

**As real as it gets
Zo echt als het maar zijn kan**

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LaMaMa 25 september 2023



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As real as it gets

Flight Simulator

Computer

- hardware
- software

FlightSimulator

- software
- hardware

Add ons

- hardware
- software

As real as it gets

ARAG

As real as it gets

Computer



ARAG

- Hardware
 - Processor
 - RAM geheugen
 - Grafische kaart
 - Harde schijf geheugen
 - Display (monitoren voor Fsim en Add-ons)
- Software
 - operating systeem (Win10 / Win11)
- Internet verbinding
- Toetsenbord
- Muis



As real as it gets

Minimum system requirements

- Processor: Intel i5-4460 / AMD Ryzen 3 1200
- RAM: 8 GB
- Graphics card: Nvidia GTX 770 / AMD Radeon RX 570 with 2 GB
- Disk space: 150 GB
- Operating system: Windows 10 (version 1909, November 2019 update)
- Internet connection: 5 Mbps

Recommended system requirements

- **Processor:** Intel i5-8400 / AMD Ryzen 5 1500X
- **RAM:** 16 GB
- **Graphics card:** Nvidia GeForce GTX 970 / AMD Radeon RX 590 with 4 GB
- **Disk space:** 150 GB
- **Operating system:** Windows 10 (version 1909, November 2019 update)
- **Internet connection:** 20 Mbps

Optimal system requirements

- **Processor:** Intel i7-9800x / AMD Ryzen 7 Pro 2700X
- **RAM:** 32 GB
- **Graphics card:** GeForce RTX 2080 / AMD Radeon VII with 8 GB
- **Disk space:** 150 GB
- **Operating system:** Windows 10 (version 1909, November 2019 update)
- **Internet connection:** 50 Mbps

As real as it gets

Flight Simulator en Add-ons

ARAG

☐ Software

- MSFS2020
- P3D
- X-plane
- Add-ons

☐ Hardware

- toetsenbord
- muis
- overige controllers (HOTAS, MCP panel, enz.)



HOTAS

hands on throttle-and-stick
Is the concept of placing buttons and switches on the [throttle lever](#) and [flight control stick](#) in an aircraft cockpit

As real as it gets

Resultaat 1

ARAG

- “Cockpit”
- Vliegtuigen (default of add-on)
- Scenery
 - vliegvelden (default of add-on)
 - landschap (default of add-on)
- Frame Rate

As real as it gets

Resultaat 2

ARAG

- Weer
- On-Line vliegen
 - Sundownwers
 - IVAO / VATSIM
 - MSFS
- Kaarten en databases (b.v. Navigraph)
- Flight Planning (b.v. Simbrief of LNM)
- Co-pilot (b.v Multi Crew Experience)
- Virtual Reality bril

As real as it gets

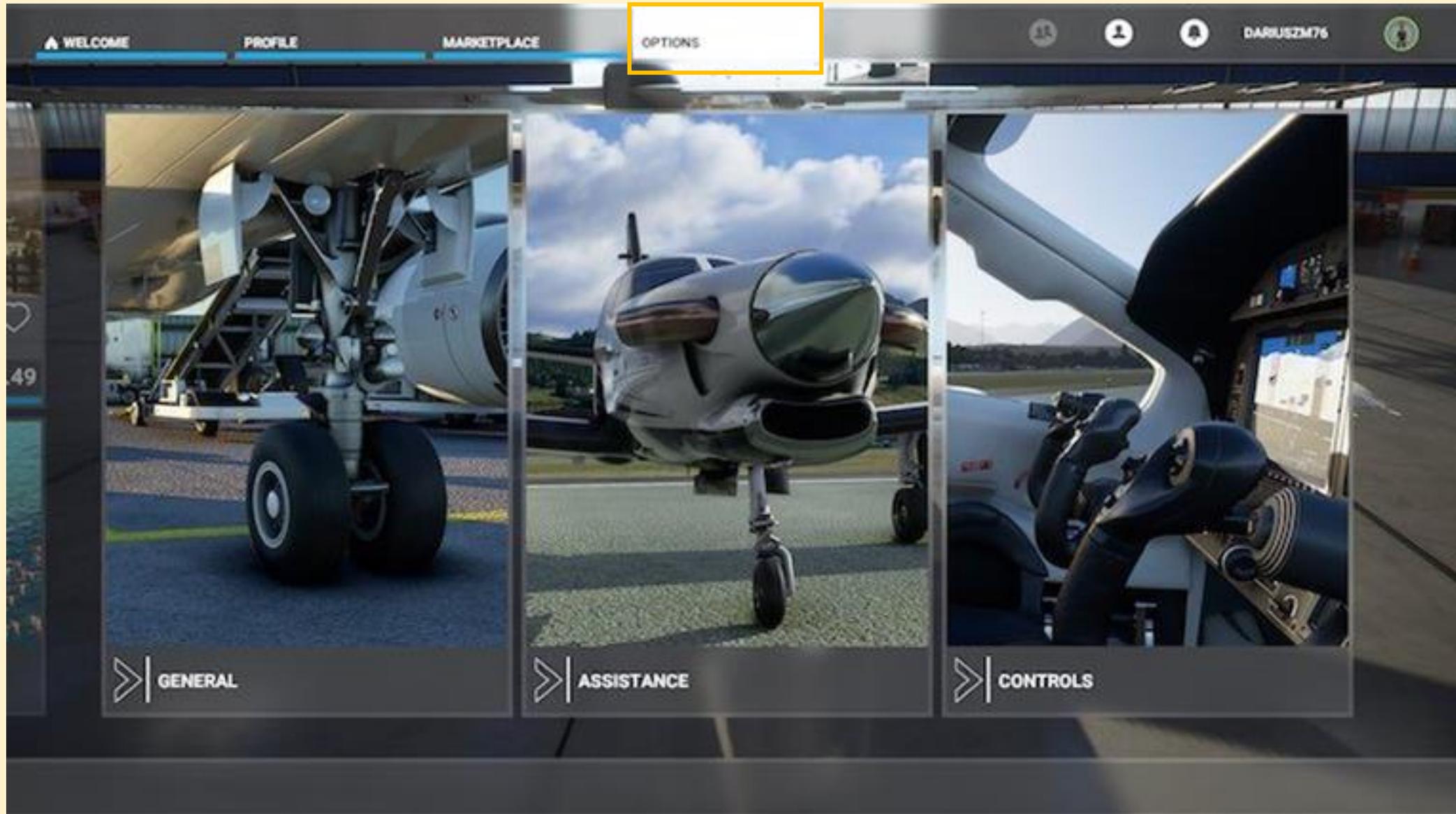
Tuning Flightsim en Werkwijze bij vliegen

ARAG

- MSF settings
- maken vliegplan
- gebruiken van weer info
- gebruik checklist
- volgen van vliegprocedures
- multi-user zonder verkeersleiding
- multi-user met verkeersleiding

As real as it gets

Tuning Flightsim en Werkwijze bij vliegen



Options - General

General options, includes only **elements related to the flight model**.

