

Add-on for Microsoft
Flight Simulator X



aerOSOFT™

VFR Germany

NORD



Manual

Concept: Sascha Normann
Project Management: Sascha Normann, Mathijs Kok
Manual, documentation: Sascha Normann, Mathijs Kok
Installer: Andreas Mügge
Aerial Images: GeoContent GmbH (www.geocontent.de)
Geocoded object data: GeoContent GmbH (www.geocontent.de)
Aerial image placement: Patrick Bernhard
Autogen-Scanner: Burkhard Renk
VFR Scenery: CR-Software, Sascha Normann,
Hubertus Fuest
Modeling/texturing: CR-Software, Sascha Normann,
Peter Werlitzl, Marcel Kuhnt,
Thorsten Reichert, Dirk Brandenburg

Coverphoto: www.aboutpixel.de - Rainer Sturm

Many thanks go to all the nice people who send us photos from their home villages and cities in Germany for the most realistic German Autogen scenery ever! And of course our wives and families who support us in the even most difficult times. Furthermore we would like to thank Innova Software for their great FSX KML tool which enabled us to place some flatten commands throughout the scenery area as well as excluding some traffic. With special thanks to the team of people that supported us in the beta. They are cool folks.

Copyright: © 2007 / **Aerosoft GmbH**
Airport Paderborn/Lippstadt
D-33142 Büren, Germany

Tel: +49 (0) 29 55 / 76 03-10

Fax: +49 (0) 29 55 / 76 03-33

E-Mail: info@aerosoft.de

Internet: www.aerosoft.com

All trademarks and brand names are trademarks or registered trademarks of their respective owners.
All rights reserved.



a e r o s o f t™



VFR Germany 2

North

Manual

Add-on for

Microsoft Flight Simulator X

Content

Introduction	6
System requirements	7
Installation	8
Removing	8
Support.....	9
Structure of Aerosoft scenery products covering Germany	10
VFR Germany	10
Mega Airports.....	10
German Airports	10
German Airfields.....	11
The four layers of VFR Germany	12
1. Areal images	12
2. Airports.....	13
3. Autogen	14
4. VFR- and landmarks	14
Proposed settings.....	15



How do I start best?	19
The glider pilot	19
The Heavy Metal fan	19
The business traveler	20
The fighter pilot	20
The student pilot	21
The flying cops	22
Maintenance flights	22
Charter pilot	22
Data structure	24
German Landmarks	25
Frequently Asked Questions (FAQ).....	26

Introduction

„The ultimate VFR Add-on for Germany in 4 parts! High detail areal images, merged with 3D objects create an experience that has only been matched by real flying.“



What sounds like a over the top add text is now real. We admit the first section took longer then expected and we had some serious problems to solve. But now the production line is moving and our new VFR scenery range are being released. You will be amazed.

For FS2004 Aerosoft had split the VFR range into two products, „Scenery Germany“ and „Real Germany“ but for FSX we have decided to merge those two and come up with a new system that will bring you the whole of Germany in VFR quality in the shortest possible time. Using the combined development

knowledge of the developers of the previous scenery series and adding the superb knowledge of the FS internal working of Burkhard Renk (MyTraffic) we were able to use the high end data delivered by GeoContent. And for a large part in automated format and that is the key to the high standard of this product. It would have been impossible to place millions of objects manually!

A product like this would have cost many times more just a few years ago. No other (extended) part of the world is covered in high res areal images combined with realistic Autogen, VFR-objects and important VFR objects. Germany has in step reached a level of detail no other country in FSX can match.



As discussed the production of this scenery was highly innovative. Where in the past most objects were placed manually, this was now done using data files that contained information about every house in Germany. Of course an automated system like that causes new problems and in many areas manual adaptations were done. It also clearly works better for small villages. Large cities do not look as impressive in this method and can only be manually done as much of the data files are not available. As this takes several years and buckets of money that is a limitation we have to accept at this moment.

We wish hours of fun exploring this region. Take out your atlas (or the VFR map included) and just set off to explore the landscape.

