aerofly FS

FLIGHT SIMULATOR

IKARUS

Home of Flight Simulators

aeroflyFS
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Important Health Warning About Playing Video Games

Photosensitive Seizures

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games.
Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these "photosensitive epileptic seizures" while watching video games. These seizures may have a variety of symptoms, including lightheadedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.
Immediately stop playing and consult a doctor if you experience any of these symptoms. Parents should watch for or ask their children about the above symptoms. Children and teenagers are more likely than adults to experience these seizures. The risk of photosensitive epileptic seizures may be reduced by taking the following precautions: Sit farther from the screen; use a smaller screen; play in a well-lit room; and do not play when you are drowsy or fatigued. If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before playing.

PEGI ratings and guidance applicable within PEGI markets only.

What is the PEGI System?

The PEGI age-rating system protects minors from games unsuitable for their particular age group. PLEASE NOTE it is not a guide to gaming difficulty. Comprising two parts, PEGI allows parents and those purchasing games for children to make an informed choice appropriate to the age of the intended player. The first part is an age rating:

The second is icons indicating the type of content in the game. Depending on the game, there may be a number of such icons. The age-rating of the game reflects the intensity of this content.
The icons are:

For further information visit http://www.pegi.info and pegionline.eu

A flight simulator for everybody

Thank you for choosing the ***aeroflyFS***. The flight simulator in a class by itself. It is the result of years of hard work and research. Particular emphasis was placed on easy operation and the realistic flight physics, so that the virtual aircraft behaves exactly like their originals.

Not only the physics are unique, but the graphics will also inspire you. The aircraft and scenery of ***aeroflyFS*** were designed in a unique detail richness.

Our number one development goal was to provide the most flying fun possible. Climb into the cockpit and enjoy flying in the stunning scenery of Switzerland with its beautiful mountains and valleys. Fly relaxed with the Jodel Robin DR400 or select the McDonnell Douglas F-18 fighter jet for adrenalin packed supersonic flight. ***aeroflyFS*** offers pure fun! Thanks to the intuitive operation both professionals and beginners get their money's worth. Real challenges are the many interactive flight challenges available, which you can attempt to master. Improve your skills and win steadily one by one all the gold trophies!

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1. System Requirements

Before installation please make sure that your computer meets at least the minimum system requirements:

Windows-Computer:
- Intel Core 2 Duo or AMD Athlon 64 X2
- Windows XP / Windows Vista / Windows 7
- Memory 2 GB
- at least 24 GB free hard disk space
- dual layer DVD-ROM drive
- 3D graphics card with 512 MB (at least as fast as NVIDIA 9600GT or ATI Radeon 4750)

Mac-Computer:
- Intel based Apple Mac computer
- Mac OS X 10.6.8 or newer
- 2 GB of RAM
- 24 GB free hard disc space
- Graphics card ATI Radeon HD 4850/ NVIDIA GeForce 9600 or faster with at least 512 MB

Note: For Windows-Computer it is highly recommended that the 3D graphics card driver is updated before ***aeroflyFS*** is started for the first time.

2. Installation

Windows: Due to the vast amount of data ***aeroflyFS*** comes on two DVDs. First, insert „DISC 1" into the DVD-ROM drive. This is also the DVD with its 20-character product key, which you will need later for activation. ***aeroflyFS*** uses the autostart feature in Windows to automatically start the software installation. After a brief moment the set-up program will start automatically and the set-up program window appears. Here you can select in which language ***aeroflyFS*** will be installed. Then follow the instructions of the set-up program. If the Windows autostart feature has been deactivated on your computer, the installation cannot start automatically. In this case, you will have to manually start the installation program „Setup.exe", which is located in the root directory of the installation DVD „DISC 1".