They are in the special **Flight Model Tab** and contain several options to choose from.

However, in order to change them, we have to set the **Legacy option** of the flight model.

When you set the flight model to the **Modern option**, then you will enable the full realism in 100%

For example, the behavior of the aircraft may change due to the air streams flowing near high peaks of the world.



Only by using the traditional settings, you may change the individual elements of the flight.

The simplest way is to use the global settings and change all available options to

- FSX (easy),
- intermediate,
- or realistic.

Instead, you can customize each slider independently.

Options - General

GENERAL OPTIONS

GRAPHICS
CAMERA
SOUND
TRAFFIC
DATA
FLIGHT MODEL
MISC
ACCESSIBILITY
DEVELOPERS
VR MODE
EXPERIMENTAL

LEGACY

SEARCH 🔍 > RESULTS FOUND: 6

GLOBAL PRESET < CUSTOM >

GENERALS		100
CRASH REALISM		69
GYRO		100
P-FACTOR		49
TORQUE		78

DESCRIPTION

Adjust whether to enable or disable Developer Mode.

Options - General

Generals

The overall level of realism of the flight model.

Crash Realism

The degree of damage during emergency landings and the strength of the aircraft's structures during maneuvers which may exceed the operational limits.

Setting this option to 100% will make your airplane more vulnerable during fast maneuvers.

For example, the wings of the aircraft may detach if they receive tremendous amount of stress during dangerous maneuvers.

Gyro

Determines the degree of precession of the gyroscope.

In case of a realistic setting, analog gyroscopes in older and simpler machines will be more prone to misleading indications.

Options - General

P-Factor

The game describes this as an asymmetrical thrust generated by propellers.

In practice, this means that an aircraft with a propeller engine will tend to pull to the right or left in certain situations - usually during takeoff and during ascent, when the wings have a higher Angle of Attack.

The pilot must counteract this phenomenon by making continuous, very delicate adjustments of the airplane's rudder.

Setting the slider to 0 disables this effect.

Torque

This option allows you to determine the realism factor of the propeller torque (associated with the opposite rotation) which is somewhat similar to the P-Factor.

The opposite rotation causes an aircraft with a propeller engine to tilt to the wing opposite to the rotation of the propeller while airborne.

This effect increases as the engine rotates.

Setting the slider to 0 disables this effect.

Options - Assistance

The **Assistance section** contains options **associated with gameplay realism (ARAG)** which were divided into **multiple categories and subcategories**.

The settings are associated with

1. piloting the aircraft and

2. the settings of the user interface

which is being displayed while flying



Instead of sliders, you can find the usual option to enable or disable a particular effect. **ARAG**

Options - Assistance

DESCRIPTION

ALL ASSISTS

For those new to flight simulation or wanting to learn the ropes. Assistance and instruction will be offered during flight by an AI co-pilot.

MIDDLE-GROUND

For those who want a mostly-realistic experience but with some extra guidance.

TRUE TO LIFE

For those comfortable with flight simulation and who want the most authentic experience.

If you wish to customize your Assistance settings further, expand the sub-categories on the left to view and adjust individual options.

Options - Assistance

ASSISTANCE OPTIONS

MIDDLE-GROUND

SEARCH



RESULTS FOUND: 49

AIRCRAFT SYSTEMS

AUTOMIXTURE

UNLIMITED FUEL

AIRCRAFT LIGHTS

GYRO DRIFT

FAILURE AND DAMAGE

CRASH DAMAGE

AIRCRAFT STRESS DAMAGE

ENGINE STRESS DAMAGE

ICING EFFECT

NAVIGATION AIDS

ROUTE AND WAYPOINTS

TAXI RIBBON

LANDING PATH

NOTIFICATION

PILOTING

MEDIUM

ON

OFF

OFF

OFF

MEDIUM

ENABLED

ENABLED

DISABLED

OFF

HARD

OFF

OFF

OFF

MEDIUM

MEDIUM

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ASSISTANCE OPTIONS

MIDDLE-GROUND

SEARCH RESULTS FOUND: 49

▼ AIRCRAFT SYSTEMS	<	MEDIUM	>
▼ FAILURE AND DAMAGE	<	MEDIUM	>
▼ NAVIGATION AIDS	<	HARD	>
▲ NOTIFICATION	<	MEDIUM	>
PILOTING AND CONTROLS NOTIFICATIONS	<	ON	>
AIRCRAFT SYSTEM	<	ON	>
FLYING TIPS	<	OFF	>
OBJECTIVES	<	OFF	>
SOFTWARE TIPS	<	ON	>
▲ PILOTING	<	MEDIUM	>
AUTO-RUDDER	<	ON	>
ASSISTED YOKE	<	OFF	>
ASSISTED CHECKLIST	<	ON	>
ASSISTED LANDING	<	OFF	>
ASSISTED TAKEOFF	<	OFF	>
AI RADIO COMMUNICATIONS (ATC)	<	OFF	>

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Options - Assistance

ASSISTANCE OPTIONS



CUSTOM



SEARCH



RESULTS FOUND: 49

^ AIRCRAFT SYSTEMS	<	HARD	>
AUTOMIXTURE	<	OFF	>
UNLIMITED FUEL	<	OFF	>
AIRCRAFT LIGHTS	<	OFF	>
GYRO DRIFT	<	ON	>
^ FAILURE AND DAMAGE	<	HARD	>
CRASH DAMAGE	<	ENABLED	>
AIRCRAFT STRESS DAMAGE	<	ENABLED	>
ENGINE STRESS DAMAGE	<	ENABLED	>
ICING EFFECT	<	ON	>
^ NAVIGATION AIDS	<	HARD	>
ROUTE AND WAYPOINTS	<	OFF	>
TAXI RIBBON	<	OFF	>
LANDING PATH	<	OFF	>
∨ NOTIFICATION	<	HARD	>
∨ PILOTING	<	CUSTOM	>

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Options - Assistance

Aircraft Systems

- 1. Automixture** - choose whether you want the engine fuel mixture automatically adjusted.
Activating this option means you don't have to worry about a handle with a red knob placed right next to the throttle (black knob).
It controls the amount of fuel injected into the engine depending on air density.
The general rule is that the higher you fly, where the air gets less dense, the more reduced the mixture should be. A lot depends on the particular model of the aircraft.
In general, reduce automixture when flying at altitudes above 3,000 feet above sea level.
- 2. Unlimited fuel** - as it says, you won't lose any fuel during flight.
- 3. Aircraft Lights** - turning this option on will cause the plane lights to turn on themselves depending on the situation, for example, navigation lights during flight, for taxiing, for landing, etc.
- 4. Gyro Drift Autocalibration** - with a realistic model of the flight and precession of the gyroscope, enabling this option results in automatic calibration of the gyroscope.
It only applies to certain aircraft.