Sascha Normann, Port of Spain, August 2007

System requirements

- Flight Simulator X with Service Pack 2 (at www.fsinsider.com or to be found on DVD 4)
- DVD-ROM drive
- Graphics card with 256 MB memory (512 MB recommended)
- CPU: 3 GHz (duo core highly recommended)
- 1 GB RAM (2 GB recommended)
- 15 GB free disk space!
- Soundcard
- Windows XP, Windows Vista (fully updated)
- Adobe Acrobat® Reader 6 minimal to read and print the manual (1)

(1) Available for free, download at:

<http://www.adobe.com/prodindex/acrobat/readstep.html>

Installation

Note: To install you need to be logged on as Administrator. Also make sure you have at least 15 GB free on the same drive as where FSX is installed.

Insert DVD 1 and on most systems this will start the setup automatically. If it does not, navigate to your DVD and double click "Setup.exe". After selecting the language and the license agreement (you will have to accept those to continue) you will be asked to enter the serial number. You will find this number on the DVD box. The code needs to be entered EXACTLY as it is given.

When this is done your FSX installation will be searched for, if it cannot be found you can search for it, and the installer will check if German Landmarks is installed (see for more details about this near the end of this manual). Follow the on screen instructions to complete the installation.

Removing

To remove "VFR Germany 2 North" use the 'programs' option in the Control Panel. You will find the name 'Aerosoft VFR Germany 2" in the list of installed applications. Removing the product this way will remove the files and also remove the scenery from the scenery library of FSX. Never remove the scenery manually by just deleting the files, this WILL lead to problems.



Support

Support for this product is offered by Aerosoft. We prefer to have a support forum for the simple reason that it is fast and efficient because customers help customers when we are sleeping. Aerosoft forums:

<http://forum.aerosoft-shop.com>

We feel strongly about support. Buying one of our products gives you the right to waste our time with questions you feel might be silly. They are not.

Updates, when available, will always be found on the Aerosoft-Website (**www.aerosoft.com**) under FAQ's / Updates (you will need to register this product before being able to access the updates).

Note: Please see the FAQ section for more information. This new way of scenery delivery has some minor drawbacks that need to be discussed and explained.

Structure of Aerosoft scenery products covering Germany

Aerosoft has decided to design a new complete new way of covering Germany in FSX. Four different product lines with each a different area of coverage.

VFR Germany

VFR base scenery of Germany, a perfect base for all German scenery.

Mega Airports

Major airports that function as hubs for the worlds airlines (in Deutschland for example Frankfurt).

German Airports

Major airports in Germany.



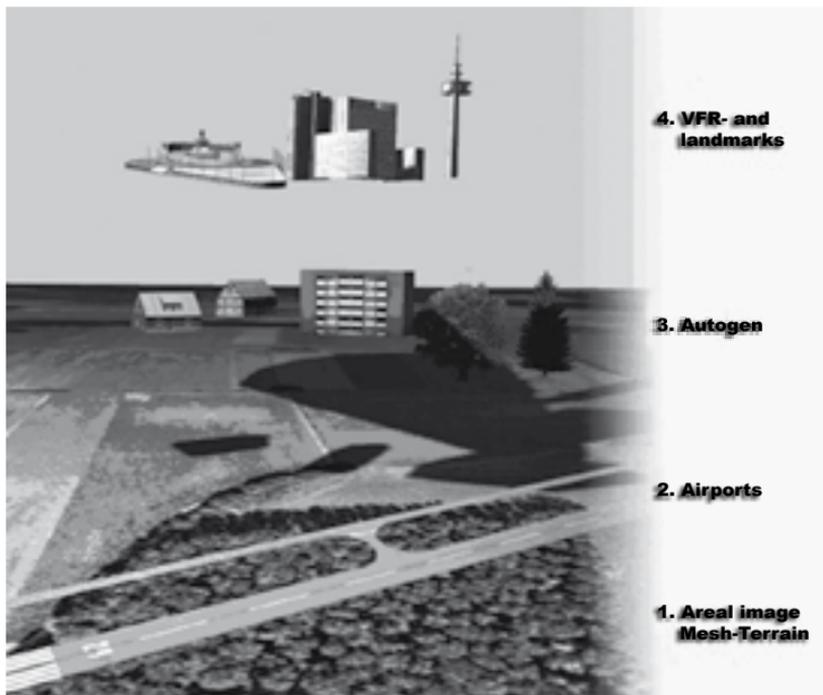
German Airfields

Regional Packs with airports and airfields (for example Norderney or Tempelhof). The first three packs will be „Island Hopping“, „Niedersachsen“ and „Northern Bavaria“. More information can be found on the Aerosoft websites and forums.

