like the following screen shot:

Step 4:

Press '**Train Profile**' to run the voice training.

Note:

If you experience difficulties with Speech Recognition, please consult the Troubleshooting section.
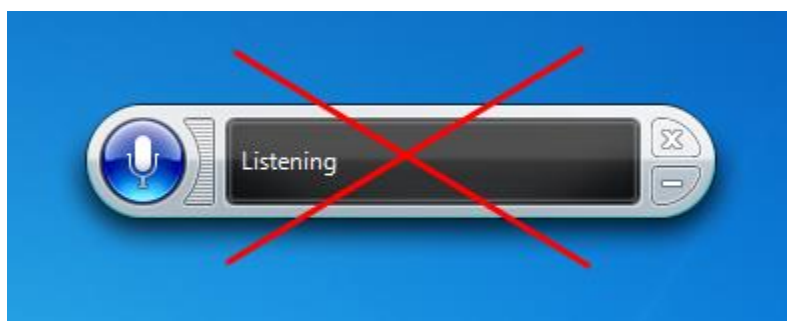
WINDOWS VISTA, WINDOWS 7, 8 AND 10

Step 1:

Open the 'Windows Speech Recognition' panel via the Windows Control Panel. You can locate this panel easily by typing "speech recognition" in the Search Box on the Windows Control page as shown below.
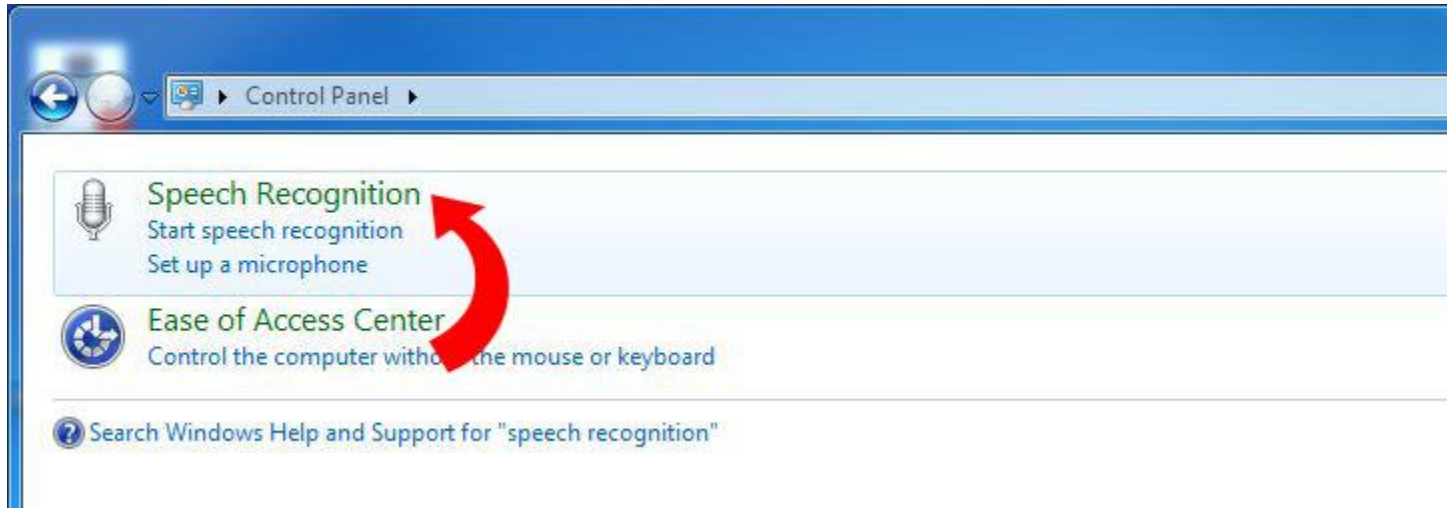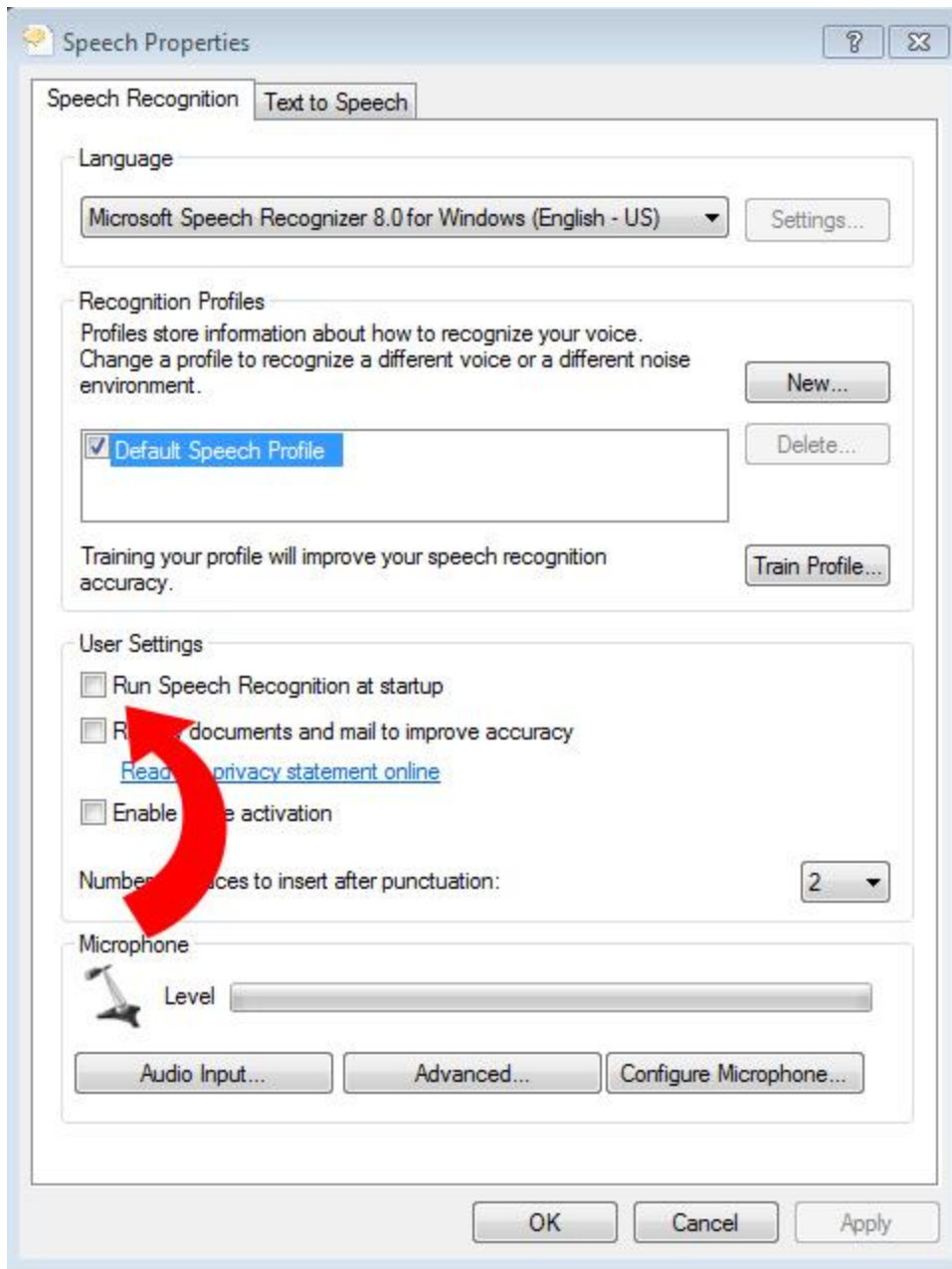

Step 2:

Microsoft's 'Windows Speech Recognition' system must be **OFF** prior to loading Flight Simulator.

To ensure Windows Speech Recognition does not load on Windows Startup, make sure '**Run Speech Recognition at Start-up**' is <u>unchecked</u> on the **Speech Properties -> Speech Recognition** page, which is located in the Windows Control Panel.

Make Sure 'Run Speech Recognition at start-up' is <u>UNCHECKED</u>!

Step 3:

The '**Language**' setting on the Speech Properties -> Speech Recognition page must be set to **ENGLISH - US**.

This is a **CRITICAL** step that is often overlooked by users from English speaking countries other than the United States, especially those from the **UK** and **Australia**.

WINDOWS 8 AND 10 USERS: You will need to download the **English - US** language pack from Microsoft if your OS is not currently set to English - US. The good news is that **anyone** can add the **English - US** language pack very easily. Click this link to learn how!
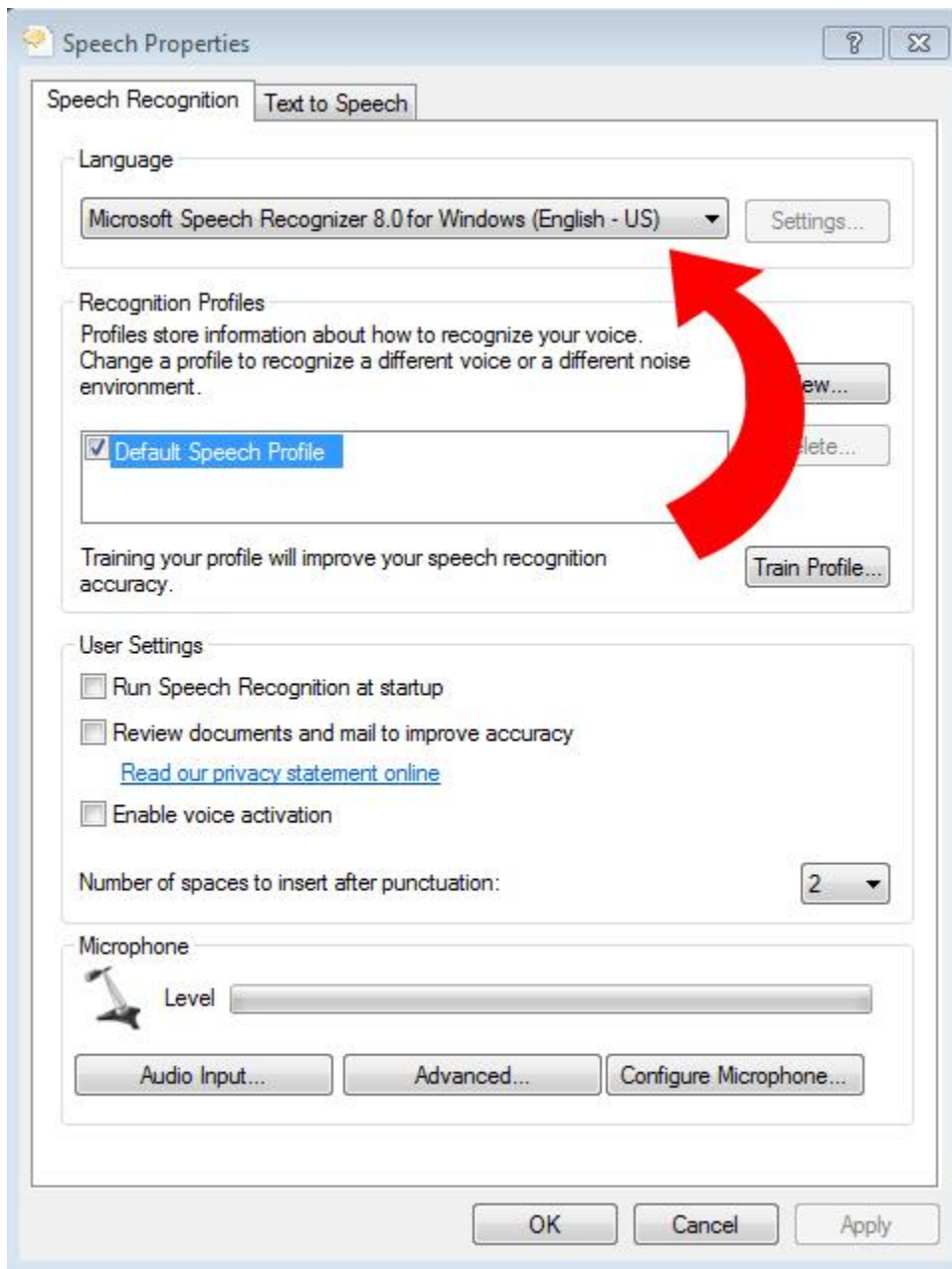
If you are running a **non-English** 'Home' version of Windows 7 or Vista, and you cannot set your speech language setting to English - US, you have four options:

1. Install Windows 8 (Best Solution) and download the **English - US** language pack from Microsoft (all Win 8 owners can do this). Click here to learn how.
2. Upgrade to Windows 7 'Ultimate' or 'Enterprise'. 'Ultimate' or 'Enterprise' owners are able to download and install the English language pack from Microsoft, but 'Home' version owners cannot.
3. Downgrade to Windows XP.
4. Install Vistalizator. Vistalizator will switch your OS to English. Many FS2Crew users from non-English speaking countries have used Vistalizator successfully so they can enjoy the benefits of Voice Control. (Note: To use Vistalizator, you do not need to uninstall Windows 7 SP1... all you need to do is run Vistalizator in compatibility mode.) **PRIOR TO INSTALLING VISTALIZATOR, SET UP A SYSTEM RESTORE POINT IN CASE SOMETHING GOES WRONG!**

Step 4:

Run the Voice Training so the computer can learn your voice.

This is a **CRITICAL** step. If you don't run the voice training, your speech recognition accuracy rates will not be high.

You may even want to run the voice training more than once.
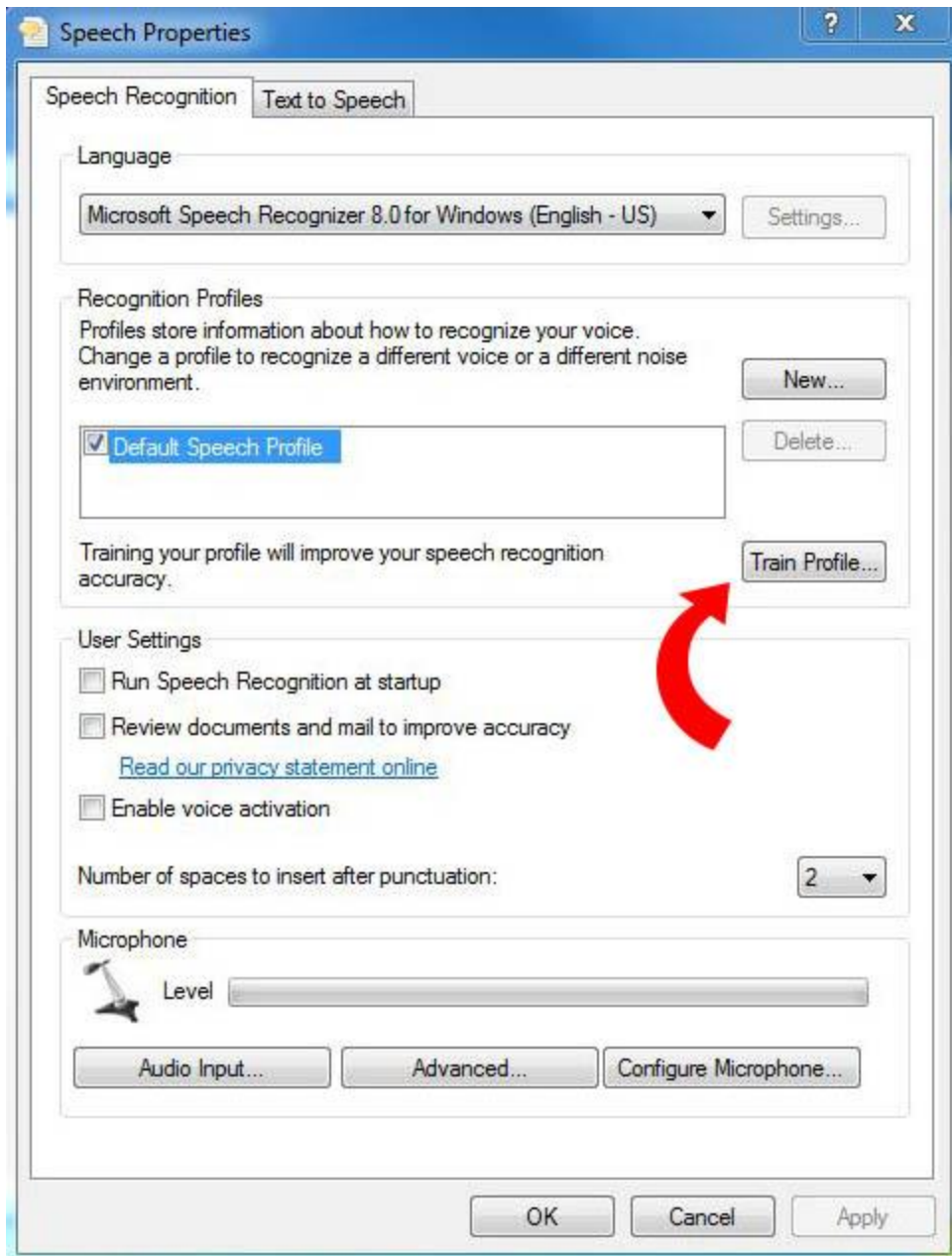
STOP! IF YOU HAVE THE OLD LEGACY VERSION OF FS2CREW NGX ALREADY INSTALLED, DO THIS FIRST!

If you have the old, legacy version of FS2Crew NGX installed on your current PMDG 737 NGX (Microsoft FSX, Steam FSX or P3D, you should re-install the PMDG 737 NGX aircraft.

Why?

Because you need a fresh and "clean" panel.cfg otherwise the FS2Crew installer will add a 2nd set of FS2Crew NGX entries to the NGX's panel.cfg file, and that will cause serious problems.

CONNECTING FS2CREW NGX REBOOT TO THE PMDG 737 NGX AIRCRAFT:

- Open the FS2Crew NGX Reboot Configurator.
- There should be an icon on your desktop that looks like this:
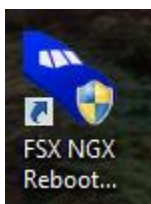
- You can also access it via **START – ALL PROGRAMS –FS2CREW2015**.
- Enter your account and order details.
- Press the **ENABLE FS2CREW BUTTON** to add FS2Crew entries to the NGX's panel.cfg file.

Ensure FSX is run with Administrator rights to avoid write permission issues that may block FS2Crew's effort to write to the NGX's panel.cfg file.

Right click on your FSX.exe and select "Properties". Then go to the "Compatibility" tab and check the "Run as Administrator" tick box. It's also a good idea to install Flight Simulator out of the Program Files folder to help avoid write permission issues.

