

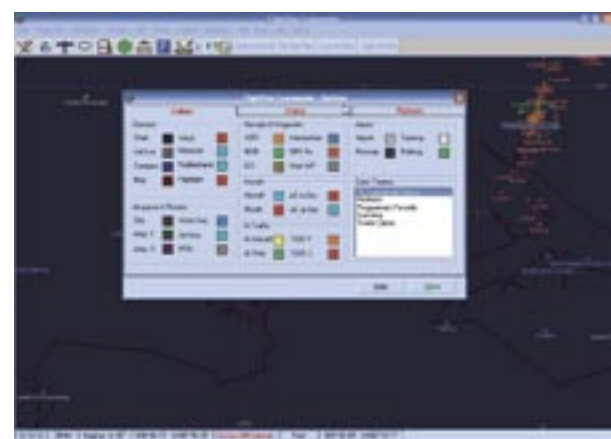
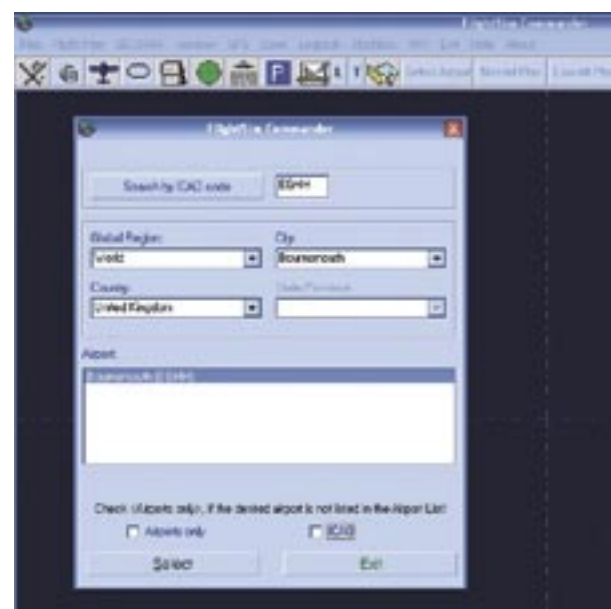
FS Commander 7

All things start with a good plan

You only have to scan through the pages of a flight sim developer's catalogue, to realise that many products were conceived and have evolved alongside Microsoft's Flight Simulator. As each new version is released, these third-party entrepreneurs try to make the experience of Flight Simulator more realistic and enjoyable, by new adding features to their products that Microsoft has yet to implement. This applies to everything from the aircraft models and overall flight environment, to the utilities and ancillary applications that emulate those available to real pilots. This



BELOW: Selecting departure and destination airports



You can set the Colour options to suit your taste

is precisely the case with the latest release from Sascha W. Felix & Volker Heine, the authors of FS Commander 7 – a significantly improved stand-alone flight planning and navigation program designed for FS2004.

It is true that many people fly FS2004 without ever planning a flight or in some cases without even attempting the take-off and approach phase; and in some ways this is the beauty of FS2004, because you only need to do as much as you want at any given time. However, if you have ever used Flight Sim's in-built planner you will quickly realise that it is rather limited. There are a number of reasons for this – it doesn't display a very detailed map, there is no facility to display SIDs (Standard Instrument Departure – a standard IFR departure route enabling air traffic controllers to issue abbreviated clearances and thus speed the flow of traffic) or STARs (Standard Terminal Arrival Route, for inbound IFR traffic), and you cannot use it to obtain detailed information on airports in the database.

FS Commander does all of these things and more because it is not simply a flight planning application. It includes a moving map display that identifies both airborne and ground AI (Artificial Intelligence) aircraft. These are shown as symbols that look similar to the ones you would see on an ATC radar screen, with information relating to heading, altitude or flight level, ground speed, departure and arrival airports and the tail number for identification. The package also includes a rather neat logbook that automatically stores the data from any particular flight at the click of a button, so you don't have to try to decipher those cryptic 'scribblings' from your keypad at the end of the flight. However, the feature that is most impressive is the small GPS window that sits in the corner of your FS screen, displaying