All these products will be fully compatible but will be fully capable of stand alone use!



The four layers of VFR Germany



At this location we like to explain to you what are the different parts that make up „VFR Germany“. The four components shown in the image above are the main elements and are explained below in some more detail.

1. Areal images

The areal images are the base and the most important element in the scenery. The images used are “orthophoto’s” done by Geocontent in the last few years (so they are very recent). These are NOT satellite images as they do not have the correct colors and not the correct pixel density. The images are “geo referenced” meaning that they are corrected and scaled so each house is at the right location. So the



lat/lon shown by your car GPS system will match the lat/lon shown in FSX. Don't take this for granted, for FS this is rarely done, but we felt that it is vital for a base product like this one is. If you like to know more about ortho photographs, check out Wikipedia:

<http://de.wikipedia.org/wiki/Orthofoto>

2. Airports

Of course all airports, ultra light fields, glider fields, and most heliports that MS Flight Simulator X did not include have been added and where needed they are corrected so they are located perfectly. But this product does NOT contain detailed airports, just the runways and taxiways/aprons. See the structure of the scenery products discussed above.



3. Autogen

The Autogen is what this product is really about. Never before have millions of buildings been placed correctly and never before have forest been done in this detail.

Autogen is standard FSX consists of a series of buildings and structures (often far too largely scaled and very American in style) that are placed semi randomly on the scenery. There is some control as sections have a known population density for example, but it is an approximation of reality, not a simulation.

In „VFR Germany“ the Autogen is very different. Using databases that hold detailed information about 8 million (!) buildings and a special tool the buildings have been positioned and where needed manually corrected. The style and direction of the buildings has been determined by the distance to the next house. The Autogen objects themselves have been created using images that customers send us of their own house. This assures us that the objects have a distinct German character and that there is a good number of different objects. This innovative system is not perfect, although the locations are highly accurate, the type and layout could be incorrect and this could cause buildings to be on roads etc. In larger cities the number of buildings is reduced as the framerate need to be acceptable.

Forests have been positioned with another tool that scans the images and positions areas of trees as long as they are 12x12 meter.

4. VFR- and landmarks

As the last layer we added most objects shown on VFR maps (high tension power lines, transmission towers, power plants etc.). The landmarks are objects and locations that are done in detail as they are important to recognize the area. They could be bridges, major buildings or churches. There are numerous objects added this way, all the time keeping in mind that this is a ground layer product, intended to be overlaid with other scenery when required by the user so framerate often determine how many objects are placed.

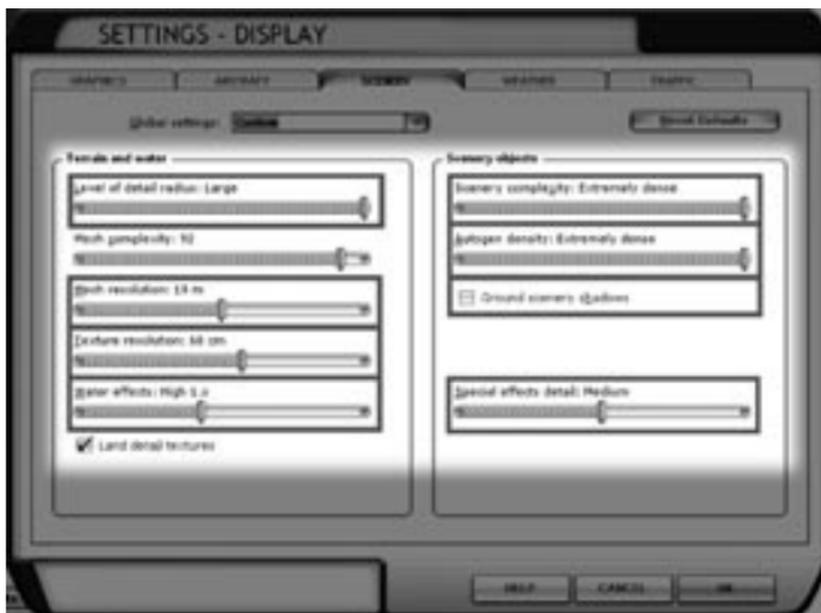


Proposed settings

As you will have noticed by the many gigabytes of this product, there are certain settings that are important for a fluent. The settings marked in red on the images below are the most important.