The PMDG 737 NGX's panel.cfg file can be opened with Notepad. It is located here:

Your Flightsim Folder\SimObjects\Airplanes\PMDG 737-800NGX\panel\panel.cfg

SETTING UP FOR VOICE CONTROL:

Most of you have probably used FS2Crew in the past, and if you have you can skip this part. But for those of you who are new to FS2Crew, you'll need to do the following to use Voice Control:

1. Set your speech recognizer to **ENGLISH – US**. Even if you're from Australia or the UK, you will need to do this. Don't worry, you don't need to change your whole computer to English – US, only the Speech Recognizer setting. If you own Windows 8 or Windows 10 and you don't see the ENGLISH – US option, you need to download the **ENGLISH – US** language pack from Microsoft.
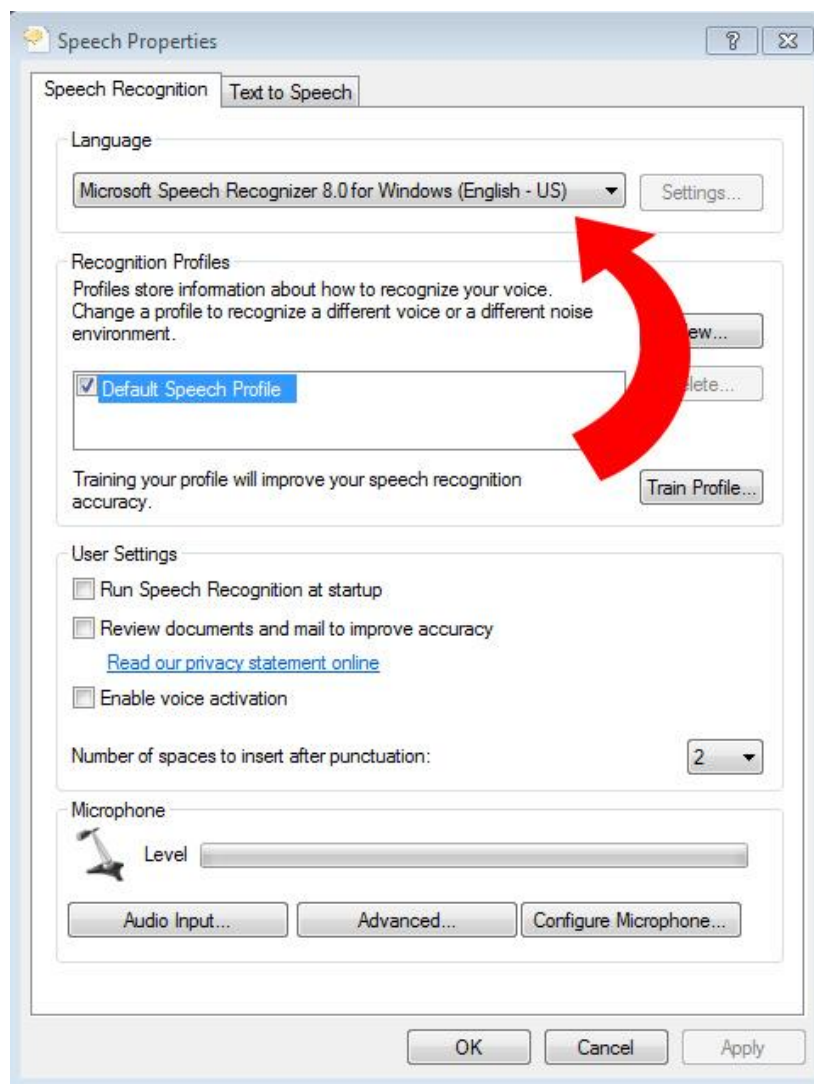
2. If you do not own an English version of Windows, you have several options: You can upgrade to Windows 8 or Windows 10 and download the English – US language pack from Microsoft. If you own Windows 7, you can upgrade to Ultimate and download the English – US language pack. If you own Windows 7 Home edition, you can try using Vistalizator from www.froggie.sk, but do that at your own risk. Make sure you make a system restore point first. Personally though, your best bet is to use Windows 8, and even better would be Windows 10. Windows 10 will be out in the summer of 2015, and it's a fantastic OS. Your final option is to use the 'Button Control' option with FS2Crew.

3. If you haven't run the Microsoft voice training, do it now or your speech recognition results will be terrible. Generally speaking, so long as you run the voice training and your microphone is in good working order and your voice is reasonably clear, you should expect voice accuracy results over 90 percent. Just remember when talking to try to sound like a TV newscaster. Speak clearly!

For more details on setting up your computer for Voice Control, please visit the FS2Crew On-Line manuals at: www.support.fs2crew.com

LOADING FLIGHT SIMULATOR:

Let's load the simulator! FS2Crew NGX works with Microsoft FSX, Steam FSX and Prepar 3D. So pick which ever one you prefer and fire it up!

Special notes:

- If using FSX, the default aircraft on the free flight screen should be the ultralight (the Trike). Never used saved situation files as they can cause the aircraft to load improperly.

THE DEFAULT TRIKE SHOULD AWAYS BE THE FIRST AIRCRAFT VISIBLE ON THE FSX FREE FLIGHT SCREEN. NEVER USED SAVED START UP FILES AS THEY CAN CAUSE PROBLEMS WITH COMPLEX 3RD PARTY AIRCRAFT.

- If using FSX, you must ensure that the aircraft is set to load initially into the 2D cockpit, otherwise you might get a warning message about the PMDG SDK when you open the FS2Crew Main Panel. Understand that you can still use the VC, you just need to ensure the 2D cockpit loads first before switching to the VC.
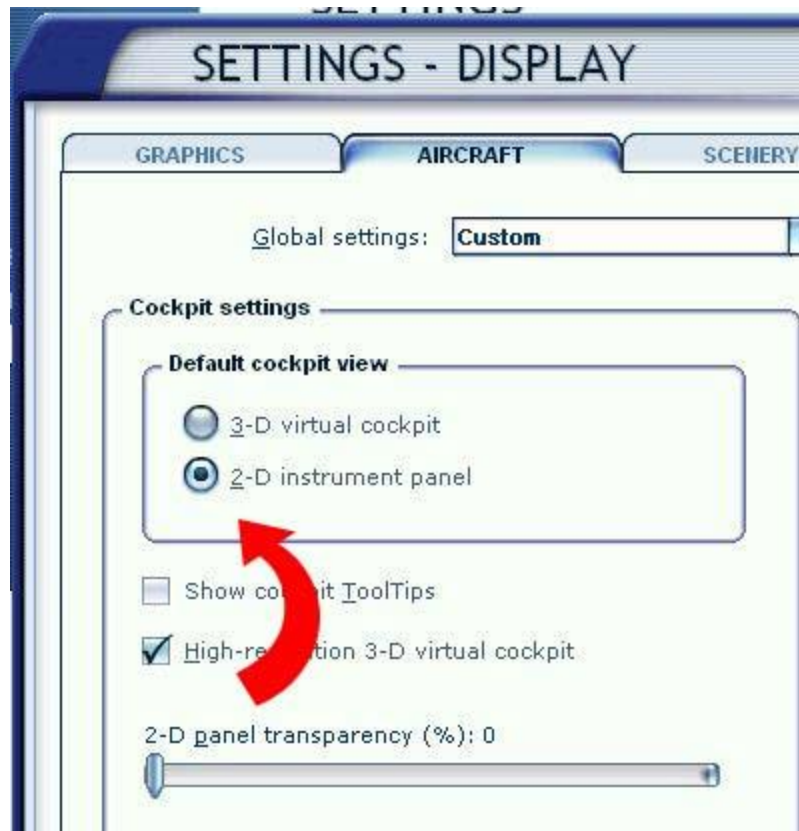
- In Prepar 3D things are different: there is no 2D cockpit option. But you don't need to worry about that. In Prepar 3D, you can load the NGX direct into the Virtual Cockpit without worrying about the SDK warning message since P3D fixed a lot of Simconnect bugs that were unique to FSX.
- Choose any departure airport your like. You can fly any route with this tutorial.

KEYBOARD/JOYSTICK ASSIGMENTS:

OPENING AND CLOSING THE MAIN PANEL

The only way to open the Main Panel is by creating a keyboard/joystick assignment as shown below:

- Create a joystick or keyboard button assignment for '**AUTOFEATHER (ARM/OFF)**' in the **FS 'SETTINGS - CONTROLS**' menu.
- You can select any Joystick or Keyboard assignment (or both).
- If using a keyboard assignment, we recommend using a single key, like the letter "C", instead of a complex combination.
- You may need to over-write an existing FS key assignment. The majority of the FS key assignments you'll never use, so it's rarely a problem.
- If the button assignment doesn't seem to work, try using a different assignment or use the FSUIPC "CONTROL SENT WHEN BUTTON PUSHED" option. You may have a conflict with another add-on.
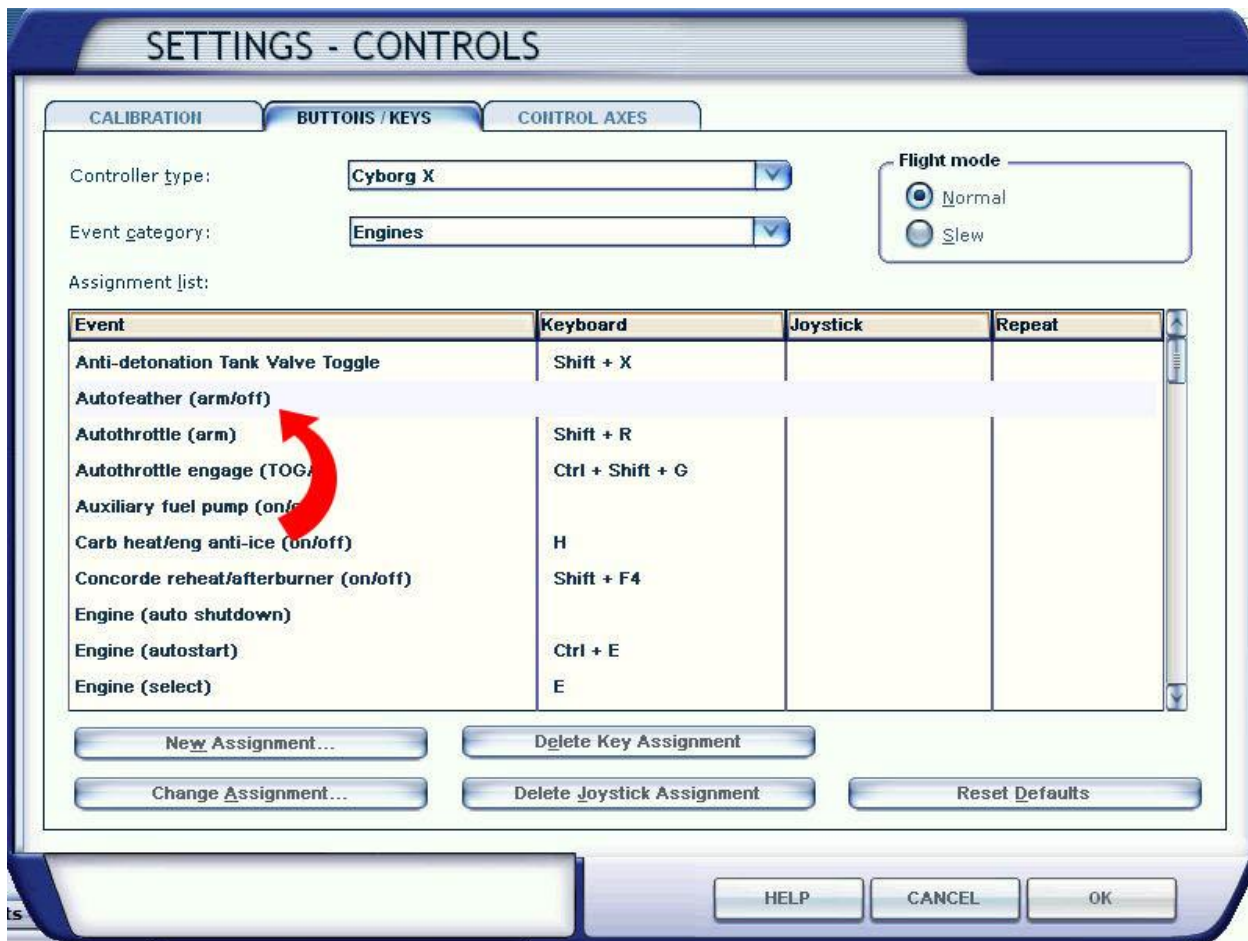

FOR NON-ENGLISH USERS:

GERMAN: AUTOMATISCHE ANSTELLWINKELVERSTELLUNG (EIN/AUS)

FRENCH: SYNCHRO DE L'HELICE (ACTIVER/DESACTIVER)

ITALIAN: SISTEMA DI MESSA IN BANDIERA DELL'ELICA (ARMA/DISATTIVA)

SPANISH: PUESTA EN BANDERA AUTOMATICA (ACTIVAR/DESACTIVAR)

HARD MUTE

- Used when you want to employ Mute for extended periods of time.
- Works on a Toggle On/Off basis.
- An "**M+**" symbol will appear in the left hand side of the FS2Crew Main Panel display when operating.
- Can be toggled On/Off by pressing the "**HM**" button on the FS2Crew Main Panel.
- Can also be toggled On/Off by creating a keyboard or joystick assignment for **ALTERNATE STATIC SOURCE (ON/OFF)** in the **FSX 'SETTINGS - CONTROLS'** menu.
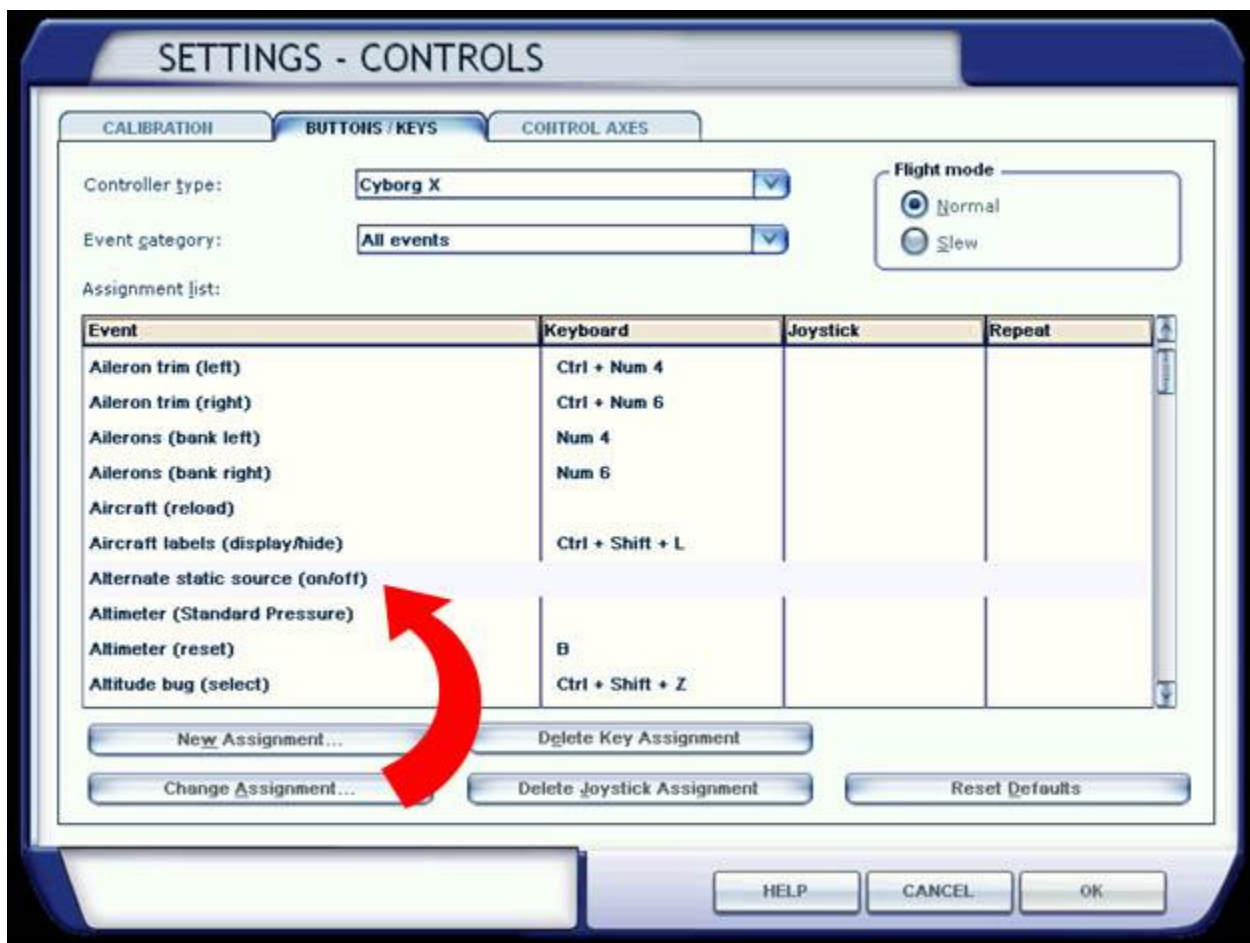
FOR NON-ENGLISH USERS:

GERMAN: QUELLE FUR STATIKDRUCK (EIN/AUS)

FRENCH: SOURCE STATIQUE DE REMPLACEMENT (ACTIVER/DESACTIVER)

ITALIAN: PRESA STATICA ALTERNATIVA

SPANISH: FUENTE ESTATICA ALTERNATIVA

SOFT MUTE

- Used when you only want to employ Mute *temporarily*, such as when communicating with on-line ATC.
- Works on a "Push-to-Hold" basis.
- If using on-line ATC, you would assign 'Soft Mute' to the same key used for your ATC 'Push-to-Talk (PTT) switch'.
- An "**M**" symbol will appear in the left hand side of the FS2Crew Main Panel display area when operating.
- By default, the **LEFT** or **RIGHT CONTROL** key acts as the SOFT MUTE KEY (Note: There is a Config Option to disable this function).
- To create a Soft Mute key assignment in addition to the default LEFT and RIGHT CONTROL KEY, create a joystick or keyboard button assignment for '**PROPELLER SYNC (ON/OFF)**' in the **FSX 'SETTINGS - CONTROLS'** menu.
- If using a joystick button, you must set the **REPEAT SLIDER TO FULL RIGHT!**

Important Reminder: Even with SOFT or HARD MUTE enabled, the Speech Recognition will still detect any inputs received via your microphone; in fact, you will still see activity in the Green Bar that displays what the Speech Recognition system is 'detecting'.   The difference, however, is that the virtual FO will not act on any words or phrases the speech the Speech Recognition system detects.

