

FLIGHT MANUAL

Concept Aircraft 2



**AFS-design
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Concept Aircraft - Gyrocopter

Autogyro or gyrocopter is called a rotary-wing aircraft and is similar a helicopter in functionality. But the rotor is not an engine, he passively by the wind into rotation (auto-rotation). The buoyancy resulting attend by the resistance of the rotating rotor blade rotor rearwardly inclined surface. The propulsion carried out by turbine force. The 3 blades are oval shaped and can break the sound barrier. Therefore he has supersonic capability. Through a special design, this autogyro for 30 sec. hover on the spot. This time allows for vertical takeoffs and landings.



Technical data Gyrocopter

Length	9,60 m
Width	2,90 m
Fuselage diameter	8,14 m x 9,40 m
Height	2,30 m
Rotor diameter	10,00 m
Maximum takeoff weight	4000 kg
Empty weight	1500 kg
Cruising speed	1920 km/h
Passengers	7
Flight range	155.200 km
Fuel capacity	1920 l
Service ceiling	33.700 m
Engines	3 Afterburner engines per 30 000 hp

Gyrocopter - model



- 1-2-3 - Three blades - driven by wind
- 4 - Rotor head (0% to 50% thrust - rotor - mode)
- 4 - Rotor head (50% to 100% thrust - Jet - mode)
- A - Cockpit with commanders and weapons specialists
- B - Right engine air intake
- C - Armory extendable ("SHIFT W" or "CTRL + W")
- D - Chain gear (key "G")
- E - Boarding ramp
- F - Left engine with afterburner
- G - Rear engine with afterburner
- H - System officer

Concept Aircraft - Swing-wing-rotor helicopter

Ultra-modern futuristic helicopter that can transform into a jet. Here, the rotors transform into wings in jet mode. Thus he can take off vertically and fly twice the speed of sound. Powering the rotor swing - by 3 helicopter turbine engines with afterburners.



Technical data Swing-wing-rotor helicopter

Length	9,60 m
Width	2,90 m
Fuselage diameter	2,30 m (jet mode) 2,90 m (rotors mode)
Height	2,30 m
Rotor diameter	10,00 m
Maximum takeoff weight	4000 kg
Empty weight	1500 kg
Cruising speed	1920 km/h
Passengers	7
Flight range	155.200 km
Fuel capacity	1920 l
Service ceiling	33.700 m
Engines	3 Afterburner engines per 30 000 hp

Swing-wing-rotor helicopter model



- 1 - Blade retracted as wing
- 3 - Blade extended rotation for hovering
- 2 - Rotor head retracted (0% to 50% thrust - rotor - mode)
- 4 - Rotor head extended (50% to 100% thrust - Jet - mode)
- A - Cockpit with commanders and weapons specialists
- B - Right engine air intake
- C - Armory extendable ("SHIFT W" or "CTRL + W")
- D - Chain gear (key "G")
- E - Boarding ramp
- F - Left engine with afterburner
- G - Rear engine with afterburner
- H - System officer