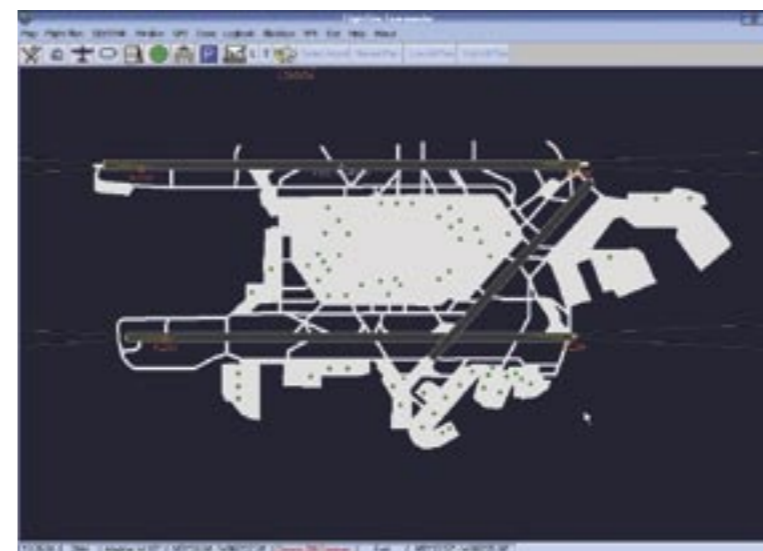
five mini pages of information pertinent to your current flight. This covers everything from your heading, true track and magnetic variation, to waypoints, weather data and a track error indicator. Incidentally, the track error indicator will also send navigation frequencies directly to your in-flight instruments, again with a single click of a button!

Installation

Installation is not fully automated, because FS Commander draws its data from a number of different sources. A certain amount is extracted from your own Flight Simulator set-up and some is imported from real-world databases. So before you use the programme for the first time you have to run the included database manager, which provides a button to access the online DAFIF (Digital Aeronautical Flight Information File) database. This contains data relating to VORs, NDBs, intersections, GPS fixes, airways, SIDs and STARs and minimum safe altitudes. Other on-screen buttons allow you to selectively update airports, airways or navigation aids; after either installing new scenery in Flight Simulator or if you want to stay current when the DAFIF database is updated each month. This interface is also used if you want to merge your own or a friend's waypoints. So for example, if you create waypoints for VRPs (Visual Reference Point – Landmarks used for position reporting by aircraft operating VFR), for your local area, you

Try before you buy

FS Commander is a shareware product and initially is free to download from the author's website. This means you can try it out before you part with your hard-earned cash; the only restriction being a time limitation which will terminate the program after 35 minutes. Having said that, there is no limit to the number of times you can try it.



Close-up of EGLL Heathrow

can incorporate them into the FS Commander database. The programme ships with nearly 1000 European VRPs covering most of the primary airfields, but if your particular favourites are missing, it is straightforward to add your own.

Creating your first flight plan

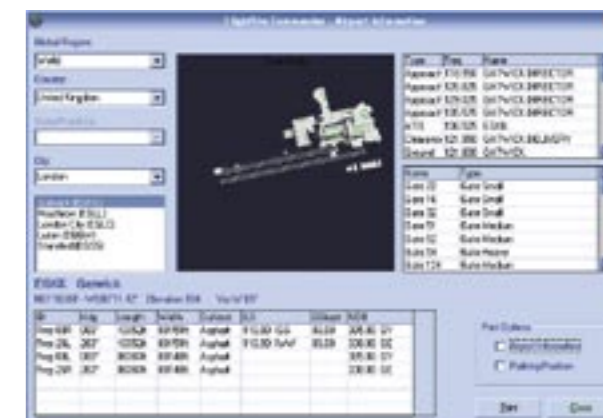
After running the database manager you can launch FS Commander and begin to create your first flight plan. However, before doing this, you first have to select an airport to define the initial centre of the map window; otherwise you would see a map of the whole world, which would make it rather difficult to locate the various legs of your flight plan!

Initially the map window displays a mass of information, which includes airports, all navigation aids, airways, rivers and coastlines. Yet the physical amount of information, and colour attributes, can easily be changed from the 'options' menu and pop-up sidebar located on the left-hand side of the screen. Moving around the map is simply a matter of zooming in or out using the 'page up' or 'page down' keys and clicking with the mouse, which again centres the display wherever you click. It is worth mentioning here that, in common with many other features in FS Commander, there is more than one-way to do this. For example, as well as using the page up or page down keys to zoom the display, you can also click on the plus or minus signs, located in the sidebar, or set the zoom level to a specific value from the drop-down menu.