For example, if you cough, and the Speech Recognition system somehow interprets that as "*Gear Down*", you will still see "Gear Down" in the Green Bar, but the FO will not put the gear down.
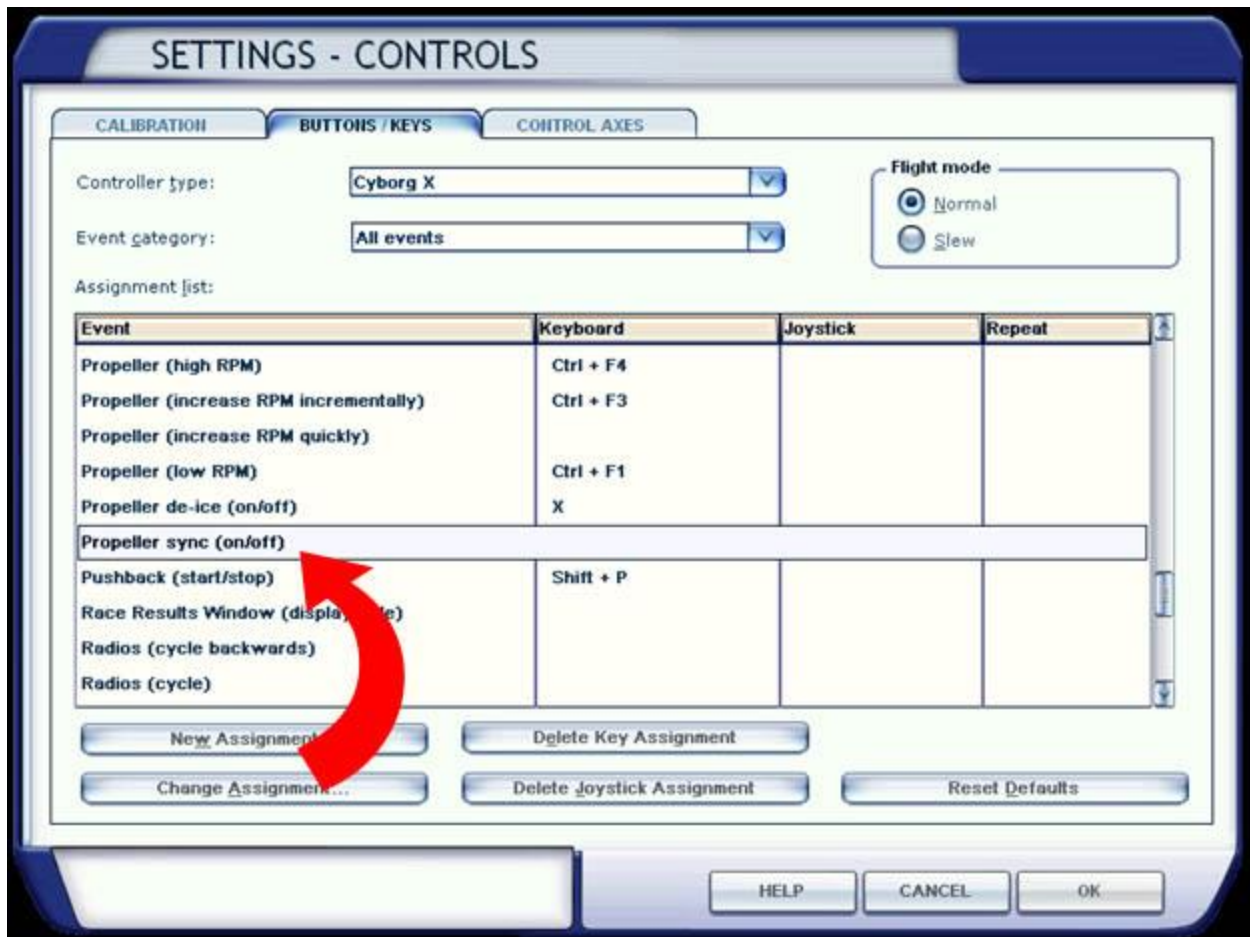
FOR NON-ENGLISH USERS:

GERMAN: PROPELLERSYNC (EIN/AUS)

FRENCH: SOURCE STATIQUE DE REMPLACEMENT (ACTIVER/DESACTIVER)

ITALIAN: SINCRONIZZAZIONE ELICA

SPANISH: SINCRONIZACION DE LAS HELICES

MAIN BUTTON (BUTTON CONTROL)

- To create your "**Main Button**" assignment, create a joystick or keyboard button assignment for '**ALTERNATE STATIC SOURCE (ON/OFF)**' in the **FS 'SETTINGS - CONTROLS**' menu.
- You can select any Joystick or Keyboard assignment (or both).

IMPORTANT: FS2Crew cannot use the same key assignment also used by a PMDG 737 NGX Command function, or the Main Button will not work!

So, for example, if you use "C" as your keyboard assignment for the FS2Crew Main Button, you cannot use "C" for any PMDG 737 KEY ASSIGNMENTS!

FOR NON-ENGLISH USERS:

GERMAN: QUELLE FUR STATIKDRUCK (EIN/AUS)

FRENCH: SOURCE STATIQUE DE REMPLACEMENT (ACTIVER/DESACTIVER)

ITALIAN: PRESA STATICA ALTERNATIVA

SPANISH: FUENTE ESTATICA ALTERNATIVA

SECONDARY BUTTON (BUTTON CONTROL)

- To create your "**Secondary Button**" assignment, create a joystick or keyboard button assignment for '**PROPELLER SYNC (ON/OFF)**' in the **FS 'SETTINGS - CONTROLS**' menu.
- You can select any Joystick or Keyboard assignment (or both).

IMPORTANT: FS2Crew cannot use the same key assignment also used by a PMDG 737 Command function, or the Main Button will not work!

So, for example, if you use "C" as your keyboard assignment for the FS2Crew Main Button, you cannot use "C" for any PMDG 737 KEY ASSIGNMENTS!
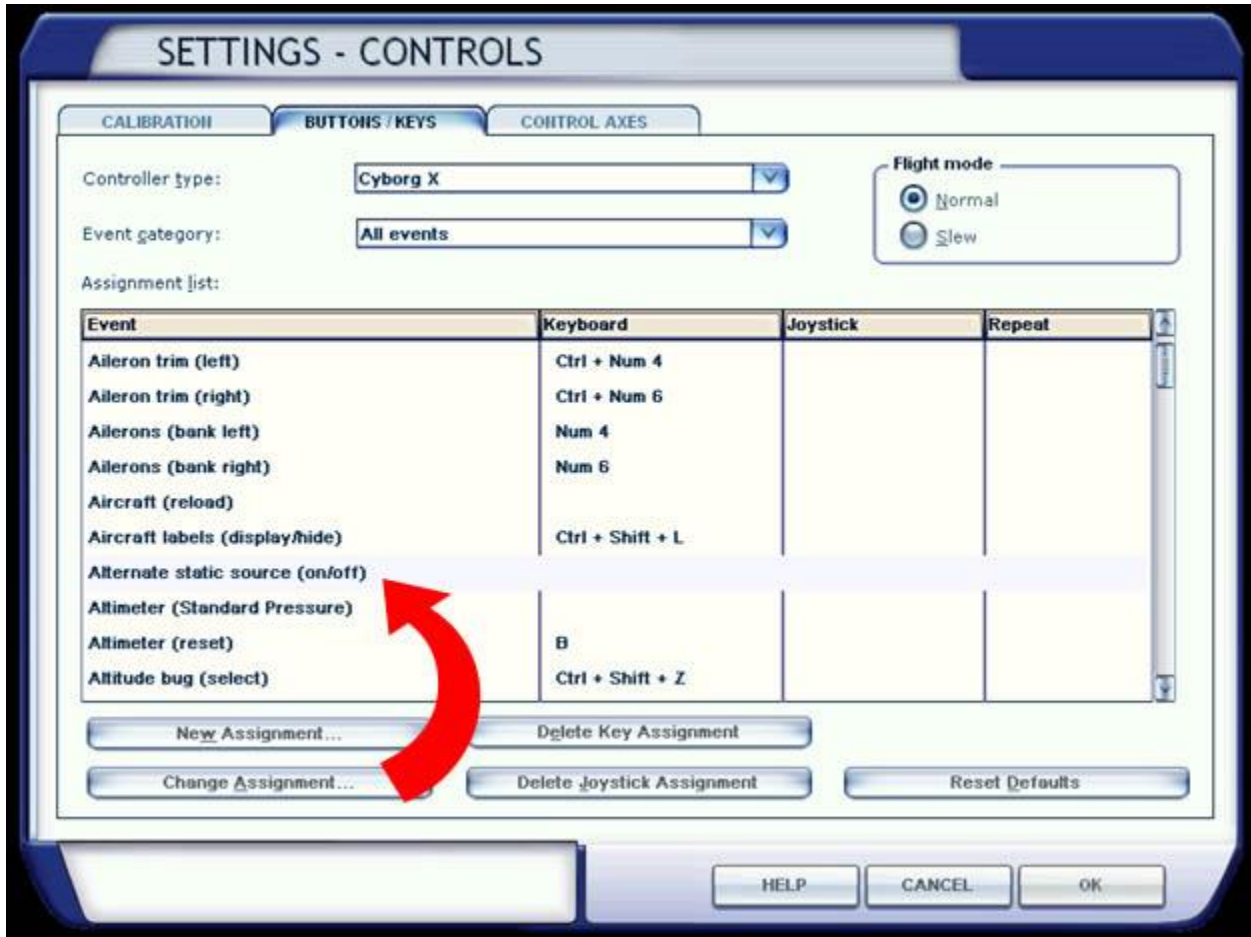
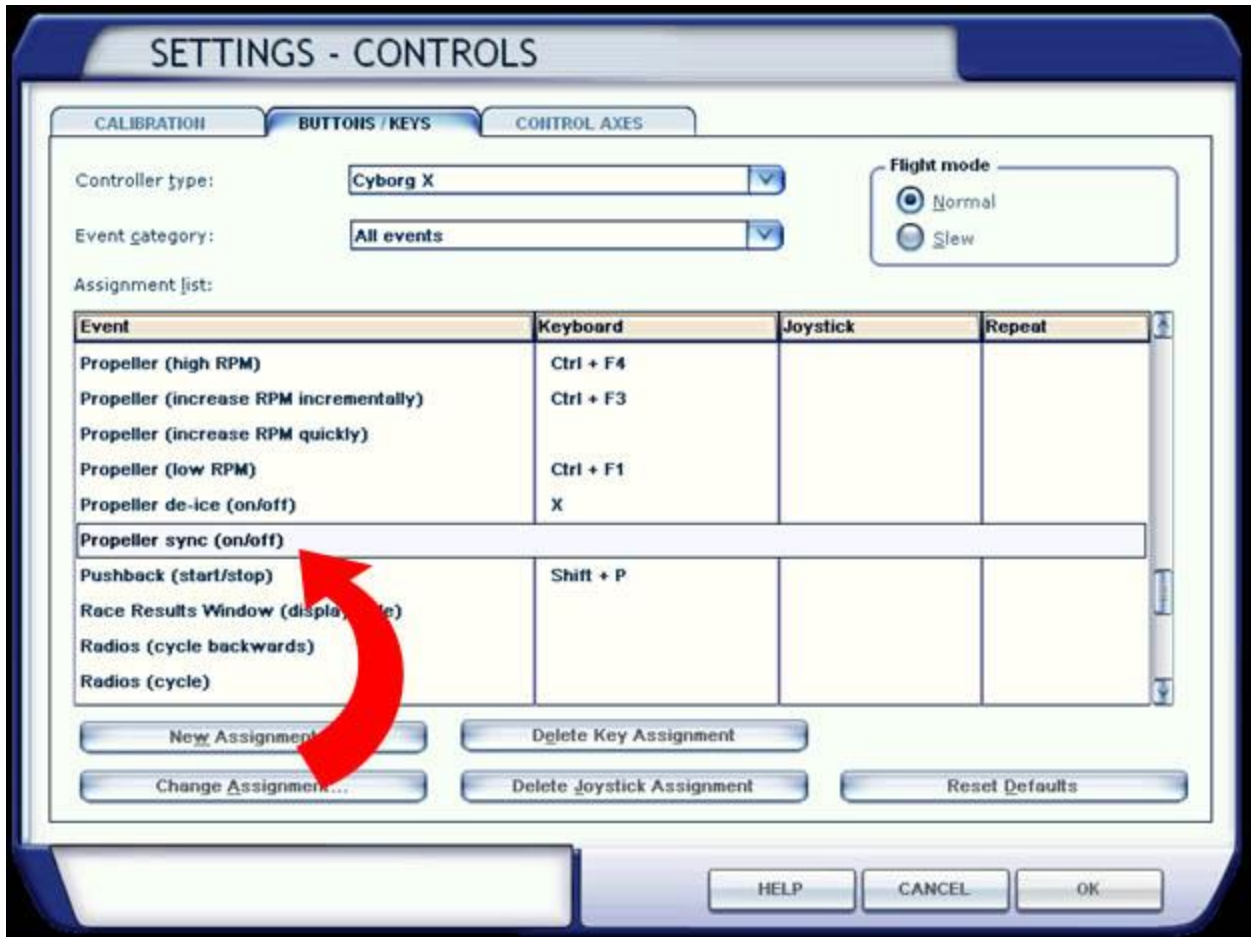**FOR NON-ENGLISH USERS:**

GERMAN: PROPELLER (SEGELSTELLUNG)

FRENCH: AMORCAGE DE LA MISE EN DRAPEAU AUTOMATIQUE (ARMER/DESARME)

ITALIAN: SISTEMA DI MESSA IN BANDIERA DELL'ELICA (ARMA/DISATTIVA)

SPANISH: PUESTA EN BANDERA AUTOMATICA

THE FS2CREW PANELS:

MAIN PANEL OVERVIEW

From Left to Right:

LEFT SCREW: Used for backup/testing purposes with Button Control only. Left Mouse click -> MAIN BUTTON. Right Mouse click -> SECONDARY BUTTON.

"VOICE/BUTTON" TEXT: Displays active Control Method (Voice or Button Control)

"(H)" TEXT: If headset is on, the (H) text will appear beside the active Control Method. Example: VOICE (H).

"MUTE" TEXT: Soft Mute is active. Soft Mute is used to prevent the First Officer from <u>acting on</u> speech commands detected by the speech recognition system as shown in the Green Bar. If using on-line ATC, it's recommended that you assign the Soft Mute keyboard button to the same button used with your Push-To-Talk (PTT) button.

"MUTE+" TEXT: Hard Mute is active. To prevent the FO from acting on any unintended speech commands detected by the speech recognition system, it's recommended that Hard Mute be activated during long stretches when voice commands would not be used (such as during cruise).

ACTIVE MODE TEXT: Displays the current FS2Crew Mode.

"LOCK" TEXT: If the FS2Crew panels are locked, the panel windows will remain open when views are changed. If the FS2Crew panels are left in the unlock position, the panel windows will automatically close when views are changed.

"DM" TEXT: If FS2Crew is in DESCENT MODE, the DM text will flash. For most FS2Crew approach, landing and descent callouts to function, FS2Crew must be in DESCENT MODE.

ARROW BUTTONS (DOWN/UP): Cycles ACTIVE MODE forward and backward.

Special Note: Right Clicking the down arrow button can be used to fast forward the preflight events timer down.

HS: Activates Headset. *IMPORTANT: Your headset audio device must be selected on the Audio page.*

HM: Hard Mute Button.

SEC: Opens SECONDARY PANEL.

LK: Toggles Panel Lock function.
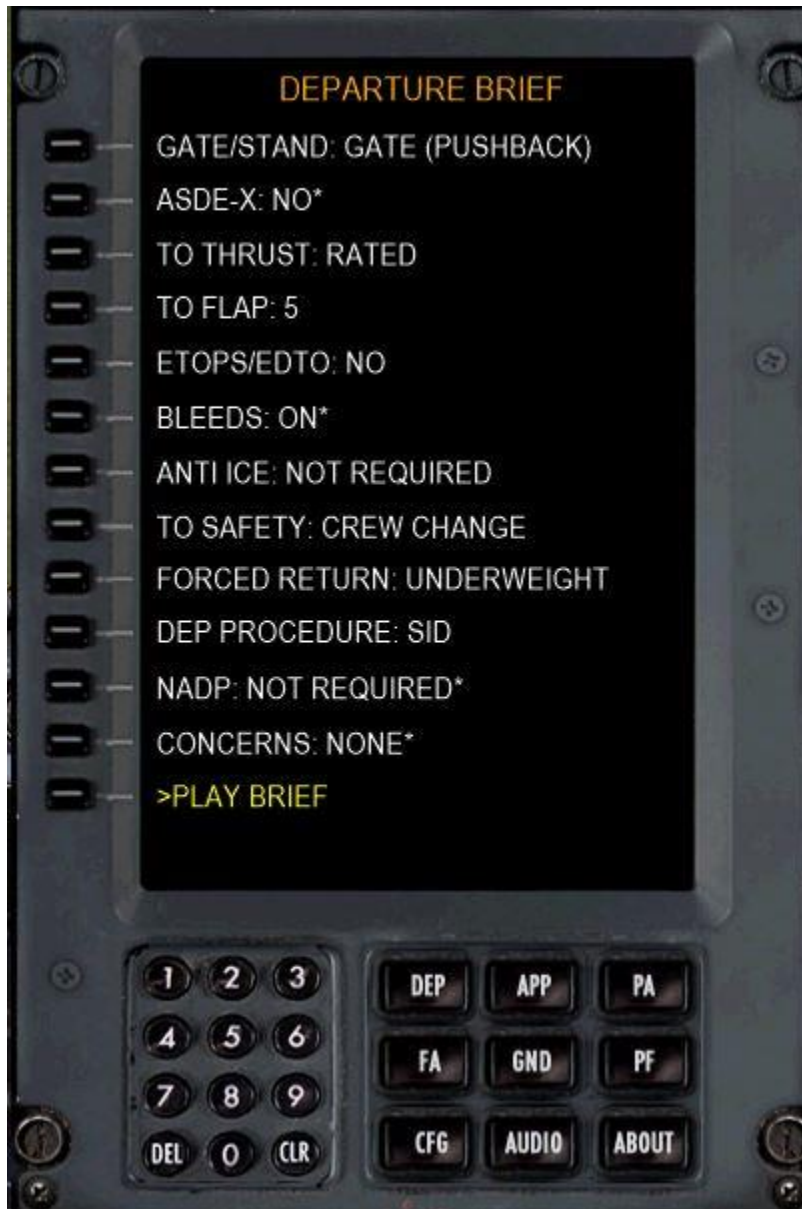
PANEL LIGHTING

FS2Crew Panel lighting is connected directly to the **MAIN PANEL BRIGHTNESS** switch located in front of the Captain's yoke.