To see all houses, aircraft and other 3d objects in good detail the Global texture resolution is very important, it needs to be at the highest setting. Take our advice and always leave it at that setting.



Detail radius: Important for the resolution of the photo scenery as seen in the distance.

Mesh resolution: Determines how detailed the undulation of the terrain is. Even at higher settings this does not affect framerates a lot.

Texture resolution: Determines the resolution the ground textures are shown at. VFR Germany uses 1 meter textures so a setting of 60 cm is okay.

Water effects: The High 1x setting is advised as higher settings reflect scenery in the water and that is highly CPU demanding.

Scenery complexity: Although all the objects of VFR Germany are shown at „Normal“ settings, we advise the highest setting as this also shows the airport objects and does affect framerates too much.

Autogen Density: This is the setting that affects framerate the most. Start at Extremely dense and reduce it until you are happy with the framerates.

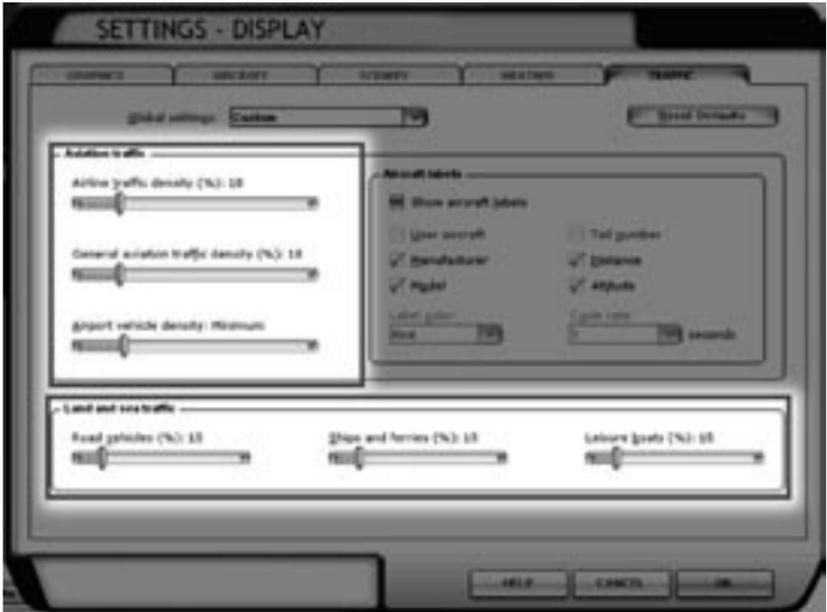


Scenery effects: Although important as this determines if chimneys emit smoke etc, it can be a framerate killer, so be careful setting this too high.



Cloud draw distance: A setting that affects framerates a lot but higher settings don't really seem to add a lot of visuals.

Cloud detail: Detailed clouds at medium settings will be enough for superb views, but when you are getting low framerates, the Simple clouds could help.



Aviation Traffic: The other aircraft in the simulator do eat a lot of frames even if you do not see them, low settings are advised.

Land and sea traffic: As CPU hungry as the aircraft, but they do make the roads and rivers really come to life.



How do I start best?

As this scenery covers such a large area, it could be hard to find a way to start. We decided to give you some advice and decided to do so per type of pilot.

The glider pilot

You select a glider, some nice summer weather and head for the glider field Wenzendorf (EP53) that's located south-west of Hamburg, use runway 04 as your starting position. Now call up the FSX tow plane (see the FSX manual for more information on that) and be towed towards the transmission tower. When you are close decouple and glide over the Nordheide. You'll see the Airbus factories in the distance at the Finkenwerder airport.

Towards the nord-west you will find your destination, the glider field Fischbeck. This field has three parallel runways made up of sand and grass and they are not easy to see from the air. When you land you'll notice they are very bumpy so take care.

