RAAS Professional

Main Ops Manual

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Please choose from the following menu items:

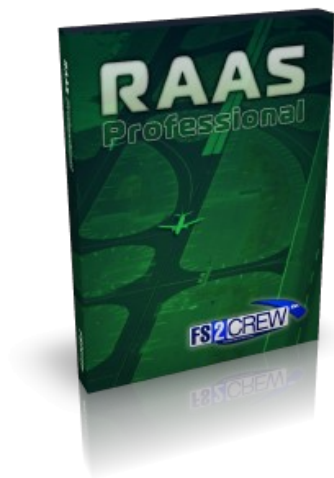| Introduction	How to Install RAAS	Help and Trouble Shooting	User Interface Overview	Managing the Runway Database	Sharing your Custom Profiles	Videos

Introduction

Thank you for purchasing **RAAS Professional** by FS2Crew!

RAAS Professional (**Runway Awareness and Advisory System**) models all aural '**Smart Landing**' and '**Smart Runway**' calls included in the real-world **Honeywell RAAS** unit.

These calls offer improved situational awareness for pilots in an effort to help reduce the risk of runway incursions and accidents by providing aural alerts during taxi, takeoff, final approach and landing/roll-out operations.

The software is highly configurable, and is ideal for power users who want to model airline-specific options and who want maximum control over how RAAS functions in flight simulator.

Here's a real-word video of RAAS being used in an actual Air France Flight. The female voice saying "**Approaching 26 Right**" and "**On Runway 26 Right**" is part of the RAAS system.   Click here to watch the video.
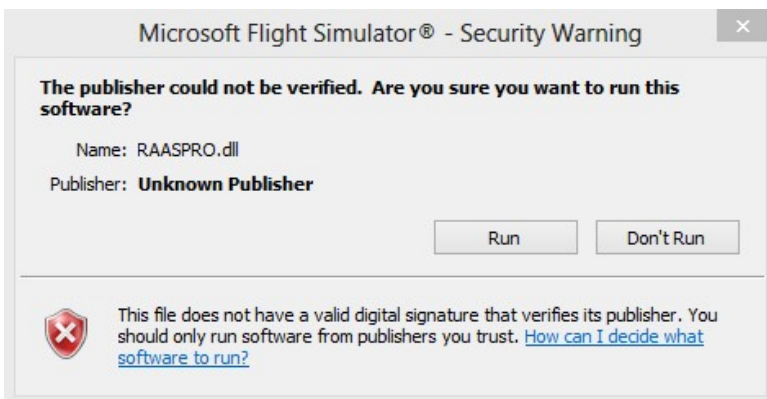
How to Install RAAS

If you are experiencing difficulties installing the software, please see the **Help and Trouble Shooting** section.

DO NOT FORGET TO RUN PETE DOWSON'S FREEWARE "MAKE RUNWAYS" TOOL PRIOR TO RUNNING RAAS. THIS TOOL CREATES THE RUNWAY DATABASE USED BY RAAS!

You can install RAAS into more than one simulator by re-running the installer and selecting the desired version.

Note: To help avoid write permission and other issues you should always:

1. Run Flight Simulator with Admin Rights. For example, if using FSX:SE, right click on the FSX.EXE (it's located in your main FS folder) and select "Run this program as an administrator" in the Compatibility tab.
2. Ensure any anti anti-virus programs are set to exclude the main Flight Simulator folder.
3. Be patient during the install. Do not click 'Cancel'.
4. When you load the Flight Simulator, select '**Run**' when asked if you want to run the **RAASPro.dll**.

5. RAAS will be available via the in-game **Add-ons** menu. It can take up to 30 seconds for RAAS to appear in the Add-ons menu.

Help and Trouble Shooting

Problem: RAAS Stopped working or never worked. According to the Log File, RAAS "could not connect to flight simulator".

Solution:

1. Uninstall Zone Alarm.   We've found that Zone Alarm can interfere with Simconnect. This can also affect other applications that use Simconnect.
2. Temporarily disable your Firewall.
3. Temporarily disable your anti-virus software. Your anti-virus software may have quarantined a RAAS file. You should setup your anti-virus program so it automatically excludes the flight simulator folder. Re-install RAAS after doing that.

Problem: RAAS was loading fine, then out of the blue and for no apparent reason, you get a message that 'Flight Simulator has detected a problem with third party software' on startup.

Flight Simulator has detected a problem with a third-party software program (add-on):

Name: RAAS Professional
Version: 1.2.1.36
Company: FS2Crew
File: .\RAASPRO\RAASPRO.dll

Do you want to run this software (not recommended)?