Note: The MAIN PANEL BRIGHTNESS knob must be at the half way position or greater for the FS2Crew panels to illuminate.

SECONDARY PANEL OVERVIEW

DEPARTURE BRIEF PAGE

GATE/ STAND: Using a gate or stand.

ASDEX: Refers to airport ground surveillance radar availability at the departure airport.

TO THRUST: Takeoff thrust setting used.

TO FLAP: Takeoff flap used.

ETOPS/EDTO: Extended Operations procedures in effect.

BLEEDS: Bleeds on or off for takeoff.

ANTI ICE: EAI or WAI for departure.

TO SAFETY: Takeoff safety brief. Note: a full takeoff safety is only required when pairing with a new crew member.

FORCED RETURN: Overweight or underweight. Determines if you will need to burn off fuel prior to landing.

DEP PROCEDURE: SID or Vectors or Self Tracking for departure.

NADP: Noise abatement departure procedure to be used for departure.

CONCERNS: As appropriate.

Notes:

1. You can change the selections by pressing the Left Line Select button.
2. You can play the brief by pressing the Left Line Select button beside the PLAY BRIEF text.
3. The asterisks (*) symbol to the right of the option means that the selection will NOT be read back during the brief because either it's standard procedure, or because it just usually wouldn't be mentioned.

APPROACH BRIEF PAGE
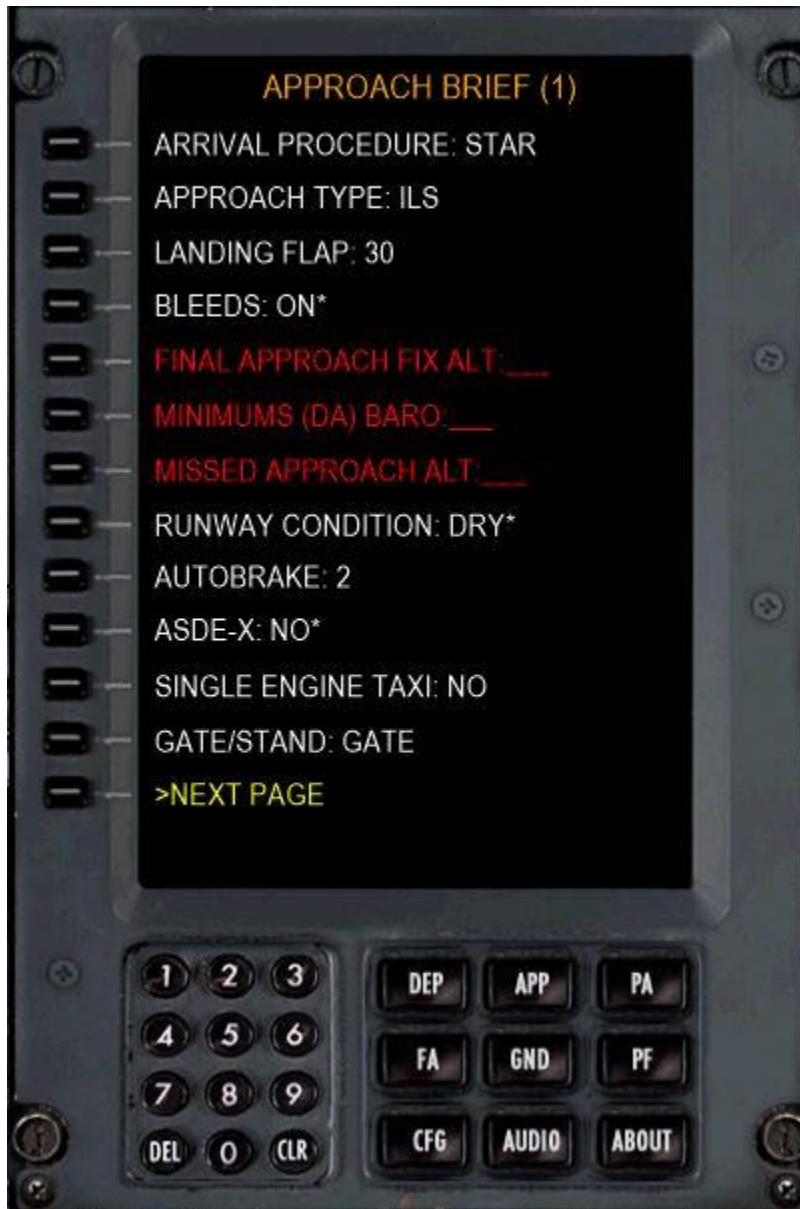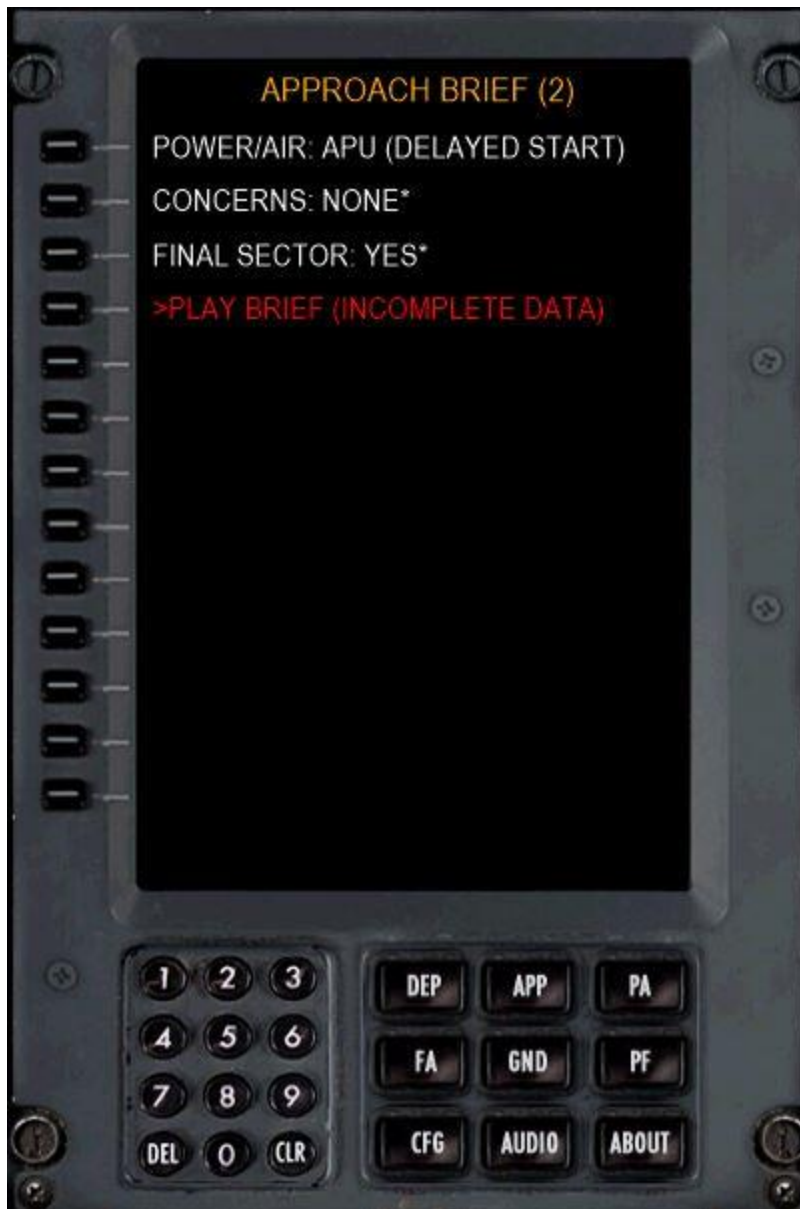
ARRIVAL PROCEDURE: STAR, Vectors or Self Tracking.

APPROACH TYPE: As required.

LANDING FLAP: 15, 30 or 40.

BLEEDS: As required. Note: A bleeds off landing would be very rare.

FINAL APPROACH FIX: The altitude value for the FAF can be located on the approach chart. See the NOTES section below for information on how to enter the FAF value.

MINIMUMS: Decision Altitude/Height. MINS selector on Captain's EFIS panel governs if the value is DA or DH. If shooting a CAT II or III Approach, you would use DH (Decision Height). CAT 1 and Non-Precision approaches use DA (Decision Altitude).

MISSED APPROACH ALTITUDE: The altitude value for the Missed Approach Altitude can be located on the approach chart.

RUNWAY CONDITION: As required.

AUTOBRAKE: As required.

ASDE-X: Ground surveillance radar used at the airport.

SINGLE ENGINE TAXI: As required. See the Tutorial section for each SOP for details on how to perform the single engine taxi.

GATE/STAND: As required.

POWER/AIR:

- **APU (Delayed Start):** You will need to manually start the APU or ask the FO to start the APU
- **APU (A.START):** FO will automatically start the APU during his After Landing Procedure.
- **GPU:** Ground crew will auto-connect the GPU when arriving at the gate/stand.
- **GPU + AC:** Ground will auto-connect the GPU and Air Conditioning cart when arriving at the gate/stand.

CONCERNS: As required.

FINAL SECTOR: Essentially, is this leg the terminal leg? If NO, depending on the SOP used, the FO will not turn off the ELEC HYD PUMPS or WINDOW HEAT during his shutdown procedure as these items would be left on for transit flights.

Notes:

1. The red fields require you to input the desired altitude.
2. For each field, enter a number in the scratchpad using the keypad.
3. Copy the value to the desired field by clicking the Line Select Button associated with that field.
4. The Final Approach Fix altitude can be obtained by looking at the approach chart.
5. To return to Page 1, press the APP button.

PA PAGE

PUBLIC ADDRESS (GND)

WELCOME
DEPARTURE DELAY
CABIN CREW ARM SLIDES
TAKEOFF SEQUENCE:___
GATE RETURN
GATE CONTINUE
REJECTED TO
REJECTED TO (CONTINUE)
CABIN CREW DISARM DRS & X CHECK
CABIN CREW OPEN DOORS
QRH SECTION
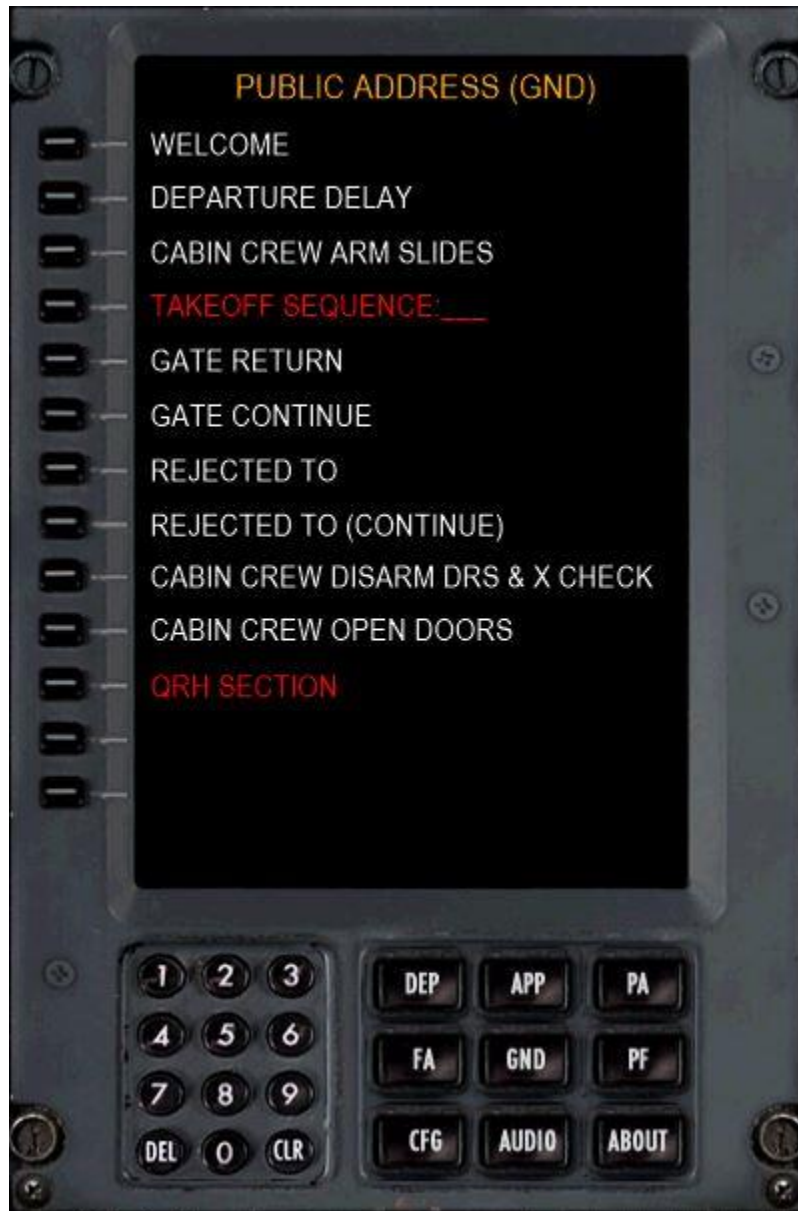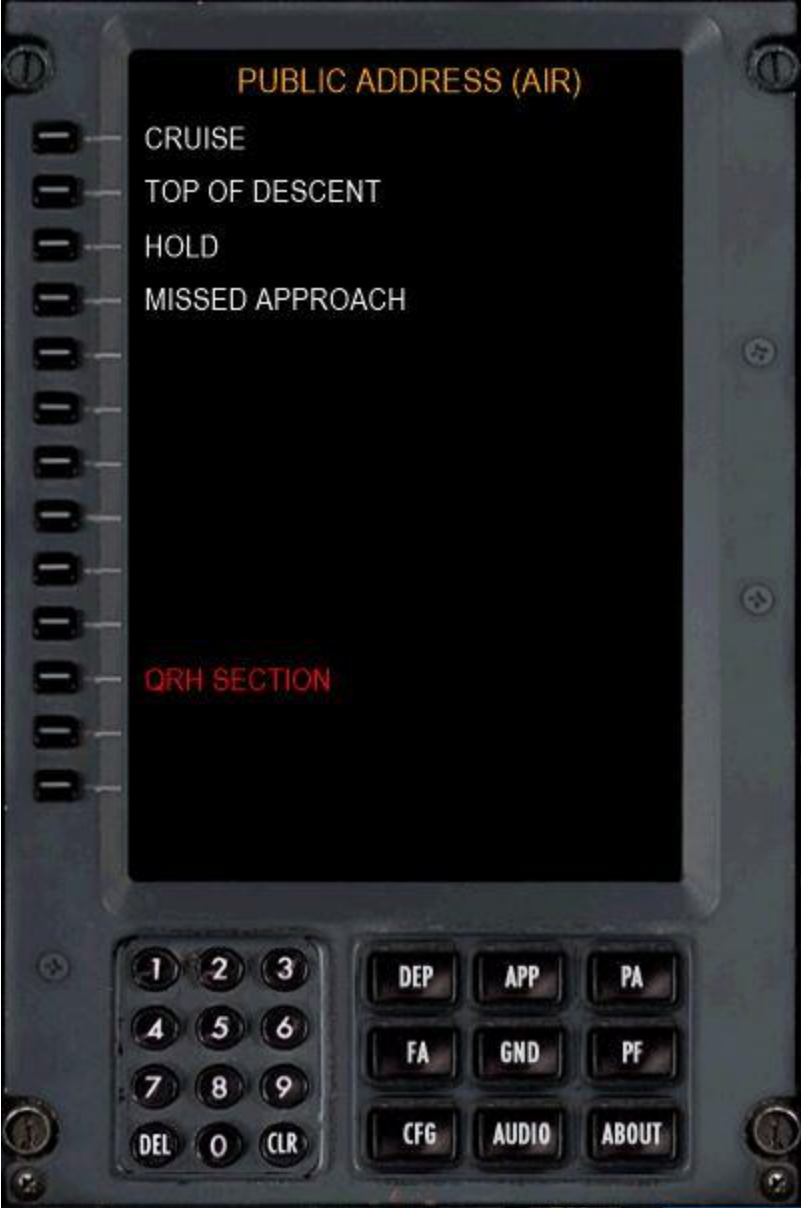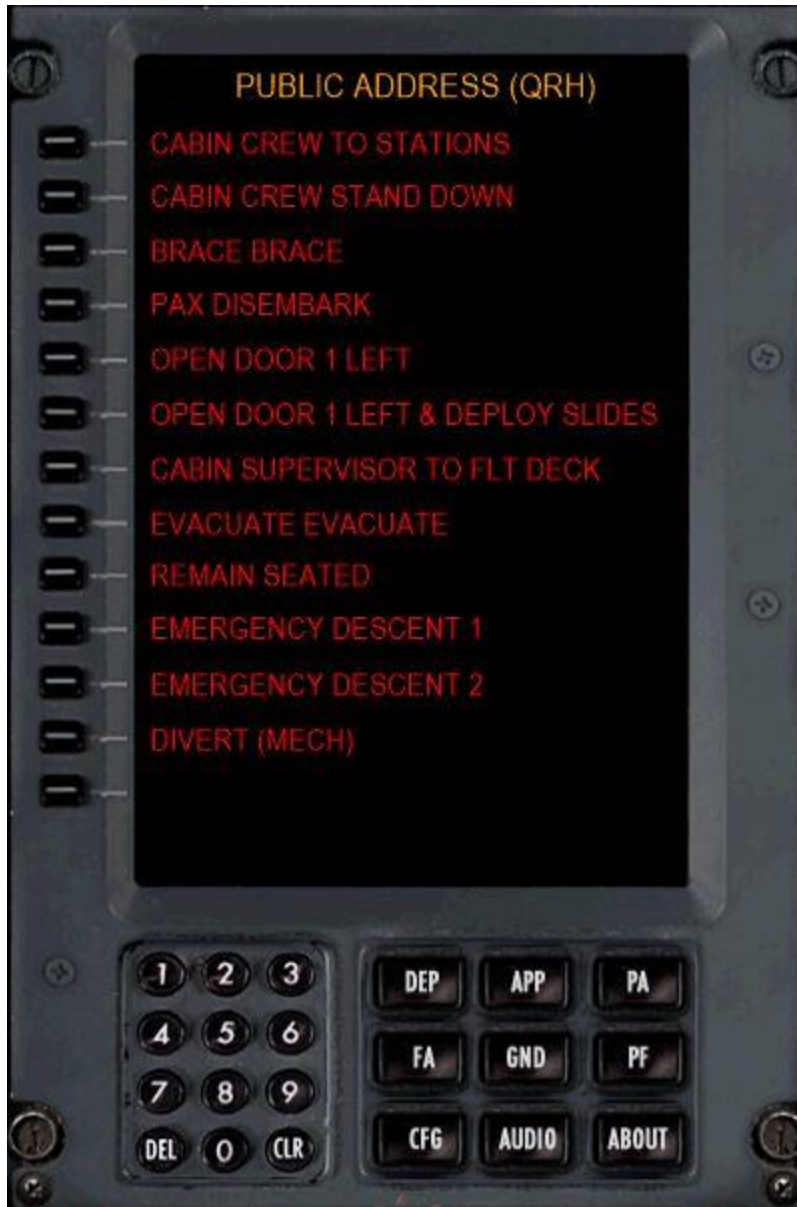
Notes:

1. The PA's are self-explanatory.
2. Press the Left Line Select Button to play the associated PA.
3. If the aircraft is airborne, the list available PA will change to those which would only be used while airborne.
4. The TAKEOFF SEQUENCE field will accept any value between 1 and 5.
5. You can also open the PA Panel directly by pressing the PA Button on the Audio Panel. If you do that, the only way you can close the PA panel is by deselecting the PA button.