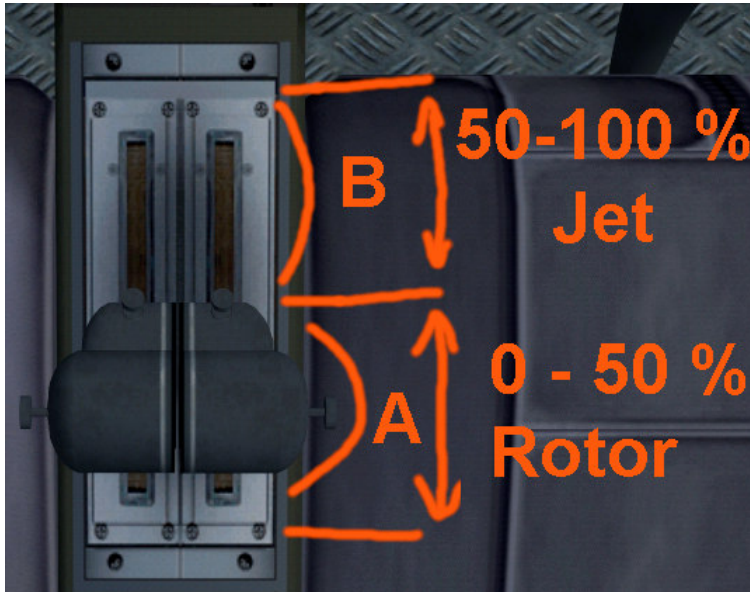
Cockpit



- A - MAP off with zoom and terrain on and
- B - C - I - Multi-function displays (please hit switches)
- E - Engine control switch
- E - Avionics / battery switch
- G - Light control switch
- G - Display MAP, GPS and kneeboard leave
- H - Control unit switch
- H - Parking brake and ramp opening
- H - Weapon control main switch
- D - Diameter of the rotor speed - mode (0% to 50% thrust)
- D - Rotor speed indicator (0% to 50% thrust - rotor - mode)
- F - Display mode (50% to 100% thrust - Jet - mode)

Zoom in virtual cockpit by pressing the "+" or "-"

Concept Aircraft Control



A - Rotor Mode (less thrust key "F2") ►

0 to 50% Thrust: helicopter mode, please fly it like a regular helicopter, you refer to in the flight school of Microsoft Flight Simulator to see how a helicopter is flown.

B - jet mode (more thrust key "F3") ►

50 to 100% Thrust: jet mode, please fly it like an ordinary airplane, read to the flight school in the Microsoft Flight Simulator to see how the airplane is flown.

Note: possible confusion! Make the transition from helicopter to jet mode and back to the intent in the helicopter mode! Rapid thrust changes instantly change the aerodynamics, which can lead to Kontrollverlust and crash.

Caution: Flutter MACH possible! If you give abruptly thrust, created uncomfortable flutter MACH. Please take this slightly thrust out, otherwise the Concept Aircraft be seriously damaged.

Control of the opponent Concept Aircraft:

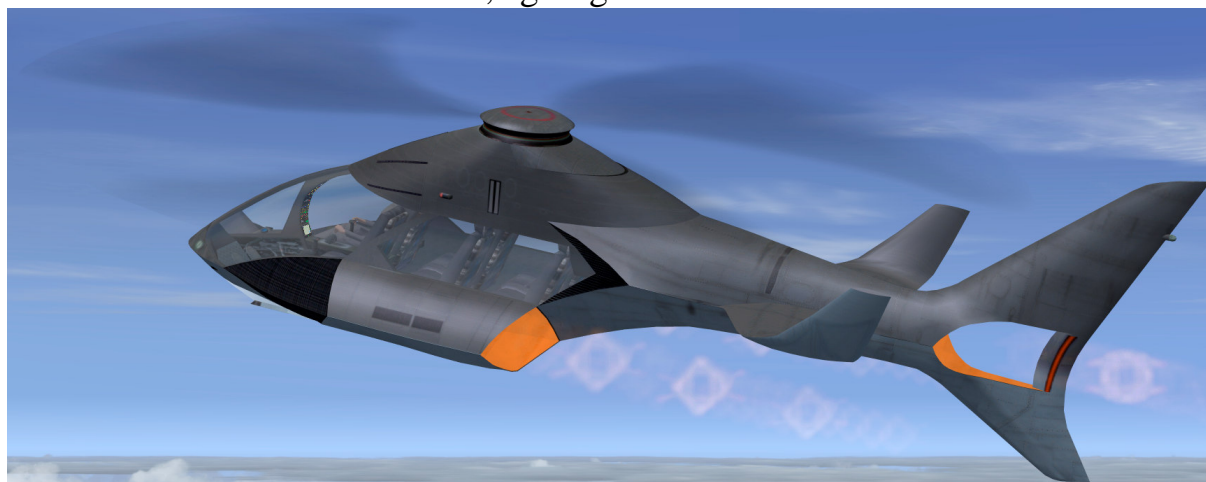
0 to 50% Thrust: ► helicopter mode

50 to 100% Thrust: ► jet mode

Keyboard layout

Taste	Beschreibung
+ - (no numeric keypad)	Zoom in virtual cockpit and exterior model: (no numeric keypad, but in block letters) Virtual Cockpit, recommendation zoom size: factor 0:40
STRG E	Engines (engines) start
SHIFT E	Ramp (Canopy) open / close
SHIFT W	Weapons in and out FS2004
STRG W	Weapons in and out FSX
G	Gear
F2, F3	Less and more thrust
SHIFT 2	GPS on / off

Please use a suitable joystick for Flight Simulator. Recommend to a joystick with throttle lever and rudder control, eg Logitech Extr.3D Pro.