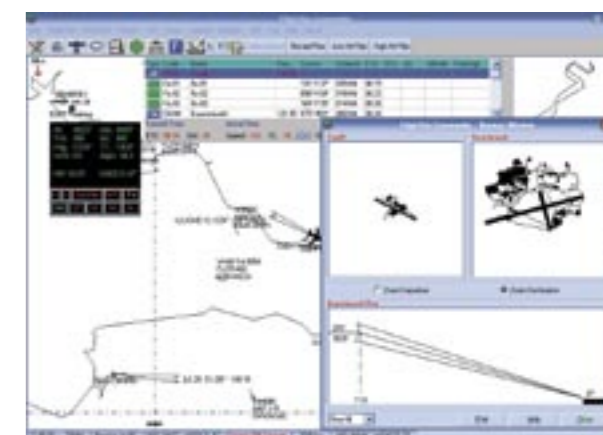
The included map contains far more information than the FS version, and I particularly like the pop-up display that shows detailed information for any airport or navaid as you hover the mouse over them; this is very useful if you haven't done a printout and can't remember the ATIS (Automatic Terminal Information Service) or ILS (Instrument Landing System) frequencies. You can get even more information from the airport preview window, including latitude and longitude, runway length and headings, all radio frequencies, currently available gates and parking positions.

Returning our attention to the map window, if your zoom level is below 10NM, the airport layout and parking positions become visible, together with the position of any AI aircraft. Incidentally, if you are connected to Flight Simulator this is an automatic process once you are on the ground, with the view changing back to 50NM once you are airborne again. Should you need to know the distance to a particular place en-route, you simply select the 'measure' tool from the menu and drag a line between the two points. This not only shows the distance, but also the course required to get there.

Once FS commander and Flight Sim are inter-connected, a few other options become available. For example, the map then acts as a rudimentary TCAS (Traffic Alert and Collision Avoidance System), showing other aircraft in the vicinity in different colours depending on their proximity to your aircraft. If an airborne aircraft



The Airport information panel



This dialogue box shows the departure and destination airports together with the approach profile.



Ready for take-off

gets within three nautical miles of your own aircraft, a warning appears on the map, accompanied by an audible sound. You can also 'shift' click on any navaid, to have the frequency automatically transferred to the appropriate instrument in your flight simulator aircraft.

Test flight

Planning a flight is straightforward, although the programme is capable of creating quite sophisticated flight plans that include, as intimated earlier, SIDs and STARs. So let's begin by looking at a typical flight plan

Please Note

Naturally, to use the on-line links I mentioned in the text, you will need to have internet access; and I suggest a broadband connection would be preferable as well, because the DAFIF files are over 20 megabytes.

that takes us from one airport to another, in which we will be flying the default FS Beech King Air 350, (as a GA pilot I find this more familiar than flying the ‘big tin’). You need to select the aircraft first because FSC needs to know about fuel consumption, ceiling height and performance, to calculate the route.

There are two methods of selecting departure and destination airports: either from the ‘select airport’ button on the menu bar, or by simply clicking on the airport itself in the ‘map’ window. This drops the airports into the flight plan table which shows the ICAO (International Civil Aviation Organisation) code, ATIS frequency, course, distance and ETA. For this example, I chose a relatively short flight from Cardiff to Bournemouth, and to make it interesting I set waypoints at Yeovil and Compton Abbas, with a final fix roughly eight miles out on the extended centreline for runway 08. (In reality I would probably fly direct carrying out an overhead join when I reached Bournemouth, but that would not be such an interesting flight). Alternatively, you can choose one of the routing options built into FS Commander: either a conventional navaid route that takes you between

VOR (Very High Frequency Omni-directional)/NDB (Non-directional Beacon) range intersections, a low altitude route using Victor Airways, or a high altitude route using Jet Airways. If you find the screen is a bit cluttered when you are trying to plan your route, you can clean it up by clicking off some of the options in the sidebar.