To avoid seeing this message in the future, uninstall this program or disable its ability to start when running Flight Simulator. For more information about third-party programs, contact the publisher or see http:\www.fsinsider.com.

Solution:

 1. Click "**YES**" when asked if you want to run the software. You'll may need keep selecting 'YES' until the simulator eventually stops asking you. This problem may be due to a rare Simconnect bug. Please read **Pete Dowson's comments** on this subject for more information (click the link).

Problem: The RAAS calls are incorrect or not playing at select airports.

Solution:

1. Run the MAKE RUNWAYS tool to refresh your runways database.
2. Read the **README** file included in the MAKE RUNWAYS zip file. **Make Runways imposes a minimum default runway length of 1500 feet**, so runways below that length won't be included in the database. You can override this value using the command line parameter described in the MAKE RUNWAYS README file.
3. Load the flight cleanly from the Free Flight screen. Sometimes if you're at an airport sitting in the cockpit, and then you load a new airport, and then you load another airport directly for the 3rd time, this may cause issues with RAAS and Simconnect as the multiple simultaneous re-loads cause initialization problems.

Problem: There is no RAAS entry in the in game Add-ons menu bar.

Solution:

1. You may have a corrupt **Simconnect** installation. Please also send FS2Crew Support your **RAAS LOG file**, which is located in your App Data folder: **C:\Users\----YOUR USER NAME---\AppData\Roaming\RAASPRO**
2. Ensure you are using an "**UNLOCKED**" version of RAAS. If you are using a "**LOCKED**" version, such as the one that comes with the **Aerosoft Airbus X or PMDG 777**, the RAAS menu will not be visible if the host aircraft associated with the locked version of RAAS is not loaded.
3. Make sure UAC is fully disabled and shutdown any anti-virus software running in the background. On rare occasions, they can interfere with the installer. It's also helpful to be running in an Admin account as sometimes Windows security can be aggressive and block programs from writing to the Program Files folder.
4. One had problems which he resolved by 'excluding' the FSX folder from his Anti-Virus scanner.
5. RAAS adds entries to the DLL.XML file. Please ensure that the entries below are present in your DLL.XML File. The DLL XML file is located here:

   C:\Users\-----YOUR USER NAME-----\AppData\Roaming\Microsoft\FSX\DLL.XML

   Note that in order to see the DLL.XML you must check 'Show Hidden Files' under Folder Options.

   Below are the entries that the RAAS installer will attempt to add to your DLL.XML:
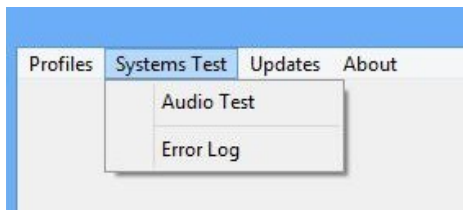
   <Launch.Addon>

   <Name>RAASPRO</Name>

   <Disabled>False</Disabled>

   <ManualLoad>False</ManualLoad>

   <Path>.\RAASPRO\RAASPRO.dll</Path>

   <DllStartName>module_init</DllStartName>

   <DllStopName>module_deinit</DllStopName>

   </Launch.Addon>

Problem: I can't hear any sounds.

Solution:

1. Open the RAAS user interface.
2. Open the **SYSTEM TEST** menu.   Select **AUDIO TEST**.

3. If you can't hear any sounds, select **ERROR LOG** and send the error log to FS2Crew Support.
4. If there are no errors, then your speakers are probably not setup properly. Check your speakers.
5. Also check the Problem entry below for possible solutions and causes associated with having no sounds.

Problem: No sounds play and/or I'm getting a Crash to Desktop (CTD) associated with the "**RAASAudio32.dll**" or Flight Simulator will not load "**RAASPRO.DLL**".

Solutions:

1. If you have **two sound cards** running in parallel, disable one of them. If you have multiple playback devices enabled, only have one as Primary.
2. Disable your **firewall** and ensure your OS has all the latest Updates.
3. If you are running any **audio editing** program in the background that attempts to strip **Digital Music Rights (DRM)** from music, such as **Audials**, **Tune Bite**, **Sound Taxi** or **Sound Bite**, please UNINSTALL them. They interfere with FS2Crew's Microsoft based Audio Engine. Some of these types of programs are legal in parts of Europe, but they are not legal in the United Sates.
4. Re-install RAAS Professional again, but do not click 'cancel' during the install. Wait for the install to finish.
5. 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 Microsoft XACT - FS2Crew Audio engine. (If you no longer have your original driver disk, click here to download the original driver.)
6. If you have a **Dolby 5.1 or 7.1 speaker sound system**, set your speaker configuration to "**Stereo**" via the Realtek Audio Manager (assuming

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you're using the Realtek Audio Manager).