The Heavy Metal fan

Although the VFR Germany is a intended as a visual scenery does not mean it cannot be enjoyed with larger aircraft. Use FSX to make a flightplan from Hamburg (EDDH) to Hannover (EDDV) and select the B737 as your aircraft. This route is flown in reality several times a week by Tuifly. Hannover is just a stop for these flights that end up in places as Valencia. Using the B737 means you won't have a lot of time to enjoy the scenery, but you will fly over the Luneburger Heide and the military practice grounds in Lower Saxony. When you select a approach from the west you'll fly over the military airport Wunstorf and the major lake Steinhuder Meer nord-west of Hannover.

The business traveler

The island of Sylt was known as the vacation island for the more affluent people but these days it handles 737's full of less fortunate people. But as your small charter company still caters for the small group of people who need some additional comfort you best pick a LearJet or a Beech King Air and fly them from Hamburg (EDDH) to Sylt (EDXW). Should they prefer a smaller island, you could use Heringsdorf on the island Usedom as your destination.

The fighter pilot

There are many rather interesting military airports, from some major helicopter bases to the many military bases that are closed after the unification of East and West Germany. In the Start menu (under Aerosoft | VFR Germany 2 | Military Airports you will find a Google Earth map of the airports.

Helicopter bases:

- EDHX-Bad Bramstedt (in use, Bundesgrenzschutz)
- ETWM-Meppen (in use, German Army)
- CS40-Basepohl (closed, former east german army)

Military air bases:

- EDXK-Leck (closed, glider on gras runway only)
- EDXJ-Husum (half of the runway in use for civil general aviation, included in „German Airfields 2“)
- ETME-Eggebeck (in use, German Navy)
- ETNS-Schleswig-Jagel (in use, German Air Force)
- ETNH-Hohn (in use, German Army, a lot of Transall)
- ETNT-Wittmundhaven (in use, German Navy)
- ETNJ-Jever (in use, German Navy)



-
- ETMN-Nordholz (in use, German Navy)
 - ETNW-Wunstorf (in use, German Army, a lot of Transall)
 - ETHC-Celle (in use, German Army)
 - ETHS-Fassberg (in use, German Army)
 - ETHL-Rostock-Laage (in use, German Air Force and civil aviation)
 - CS08-Wittstock (closed, former USSR)
 - CS06-Damgarten (closed, former USSR)
 - CS04-Gross Mohrdorf (closed, former USSR)
 - ETNU-Neubrandenburg (in use, German Air Force)
 - CS44-Annenwalde-Templin 2 (closed, former east german air force)
 - CS41-Warbelow-Gnoien (closed, former east german air force)
 - CS54-Sülte (closed, former east german air force)
 - CS49-Ludwigslust (closed, former east german air force)

The student pilot

Start from the airfield Leer-Papenburg EDWF (that's included in German Airfields 3) using a Cessna 172. Head south after take-off and head for the Emsland. Follow the river until you see the large Meyer-Werft shipyards in Paperburg. Take a heading of 120 degrees from here until you see something that looks like a race circuit but actually is a highly modern test center for cars. It's a good practice to try to follow the circuit with its tight turns. Stay low, stay slow and always in full control so you do not crash. You should still see the Ems river, fly towards it and follow it north back to the Leer-Papenburg (EDWF) airfield.

The flying cops

As a police helicopter pilot you have been tasked to fly two air force generals to Fassberg (between Uelzen and Munster). The best helicopter for this would be the Augusta Westland that comes with the FSX Acceleration Pack. You start from the police base at Bad Bramstedt (EDHX) and should find your way to the Air Defence base Panker. Best way to do so is to fly heading 55° until you reach the Ploner lake and then continue on a heading of 35° until you reach the Ostsee coastline. About 5 kilometers north you will find the base that'll recognize by the four large concrete areas (with grass in the center).

You'll pick one general here and continue towards Uetersen (EDHE) to pick up the second general. If you follow the A215 and A7 from Kiel towards Hamburg you can turn west near the Hamburger airport. Uetersen (included in German Airfields 2) will be right in front of you and you will see the military base north of the airfield.

With both passengers aboard, we use the GPS to set a direct heading to Fassberg, with two generals onboard we got priority over other traffic! When you land at Fassberg make sure you keep an eye on the helicopter traffic from the helicopter base that's not far off.