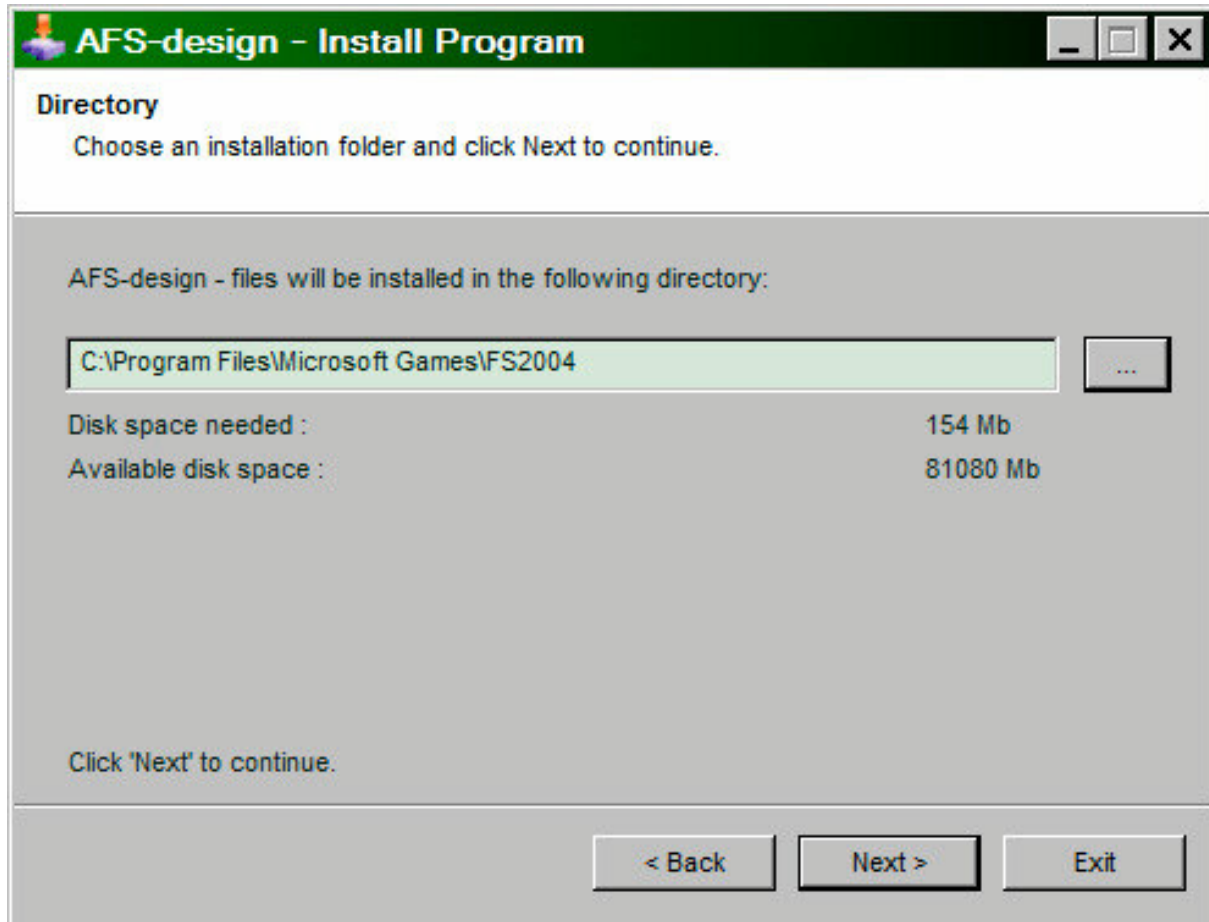


System

System:	Windows XP , Vista, Win7, Win 8 (32 or 64)
FS VERSION:	FSX (SP1, SP2, Acceleration Pack) and FS2004
Filesize:	15 MB
Filesize hard drive:	142 MB
INSTALLATION:	EXE. file
PUBLISHER:	AFS-design
Homepage:	http://www.afs-design.de
SUPPORT mailto:	info@afs-design.de
FS VERSION:	FSX (SP1, SP2, Acceleration Pack DX9) and FS2004
Control:	Joystick, keyboard and mouse