FA (FLIGHT ATTENDANT) PAGE

1. To contact the FA, you have two options: You can either press the **ATTEND** button on the overhead or use the FA Page as shown below:
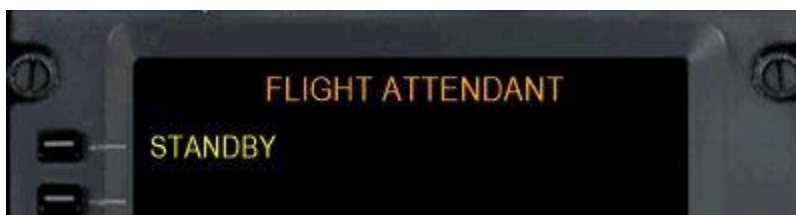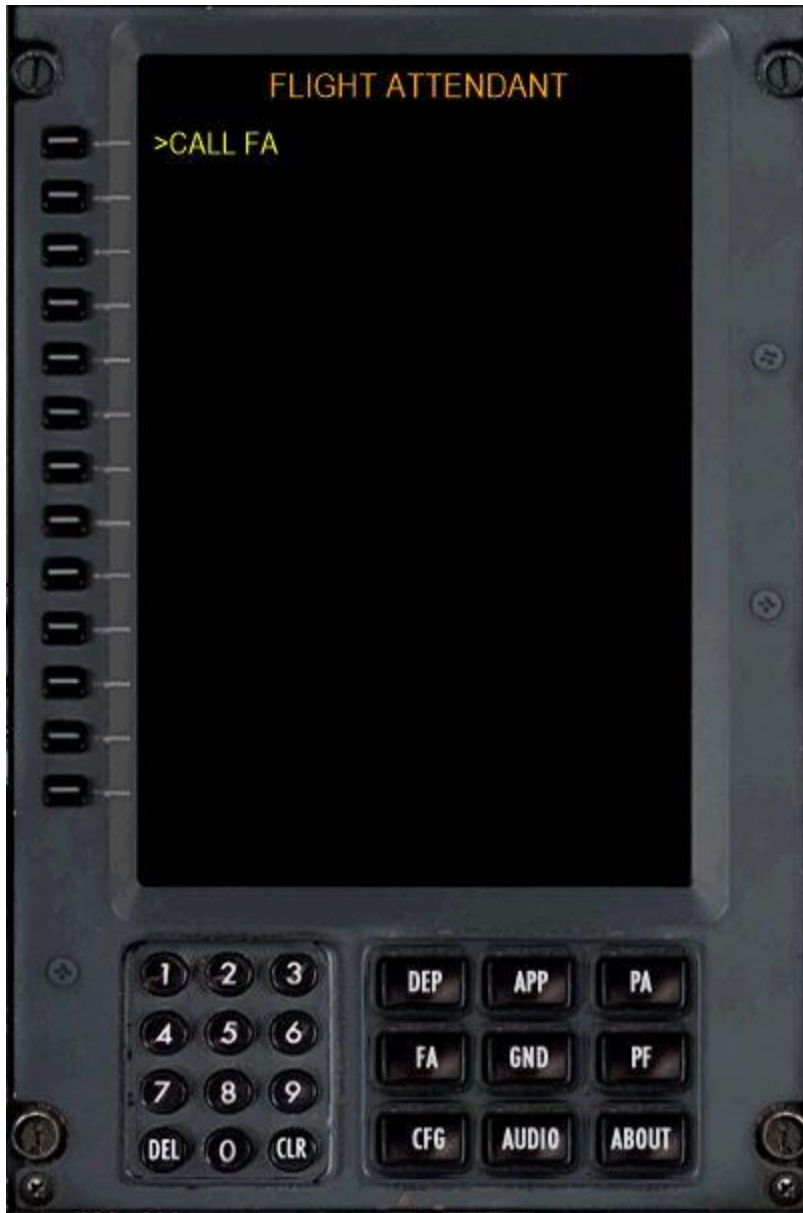
"FA BEING NOTIFIED"

YOU WILL HEAR A SINGLE CHIME WHEN THE FA CALLS THE FLIGHT DECK. SELECT LSK 1 TO ANSWER THE CALL, THEN SELECT FORM THE LIST.

GROUND CREW PAGE

Notes:

1. The Ground Crew page performs the same functions as the Ground Crew connections page in the PMDG FMC.
2. **Note:** To communicate with the Ground Crew, press the **FLT** button on the Captain's audio panel, otherwise you will see this:
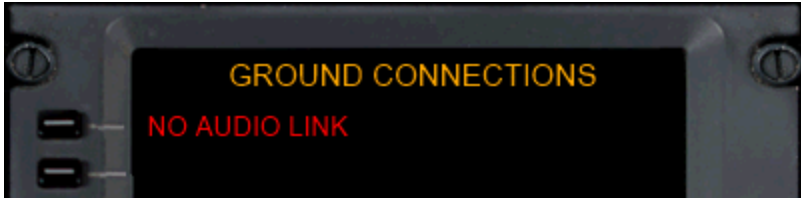
GROUND CONNECTIONS
NO AUDIO LINK

Press in the FLT Mic Selector switch as shown below. The Service Interphone switch does "not" need to be on.

PF (PRE-FLIGHT EVENTS PAGE)
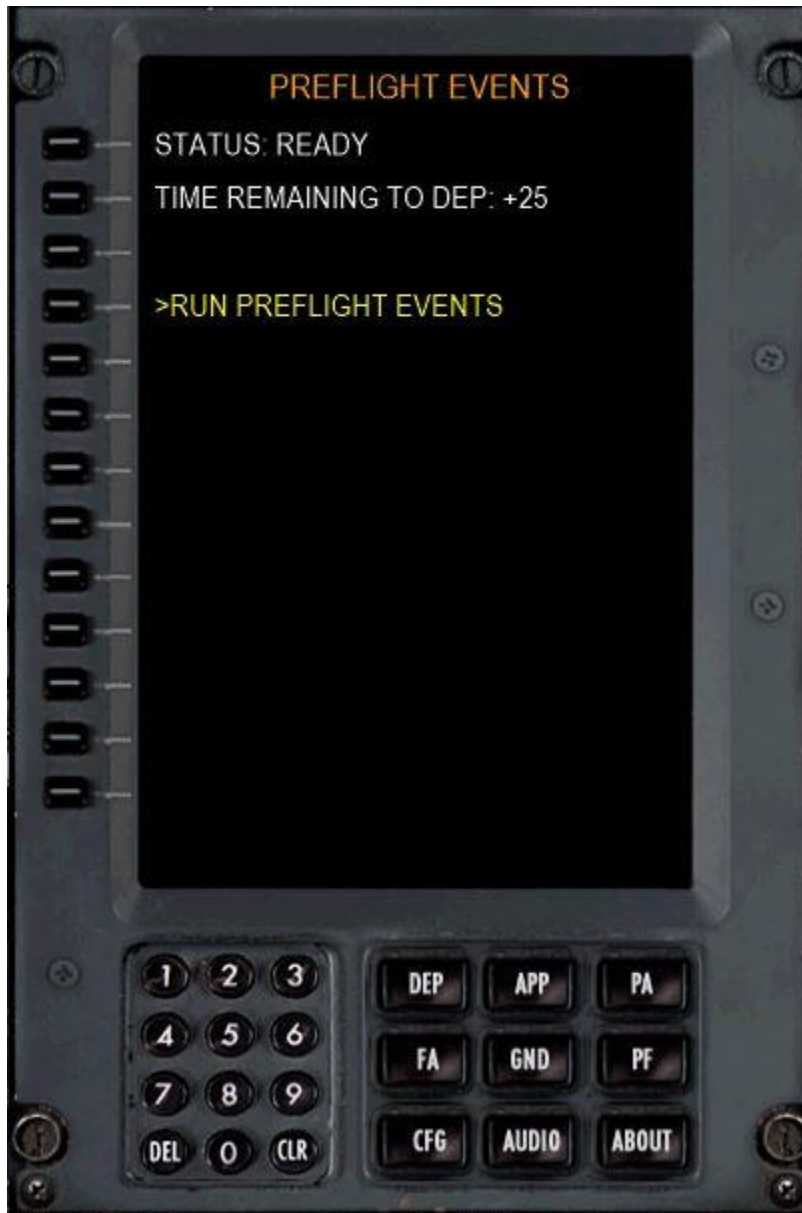
Notes:

1. The engines must <u>not</u> be running for the pre-flight events to work.

CONFIG

CONFIG - SETUP
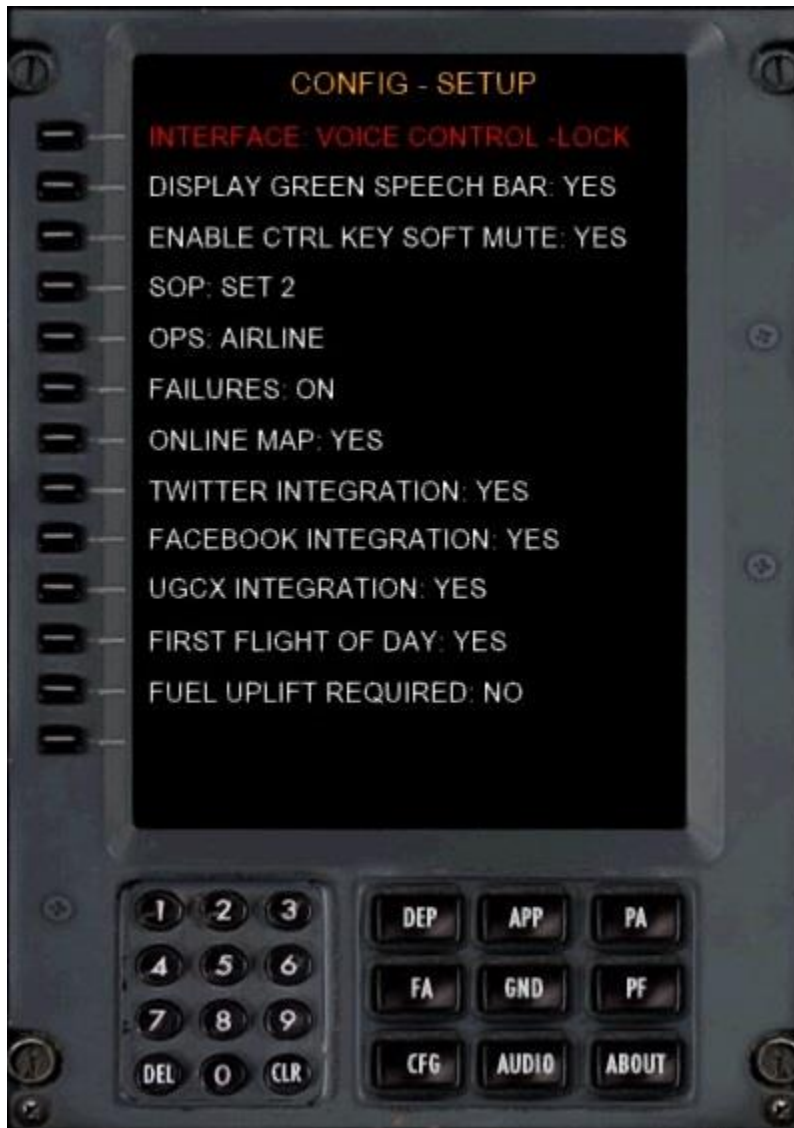
INTERFACE: VOICE or BUTTON CONTROL. If you change the interface method, the new interface method will be LOCKED. This is to prevent users from frequently loading/unloading the speech recognition system too often which could cause the simulation to crash.
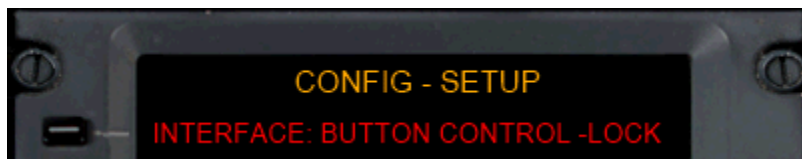
To UNLOCK the interface, <u>RIGHT CLICK</u> Line Select 1.

DISPLAY GREEN SPEECH BAR: Displays what the speech recognition system detects. If using Voice Control, it's highly recommended you can keep this bar visible.

ENABLE CTRL SOFT MUTE KEY: Allows the CTRL key to be used for Soft Mute.

SOP: Allows selection of SOP SET 1, 2 or 3.

OPS: Airline or Military. If military, Flight Attendant is automatically suppressed.

FAILURES: Failures modelling enabled/disabled. Please see the Failures Manual.   Only functional when using Voice Control with the AU voice set.

ON-LINE MAP: Displays your position on the FS2Crew on-line map.

TWITTER/FACEBOOK INTEGRATION: Allows integration with Facebook/Twitter. Facebook/Twitter must be setup via the NGX REBOOT CONFIGURATOR.

UGCX INTEGRATION: Allows integration with Ultimate Ground Crew X.

FIRST FLIGHT OF DAY: Self Explanatory. This selection auto-updates after the first flight to NO.

FUEL UPLIFT REQUIRED: Self Explanatory. If selected to YES, the FO will be handed the fuel slip during the pre-flight events.

CONFIG - CALLOUTS

The available callouts are self-explanatory. When you select an SOP SET, the settings for each option will be automatically updated to match the selected SOP.

CONFIG - CALLOUTS (2)

ENGINES STABLE: NO

TAXI SPEED > 30 KTS: YES

1 2 3
4 5 6
7 8 9
DEL 0 CLR

DEP APP PA
FA GND PF
CFG AUDIO ABOUT
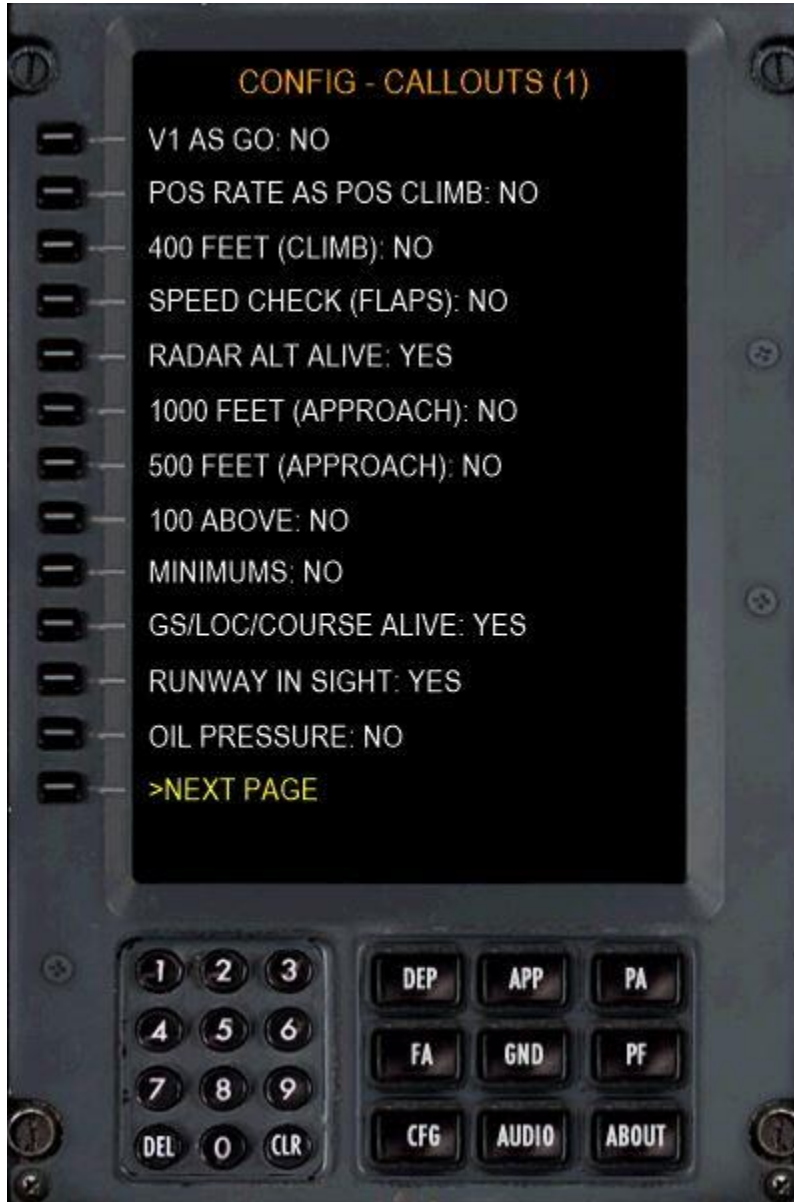
CONFIG - MISC

These settings will be automatically updated when you select an SOP Set to match the selected SOP.
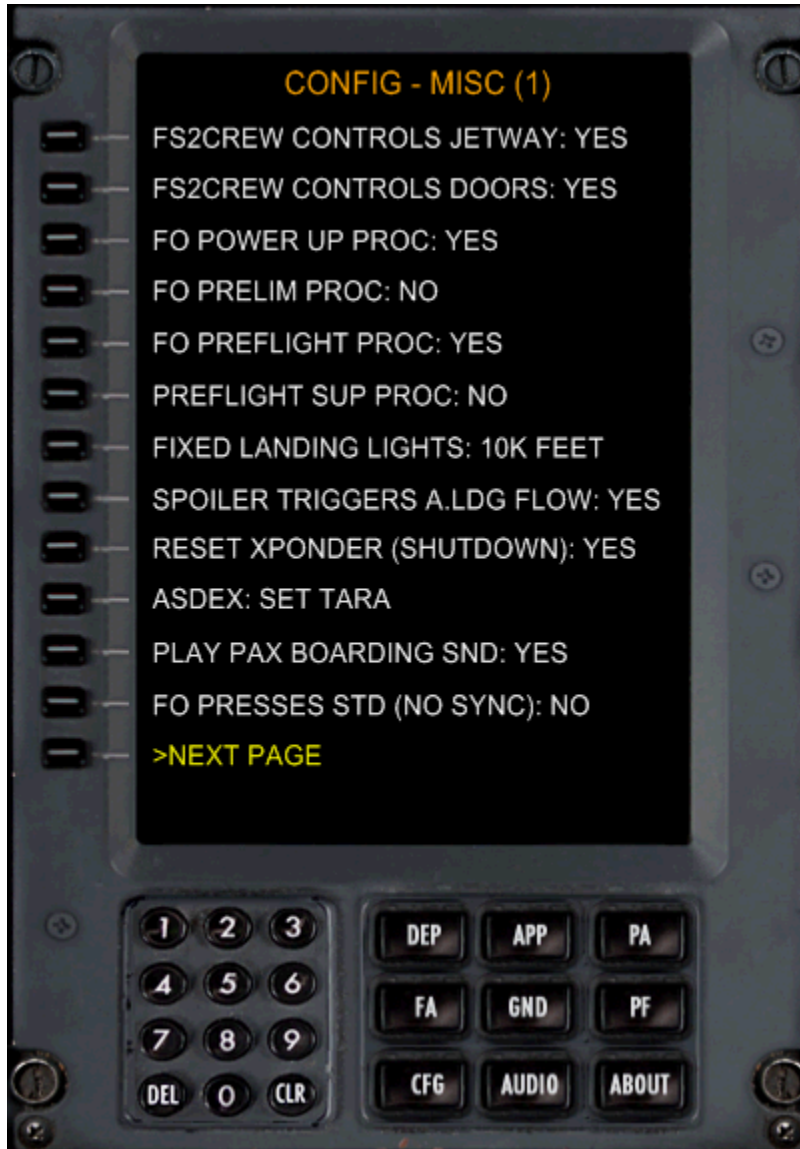
FS2CREW CONTROLS JETWAY: FS2Crew will attempt to control the default FS Jetway. Note: It may not be able to control some 3rd party scenery jetways that do not use the default FS command to toggle the jetway.