Maintenance flights

Close to Bremen are two airfields with major maintenance facilities that are used by many airlines. Both are small and can only be flown into in VFR conditions but even the biggest of aircraft from Boeing and Airbus come here regularly. Try landing a major jet at Lemwerder (EDWD) or Ahlhorn (EP22) and see how a major aircraft looks on a small field!

Charter pilot

Although only the airports of Bremen, Hamburg and Hannover are real 'international' airports, many of the smaller airports have been getting a lot of the low cost airlines as customers because they are cheaper to operate from.



You could use any airliner to fly the routes that we suggest:

Lübeck Blankensee (EDHL) to:

- London-Stansted (EGSS)
- Dublin (EIDW)
- Leeds/Bradford (EGNM)
- Stockholm-Skavsta (ESKN)
- Danzig (EPGD)
- Bergamo (LIME)
- Pisa (LIRP)
- Girona (LEGE)

Rostock-Laage (ETNL) to:

- Stockholm-Skavsta (ESKN)
- Palma de Mallorca (LEPA)
- Antalya (LTAI)
- Cologne/Bonn (EDDK)
- Nürnberg (EDDN)
- Munich (EDDM)

Heringsdorf to:

- Bremen (EDDW)

Sylt (EDXW) to:

- Cologne/Bonn (EDDK)
- Hannover (EDDV)

Schwerin-Parchim (EDOP) to:

- Zhengzhou, China (ZHCC)

Data structure

Experienced users will appreciate a look into what files so what as it allows them modify and debug compatibility issues.

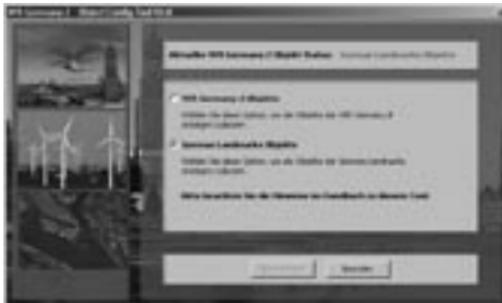
- Aerosoft
 - o VFR Germany 1
 - ▢ Scenery
 - *.bgl (*areal images*)
 - Autogen_Library.bgl (*Autogen data*)
 - VFR_<Area>...BGL (*VFR objects and landmarks*)
 - ▢ Texture
 - *an.agn (*Autogen-Position data*)
 - *.bmp (*divers*)
 - o AFD
 - ▢ Scenery
 - AF2_<...>.BGL (*AFCAD files*)
 - BR2_<...>.BGL (*afcad files as in My Traffic*)



German Landmarks

During the installation we will test if German Landmarks (by CR Software) is installed. If it is you will have the option to either remove the German Landmarks objects in the region covered by VFR Germany 1 or to keep them. If you decide to keep them you must be aware they might not complete fit on photographic base of "VFR Germany 2".

If you like to change this setting you can do so at any moment by calling the "Object Config Tool" from the Start Menu (via Aerosoft | VFR Germany 2). With this tool you can select what objects you like to activate.



If you happen to have installed "VFR Germany 2 " BEFORE you install "German Landmarks" the same tool can be used to select what you like to see.

Frequently Asked Questions (FAQ)

The more detailed a scenery is, the larger the chance you will find things that are not correct. In FS2002 small villages were grey polygons and nobody could say that and that house was placed incorrectly. Right now we are at the stage that we placed 8.000.000 buildings as accurate as possible. But it's not perfect and we don't claim it to be perfect. But using the resources available this is as precise as FS gets. We will listen to suggestions, but please cut us some slack.

- Q:** When used together with German Airfields I seem to lose some Autogen objects at some airports.
- A:** This is most likely caused by the DX10 preview of FSX. As the DX10 preview is just that; 'a preview' and not fully supported we advise you to only use the DX9 implementation
- Q:** Why are there buildings on airport XY not always positioned on the correct location?
- A:** The default buildings are often not placed very accurate and at the larger airports this is not always possible to solve.
- Q:** The photo textures look very green or lacking in contrast and in some other areas the water seems undecided between high tide and low tide?
- A:** Geocontent has worked extensively to match the images but as they are done on different film material, in different seasons and even in different years some color mismatches has to be expected. Due to the huge amount of data it is not commercially viable to spend the estimated €1.000.000 or more needed to do that work.
- Q:** I got bad framerates!
- A:** Unfortunately there is only a limited amount of help we can give you for this issue. You need modern hardware for this scenery (as you do for FSX). Follow the guidelines in the manual. With SP2 the situation is improved as more Autogen objects can be loaded with less impact on framerate.