Mac: ***aeroflyFS*** comes on two DVDs due to the great amount of data. To install ***aeroflyFS*** on your Mac you will have to copy two files from the DVDs to your hard-disc first, so carefully perform the following installation instructions.
First insert the aerofly FS DVD 1 into your DVD drive. On DVD 1 there is a file named „aerofly-fs.dmg". Drag this file to your Desktop.
Insert the ***aeroflyFS*** DVD 2 into your DVD drive. Drag the file named „aerofly-fs.002.dmgpart" from the DVD to your Desktop as well. Double click on the file „aerofly-fs.dmg" on the Desktop. After a while a new window will open. Do not run ***aeroflyFS*** directly from within this window. Instead drag the ***aeroflyFS*** application to your Applications folder. You may now remove the two DMG files from your Desktop again. Go into your Applications folder double click on the ***aeroflyFS*** icon to start ***aeroflyFS***.

3. First run

To start ***aeroflyFS***, either click on the ***aeroflyFS*** icon (the icon with the red and white Pitts biplane) on your desktop or select the entry ***aeroflyFS*** in the ***aeroflyFS*** program files. After a brief loading period, you will see the Welcome dialog, alerting you to a few important things before you should start flying. Please read this dialogue thoroughly.

4. Activation

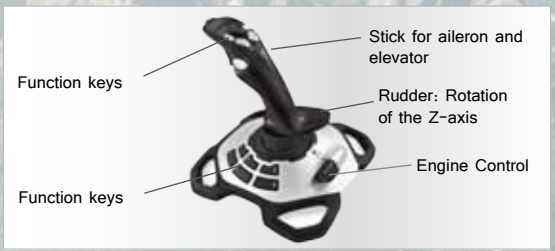
Before you can use all the planes and program features, ***aeroflyFS*** must be activated. The online activation takes place completely anonymous and should only be performed once. Only the serial number and product key, which you will find on the installation DVD 1 will be transferred.
The Product-Key is divided into 5 blocks with 4 characters each. The activation is fastest if you activate directly in ***aeroflyFS***. If the PC on which you installed ***aeroflyFS*** doesn't have internet connection, please click on „Offline Activation" for alternative activation options.

5. Configure controls

You may control the aircraft in ***aeroflyFS*** either with the keyboard, mouse or any standard joystick or gamepad. If you have not connected a joystick or a gamepad, ***aeroflyFS*** will select by default the control with the mouse. You can then control the aircraft with a combination of mouse movements and keystrokes. With a little practice you will be able to fly very precise, indeed.

If you have connected one or more joysticks or game pads, ***aeroflyFS*** will select the first found joystick or gamepad as the control input device.

Note: Before the first flight we recommend you get an overview in the „Set Settings → Control Devices" menu, which joystick axis or button or key on your keyboard you prefer to control the aircraft. In this window you will set up the aircraft controls as well as the camera control's and special functions. Click on "?" next to the „OK" button to obtain information for setting up functions.



6. Overview for standard setup

After the first program start follow this standard configuration for the controls of the aircraft and the camera:

Control function	Mouse control	Joystick control
Throttle	W/S	Joystick Z-Axis W/S
Aileron	Mouse left/right	Joystick X-Axis
Elevator	Mouse forwards/backwards	Joystick Y-Axis
Rudder	Mouse left/right if aircraft on the ground	Joystick Z-Axis
	Q/E if in the air	
Brake	B	B
Landing Gear	G	G
Flaps	Number keys 1/2	Number keys 1/2
Retractable glider engine	Number keys 3/4	Number keys 3/4
Winch hook	H	H
Copilot position	C/X	C/X
Elevator trim	-	-
Aileron trim	-	-
Rudder trim	-	-
Camera Control	**Mouse control**	**Joystick control**
View left/right	Keys 6/7	POV left/right
View up/down	Keys 8/9	POV up/down
Camera pan left/right	Arrow keys left/right	Arrow keys left/right
Camera pan up/down	Page up/Page down	Page up/Page down
Zoom	A/Z	A/Z
Camera forward/back	PC:Arrow keys up/down Mac: fn + Cursor keys	PC:Arrow keys up/down Mac: fn + Cursor keys
Reset Camera	N	N
General functions	**Mouse control**	**Joystick control**
Move aircraft back	R	R
Move to flight level	L	L
Pause	P	P
Sound on/off	V	V