Options - Assistance

Failure & Damage

- 1. Crash Damage** - includes collisions with Earth and other objects.
When a collision gets detected the screen turns black and you return to the menu.
- 2. Aircraft Stress Damage** - adjust whether you want the aircraft to suffer stress damage when flying at high G-force.
- 3. Engine Stress Damage** - adjust whether you want the engine to suffer stress damage when flying at high G-force.
- 4. Icing Effect** - by enabling this option the ice accretion will affect the aircraft, resulting in airframe icing, injection systems and carburetor icing as well as pitot icing.
This can lead to loss of power, loss of altitude or total engine failure.
Only visual effects can be switched on, that is, the frost on the windows and surfaces of the hull.
In modern aircraft, this effect is eliminated by the Anti-Ice system.
In case of older planes you have to avoid flying in icy conditions.

Options - Assistance



The effect of icing can be visual only, or it can cause a lot of trouble to the technical parts and systems of an aircraft without the Anti-Ice system.

Options - Assistance

Navigation Aids

1. **Route & Waypoints** - navigation icons that are superimposed in the world.
2. **Taxi Ribbon** - on screen ribbon (illuminated road) that guides you through taxi ways from parking area to runway and vice versa (after landing)
3. **Landing Path** - to see a series of on-screen markers shown in the world to guide the optimum path during final approach and landing (these also indicate the proper velocity).
4. **Smartcam mode** - the camera will automatically focus on the nearest active place (city, airport, tourist attraction).
5. **POI Markers** - points of interest are marked with an icon in the world during flight, including specially designed places and tourist attractions.
6. **City Markers** - cities to be marked with an icon in the world during flight.
7. **Airport Markers** - Airports to be marked with an icon in the world during flight.
8. **Fauna Markers** - various groups of animals to be marked with an icon in the world during flight.

Options - Assistance



It's easy to get lost in huge airports.

Illuminated routes make it very easy to navigate on land.

Options - Assistance



The landing path is a very useful tool for beginners to learn how to approach the runway properly.

Options - Assistance

ASSISTANCE OPTIONS



MIDDLE-GROUND



SEARCH



RESULTS FOUND: 49

^ AIRCRAFT SYSTEMS	<	MEDIUM	>
AUTOMIXTURE	<	ON	>
UNLIMITED FUEL	<	OFF	>
AIRCRAFT LIGHTS	<	OFF	>
GYRO DRIFT	<	OFF	>
^ FAILURE AND DAMAGE	<	MEDIUM	>
CRASH DAMAGE	<	ENABLED	>
AIRCRAFT STRESS DAMAGE	<	ENABLED	>
ENGINE STRESS DAMAGE	<	DISABLED	>
ICING EFFECT	<	OFF	>
^ NAVIGATION AIDS	<	HARD	>
ROUTE AND WAYPOINTS	<	OFF	>
TAXI RIBBON	<	OFF	>
LANDING PATH	<	OFF	>
NOTIFICATION	<	MEDIUM	>
^ PILOTING	<	MEDIUM	>

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Options - Assistance

Notifications

1. **Piloting & Controls Notifications** - notifications with control buttons and key bindings
2. **Aircraft System** - notifications about aircraft systems, for example, the need to calibrate the gyroscope
3. **Flying Tips** - flight tips, such as information that you should reduce your speed
4. **Objectives** - hints about the next stages of flight, for example, that you should make contact with the ATC
5. **Software Tips** - on-screen Software tips during flight.

Options - Assistance

ASSISTANCE OPTIONS

CUSTOM

SEARCH RESULTS FOUND: 49

PILOTING	<	HARD	>
AUTO-RUDDER	<	OFF	>
ASSISTED YOKE	<	OFF	>
ASSISTED CHECKLIST	<	OFF	>
ASSISTED LANDING	<	OFF	>
ASSISTED TAKEOFF	<	OFF	>
AI RADIO COMMUNICATIONS (ATC)	<	OFF	>
AI ANTI-STALL PROTECTION	<	OFF	>
AI AUTO-TRIM	<	OFF	>
ASSISTED CONTROLLER SENSITIVITY	<	OFF	>
GLIDERS: TOW PLANE TAKE-OFF ASSISTANCE	<	OFF	>
HELICOPTERS: ASSISTED TAIL ROTOR	<	OFF	>
HELICOPTERS: ASSISTED CYCLIC	<	OFF	>
TURBULENCE	<	REALISTIC	>
POINTS OF INTEREST	<	HARD	>
USER EXPERIENCE	<	CUSTOM	>

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Options - Assistance

Piloting

1. **Take-Off Auto-Rudder** - keeps the plane straight during take-off, that is, removes the P-Factor effect.
2. **Assisted Yoke** - you want the yoke controls (pitch and roll) to be assisted.
3. **Assisted Checklist** - AI co-pilot will help you in completing subsequent operations from checklists. For example, before landing (checklist can be auto-completed or validated)
4. **Assisted Landing** - you want the throttle, pitch, landing gear and flaps to be assisted during the Final Approach phase of a flight, that is, once the landing clearance is issued (after you get the permission for landing). Includes automatic landing gear operation, automatic flaps regulation, engine power adjustments and steering assistance.
5. **Assisted Takeoff** - you want the throttle, pitch, landing gear and flaps to be assisted during a Takeoff. This option includes automatic landing gear operation, automatic flaps regulation, engine power adjustments and steering assistance.
6. **Delegate ATC to AI** - to activate the AI co-pilot that will manage communication with the Air Traffic Control. A very useful feature that allows you to observe when you send, receive and confirm different messages during the flight.

Options - Assistance

User Experience

1. **ATC UI Panel Open at Start** - after the game gets loaded it automatically opens the ATC interaction UI Panel.
2. **Show Message Log in ATC Menu** - displays a log of archived messages in the ATC Menu.
3. **ATC Voices** - turns on and off the ATC voice messages
4. **Checklist UI Panel Open at Start** - after the game gets loaded it automatically opens the Checklist Panel.
5. **VFR Map UI Panel Open at Start** - after the game gets loaded it automatically opens the VFR Map UI Panel.
6. **Nav Log UI Panel Open at Start** - after the game gets loaded it automatically opens the Nav Log UI Panel.

For a more detailed description of the features in the User Experience section, please refer to the Toolbar section.

Options - Assistance



The notifications are interesting at first, but after a while they'll become rather annoying.

It's worth turning them off once you know the basics of flying.