On a route that takes you between airports that have SIDs and STARs, you would probably use one of the auto-routing options; unfortunately, the two I have chosen do not, so I’m free to create my own departure and arrival routes. Although these are not strictly SIDs or STARs, they can nonetheless be saved and re-used in exactly the same way, (in fact the same applies to user waypoints or VRPs). You can also mix the different types of flight plan, so for example you can have a plan that starts as VOR to VOR, and then continues as a Low Altitude Route, before dropping back to VOR at the destination.

So before take-off let’s have a quick look at the runway window and departure/arrival paths to check the details are correct and perhaps print them out for reference during the flight. After this, you need to load the flight



Close-up of EGHH Bournemouth

plan into FS, connect FSC and prepare for take-off.

I’ll open the box

FS Commander includes a fairly comprehensive ‘Black Box’ facility, so if you want to check your progress as a pilot you can look at the data recorded throughout the flight. This is shown as two separate graphs that will help you to analyze your performance of following the flight plan, in terms of track and altitude and also see how smooth (or erratic) the take-off and approach phases were.

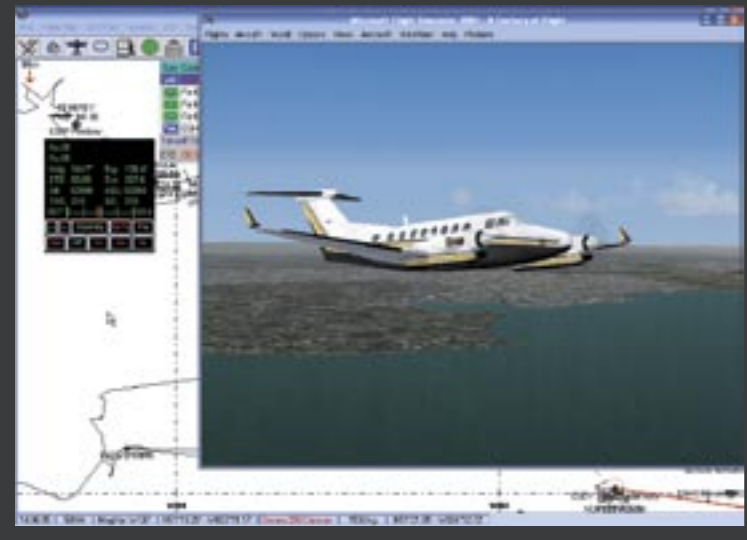
Once the flight plan is active the small GPS window contains five separate pages showing everything from your heading and altitude, to the ETA to the next waypoint, weather, arrival frequencies, even the parking position at your destination airfield. You can also activate the heading hold in your FS aircraft’s autopilot from here and transmit ATIS and ILS frequencies to your on-board radio equipment. Once this is done you can get ATC clearance and get under way, either by following the ‘track error’ indicator or with the assistance of the autopilot. Notwithstanding an emergency, the flight should continue automatically with the autopilot tracking the flight plan between waypoints, until it’s time to descend to make your approach.

Obviously this is a fairly simple flight plan but the method and execution is exactly the same regardless of the complexity. I’m pleased to say that the system works flawlessly and certainly takes the stress out of flight planning and navigation, particularly for those unfamiliar with radio navigation aids.

Joe Lavery

Expanding the system

Due to the fact that Microsoft Windows doesn’t allow two programs to be displayed when Flight Simulator is running in ‘full-screen’ mode, I believe the ideal way to use FS Commander is to use a dual monitor set-up. Then the FSC programme can be moved to the second monitor. This method allows you to access the information provided by the programme and have a moving map display at the same time. With most modern video cards sporting at least two outputs and the relatively low price of TFT monitors, it is not quite as extravagant as you might think. The alternative is to run FS in ‘windowed mode’, which does allow multiple programs to co-exist on the same screen.



Review Score

Publisher: Aerosoft
Price: €29.99
Website: <http://www.fscommander.com/>
Developer: Sascha W. Felix & Volker Heine
At a glance: A comprehensive flight planning utility that includes an easy to understand GPS system.
System requirements: Windows 2000 or XP, Fsuiipc.dll 3.x, Flight Simulator 2004, P4 or Athlon 2000, 512MB RAM, FS2002/4, 32Mb 3D graphics card
Recommended: [P4 or Athlon 2500 +, 1 Gigabyte RAM, ATI Radeon 6800 or similar 3D video system]