7. First flight: Select a plane

Extremely detailed aircraft are available in the ***aeroflyFS*** flight simulator. All aircraft feature animated instruments. You can see them in the cockpit view and use them for flying. Many planes also have special functions such as retractable landing gear, flaps, or a functional retractable engine. To select one of the aircraft, go to the menu entry „Aircraft → Select Aircraft“

Winch launch

Immediately after you have selected one of the gliders or after repositioning it on the runway, you may also use the winch launch system. Press the spacebar to activate the winch launch. Pay attention to adequate speed during the whole launch process. When flying over the winch truck the rope is disengaged automatically. You may also release the hook manually by pressing the „H“ key at any time.

Retractable engine

In the case of Discus bM you may rely on both the winch launch and the start with the built-in retractable engine. The power is sufficient for a proper take-off. Be aware that you may have to assign in the menu „Settings → Simulation” two keys to raise and retract the engine.

8. Select start position

You can start your flight at one of the many fully equipped airfields or in the air at any position on the map. To select the starting position open the menu „Scenery → Choose Start position”.

In ***aeroflyFS*** we distinguish between fully developed airports with buildings, hangars and houses in the vicinity and airfields that have a paved runway. The fully developed airports are identified by blue airport icons on the map, the others by gray icons. At the blue highlighted airports you may freely select the runway and the starting method.

Besides selecting one of the most-developed airfields as the starting position, you also have the option to select your starting point for your flight anywhere on the map. To do this just move the mouse over the map and double click at the desired starting point. In both cases, you can select the runway and the starting method.

9. Camera control

For all aircraft the keyboard function keys „F2“ to „F7“ are initially assigned to toggle between the different camera angles. Please note that depending on the settings on Mac computers the function keys may only be active by pressing the „fn“ key at the same time.

Note that you can assign the function keys and further camera settings in the controller setup menu:

- F2 / F3: Selecting up or down movement of the aircraft specific cockpit camera. These are usually positions within the aircraft.
- F4: Press F4 to switch between two modes. The first mode positions the camera behind the aircraft looking forward. The second mode positions the camera in the center of gravity of the aircraft; the aircraft itself is not visible.
- F5: Fixed observer position. After pressing the „F5“, the camera remains in place. You observe and control of the aircraft from a fixed position.
- F6: Follow mode. The camera looks from the rear at the aircraft. It follows the aircraft movements with a slight delay.
- F7: Moving camera around the plane. With this camera you can move freely around the aircraft. You can see the aircraft in the air from all directions very well.

Note that you can assign in the controller setup menu further camera settings. As also shown in the table on page 5, there are still available zoom (closer/further), camera movement (forward/back), view (up/down and left/right), pan (up/down and left/right) and reset of the camera in a neutral position by pressing „N“.

10. Orientation / Navigation

Bring up the Moving Map via the main menu or the keyboard shortcut „Shift + M“. You can move the map window with the mouse, resize or close it again. In addition, the map offers flight-relevant real/time information.

Automatic control

The automatic control button „Autopilot“ in the moving map shows the current status of the autopilot. The operation is explained in paragraph 14 using the alphabetic keys „C“ and „X“.

North up/Track up button in the Moving Map

Select this button whether you want as orientation "North" at the top of the moving map (North up) or the flight direction (Track up). In the first case, the plane turns during course changes, in the second case the plane is fixed and the map rotates.

Other information in the Moving Map

The Moving Map shows the speed, altitude, course, throttle position, flap setting and landing gear position aswell the ground speed, which depends on wind direction and wind speed and may therefore differ from the airspeed displayed.

11. Active instruments and flight information

All ***aeroflyFS*** aircraft have animated instruments. Each instrument works independently and is virtually a simulation within the simulation.

The 6 basic instruments	Other instruments
• Air speed indicator	• Speed compensated variometer
• Artificial horizon	• G-Force indicator (Acceleration)
• Altimeter	• Tachometer (RPM)
• Compass	
• Turn indicator	
• Vertical speed indicator	

Please note the detailed information for each instrument is in the manual.