Options - Assistance



Starting the game right away with a screen filled with various panels slightly spoils the atmosphere and

As real as it gets

Resultaat 2

ARAG

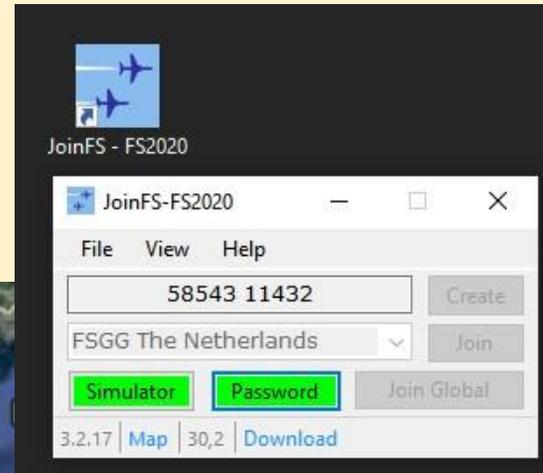
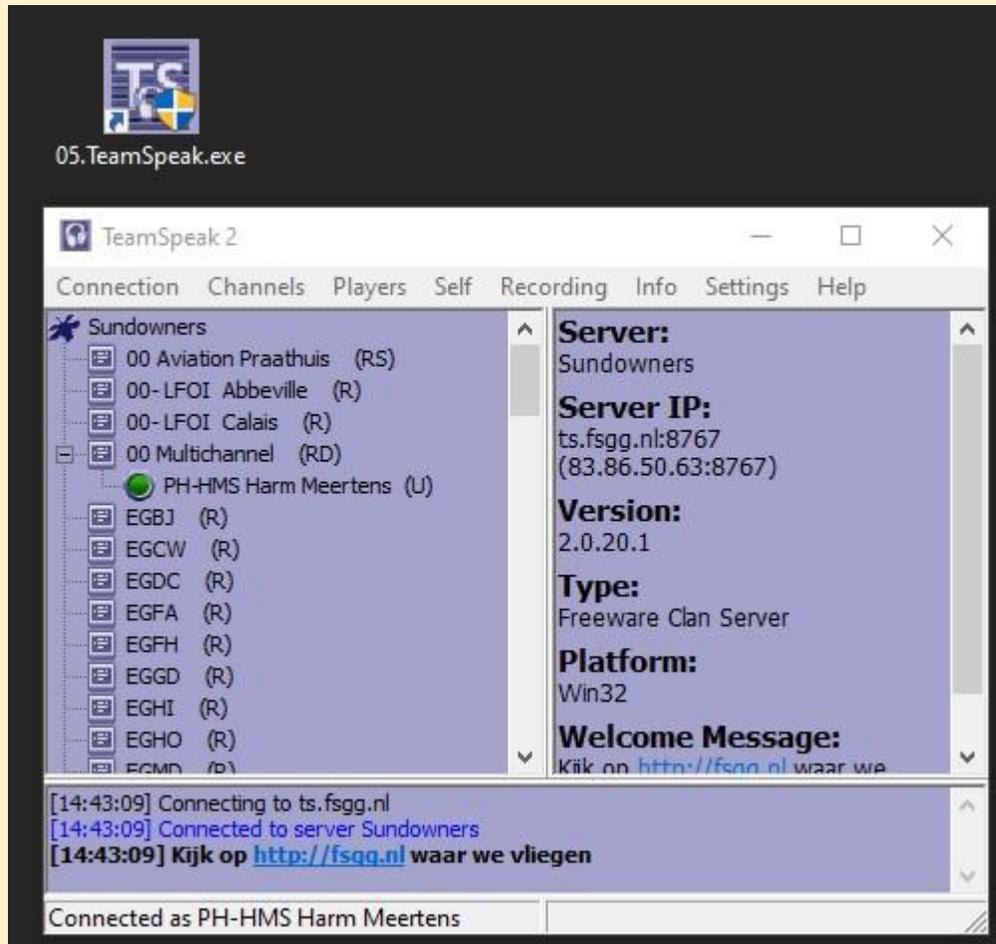
- Weer
- On-Line vliegen
 - Sundownwers
 - IVAO / VATSIM
 - MSFS
- Kaarten en databases (b.v. Navigraph)
- Flight Planning (b.v. Simbrief of LNM)
- Co-pilot (b.v Multi Crew Experience)
- Virtual Reality bril