7. 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.

8. Sometimes users have corrupt versions of the **FSX.CFG** file. Delete the FSX.CFG file. It will re-build automatically when you load Flight Simulator. Your FSX.CFG file is located here:

- Windows XP: **\Documents and Settings\<username>\Application Data\Microsoft\FSX**
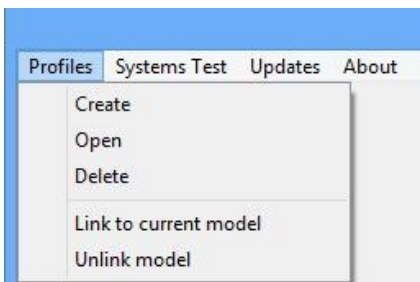- Windows Vista/ 7 / 8/ 10: **\Users\<username>\AppData\Roaming\Microsoft\FSX**

User Interface Overview

HOW TO OPEN THE RAAS USER INTERFACE:

PROFILES MENU:

Notes:

- You can create 'Profiles' to match specific Airline Configurations. Each 'Profile' can contain your custom RAAS settings.
- You can link and unlink Profiles to specific aircraft models, so that when you load a model the associated RAAS profile will automatically load for that specific aircraft model. Note that linking and unlinking refers to associating and de-associating the current aircraft model loaded with the current Profile.

3. The 'Default' option allows you to have the associated profile load by default on start-up.

MAIN USER INTERFACE SECTION:

UPPER AREA:

Notes:

- The current profile name is displayed in text in the top middle section of the user interface. In this case, the profile is called "Airbus".
- There is currently only 1 sound set available. More will be released in the future.

- The Master Volume slider controls the volume of the RAAS audio.

ADVISORIES SECTION:

Notes:

- **Approaching Runway (On Ground)** advisory provides the flight crew with an awareness of when a runway is being approached.
- **Approaching Runway (In Air)** advisory provides the flight crew with an awareness of which runway the aircraft is lined-up with during approach.
- **On Runway** advisory provides the flight crew with an awareness of which runway the aircraft is lined up with on on the ground.
- **Runway End** advisory is used to improve crew awareness of the runway end during low visibility operations.
- **Taxiway Take-off** advisory alerts pilots to excessive taxi speeds or an inadvertent takeoff on a taxiway.
- **Insufficient Runway Length (On Ground)** provides the crew of an awareness of which runway the aircraft is lined-up with and if the runway length available is less than the defined minimum takeoff length.
- **Extended Holding on Runway** alerts the crew of an extended holding period on the runway.
- **Approaching Short Runway (In Air)** offers an advisory of which runway the aircraft is lined-up with and if the runway length available is sufficient as defined in the Runways section.
- **Taxiway Landing** alerts the crew if they are not lined up with a runway at low altitudes.
- **Takeoff Flap Monitor** alerts the crew if the aircraft's flaps are not in the defined takeoff range.
- **Landing Distance Remaining** provides the flight crew with an awareness of the runway length remaining during roll-out.
- **Distance Remaining (Rejected Takeoff)** provides the flight crew with an awareness of the runway length remaining during a rejected takeoff.
- **Landing Flap Monitor** advisory alerts the crew if the landing flaps are not set.
- **Excessive Approach Speed** is an alert if the aircraft speed become excessive compared to the final approach speed.
- **Excessive Approach Angle** is an alert if the aircraft's approach angle becomes too steep.
- **Altimeter Setting (Above Transition)** alerts the crew if the altimeter is not set to standard after climbing above the transition altitude.
- **Altimeter Setting (Below Transition)** provides the flight crew with an awareness of improper corrected altitude setting while below the transition altitude.
- **Long Landing** alerts the flight crew if the aircraft has not touched down within the pre-defined Touchdown Zone Length.
- **Caution Enabled** adds the phrase "Caution" to select aural calls.

RUNWAYS SECTION:

Notes:

- '**Ru**' stands for RAAS units.   If 'Feet' are selected, the the units will be in feet. If 'Meters' are selected, the units will be in meters.
- **Exclude Short Runways** will exclude all runways less than 50 feet wide and 1000 feet long.
- **Annunciate Units** appends the units of measurement (feet or meters) to any runway distance remaining audio calls.
- **Touchdown Zone Length** refers to the size of the touchdown zone as a percentage of the runway length.