12. Program functions

It is possible to adjust basic processes of the simulation in various program functions such as individually adapting the graphic display requirements to the existing hardware. You can thereby affect the following settings in the menus listed in the table:

Setting	Menu
Default settings of the simulation	Settings → Simulation
Adjusting the graphic quality	Settings → Graphics
Full view mode/Window mode	Settings → Graphics
Settings for wind, clouds, fog, thermals	Settings → Simulation
Simulation reality and reset time after a crash	Settings → Simulation
Controller setup	Settings → Controller setup
Language preference	Settings → Language

13. Graphic settings

During the development of the ***aeroflyFS*** simulator great value was placed to perfectly display the textures. You'll find all aircraft uniquely detailed and for the scenery data with a resolution down to 3 feet was used. Their perfect graphics may make individual adjustments to the performance level of your graphics card necessary. The graphics menu provides possibilities for various settings: in this menu you can make changes to the „graphic quality" by using the level pre-selections Low, Medium, High and Ultra or clicking on the buttons to individually adjust the graphic display.

Note that any changes in the graphics settings will have a direct influence on the fluent display of the simulation. We therefore recommend that you first turn on the FPS (frames per second) display in the „Graphic" menu. After you activate the current frame rate will be displayed in lower right corner.
Make sure that after all changes in the program settings the simulation still runs with at least 35 frames per second (FPS). If your PC is not up to the necessary performance level, you can also achieve a smoother display by disabling „HDR Rendering" and „Vertical Sync" directly in the menu „Graphic Settings".

14. Autopilot

With the built-in Autopilot, you can stabilize flight condition or let the Autopilot take complete control of the aircraft. You can therefore fly longer distances without any flight control inputs. The autopilot has two active positions, which can be skillfully used for your assistance:

„OFF“:
The autopilot is switched off. You fly without any support.

Mode 1:
The Autopilot stabilizes the flight condition in which you activate the Autopilot. If the aircraft is climbing or has an inclined position, it will be retained. Mode 1 is ideal for example for a steady climb after takeoff. In Mode 1 you can override the Autopilot by a preset limit. Mode 1 is ideal for those looking for an active assistance in controlling the aircraft.

Mode 2:
The Autopilot automatically returns the aircraft into a horizontal flight position. In Mode 2 the Autopilot maintains in addition the altitude and the current course. You cannot override the autopilot in this mode. Pay attention to sufficient throttle position, so that the Autopilot can maintain the current altitude. If you enable Mode 2 in a turn, the course will be maintained after reaching the horizontal attitude.

Notes for Autopilot key assignments

After installation of the simulator the keys „C“ and „X“ on the keyboard are intended to operate the Autopilot. By repeatedly pressing the „C“ key you activate the Autopilot in ascending order from „Off“ via „Mode 1“ to „Mode 2“. To turn off the Autopilot, press repeatedly the “X” button to select the modes again in descending order.

15. Setting the level of realism

In the menu „Settings → Simulation“ you have the option to switch the flight simulation realism between “Novice” and “Expert” mode. In the latter, you have full control over the aircraft. In the „Novice“ setting the computer will assist you by stabilizing the rudder, reducing the rudder effect and offer a more docile flight performance in borderline flight conditions.