Installation for FS2004

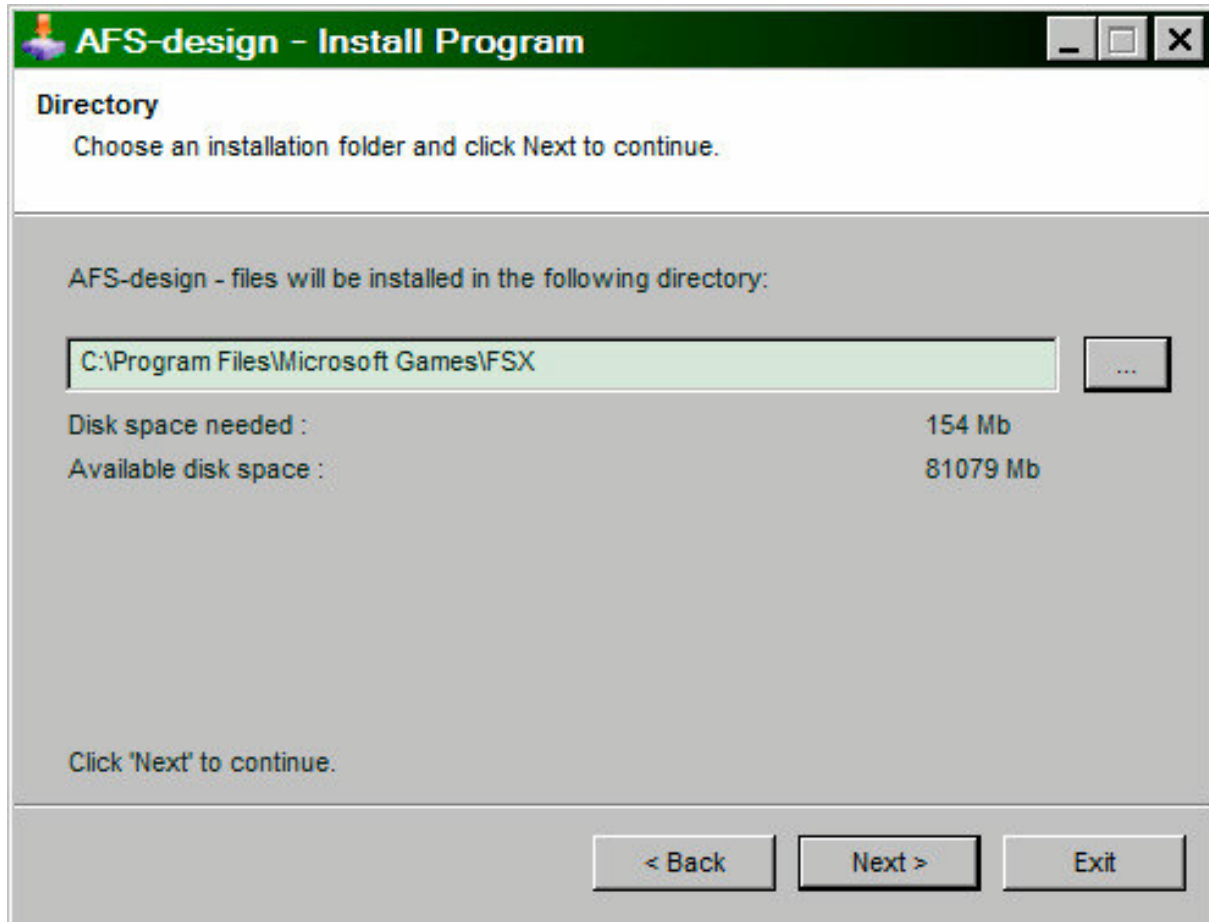
1. For FS2004 download the „AFS-____-FS9.exe“ to a temporary directory of your choice.
2. Please start the „AFS-____-FS9.exe“ and install.



3. Set in ... the main directory from FS2004, when not automatic choice.
4. Than start the Flight Simulator with the new sceneries.

Installation for FSX

1. For FSX download the „AFS-____-FSX.exe“ to a temporary directory of your choice.
2. Please start the „AFS-____-FSX.exe“ and install.