-
- Q:** The coast lines, edges of rivers or lakes are incorrect.
- A:** To get the correct reflection effects a water mask has been used. This is created from the most accurate databases that are available. However these do not always fully match the aerial images even though in many regions they have been manually corrected. Unfortunately this is rather noticeable in the water rich northern areas of Germany.
- Q:** I got strange colors near the scenery borders!
- A:** Partly depending on the graphics card/driver combination, it is an effect that is not fully avoidable using the technology used.
- Q:** My house (or other houses) are on the street! Wooded areas are not positioned correctly.
- A:** With 8.000.000 houses and several hundred thousand wooded areas it was not possible to check each and every one, check the manual for more information on the technology. In very serious cases (trees on runways etc) we are willing to make patches, report those to **support@aerosoft.de** with a screenshot and a lat/lon.
- Q:** ATC tells me there is nothing to transmit!
- A:** FSX leaves something to desire in this aspect. Airports that have no published frequencies or airports with a sloped runway cause this. It is annoying, but beyond our control. It has been bugged with MS of course.
- Q:** Some bridges are seen in 2d and 3d!
- A:** Those 3d bridges are default bridges that cannot be removed. If you increase the water effect setting the 2d bridge will be less visible.
- Q:** Archhh, no winter/special night textures?
- A:** Technically possible, but it would increase the download data from 15Gb to 33 Gb (or 4 DVD's to 8 DVD's). If you would have all four sections of VFR Germany installed with 2 texture sets it would need 200 Gb. Even in this day and age that is simply too much.

Q: Some major buildings mostly in industrial areas the sides of buildings are below the ground level or have incorrect textures.

A: This is caused by some inherent FSX problems with Autogen and cannot be helped. It should not be very noticeable from cruise altitudes though.

Q: I miss a lot of churches?

A: There is no data available for that. Although religious buildings are shown on maps there is no information on what kind of building it is, We decided it was better NOT to show objects when we were not sure what to show.

Q: Some bridges have no traffic!

A: This is a limitation of FSX and can not be solved at this moment.

Q: The water (lakes/ivers) seem to have a mismatch between 2d and FSX style water!

A: We had two data sources for water, the areal images and a special file telling us what was water. They did not always match but it was not possible to solve all those locations.

Q: Rivers go up the hills!

A: An old FS problem and it is now seen where FSX did not have water before VFR Germany is installed. In most locations this is solved, but it might show in some locations.

Q: Why are many dams not added?

A: Dams with the differences in altitude and water level are very hard to do in FSX, often even impossible. In some locations we did add them, in other locations they were not possible.

Q: Why is this landmark not added?

A: Mainly because it is hard to decide what is important. All object noted on the charts and in aviation databases are added. But if you feel that we messed up totally because your shed is not included, write us a mail at; **support@aerosoft.de**. We don't promise anything but we will consider each suggestion.





Add-ons

for Microsoft FSX



aerosoft™



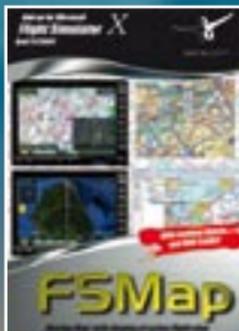
PMDG 747-400 X

Queen of the Skies!

The PMDG 747-400 is the answer for Jumbo-Jet enthusiasts who demand exceptional functionality and visual appeal! Stunning photorealistic cockpit and exterior models combined with an accurate systems functionality. The completely new models of the PMDG 747-400 Queen of the Skies have been exclusively designed for FSX implementing new features such as specular lighting and bump-mapping.

PMDG 747-400 X

€ 59.99



FSMap

Moving Map with display of active flight plan!

Professional and very comprehensive Moving map with the original ICAO maps of Germany, Austria, Switzerland, Holland and Belgium. FS Map shows your current position, the flight data of your aircraft, airports and NavAids in real time on a digital VFR Map. The AI traffic, IVAO and VATSim-Traffic can also be displayed on the map. A must for every VFR pilot. Including new TCAS.

FSMap

€ 39.99