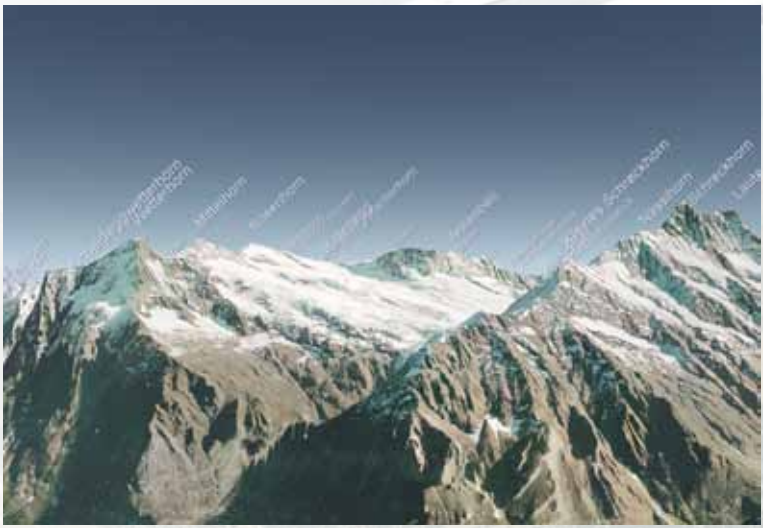
16. Thermal and wind field display

If the window wind field display is selected in the menu "Wind settings", thermals and wind direction arrows will be displayed during the simulation showing the current conditions.

You can see how realistic the thermal simulation is, by activating the wind field display: in real flight the thermals do not stay in place, but move with the wind according to wind direction and strength. That's exactly what you'll observe in the ***aeroflyFS*** flight simulator too.

17. Names of cities, mountains and lakes

In the menu „Simulation → Show scenery details" or by pressing „Shift + F" you can switch on and off the names of cities, mountains and lakes.



18. Flight and weather condition settings

Using the menu „Settings → Conditions," you are able to change the following parameters:

- Visibility
- Fog
- Cloud type
- Lower limit of the cloud layer (base)
- Cloud density
- Cloud layer thickness
- Wind strength
- Wind direction
- Turbulences
- Thermal strength

Note that the ***aeroflyFS*** simulator includes a full wind simulation. Extreme settings of wind and turbulences can have negative impact on flight performance, especially during takeoff and landing.

Incorporating cloud formations may lead to reduced FPS (frames per second) depending on the performance of your computer's graphics card.
Please read the corresponding detailed instructions in the online manual which you can find in the „Help" menu.

19. Head tracking support (currently only for Windows)

The ***aeroflyFS*** simulator supports TrackIR, one of the most widely available head-tracking system for PCs. With an infrared transmitter mounted on top of the monitor and reflectors attached to a baseball cap you can control the camera view in the directions left/right and up/down. The ***aeroflyFS*** is compatible with the hardware of the TrackIR4 TrackIR5 systems including their Pro versions. For Windows7 users we recommended to also download and install the software for the TrackIR4 TrackIR5 from the manufacturer's website.
To use the head tracking system, you must start the TrackIR software before the start of ***aeroflyFS***.

20. Aircraft

Cessna 172 Skyhawk

Technical data:	
Wingspan	27.17 ft.
Engine performance	180 HP
Maximum speed	145 mph
Cruising speed	131 mph
Maximum take-off weight	2551 lb
Range	610 nmi

Special Features: Flaps, stall warning, animated instruments, moving map, brake

McDonnel Douglas F/A-18 Hornet

Technical data:	
Wingspan	37.5 ft.
Length	56 ft.
Maximum speed	Mach 1.8
Range radius	290 nmi
Service ceiling	50000 ft.
Maximum take-off weight	55997 lb

Special features: landing gear, flaps, afterburner, animated instruments, Moving Map, Head-Up display and brake

Jodel Robin DR 400 / 140 B Major

Technical data:	
Wingspan	28.81 ft.
Top speed	191 mph
Cruising speed	162 mph
Service ceiling	15486 ft.
Maximum take-off weight	2205 lb

Special Features: Flaps, stall warning, animated instruments, moving map, brake

Pitts S-2B

Technical data:	
Wingspan	20 ft.
Top speed	218 mph
Cruising speed	162 mph
Roll rate	240° /sec
Maximum take-off weight:	1711 lb
G-force range	+9.0 / -6.0 G

Special Features Front and rear cockpit and brake

Discus bM

Technical data:	
Wingspan	59 ft.
Wing area	122 sq.ft.
Empty weight	507 lb
Maximum take-off weight	1157 lb
Top speed	174 mph