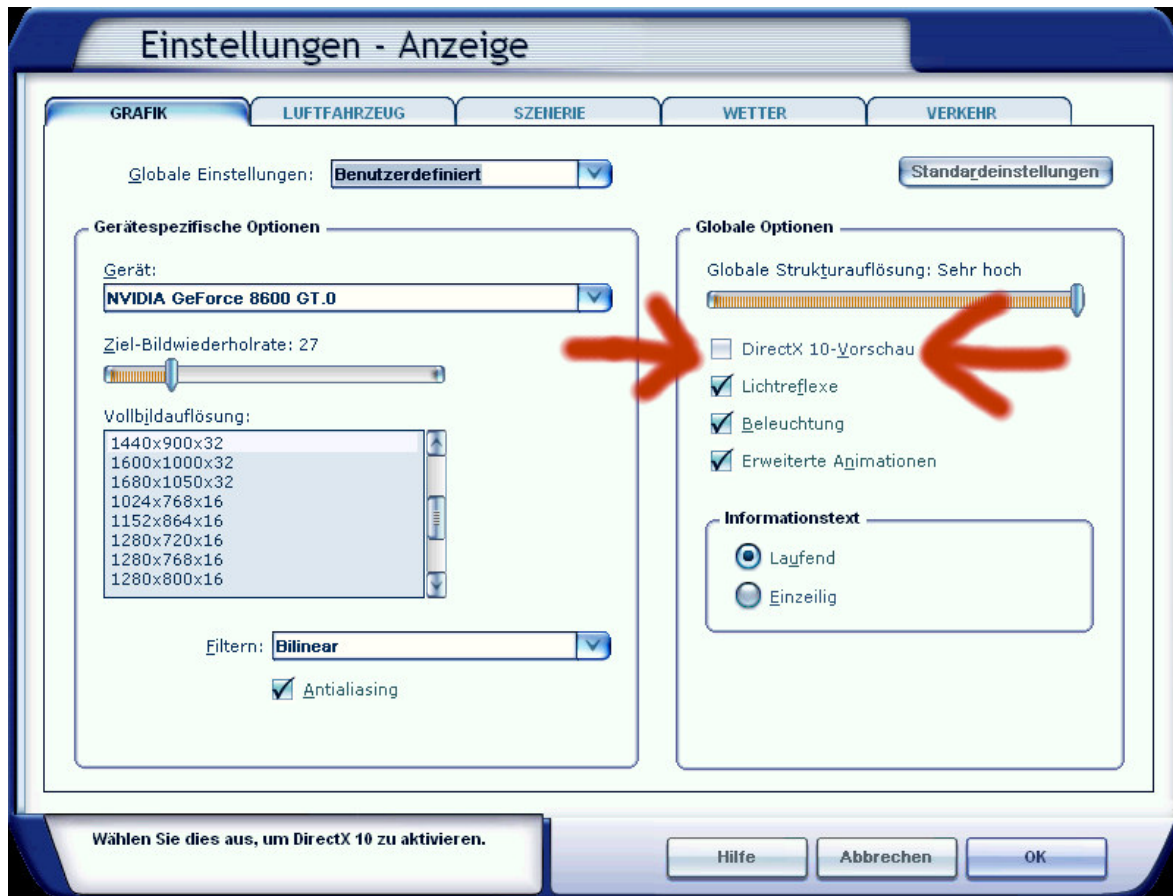


3. Set in ... the main directory from FSX, when not automatic choice.
4. Than start the Flight Simulator

Problem with DirectX

This program use DirectX9 only. Please switch out DirectX 10 trailer !

1. Install this add-on
2. Start the Microsoft FSX
3. Choose a plane your choice
4. Start the simualotion (click start)
5. In the simulation switch button "ALT"
6. Choose options / adjustment / display (graphic settings)
7. In the graphic settings windows choose graphic
8. deactivate "DirectX 10 trailer" in small box (without camisole)
9. Exit the FSX, and start the FSX new !



Aircraft selection



After you start Microsoft Flight Simulator, you can "**create flight**" in the heading and "**selected plane**", select "**Concept Aircraft**" a model.