On-Line vliegen

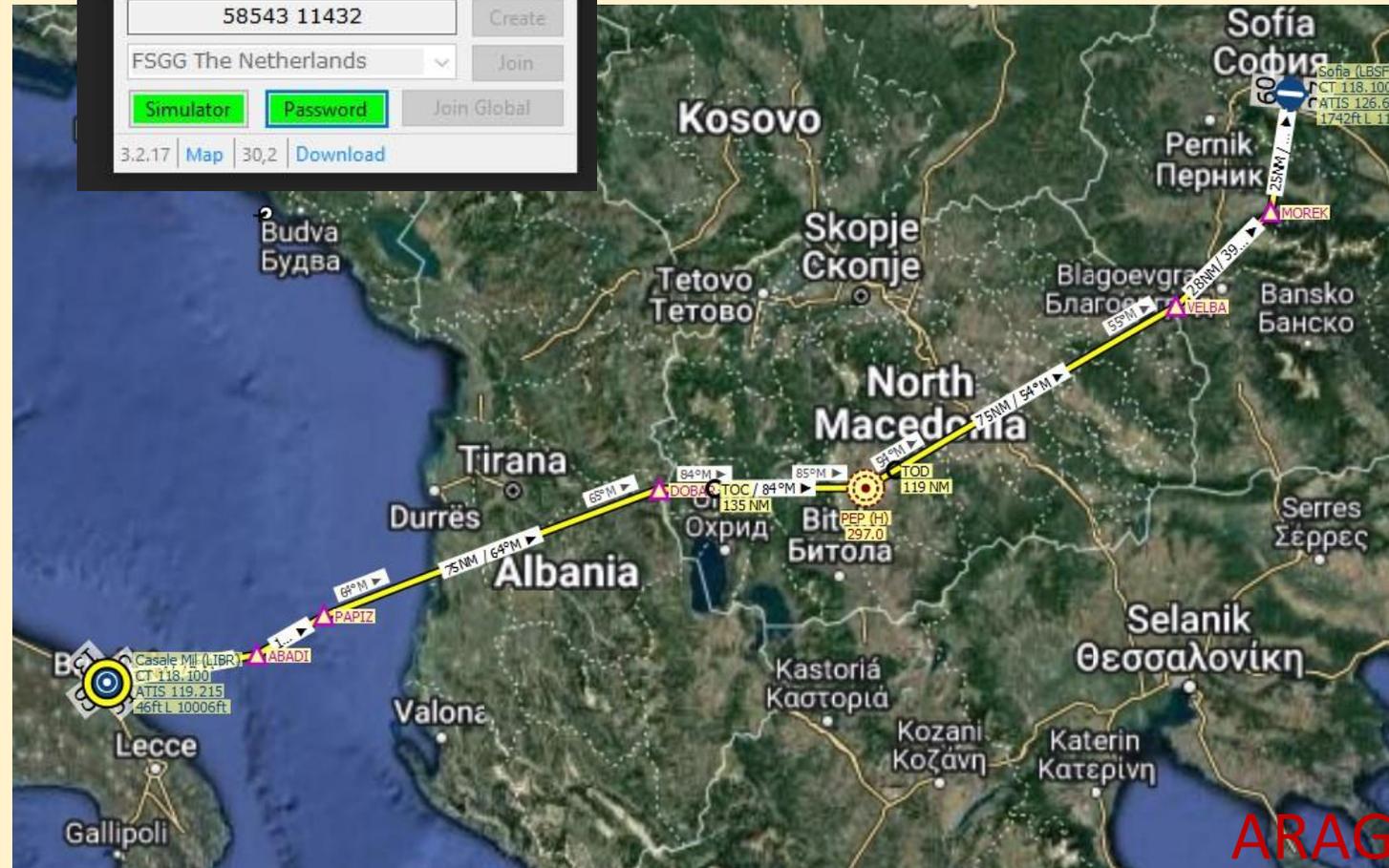
Sundowners

TeamSpeak

voor spraak communicatie



JoinFs en Little NavMap
voor vliegtuig locatie



On-Line vliegen

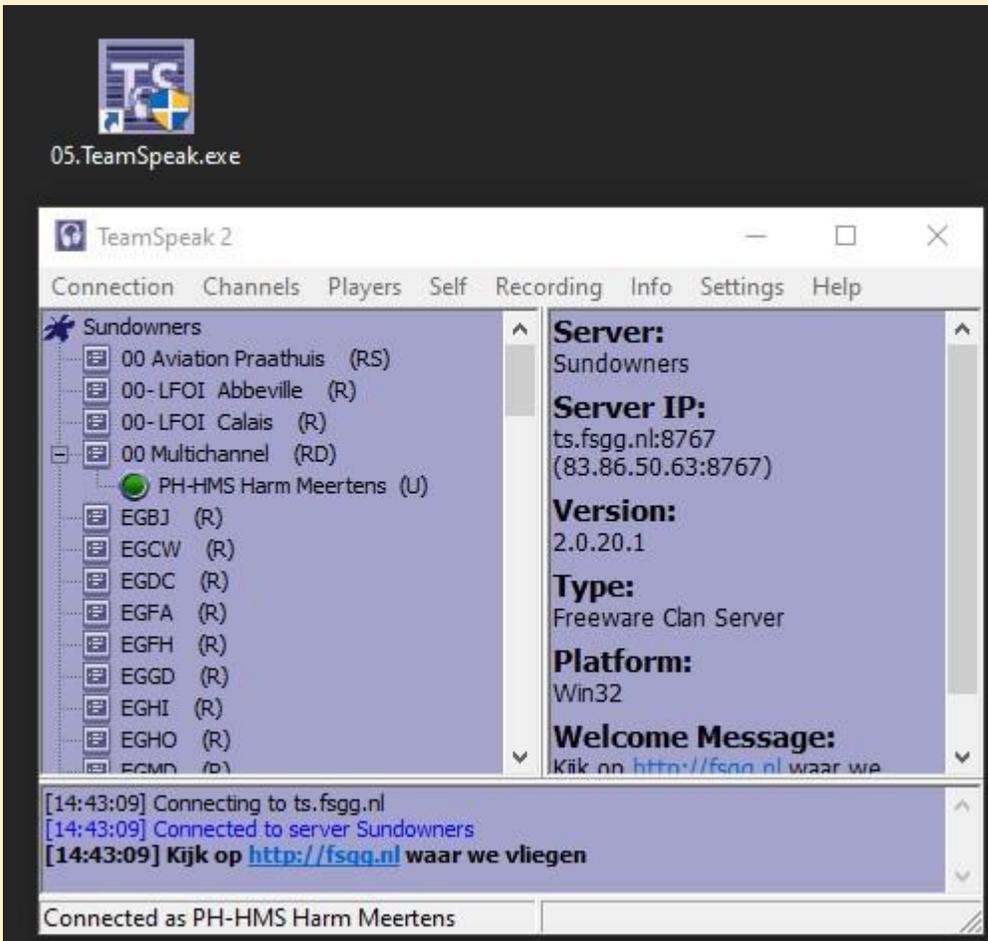
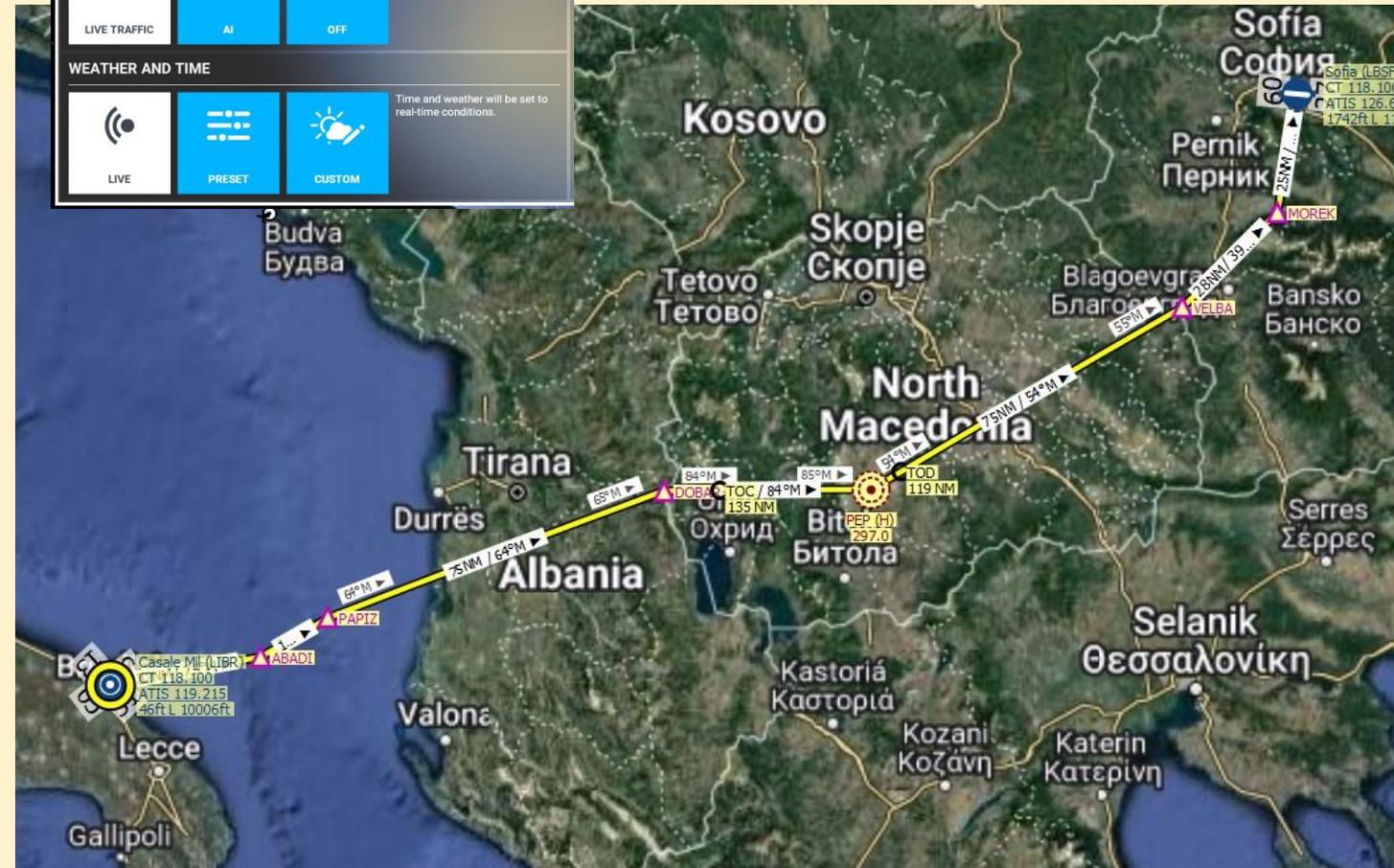
Sundowners