FS2CREW CONTROLS DOORS: Self-explanatory.

FO POWER UP PROC: FO runs the Electrical Power up Procedure.

FO PRELIM PROC: FO runs the Preliminary Preflight Procedure.

FO PREFLIGHT PROC: FO runs the Preflight procedure.

PREFLIGHT SUP PROC: FO runs the Supplementary Procedures, such as the Weather Test, during preflight.

FIXED LANDING LIGHTS: For use with SOP 1 only; this option allows you to select when you want the fixed landing lights to be turned off. Many US airlines, for example, turn them off at the Transition Altitude, not 10,000 feet.

SPOILER TRIGGERS A.LDG FLOW: If YES, stowing the speed brakes (spoiler) will trigger the FO to start his After Landing procedure.

RESET XPONDER: If NO, FO will not reset the transponder code during shutdown in SOP 1.

ASDEX: If using ASDE-X, leave the transponder mode in TARA or XPNDR.

PLAY PAX BOARDING SOUND: If YES, passenger boarding sound will play during preflight.

FO PRESSES STD (NO SYNC): Only used if the altimeters in the PMDG NGX Options are not set to SYNC. The FO will press STD on his side at the Transition Altitude. Generally, though, it's best to have your PMDG 737 Altimeters set to SYNC in the PMDG Options menu.

CONFIG - MISC (2)

OPEN/CLOSE AFT DOORS: NO
HYD A PUMPS OFF (PUSHBACK): NO
FO CONTROLS IRS: YES
LOADSHEET FROM ACARS: YES
USE VSD (FO'S SIDE): NO
RUN ELEC PWR UP GPU PRE-CON: NO
DISABLE FMA CALLOUT DET: NO
MODIFIED TL CALL SOP1: NO
USE AIRSTAIRS AT STAND: NO
SOP2 FORCE TL FLOW TO 10K: NO
MCP COMMANDS AVAIL ON GND: NO
>PREV
>NEXT PAGE
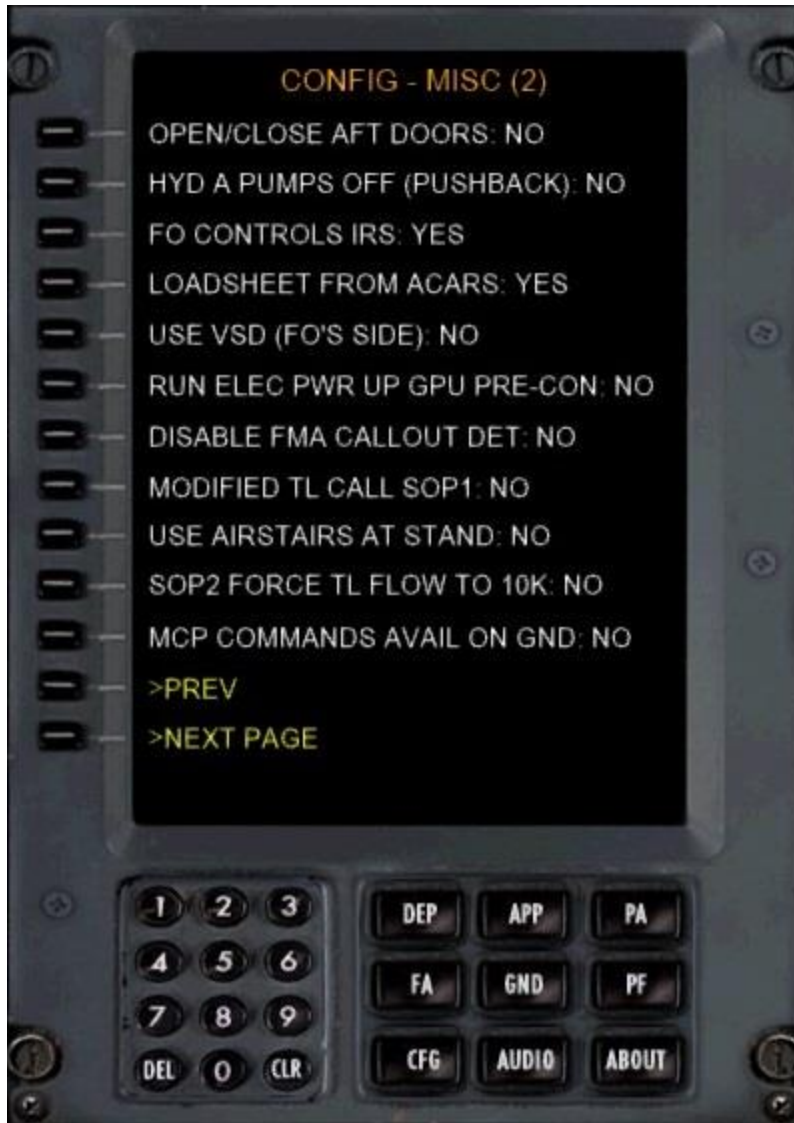
OPEN/CLOSE AFT DOORS: Self-explanatory. Refers to Aft Cabin door at the stand/gate.

HYD A PUMPS OFF (PUSHBACK): Some airlines, such as SWA, turn off the HYD A pumps for pushback.

FO CONTROLS IRS: Used if you want the FO to perform the Preliminary Prefight Procedure but you do not want him to set the IRS to Nav.

LOADSHEET FROM ACARS: Loadsheet received in person or via the ACARS printer.

USE VSD (FO'S SIDE): If NO, the FO will not use the VSD when required per the SOP. The FO's side VSD may cause problems for some users if used.

RUN ELEC PWR UP GPU PRE CON: Forces the FO to run the Electrical Power up Procedure even if the GPU is already connected to the aircraft. Normally, if the GPU is already connected, the engineers would have already performed the Electrical Power up Procedure.

DISABLE FMA CALLOUT DET: Disables FMA callout detection. Used if the speech recognition system is detecting uncommanded FMA callouts frequently. The best solution, though, is to keep your mic away from your speakers.

MODIFIED TL CALL (SOP 1): If YES, the FO will announce "**TRANSITION**" passing the Transition Level in the descent. The FO will not set local pressure in the altimeter (his and yours) by triggering the FSX Key Barometric Altimeter event. Note that due to SDK limits, FS2Crew cannot independently control the FO's altimeter setting.

USE AIRSTAIRS AT STAND: If YES, air stairs will deploy if "Stand" selected. If NO, air stairs will not deploy.

SOP2 FORCE TL FLOW TO 10K: If YES, the FO will perform the Transition Level flow at 10,000 feet rather than at a higher transition level.

MCP COMMNDS AVAIL ON GND: If YES, MCP voice commands will function while the aircraft is still on the ground.
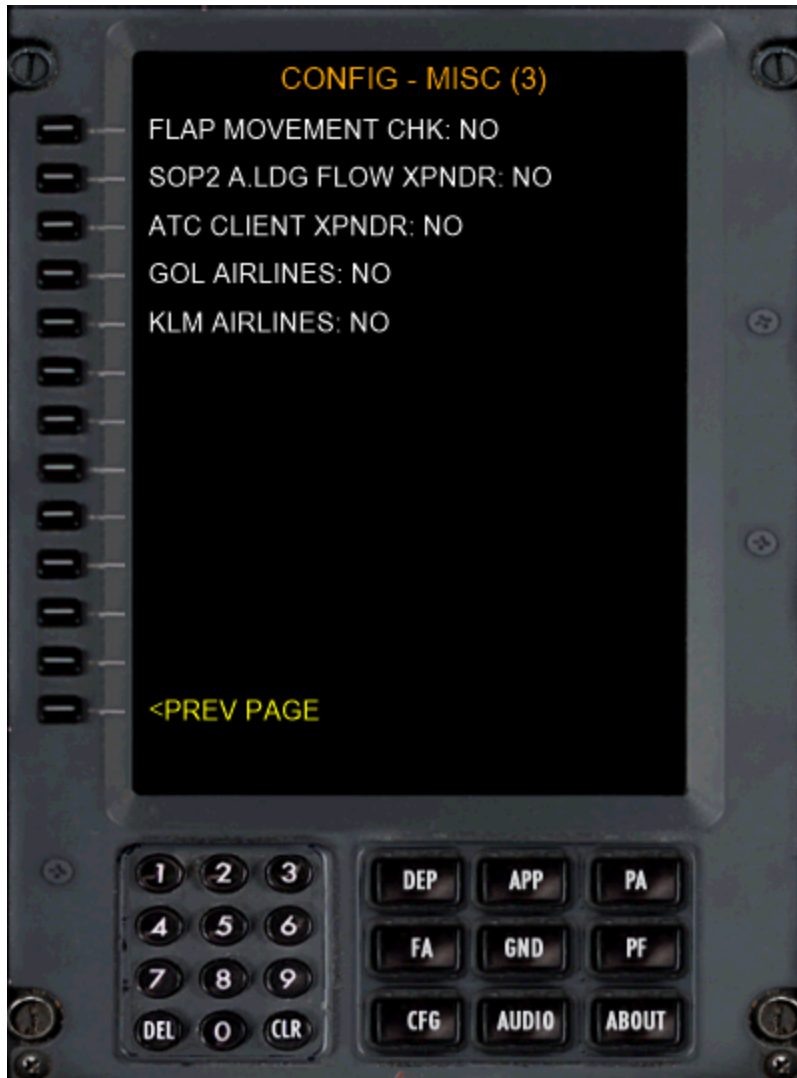
FLAP MOVEMENT CHK: If YES, FO will perform the flap movement check during cold weather ops.

SOP2 A.LDG FLOW XPNDR: If YES, the FO will set the Transponder in SOP 2 during his After Landing flow rather than during shutdown.

ATC CLIENT XPNDR: If YES, FS2Crew will attempt to set your on-line ATC's pilot client's Xponder setting directly.   At the moment, do not set this option to yes if using P3D V3 as it may induce a crash due to an issue with P3D V3 and the pilot clients.

GOL AIRLINES: If YES, the FO will turn on the Retractable Landing Lights when you announce "LAND".

KLM AIRLINES: If YES, the FO will turn off the taxi light in SOP1 and SOP2 during his Before Takeoff procedure.

AUDIO SETUP

Notes:

1. If using a Headset, select the headset audio device by pressing LSK 4. Then press the "HS" button on the MAIN PANEL. Most, but not all sounds, will be routed through your headset.
2. RESET AUDIO SYSTEM is used if the FO's audio drops out. Do not touch your computer during the audio reset.

TROUBLESHOOTING:

FS2Crew has years of experience developing flight simulation products. The following solutions can be used to solve problems you may experience.

NOTE: For the latest info, always check the FS2Crew Support Forum. The "Search" function will turn-up almost any possible issue.

Problem: The FO is acting strange and I'm getting an audio "**SDK Warning**" alert when I open the FS2Crew Main Panel.

Solution:

1. Run the "SYSTEM CHECK" in the FS2Crew NGX Configurator.
2. DO NOT USED SAVED SITUATION FLIGHTS. Default aircraft should be the Trike.
3. In FSX, the 2D panel should be set to load by default, not the VC. There is an option for this in the FSX menus.
4. Re-install the PMDG 737 NGX aircraft. Ensure you have SP1D or later.

    Before you re-install the NGX, MANUALLY DELETE THE LEFTOVER PMDG737 FOLDERS IN THE SIMOBJECTS FOLDER. This ensure everything will be clean.

    Several users who experienced the SDK warning message had to delete these folders before re-installing to make the SDK Warning go away.

5. Recycle the enable/disable button on the FS2Crew Reboot Configurator. This will ensure the 'ENABLESDK' option is added/ re-added to the 737NGX_Options.ini file. If you installed the 600/700 expansion pack after you have FS2Crew enabled, the required ENABLE SDK LINE may have deleted by the 600/700 installer.

    These two lines should be in the 737NGX_Options.ini file:

    [SDK]
    EnableDataBroadcast=1

Fuel and Payload...	Load...	Save...	Flight Planner...	Failure

Problem: I assigned a button to **AUTOFEATHER ARM/OFF**. But when I press that button, nothing happens. The Main Panel doesn't open.

Solutions:

1. Assign **AUTOFEATHER ARM/OFF** to a different button, like "**N**". You may have a conflict with another add-on.

2. Try opening the Main Panel via the **VIEWS - INSTRUMENT PANELS** menu in FSX. If the FS2Crew Main Panel is not visible in the drop down list, then FS2Crew was not added to your panel.cfg properly.

3. Try assigning the button via a registered version of **FSUIPC**. Some users, due to their joystick and hardware setup, can only assign buttons via FSUIPC.

4. You may have a Windows write permission issue, especially if you have FSX installed the Program Files folder. Right click on the FSX.EXE and select "Run this program as an Administrator" in the Compatibility tab. Right click on the FS2Crew PMDG 737 NGX Reboot Config Manager on your desktop and select "RUN AS ADMIN". Click the button that says "**ENABLE FS2CREW VOICE CONTROL**". Assuming nothing is blocking the Config Manager, the required FS2Crew window and gauge entries should be added to the PMDG 737's panel.cfg file. If you want to check, you can open the PMDG 737's panel.cfg file with Notepad. It's located here:

   SimObjects\Airplanes\PMDG 737-800NGX\panel.cfg

Problem: I installed FSX and FS2Crew with Admin rights, but I am using Flight Simulator in a **NON-ADMIN** account. I am not able to select a Headset device. FS2Crew says "**No Such Device**"

Solution:

Copy the FS2Crew2010 folder below from the AppData folder in your Admin account to the same AppData folder in your non-admin account.

C:\Users*YOUR USER NAME***\AppData\Roaming\FS2Crew2010**

Problem: I'm getting a Crash to Desktop (CTD) when I load the host Aircraft, and the error message refers to **'FS2AUDIO.DLL'**.

Solutions:

1. If you have two sound cards running in parallel, disable one of them.
2. If you are running any program in the background that attempts to strip **Digital Music Rights (DRM)** from music, such as **Tune Bite**, **Sound Taxi, Audials** or **Sound Bite**, please disable them. They interfere with FS2Crew's Audio Engine. Some of these types of programs are legal in parts of Europe, but they are not legal in the United States.
3. Re-install FS2Crew again, but do not click 'cancel' during the install. Wait for the install to finish.
4. If using a **Creative Labs X-Fi Extreme Audio Sound Card**, uninstall the latest driver and re-install the original driver off the CD that came with your Sound Card. The latest driver conflicts with the FS2Crew Audio engine. (If you no longer have your original driver disk, click here to download the original driver).
5. Sometimes users have corrupt system files/data on their Operating System. They solved their problem by doing a clean re-install of their OS or by repairing their OS. Follow this link to learn how to repair a corrupt Windows 7 installation. You will need to go to the Windows Download Center and Download Windows 7, for example, with SP1 and install using the Update option. You will need to re-activate Windows 7.
6. Sometimes users have corrupt versions of the **FSX.CFG** file. Delete the FSX.CFG file. It will re-build automatically when you load FSX. Your FSX.CFG file is located here:

- Windows XP: **\Documents and Settings\<username>\Application Data\Microsoft\FSX**
- Windows Vista/ 7 & 8: **\Users\<username>\AppData\Roaming\Microsoft\FSX**

7. Ensure the Trike is the default FSX aircraft on the Free Flight Screen.
NEVER USE SAVED SITUATION FILES!

Problem: The '**VOICE**' button on the FS2Crew Main Panel will not stay on.

Solution:

If using Vista or Windows 7, 8 or 10, ensure your Microsoft Speech Recognizer is set to **English - US**. This is something users from the UK or Australia often miss. If using XP, ensure you installed SAPI.
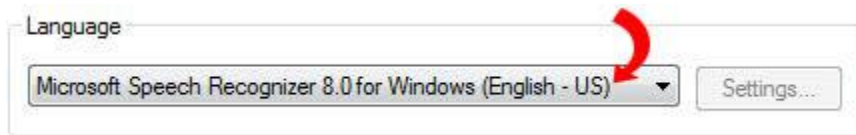
Check for error messages in the '**Speech Recognition Init Log**', which will be available via:

C:\Users**YOUR USER NAME **\AppData\Roaming\FS2Crew2010\Speech Engine Log.

Open the Log with Notepad.