EXTERNAL HOLD SECTION:

Extended Hold (On Runway)

Set extended hold time periods:

INITIAL Time Period: `60` s

REPEAT Time Period: `30` s

Notes:

- The entered values, measured in seconds, are used for the '**Extended Holding on Runway**' call. **IMPORTANT: the value for the INITIAL Time Period must range from 60 seconds to 300 seconds. The values for the REPEAT Time Period must range from 30 seconds to 300 seconds.**

FLAPS SECTION:

Flaps Configurations

Minimum Take-off Flaps: `1`   Minimum Landing Flaps: `10`

Lower Flap Gate Alert: `600` ft   Upper Flap Gate Alert: `950` ft

Notes:

- **Minimum Take-off Flaps**: Minimum takeoff flap **in degrees**.

    IMPORTANT: IF USING AN AIRBUS ('**AIRBUS SUPPRESSION ZONE**' OPTION SELECTED ON THE **MISC SETTING PANEL)**, YOU MUST ENTER THE FLAPS SETTING USING **AIRBUS FLAPS UNITS**.

    0 = FLAPS UP
    1 = FLAPS 1
    2 = FLAPS 2
    3 = FLAPS 3
    4 = FLAPS FULL

    IF USING A BOEING OR NON-AIRBUS AIRBUS AIRCRAFT, YOU MUST SELECT '**BOEING SUPPRESSION ZON**E' ON THE **MISC SETTING PANE**L. YOU MUST ENTER THE FLAP SETTING VALUE USING **DEGREES**.

- **Minimum Landing Flaps**: Minimum landing flap in **degrees** if '**BOEING SUPPRESSION ZONE**' selected or **Airbus Units** if '**AIRBUS SUPPRESSION ZONE**' selected.
- **Upper Flap Gate Alert**: Defines the maximum altitude (AFE) of the upper Stabilized Approach Monitor Flap gate. **Value must range between 500 feet AGL to 1400 feet AGL.**
- **Lower Flap Gate Alert**: Defines the maximum altitude (AFE) of the lower Stabilized Approach Monitor Flap gate. The lower flaps gate requires the aircraft be lined up with the runway. **Value must range between 500 feet AGL to 1000 feet AGL.**

MISC SECTION:

Misc Settings

Max. Approach Speed: `200` kts

Transition Altitude: `18000` ft

○ Airbus Suppression Zone
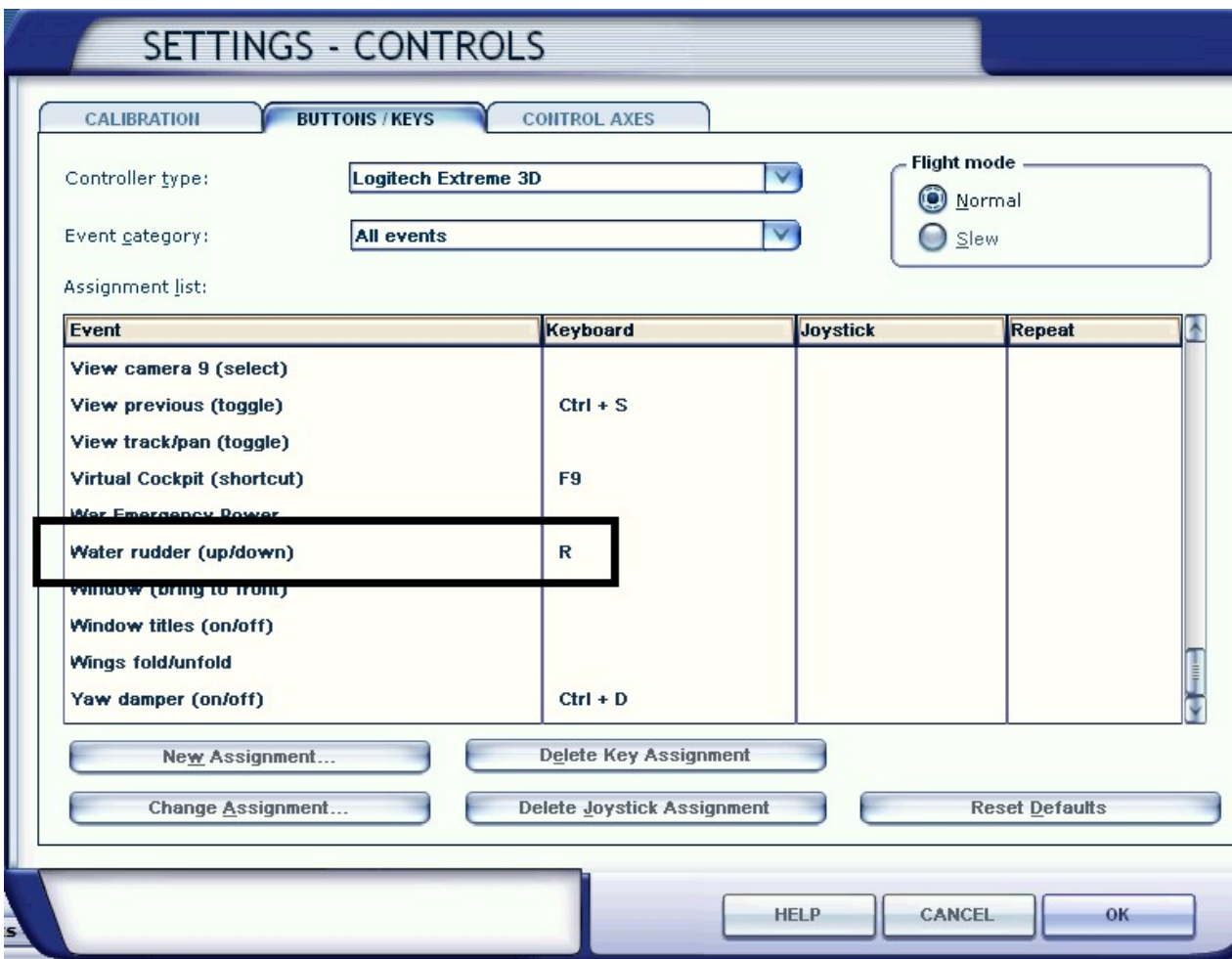○ Boeing Suppression Zone