TeamSpeak

voor spraak communicatie



MSFS en Little NavMap
voor vliegtuig locatie



On-Line vliegen

IVAO

Webeye voor

vliegtuig locatie en ATC gebieden

Pilot Client Altitude voor Verkeersleiding

Auto Unicom indien
geen ATC controller



IVAO Pilot Client: Altitude 1.12.0b

KLM127 [LIBR - LBSF] MTL

124.850

#! [10]> Latest Altitude version available is 1.12.0b.
Connect with us family.ivao.aero
#! [10]> IVAO is proudly sponsored by Aerosoft.
#! [10]> You are Pilot Rating FS3
KLM127 [14]> LIBR Traffic, IFR B737 at Gate 12,
pushing back
KLM127 [14]> LIBR Traffic, B737 lining up and
taking off runway 13, ABADI departure, initial climb
6500ft

SEND AU

XPDR 2000 TX ID

COM 1 122.800 UNICOM RX TX

COM 2 124.850 RX TX

ONLINE ATC MSG SETTINGS

TCAS D-ATIS PROFILE

UTC time: 15:14
Online time: 00:04

Auto UNICOM

Tip! While on the ground your **TRANSPONDER** Should be set to STBY

Close SEND

Departure Enroute Arrival

Fetch METAR LIBR

Start And Push
 Taxi To Runway
 Hold Short
 Backtrack
 Intersection Dep.
 Line-Up/Take-Off
 Airborne
 On Climb

3 Minute Timer

Departure

Parking Aircraft Status: On Ground

Parking Type Gate ID
Gate 12

Taxi Route Hold Short
Taxiways AA
[Example: W2 W A3 E E1]

Departure Runway Runway L | C | R
- 13 + - +

Departure Type
SID Standard Instrument Departure
ABADI

Other Types:

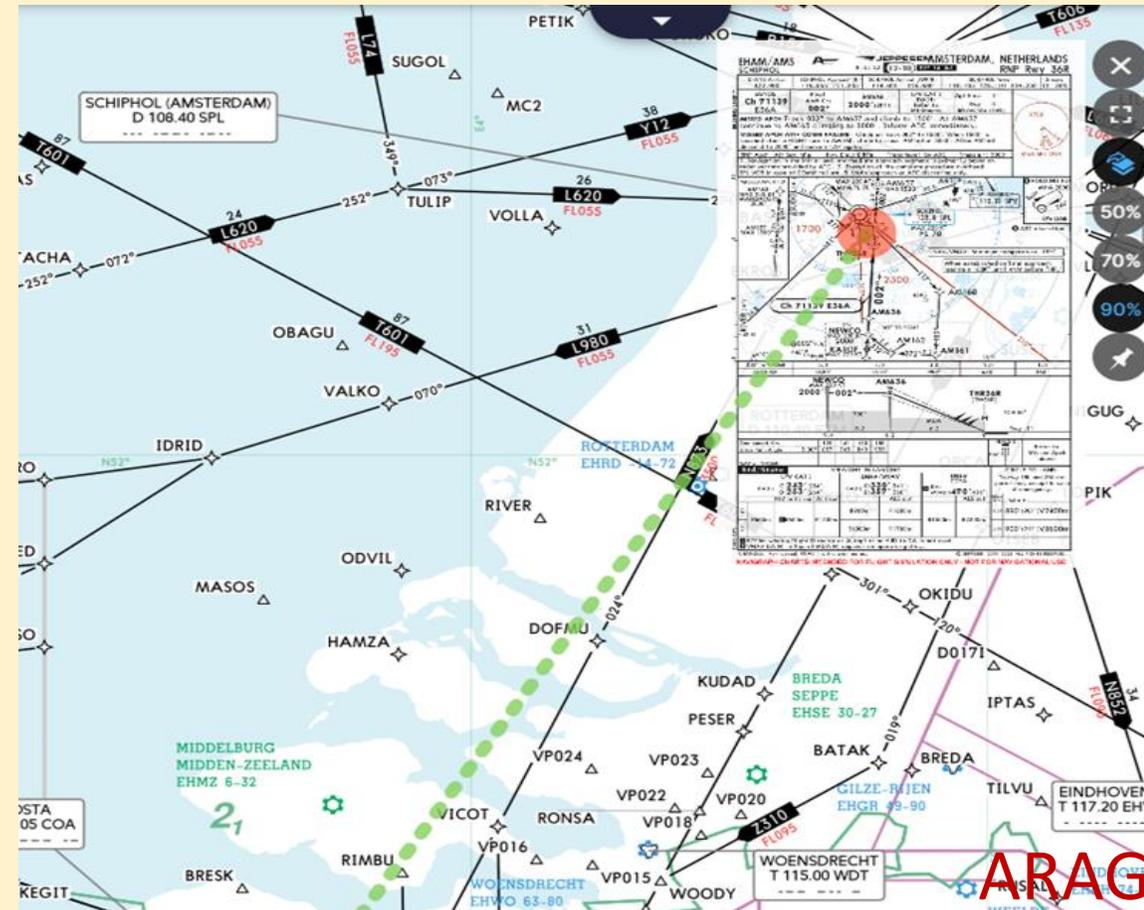
Initial Climb: 6500ft
TA Transition Altitude [..in FT]
8000ft
Unless changed, TA is set at 10,000ft

Waarom zou je Navigraph gebruiken?