In 99 percent of all cases the problem is because you forget to set your Speech Recognition Language Setting to **English - US** if using Vista or Windows 7, but sometimes the problem is associated with having a corrupt system that prevents the Speech Recognition engine from loading properly, particularly if the Speech Recognition Init log shows this error:

Creating the ISpRecoContext object... Error Code: 0x80045003

We're finding that some 3rd party programs that perform Systems Repair/Mechanic type functions may be damaging the user's Registry, which in turn damages the speech recognition system that comes with Windows.

In these cases you'll find that all 3rd party programs on your computer that use Microsoft's Speech Recognition API will be non-functional, not just FS2Crew.

Vista / Windows 7 users have resolved this problem by re-installing Windows. We also suggest trying a Systems Restore.

XP users can try uninstalling SAPI and then re-installing it.

If you get this error:

Creating the ISpAudio object... Error Code: 0x8004503a

Check your USB headset. It may be faulty. Exit Flight Simulator, and try loading FS2Crew again but with your USB headset unplugged.

Problem: During flight, I get random crashes.

Solution:

Random crashes can be attributable to numerous different sources and can be very complex to troubleshoot. They are often connected to bad video and audio drivers. Also, certain 3rd party scenery or AI traffic in Flight Simulator can be faulty and eat up huge amounts of memory. If you get a random crash, you should try flying in an area that does not use 3rd party scenery or AI traffic. Certain 3rd party scenery add-ons are infamous for causing problems.   FS2Crew adds very little overhead to the simulation in terms of memory usage. FS2Crew is not a heavy graphic program, and heavy graphics are what eat up the largest amounts of memory.   If you're experiencing random crashes, you may want to move your FSX display sliders to the left (lower the LOD especially) as you may be hitting FSX's 4 GB internal memory limit. You may simply be pushing your system too hard. You may also want to consider deleting your FSX.CFG file as it may be corrupt. FSX will rebuild a new FSX.cfg file when it loads. You should also read the Introduction Section in the PMDG Manuals as it contains several good tips for managing OOMs and other problems.

Upgrading to Windows 7 - 64 bits (or later) is highly recommended. Windows 7 handles memory more efficiently than XP or Vista.

Recommended Sites to help Troubleshoot Random Crashes:

Avsim CTD Forum

Problem: I'm experiencing a frame rate drop.

Solution:

1. Ensure your speech recognition language is set up properly. If it's not, your system will grind to a halt.

2. Double check your Sound Card settings. One beta tester cranked his sound card's settings up to 24 bit (192,000) and had some frame rate loss. When he returned his sound card settings to their default settings - 16 bit (44,000) - his frame rates returned to normal.


Problem: The 737 is not acting properly.
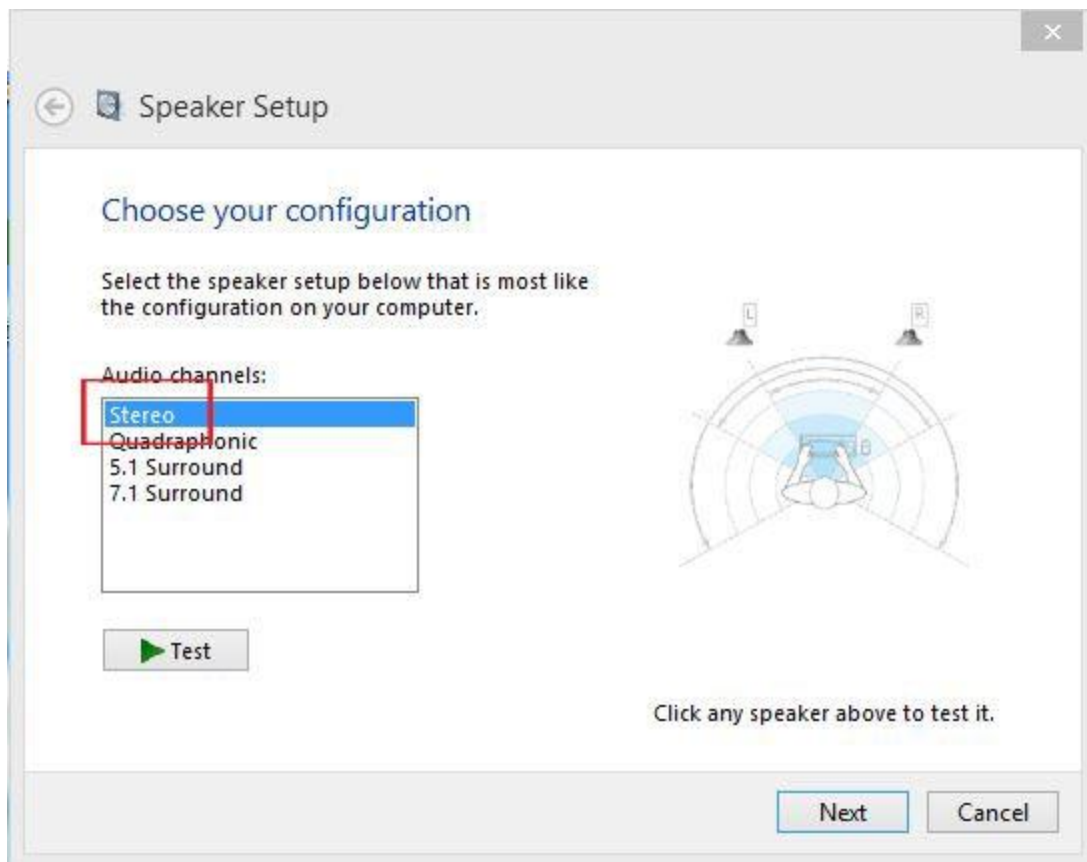
Solution:

1. Do NOT used saved situation files. The default aircraft should always be the Trike.

Problem: I cannot hear the FO's voice, or other voices.

Solution:

1. Check your audio setup. If using a headset, ensure you've selected the associated Audio Device on the FS2Crew Configuration Panel. As a test, make sure HS (Headset) is unchecked on the FS2Crew Main Panel. This way all sound should be routed through your main speakers. Sometimes users just have complex audio hardware setups, and they just need to experiment with their audio hardware settings. Also consider getting a USB headset: USB headsets can resolve a lot of problems due to their simplicity.
2. FS2Crew uses the right and left speaker channels. If using surround sound, ensure you have right and left speakers assigned and available. One user mistakenly had his rear speakers setup as his side speakers with no side speakers physically present.
3. Shutdown any other programs running in the background that may use audio, such as Skype.
4. If you have a **5.1 speaker sound system**, set your speaker configuration to "**Stereo**" via Windows Control Panel - Sound Options section.
5. If using a headset, ensure your headset's audio device is selected on the CFG screen and press HS on the Main Panel. Remember that only the FO's checklists and callouts will be routed through your headset, not all FS2Crew sounds.
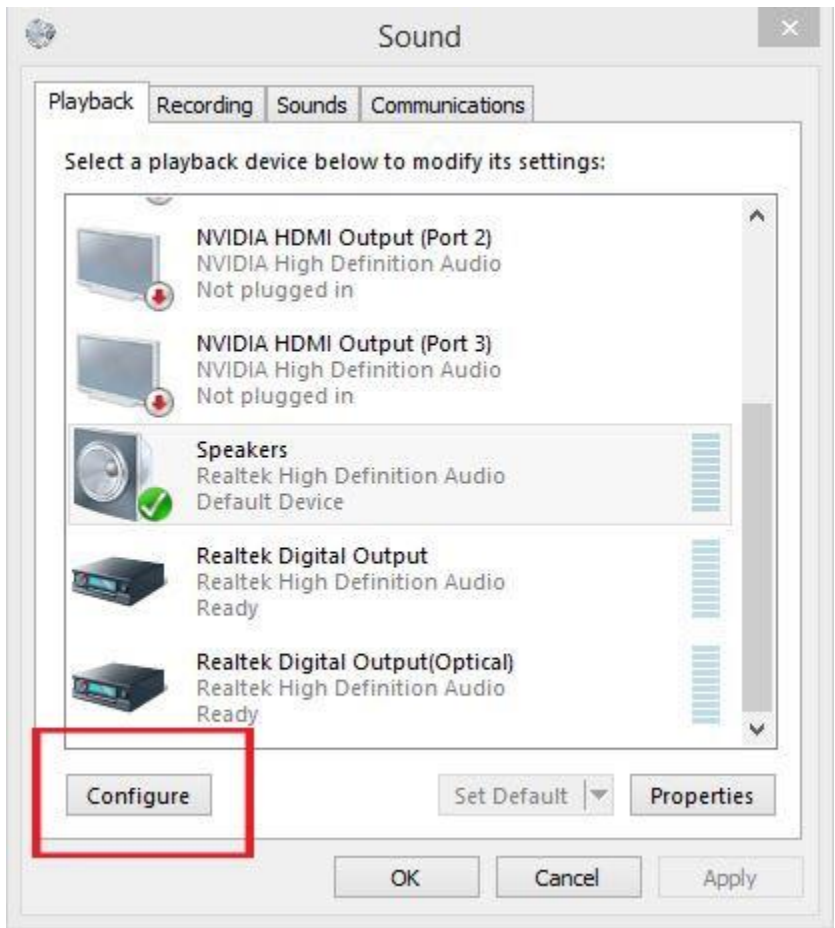
Problem: My voice recognition results are not very good.

Solution:

1. Check your audio setup.
2. Use a USB headset. Never use built in microphones!
3. Be sure to run the Voice Training.
4. Try creating a new "RECOGNITION PROFILE" on the Windows Speech Recognition page.
5. Speak in a neutral mid-western American style accent in a clear and distinct way.
6. Reduce ambient background noise as much as possible.
7. Upgrade to the very latest version of Windows- 64 bit.

Problem: Speech recognition is having problems detecting certain words. Can I train the speech recognition system for "specific" words?

Solution:

1. Yes, you can use the dictation facility in Windows.
2. First, start 'Windows Speech Recognition' (this is not the FS2Crew Speech Recognition system, but rather the speech recognition system that comes with Windows).
3. Open a text document.
4. Next, dictate a list of words you are having trouble with.
5. Every time the speech recognizer makes a mistake, use the "**CORRECT THAT**" voice command. This effectively trains the speech recognition engine to recognize how you pronounce these words. You may need to dictate and correct the same words multiple times until the recognition rate improves.

There is another way (and better way) to train specific words as well for Vista and Win 7 users:

   1. Open the Microsoft Windows Speech Recognizer and <u>RIGHT CLICK</u> the microphone icon. You can open the Windows Speech Recognizer by typing "Speech Recognition" in the search for programs box in the start menu.

   2. Click "**ON: Listen to everything I say**". Next, Select "**OPEN THE SPEECH DICTIONARY**" and select "**ADD A NEW WORD**".

   3. When done, turn **off** Windows Speech Recognition. It CANNOT be running while using FS2Crew. It must be OFF!

Problem: I spoke, for example, "**BEFORE TAXI CHECKLIST**", and "Before Taxi Checklist" was displayed in the Green Bar. So I know the Speech Recognition system detected the correct phrase, but nothing happened. The FO never replied.
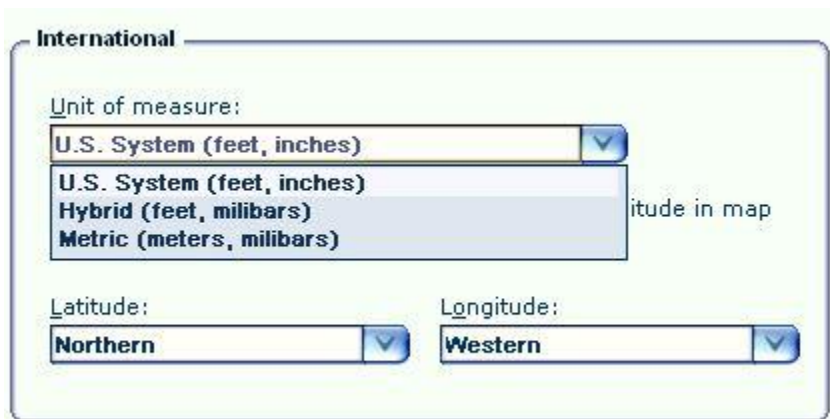
Solution:

1. You were probably in the wrong FS2Crew Mode. The displayed mode in the FS2Crew Main Panel must match the checklist you are attempting to use. For example, in order for the After Start Checklist to work, the mode in the FS2Crew Main Panel must say "BEFORE TAXI".

Problem: The FO's altitude related call-outs are totally off. For example, his 10,000 foot call-out occurred around 33,000 feet.

Solution:

Ensure your FS units of measurement are set to **FEET** for altitude, not meters:

Problem: I can't get FS2Crew sounds to play through my headset with other sounds coming through my speakers.
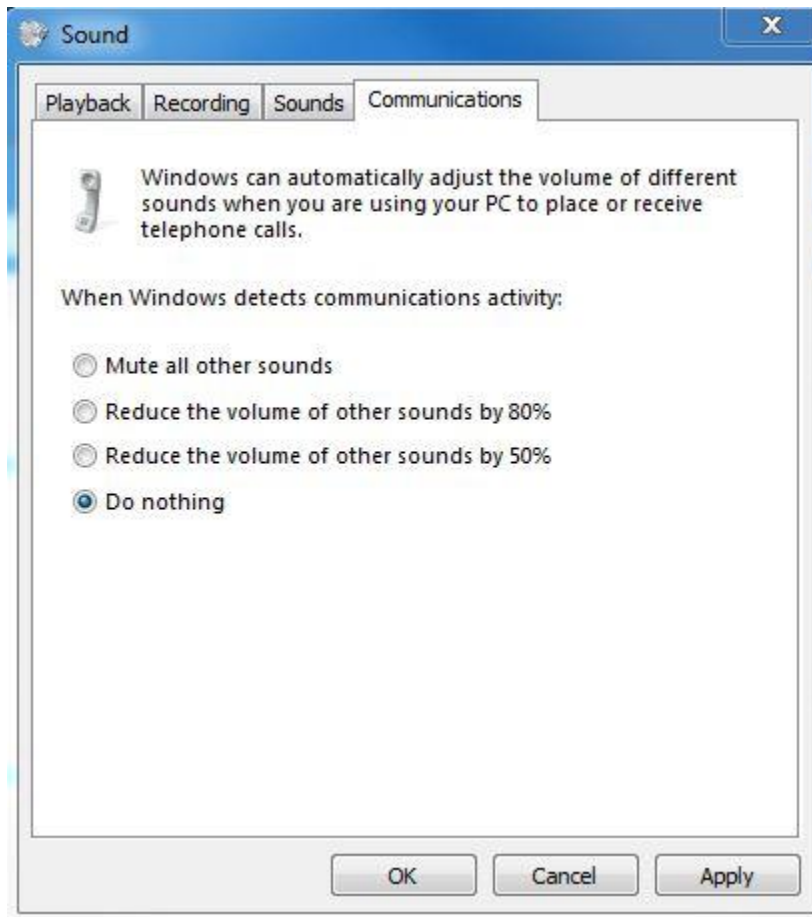
Solution:

1. Go to the **FSX - SETTINGS - SOUND** menu. Set 'Sounds' to your speakers and 'Voice' to your headset. On the FS2Crew Config Panel, select your audio device associated with your headset then press '**HS**' on the FS2Crew Main Panel.

Problem: The FO's volume is jumpy.

Solution:

1. Go to **Control Panel -> Hardware and Sound -> Sound -> Communications**. Select "**Do Nothing**" when **Windows detects communications activity** and click apply.

Problem: When I'm flying in FSX with FS2Crew running, if I change to the desktop and then change the task back to FSX, I lose my FS2Crew sounds.

Solution (Based on Windows 7 / 8):

1. Right click on the speaker in the taskbar (lower right near the clock).
2. Go up to "Playback Devices".

3. Right click on the audio device that is in use for your FS2Crew and go to "Properties".
4. Now click on the "Advanced" tab at the top.
5. Now uncheck the two boxes as shown below.
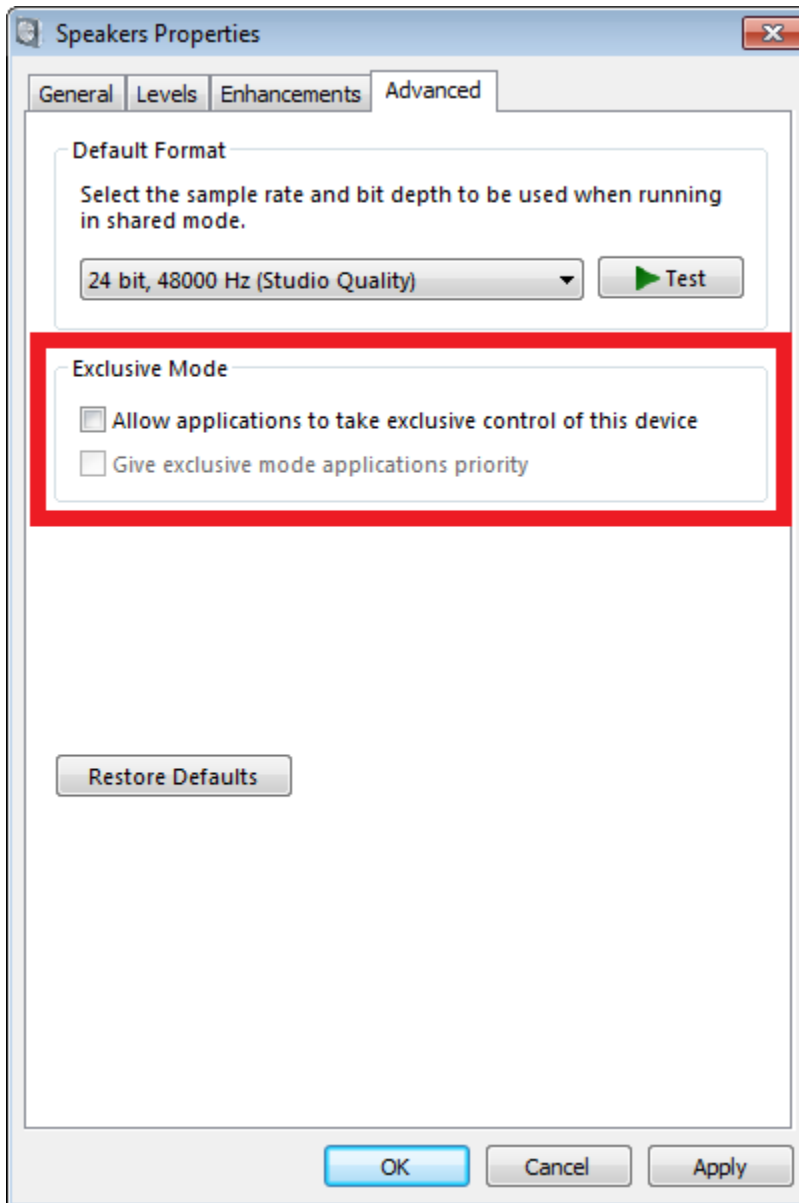
Problem: My Microphone volume resets itself to a value I did not select.