Special features: retractable landing gear, retractable auxiliary engine, speed brakes, landing gear warning, animated instruments, moving map, Variometer, brake and winch launch

Swift S1

Technical data:	
Wingspan	41.6 ft.
Wing area	126.26 sq.ft.
Maximum take-off weight	904 lb
Top speed	178 mph
Landing speed	49 mph
G range	+10.0/-7.5 G

Special features: air brakes, landing gear, landing gear warning, brake and winch launch

Sopwith F1 Camel

Technical data:	
Wingspan	28 ft.
Wing area	231 sq.ft.
Maximum take-off weight	1453 lb
Top speed	115 mph
Service ceiling	19000 ft.
Engine power	130 HP

Special features: animated instruments and rotary engine

Extra 330 LX

Technical data:	
Wingspan	28.87 ft.
Wing area	115 sq.ft.
Maximum take-off weight	1918 lb
Top speed	261 mph
Engine power	315 HP
G force range	+/- 10G

Special features: Front and rear cockpit, moving map and brake

21. Flight challenges

An essential component of the ***aeroflyFS*** are the interactive challenges with competitive characters. During all challenges you will be interactively guided.

Start: At the start of the challenge a countdown will begin. At the end of the countdown you will be given control of the aircraft. Depending on the degree of difficulty the challenge is aircraft type specific and enhanced with certain weather settings such as wind, wind changes and turbulences.

Flight: During flight you'll receive information in the form of directional arrows, virtual gates and landing markers, which explain the process of the challenges. Follow the onscreen instructions. Rebooting the tasks will reset you to the starting position and the point count to zero again.

Review: The performed flight task is evaluated under the aspects of the time used, the successful passes through the gates and the resulting performance level. If the mission has been completed successfully, a bronze, silver or even gold trophy will be awarded in a separate window. This way you can see at anytime which flight tasks are still ahead of you.

All *aeroflyFS* flight tasks

Basic Flying:
Flying straight, flying a circle, flying an upward spiral, take-off and ascent, landing, traffic pattern, distance flight St. Stephen → Zweisimmen and distance flight Saanen → St. Stephan.

Jet Flying:
Flying straight, flying a circle, flying an upward spiral, take-off and ascent, landing, take-off and landing, taxi to runway, low-altitude flight over Eiger mountain. Low-altitude flight over Saanen, low-altitude flight over Mollis, sightseeing tour Eiger.

Slope soaring:
Slope soaring at the Matterhorn, slope soaring at Säntis.

Aerobatics:
Knife edge, roll, 4-point roll, slow roll, barrel roll, loop, cuban eight, show program.

22. Liability

This software has been carefully designed, tested and reproduced. Please ensure that your computer meets the system requirements. The manufacturer is not liable for consequential damages resulting from erroneous information.

23. Help / Manual

In the main menu you'll find under Help → Online Help and Support to the continually updated online ***aeroflyFS*** manual in PDF format. After downloading it you'll be able to easily read it with a PDF reader. Please be aware that after a software update the manual may include discrepancies to program.

24. Tips to improve performance

If the simulation does not run smoothly on your computer it may be several reasons:

- Try to lower graphic settings
- Update the drivers for your graphics card
- Disable antivirus and other programs, which may reduce the performance of your computer
- Connect notebooks always to the wall outlet. Power-Safe programs may affect the processor performance

Notes for Mac OS X:

Due to the operating system not all commercially available Joysticks and GamePads are supported by Mac OS X.

Notes for Microsoft Windows:

In any case, please install the latest 3D graphics card driver before the first program start.

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Standard key assignment

Flaps	1/2
Brake	B
Landing gear	G
Autopilot mode on/off	C/X
Pause	P
Reset plane	R
Cockpit cameras	F2 / F3
Camera behind aircraft	F4
Fixed camera position	F5
Follow mode camera	F6
Exterior view	F7
Camera control	Arrow keys / POV
Show Moving Map	Shift + M
Names of cities, mountains, lakes	Shift + F
Show flight information	Shift + I

www.aeroflyFS.com