To reflect current conditions in aviation in your flight simulator

This is important for

- realism
- to share a **virtual airspace** when flying **with other pilots and controllers** together using different addon software



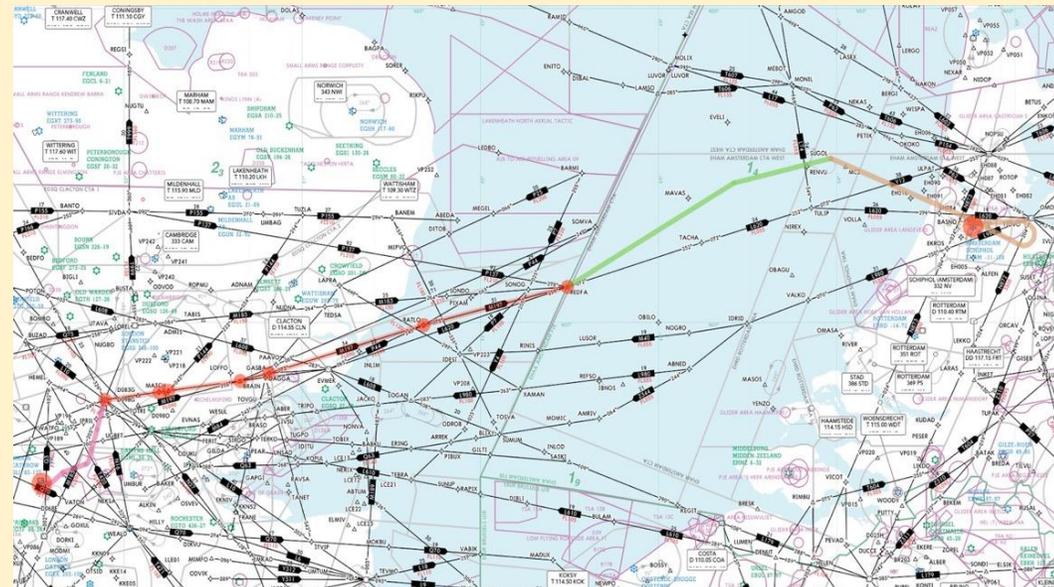
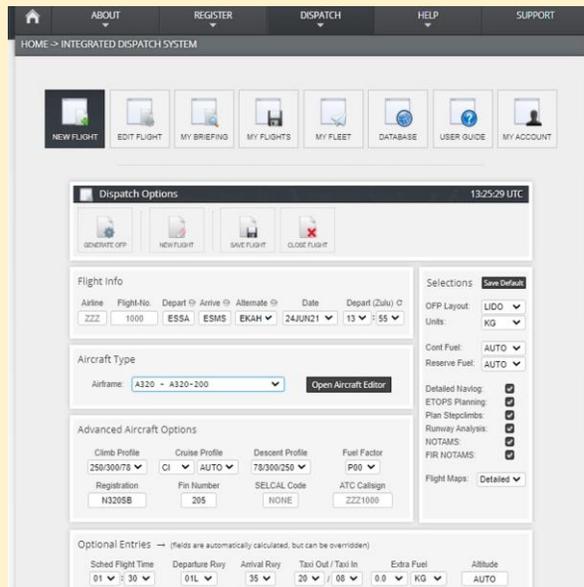
Flight Planning

Is a freeware, web-based, flight planning tool that produces **accurate briefing packages** for flight simulation.

Creating a flight plan, a **briefing package similar to those real-world pilots use will be generated.**

This will provide the essential information required to prepare your flight.