Solution from a user:

I noticed how my microphone volume every now and then resets itself to a value I didn't pick. Normally I have my microphone volume set to 75% but all of a sudden it may end up at let's say 32% without me doing anything or even being aware of this happening. This of course could result in the speech recognition engine and thus FS2Crew having problem recognizing what you say simply because the mic volume will be very low. I'm not sure if this is a Windows bug or if FS2Crew is to blame for doing this because I normally only see this when using FS2Crew and I've seen this not only in FS2Crew Reboot but also in previous versions of FS2Crew.

Anyway I found a very easy solution to this problem I thought I would share with all of you. I'm using a great freeware command line utility called Nircmd and what I've done is to simply create a standard task using Windows Task Scheduler that will run this utility whenever I logon to Windows with a certain set of parameters. The command I use looks like this:

nircmd.exe loop 172800 500 setsysvolume 49500 default_record

The parameters in the example above will run the Nircmd utility and set the volume of the default recording device selected in Windows to 75% and this will happen 172800 times every 500 ms. This translates to twice every second for 24 hours. To adjust the volume that will be set by the utility you can change the 49500 value in the example above to anything between 0-65536 where 0 obviously will result in 0% volume and 65535 100% volume.

You can find the utility following the link below.

http://www.nirsoft.net/utils/nircmd.html

SUPPLEMENTARY VOICE COMMANDS

GENERAL COMMANDS:

- HOLD THE CHECKLIST
- RESUME THE CHECKLIST
- CANCEL THE CHECKLIST
- SAY LAST PLEASE
- REPEAT LAST PLEASE
- LETS START AGAIN
- RESTART THE CHECKLIST
- LETS RESTART THE CHECKLIST FROM THE BEGINNING
- CANCEL LAST COMMAND (Used if an autopilot value does not stop spinning).
- SET AND CHECKED (Used if you are unable to reply to a Checklist item using the expected syntax).

MISC COMMANDS/ ANNOUCEMENTS:

- THIS IS THE CAPTAIN EVACUATE EVACUATE EVACUATE
- YOU HAVE CONTROL / I HAVE CONTROL / MY AIRPLANE
- SET XXX (POINT/ DECIMAL) ON (STANDBY) COMM (1 / 2)
- SWAP COMM (1 / 2)
- DE-TUNE THE NAVS
- SET XXXX ON THE TRANSPONDER
- FUEL CROSS FEED VALVE CHECK (Can be used on ETOPS flights)
- MANUAL BRAKING
- AUTOBRAKES OFF
- GREEN LIGHT ON THE AERO BRIDGE
- MARSHALLER IN SIGHT
- MY THROTTLES
- AUTOPILOT COMING OUT
- LEAVE THE FLAPS UP FOR TAXI
- CONTINUE (Optional phrase used during an approach).
- VISUAL (Used during an approach. FO will no longer make approach callouts)

- CANCEL THE BAROS / RESET THE BAROS (Used when transitioning to a visual approach after calling "VISUAL".
- AUTOTHROTTLE DISCONNECT (Used when manually disconnecting the auto throttle)
- AUTOPILOT DISCONNECT (Used when manually disconnecting the autopilot)
- MANUAL FLIGHT (Using when manually disconnecting the autopilot)
- GOING ON HEADSET (Toggles HEADSET selection on MAIN PANEL on)
- GOING ON SPEAKERS (Toggles HEADSET selection on MAIN PANEL off. If you suddenly find that sounds are no longer coming through the headset, make sure this voice command was not accidently detected).
- SET QNH / SET TRANSITION/ SET ALTIMETERS

AUTOPILOT VALUE COMMANDS:

NOTE: AIRCRAFT MUST BE AIRBORNE FOR THESE CALLS TO WORK.

- SET HEADING XXX. *(EXAMPLE: SET HEADING ONE TWO ZERO)*
- SET SPEED XXX. *(EXAMPLE: SET SPEED TWO FOUR ZERO)*
- SET FLIGHT LEVEL XXX. *(EXAMPLE: "SET FLIGHT LEVEL THREE THREE ZERO")*
- SET ALTITUDE XXX. (*EXAMPLE: "SET ALTITUDE FOUR THOUSAND"*)
- SET VERTICAL SPEED (UP/ DOWN) XXXX. *(EXAMPLE: "SET VERTICAL SPEED UP FIVE HUNDRED. SET "VERTICAL SPEED DOWN ONE THOUSAND TWO HUNDRED").*
- SET VREF PLUS XXX. *(EXAMPLE: SET VREF PLUS FIVE)*
- SET MISSED APPROACH ALTITUDE (MAP altitude must be entered on APPROACH BRIEF PAGE).
- MATCH HEADING
- MATCH SPEED
- BUG UP/ 1 / 5/ 10/ 15 / 25 (Autopilot must be off)
- SET COURSE ON MY SIDE XXX
- SET COURSE ON YOUR SIDE XXX

ANNOUNCING AUTOPILOT VALUE COMMANDS:

NOTE: AIRCRAFT MUST BE AIRBORNE FOR THESE CALLS TO WORK.

If the autopilot is engaged, as the Pilot Flying only you should touch the MCP panel. If you update an autopilot value, you should announce your selection as part of good CRM.

- HEADING ___
- SPEED ___
- ALTITUDE ___

- FLIGHT LEVEL ___
- VERTICAL SPEED DOWN / UP ____
- SPEED INTERVENE
- ALTITUDE INTERVENE
- BUG UP/ 1 / 5/ 10/ 15 / 25 (Autopilot must be on)

REMINDER: IF THE AUTOPILOT EVER 'RUNS AWAY' ON YOU (DOESN'T STOP CHANGING VALUES), USE THE COMMAND "CANCEL LAST COMMAND" TO STOP THE RUNAWAY!

MCP AND EFIS COMMANDS:

- SELECT AUTOPILOT ON (OFF) (PLEASE)
- SELECT COMMAND A / B (PLEASE)
- SELECT CONTROL WHEEL STEERING A /B (PLEASE)
- SELECT FLIGHT DIRECTORS ON (OFF) (PLEASE)
- RECYCLE THE FLIGHT DIRECTORS (PLEASE) / CYCLE FLIGHT DIRECTORS
- SET (RIGHT / LEFT) FLIGHT DIRECTOR (ON /OFF) (PLEASE)
- SELECT AUTO THROTTLE OFF (PLEASE)
- ARM THE AUTO THROTTLES (PLEASE)
- SELECT CLIMB THRUST (PLEASE)
- SELECT MAXIMUM CONTINUOUS THRUST (PLEASE)
- SELECT SPEED INTERVENE (PLEASE)
- SELECT / ENGAGE VNAV (PLEASE)
- SELECT / ENGAGE LNAV (PLEASE)
- SELECT / ENGAGE LEVEL CHANGE (PLEASE)
- SELECT / ENGAGE HEADING SELECT (PLEASE)
- SELECT / ENGAGE HEADING HOLD (PLEASE)
- SELECT / ENGAGE VERTICAL SPEED (PLEASE)
- SELECT / ENGAGE ALT HOLD (PLEASE)
- SELECT / ENGAGE ALTITUDE INTERVENE (PLEASE)
- SELECT / ENGAGE SPEED INTERVENE (PLEASE)
- ARM THE LOCALIZER (PLEASE)
- ARM APPROACH (PLEASE)
- SELECT BANK SELECTOR (AUTO/ 10 / 15/ 20/ 25/ 30)
- LEFT (RIGHT) FLIGHT DIRECTOR (ON /OFF) (PLEASE)
- SELECT N1
- RESET MASTER CAUTION
- SET EFIS MODE TO APPROACH
- SET EFIS MODE TO VOR

- SET EFIS MODE TO MAP
- SET EFIS MODE TO PLAN
- DISPLAY WEATHER ON MY SIDE
- DISPLAY STATIONS ON MY SIDE
- DISPLAY WAYPOINTS ON MY SIDE
- DISPLAY AIRPORTS ON MY SIDE
- DISPLAY POSITION ON MY SIDE
- DISPLAY TERRAIN ON MY SIDE
- SELECT RAW DATA ON YOUR SIDE

GPWS INHIBIT:

- SELECT GROUND PROXIMITY FLAP INHIBIT SWITCH TO NORMAL
- SELECT GROUND PROXIMITY FLAP INHIBIT SWITCH TO INHIBIT
- SELECT GROUND PROXIMITY GEAR INHIBIT SWITCH TO NORMAL
- SELECT GROUND PROXIMITY GEAR INHIBIT SWITCH TO INHIBIT
- SELECT GROUND PROXIMITY TERRAIN INHIBIT SWITCH TO NORMAL
- SELECT GROUND PROXIMITY TERRAIN INHIBIT SWITCH TO INHIBIT

FMC:

- SET FULL CLIMB THRUST
- SET GO AROUND THRUST
- SET MAXIMUM CONTINUOUS THRUST
- SET CRUISE THRUST
- DELETE THE SPEED RESTRICTIONS

OVERHEAD & MAIN PANEL COMMANDS:

- SET TAXI LIGHT OFF
- SET TAXI LIGHT ON

- SET STROBES OFF
- SET STROBES ON

- SET DOME LIGHT ON
- SET DOME LIGHT OFF

- SET SEAT BELTS SIGNS ON

- SET SEAT BELTS SIGNS OFF
- SET SEAT BELTS SIGNS AUTO

- SET WING ANTI ICE ON
- SET WING ANTI ICE OFF

- SET ENGINE ANTI ICE ON
- SET ENGINE ANTI ICE OFF

- SET ENGINE BLEED ONE ON
- SET ENGINE BLEED ONE OFF
- SET ENGINE BLEED TWO ON
- SET ENGINE BLEED TWO OFF
- SET ENGINE BLEEDS OFF
- SET ENGINE BLEEDS ON

- START THE APU / TURN ON THE APU
- TURN OFF THE APU
- SET APU BLEED ON
- SET APU BLEED OFF
- APU ON THE BUSSES

- SET LEFT WIPER TO PARK
- SET LEFT WIPER TO INTERMITTENT
- SET LEFT WIPER TO LOW
- SET LEFT WIPER TO HIGH

- SET WIPERS ON
- SET WIPERS OFF

- SET RIGHT WIPER TO PARK
- SET RIGHT WIPER TO INTERMITTENT
- SET RIGHT WIPER TO LOW
- SET RIGHT WIPER TO HIGH

- SET IGNITION SETOR TO LEFT
- SET IGNITION SETOR TO RIGHT
- SET IGNITION SETOR TO BOTH

- SET ENGINE ONE START SWITCH TO GROUND
- SET ENGINE ONE START SWITCH TO FLIGHT
- SET ENGINE ONE START SWITCH TO CONTINUOUS
- SET ENGINE ONE START SWITCH TO AUTO
- SET ENGINE ONE START SWITCH TO OFF

- SET ENGINE TWO START SWITCH TO GROUND

- SET ENGINE TWO START SWITCH TO FLIGHT
- SET ENGINE TWO START SWITCH TO CONTINUOUS
- SET ENGINE TWO START SWITCH TO AUTO
- SET ENGINE TWO START SWITCH TO OFF

- SET BOTH START SWITCHES TO GROUND
- SET BOTH START SWITCHES TO FLIGHT
- SET BOTH START SWITCHES TO CONTINUOUS
- SET BOTH START SWITCHES TO AUTO
- SET BOTH START SWITCHES TO OFF

- SHUTDOWN ENGINE NUMBER ONE
- SHUTDOWN ENGINE NUMBER TWO

- DISPLAY ENGINE (PLEASE)
- DISPLAY STATUS (PLEASE)

GROUND CREW COMMANDS:

- COCKPIT TO GROUND/ GROUND FLIGHT DECK
- CAN WE PRESSURIZE THE HYDRAULICS?
- PLEASE CONNECT THE (GPU / EXTERNAL POWER)
- PLEASE DISCONNECT THE (GPU / EXTERNAL POWER)
- PLEASE CONNECT THE AIR START (UNIT / CART)
- PLEASE DISCONNECT THE AIR START (UNIT / CART)
- PLEASE CONNECT THE AIR CONDITIONING (UNIT / CART)
- PLEASE DISCONNECT THE AIR CONDITIONING (UNIT / CART)
- PLEASE DISCONNECT THE GROUND EQUIPMENT

Note: There is a CFG option to have the GPU and AC Unit connect automatically during Gate Arrival.

Note: To communicate with the Ground Crew, you audio panel must be setup properly.

AFT OVERHEAD PANEL - ENSURE THE SERVICE INTERPHONE SWITCH IS SET TO 'ON'.

CAPTAIN'S AUDIO CONTROL PANEL - ENSURE 'SVC' IS PRESSED IN AND THE VOLUME IS UP

Note: YOU MUST USE THE CAPTAIN'S AUDIO CONTROL PANEL!!!!!!! NOT THE OVERHEAD OR FO'S AUDIO CONTROL PANEL.

OTHER OPTION: Use the FLT Interphone instead on the CAPTAIN'S PANEL AUDIO CONTROL PANEL. Press in the FLT Mic Selector switch as shown below. The Service Interphone switch does "not" need to be on.

FA IN FLIGHT CONVERSATIONS

- ONE COFFEE PLEASE
- ONE TEA PLEASE
- SOME LUNCH PLEASE
- SOME DINNER PLEASE
- SOME BREAKFAST PLEASE
- ONE JUICE PLEASE
- ONE WATER PLEASE
- I WILL KEEP YOU UPDATED
- I WILL KEEP YOU IN THE LOOP
- I WILL KEEP YOU INFORMED

FMA CALLOUTS:

- N1
- MCP SPEED
- THROTTLE HOLD
- VOR ARMED
- LOCALIZER ARMED
- LOCALIZER
- V O R
- LNAV
- ROLLOUT
- ARM
- ROLLOUT ARMED
- FLARE ARMED
- BACK COURSE
- LNAV ARMED
- VNAV ARMED
- VERTICAL SPEED
- ALTITUDE HOLD
- ALTITUDE ACQUIRE
- GLIDESLOPE
- FLARE
- GLIDEPATH
- LAND TWO
- LAND THREE
- NO AUTOLAND
- FLARE ARMED
- GLIDESLOPE VERTICAL SPEED
- GLIDEPATH ARMED
- LOCALIZER CAPTURE
- GLIDESLOPE CAPTURE
- COURSE CAPTURE
- RETARD
- SINGLE CHANEL
- FMC SPEED
- VNAV SPEED
- VNAV PATH
- VNAV ALT
- FAC
- TO GA
- COMMAND
- CONTROL WHEEL STEERING PITCH
- CONTROL WHEEL STEERING ROLL
- AUTOPILOT

SUPPLEMENTARY PROCEDURES

CIRCUITS:

To put FS2Crew into circuits mode, select **TOUCH AND GO** for the Approach Type on the APPROACH BRIEF page. You would use this mode if you wish to make practice circuits.

APPROACH BRIEF (1)

ARRIVAL PROCEDURE: STAR

APPROACH TYPE: TOUCH AND GO
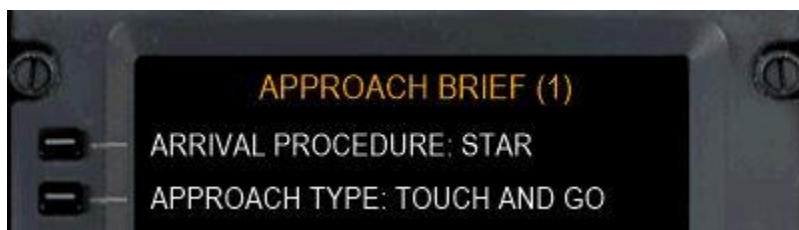
Circuits are modeled on the standard Boeing circuits profile.

Notes:

1. Automation is generally not used during circuit training.
2. Circuits are flown with the Flaps at 5.
3. On touchdown, the FO will automatically raise the Flaps to 15, and you would perform a Flaps 15 takeoff.
4. VREF must be entered in the FMC prior to takeoff.
5. Checklists: Only perform the LANDING CHECKLIST.   The After Takeoff, Descent and Approach Checklists are skipped in the circuit.
6. The position of the speed brake is the factor that determines if the circuit is a full stop landing or a touch and go. Speed brake <u>armed</u> means the landing will be a full stop landing. <u>Not armed</u> means it will be at touch and go.
7. When you speak "CLEARED", the FO will call: **NO BRAKES, NO REVERSE TOUCH AND GO**.

One way of doing a Circuit:

Switch off the FD and auto throttles for takeoff. Use flap 5 for convenience. Aim for climb speed 180 knots and leave flap at 5. At 1000 AGL start turn at 30 degrees angle of bank - maintaining bank angle until arriving at downwind heading and hauling back throttles to maintain 180 knots while levelling at 1500 ft. agl.

Up to you whether you set MCP cursor at 180 knots or set Vref+5 now. You are not using auto throttle so the MCP speed is purely a reminder figure rather than an A/T setting. Ensure A/T is switched off and not just ARM (see FCTM cautionary paragraphs on auto throttle use in ARM mode - Boeing do not recommend it.)

Downwind keep eyes on runway and visual tracking. Don't stare at the MAP. Abeam landing threshold hit stopwatch, select gear down, flap 15, arm the speed brake if full stop landing and allow speed to reduce toward 150 knots and call for landing checklist to flaps.

45 seconds after passing end of runway, turn base 25-30 degrees angle of bank and square off the circuit because of slower speed of 150 knots. Avoid flying a 5 degree bank angle turn as this is sloppy flying. If an ILS is available ensure the standby ADI ILS is selected because it gives you earlier glide slope indication than primary ADI/HSI glide slope. Very useful if the simulator is limited in side view.

Flap as required on base and final. Cross the fence at VREF if no wind and use reverse and manual braking. This gives you the practice at modulating the brakes as a skill rather than always carrying out autobrake use which can lead to loss of braking technique skills.

For touch and go don't arm the speed brake and don't use reverse. On touch-down open up to 50-60% spool-up N1. The FO will set the stab trim to 5 units and set Flaps 15. When ready, set take-off thrust and rotate at VREF which had already been set. Around 1000 feet AGL select flap 5 and aim for 180 knots and repeat the circuit. Note at no stage was FD, AP or AT used. Minimum talk in the cockpit.

For asymmetric circuit practice simply maintain flap 5 downwind and 180 knots, pull back one throttle to idle early downwind, set flap 15 VREF and you are on your way again.

-MANUAL END-