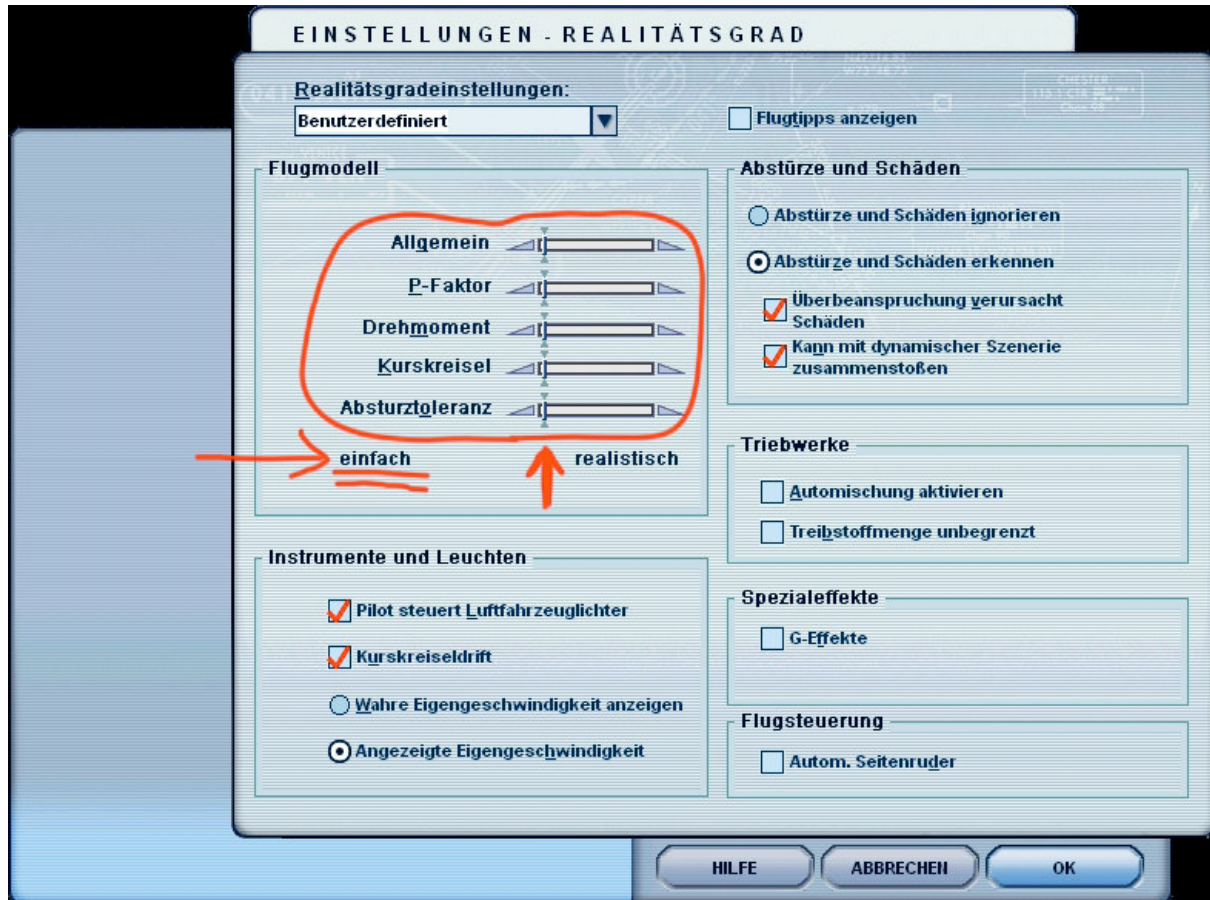
The following models are available:

- Gyrocopter
- Swings- Rotor - Wing

These are equipped with a variety of liveries:

- Grey tarn,
- Black & white
- Texture for Repainter (only use 8-bit BMP's)

Realism settings



Once you have selected everything you want, please "Start Flight" the. When you see the cockpit, please see the "ALT" - button and check the realism settings. Please turn the slide of the "flight model" to "simple", otherwise the Concept Aircrafts not be controllable in the supersonic range.

Contents

Concept Aircraft - Gyrocopter	1
Technical data Gyrocopter	1
Gyrocopter - model	2
Concept Aircraft - Swing-wing-rotor helicopter.....	3
Technical data Swing-wing-rotor helicopter.....	3
Swing-wing-rotor helicopter model	4
Concept Aircraft Control.....	6
Keyboard layout	7
System	7
Installation for FS2004.....	8
Installation for FSX.....	9
Problem with DirectX	10
Aircraft selection	11
Realism settings.....	12
Contents.....	13
Right	13

Right

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