SimBrief

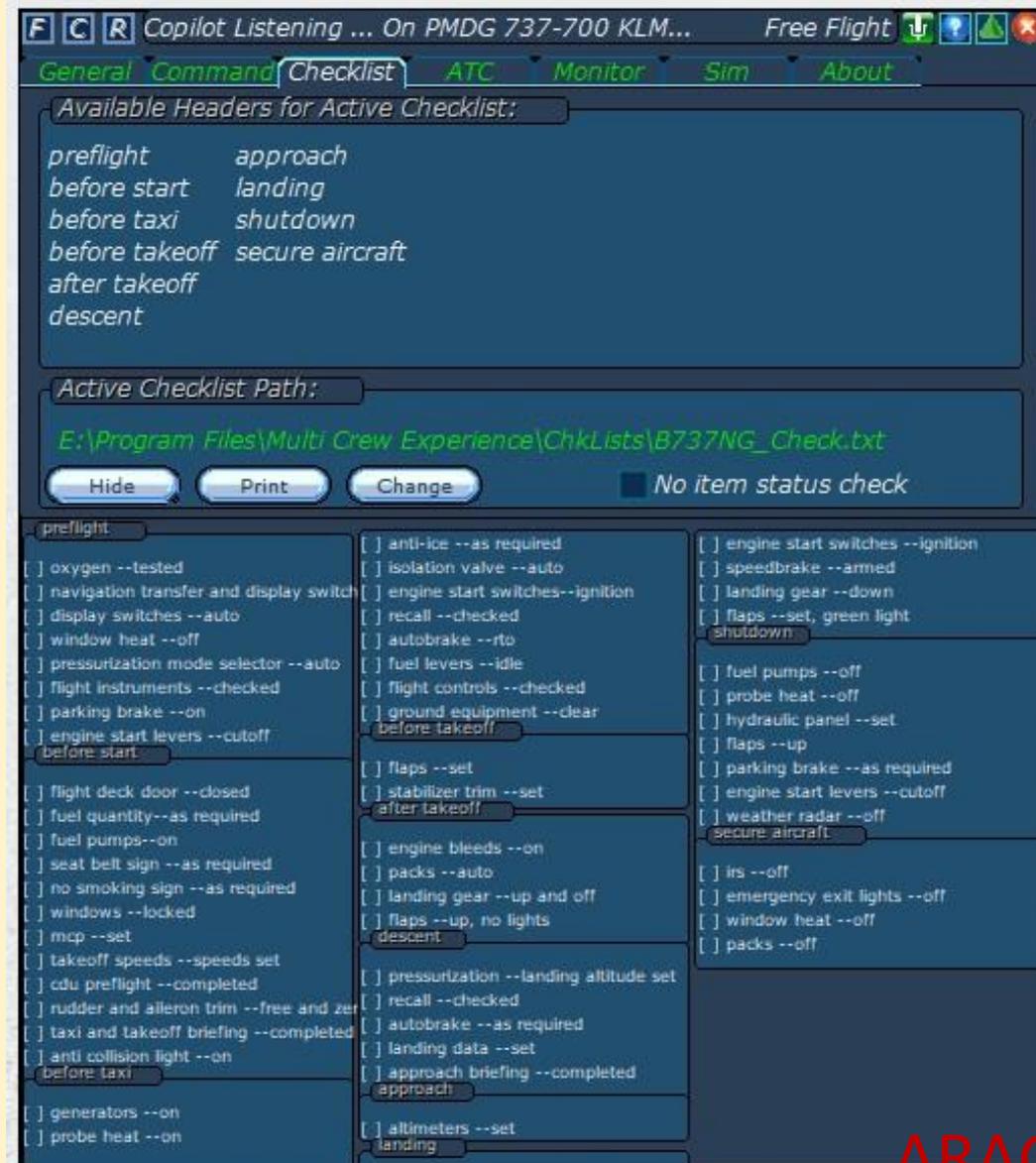
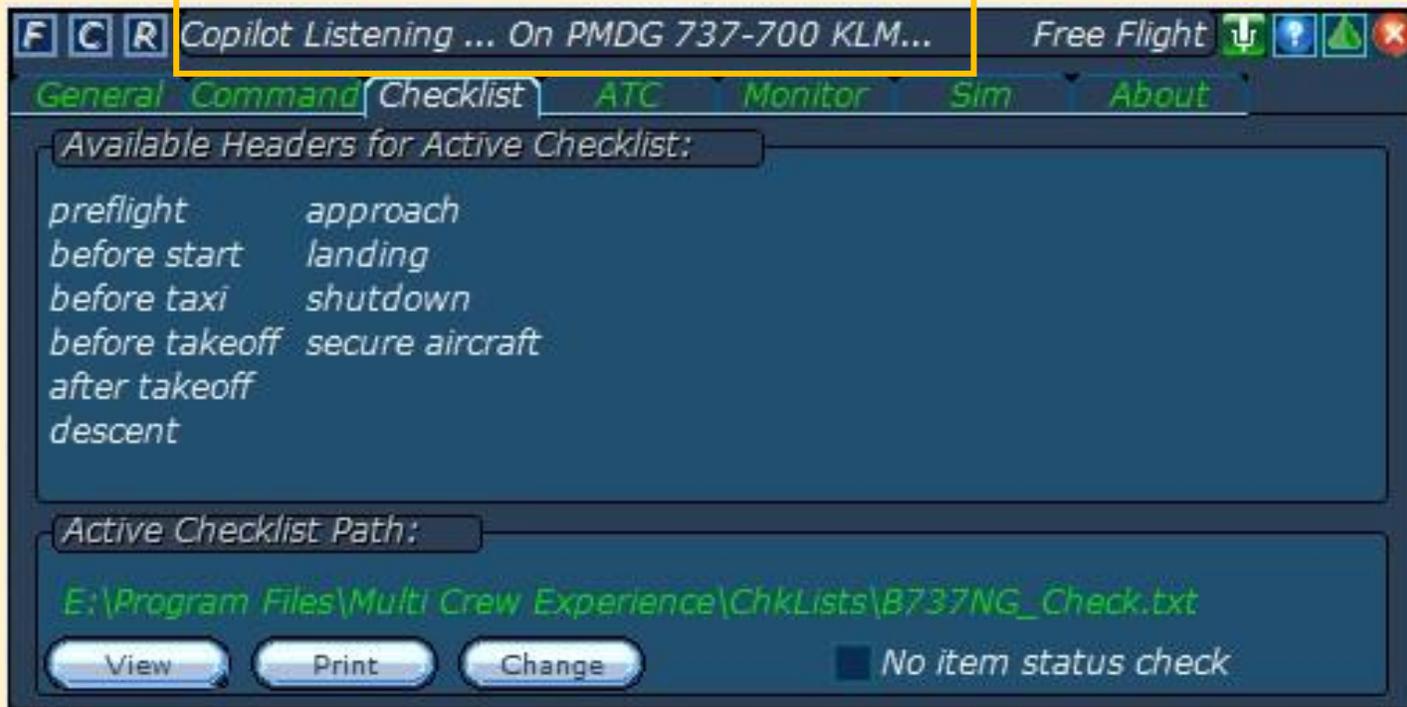


Co-pilot/spraakherkenning

CoPilot voor hulp in de Cockpit

Multi Crew Experience

Spraakherkenning met
standard commandos



Co-pilot/spraakherkenning

Co-pilot		Pilot	
BEFORE TAKEOFF			
<input type="checkbox"/> Flaps	--	Set	MCE Checklist Boeing 737
<input type="checkbox"/> Stabilizer trim	--	Set	
AFTER TAKEOFF			
<input type="checkbox"/> Engine bleeds	--	ON	
<input type="checkbox"/> Packs	--	AUTO	
<input type="checkbox"/> Landing gear	--	UP and OFF	
<input type="checkbox"/> Flaps	--	UP, No lights	
DESCENT			
<input type="checkbox"/> Pressurization	--	landing altitude set	
<input type="checkbox"/> Recall	--	Checked	
<input type="checkbox"/> Autobrake	--	As required	
<input type="checkbox"/> Landing data	--	set	
<input type="checkbox"/> Approach briefing	--	Completed	

Spraak commando's

- After Takeoff Checklist
- Set Heading 230
- Set Altitude 4000 Feet

Co-pilot/spraakherkenning

MCE Checklist Boeing 737

MSFS2020 Checklist Boeing 737

BEFORE TAXI

<input type="checkbox"/> Generators	--	On
<input type="checkbox"/> Probe heat	--	ON
<input type="checkbox"/> Anti-ice	--	As required
<input type="checkbox"/> Isolation valve	--	AUTO
<input type="checkbox"/> Engine start switches	--	Ignition
<input type="checkbox"/> Recall	--	Checked
<input type="checkbox"/> Autobrake	--	RTO
<input type="checkbox"/> FUEL levers	--	Idle
<input type="checkbox"/> Flight controls	--	Checked
<input type="checkbox"/> Ground equipment	--	Clear

CHECKLIST

BEFORE TAXI PROCEDURE 0/12

< ENGINE START BEFORE TAXI CHECKLIST >

RESET PAGE

GENERATOR 1 and 2 switc...	ON
PROBE HEAT switches	ON
WING ANTI ICE switch	As Needed
ENGINE ANTI ICE switches	As Needed
PACK switches	Auto
ISOLATION VALVE switch	Auto
APU BLEED air switch	OFF
ENGINE START switches	CONT or AUTO
Engine start levers	Idle Detent
Flap Lever	TO Flaps
Transponder	As needed
Recall	Check

TICK ITEM

ARAG

As real as it gets

Virtual Reality Brill