Notes:

- **Maximum Approach Speed**: Used to define the speed for the '**Excessive Approach Speed**' call.
- **Transition Altitude**: Enter the Transition Altitude here. In the United States and Canada, this value is always 18,000 feet.
- **Boeing Suppression Zone**: Suppresses the '**Approaching Runway (In Air)**' advisory between 550 to 450 feet AFE to allow for the normal 500-foot altitude call outs in Boeing aircraft. Also used to determine the flap units for the Minimum and Maximum Flap settings in the **FLAPS SECTION** (Airbus units or Degrees).
- **Airbus Suppression Zone**: Suppresses the '**Approaching Runway (In Air)**' advisory between 350 to 450 feet AFE to allow for the normal 400-foot altitude call outs in Airbus aircraft. Also used to determine the flap units for the Minimum and Maximum Flap settings in the **FLAPS SECTION** (Airbus units or Degrees).

Audio Output Device: Speakers (Realtek High Definition Audio)

☑ Enable Key Event API

Notes:

- **Audio Output Device:** Select audio device used for RAAS sounds.
- **Enable Key Event API:** When checked, the **RAAS Master Switch** may be toggled on/off using a key event tied to the **WATER RUDDER (UP/DOWN)** event available via the CONTROLS MENU in your version of flight simulator. In the example below, the R key is being used to toggle the RAAS Master Switch. This feature is mainly intended for home cockpit builds who want to control RAAS independently of the Addons Menu.

Managing the Runway Database

Before using RAAS for the first time, or anytime you install new scenery, you should refresh your Runway Database so the RAAS unit can accurately read your airport scenery out of Flight Simulator.

To refresh your Runway Database, perform the following steps:

Download and install **MAKE RUNWAYS** by **Pete Dowson**.

This is a freeware utility.

CLICK HERE TO DOWNLOAD "MAKE RUNWAYS" DIRECT FROM PETE DOWSON'S WEBSITE

Follow the directions included in the download zip.

But all you really need to do is this:

1. Drop the MakeRwys.exe into to your main Flight Simulator folder.
2. Run the MakeRwys.exe. It's a good idea to run it with Admin rights. Right click on the EXE and select 'Run as an Admin'.
3. That's it!
4. Every time you update your scenery, you should re-run the MakeRwys exe to update the runways database used by RAAS.

Sharing your Custom Profiles

One of RAAS Professional's best features is that it allows you to create and save custom profiles.

You can share your custom profiles with your friends, or distribute them via the **Avsim.com File Librar**y, or any other Flight Simulator fan site.

Saved user profiles are located in your **App Data folder**.

(Note that you may need to check view "**hidden files**" in the **View Options** menu in order to see your profiles.)

C:\Users\-----YOUR USER NAME-----\AppData\Roaming\RAASPRO\Profiles

Saved profiles have an .ini extension.

Two recommended places to share your custom profiles with the flight simulator community are:

1. **The Avsim.com File Library**

2. **The Flightsim.com File Library**

Videos

The following videos show RAAS in action:

Official RAAS Professional Trailer

Real-World Video #1

Real-World Video #2

Real-World Video #3

Real-World Video #4

Real-World Video #5