

Exclusive Preview

for simFlight.com



aerosoft™



By Johan Peeters



About The Lockheed-Martin F-16 Fighting Falcon

The F-16 Fighting Falcon is a compact, multirole fighter aircraft. It is highly maneuverable and has proven itself in air-to-air combat and air-to-surface attack. It provides a relatively low-cost, high-performance weapon system for the United States and allied nations.

In an air combat role, the F-16's maneuverability and combat radius (distance it can fly to enter air combat, stay, fight and return) exceed that of all potential threat fighter aircraft. It can locate targets in all weather conditions and detect low flying aircraft in radar ground clutter. In an air-to-surface role, the F-16 can fly more than 500 miles (860 kilometers), deliver its weapons



with superior accuracy, defend itself against enemy aircraft, and return to its starting point. An all-weather capability allows it to accurately deliver ordnance during non-visual bombing conditions.

F-16 pilots may suffer Gravity-induced loss of consciousness (GLOC) when conducting high-speed turns. When flyers are in a high-G, combat environment, aircraft acceleration presents the biggest demand on their bodies. The F-16 is a high technology aircraft that requires pilot physical conditioning to perform up to nine G maneuvers. Sharp turns can induce loss of consciousness when gravity pulls blood toward the lower extremities, carrying oxygen away from the brain. After about 5 seconds of pressure, vision is progressively lost from peripheral vision to central vision. When blood flow is allowed to resume, vision is smoothly and rapidly recovered. Cerebral failure and recovery is much less graceful and predictable. After about 5 seconds of blood flow stoppage to the brain, GLOC occurs suddenly and lasts from 10 to 30 seconds (average about 13 seconds). When consciousness is regained, it is usually accompanied by brief seizure-like activity and a period of confusion, which lasts about 12 seconds. During this 12 seconds, the aviator is unable to function effectively. An additional period of up to 2 minutes is required before cognitive and psychomotor performance ability recovers to normal. GLOC is a real threat to F-16 pilots. Over the lifetime of the F-16, by 2007 the US Air Force had lost 12 pilots and 16 aircraft to GLOC. GLOC is not a new problem, it has been around for every 70 years. Because of the emergence of high performance aircraft such as the F-16 and the fact that these aircraft can perform beyond the acceleration tolerance limits of the human, GLOC became the U.S. Tactical Air Force's second most serious human factors problem, second only to spatial disorientation.



The F-16 was built under an unusual agreement creating a consortium between the United States and four NATO countries: Belgium, Denmark, the Netherlands and Norway. These countries jointly produced with the United States an initial 348 F-16s for their air forces. Final airframe assembly lines were located in Belgium and the Netherlands. The consortium's F-16s are assembled from components manufactured in all five countries. Belgium also provides final



assembly of the F100 engine used in the European F-16s. The long-term benefits of this program was technology transfer among the nations producing the F-16, and a common-use aircraft for NATO nations. This program increases the supply and availability of repair parts in Europe and improves the F-16's combat readiness.

Originally conceived as a simple air-superiority day fighter, the aircraft was armed for that mission with a single six-barrel Vulcan 20-mm cannon and two Sidewinder missiles, one mounted at each wingtip. Over the years,



however, the mission capability of the aircraft has been extended to include ground-attack and all-weather operations. With full internal fuel, the aircraft can carry up to 12 000 pounds of external stores including various types of ordnance as well as fuel tanks.

The original F-16 was designed as a lightweight air-to-air day fighter. Air-to-

ground responsibilities transformed the first production F-16s into multirole fighters. The empty weight of the Block 10 F-16A is 15,600 pounds. The empty weight of the Block 50 is 19,200 pounds. The A in F-16A refers to a Block 1 through 20 single-seat aircraft. The B in F-16B refers to the two-seat version. The letters C and D were substituted for A and B, respectively, beginning with Block 25. Block is an important term in tracing the F-16's evolution. Basically, a block is a numerical milestone. The block number increases whenever a new production configuration for the F-16 is established. Not all F-16s within a given block are the same. They fall into a number of block subsets called miniblocks. These sub-block sets are denoted by capital letters following the block number (Block 15S, for example). From Block 30/32 on, a major block designation ending in 0 signifies a General Electric engine; one ending in 2 signifies a Pratt & Whitney engine. *(source: globalsecurity.org)*





The Aerosoft F-16 Fighting Falcon X

The Aerosoft F-16 Fighting Falcon X is brought to you by almost the same group of people that made the Seahawk, Warthog at Aerosoft and the FS2002/4 Tornado and F-16 at LAGO. All of these products were immensely popular and highly detailed in their time. But now comes the Falcon X, a project that enables the armchair pilot and even the Cessna pilot, to fly the F-16 as if they really were a Viper pilot, and I do say FLY, because important to know is that Aerosoft, from the beginning of this project, decided that they will not make this aircraft fire any weapons, but simply to focus on the aspect of flying the magnificent falcon in the virtual skies of Microsoft's Flight Simulator X





So, how does the Falcon X look?

Well I could just keep this section short, by saying it's breathtaking, fantastic and perhaps the most realistic rendition of a military plane ever developed for FSX. But why would you believe me? Instead you'll have to look at the screenshots. By clicking on them it'll send you to the internet, so that you can see the picture in all its glory.

So prepare yourself for a walk around the F-16.



So as you can see, every detail, every antenna, every tube, every rivet, every hole, well everything, is modeled in this product. Aerosoft has even done the effort of adding the CARAPACE ECM system, which is only used on Belgian F-16's, it comprises a bulge under the intake and an extra module in the tail. And being a Belgian myself, I appreciate this very much! And this Belgian model is just one of a total of more than 15 different models included in this pack. More about that later on.

Now bear in mind that all of these details require a lot of computing power, this is why Aerosoft recommends by minimum a 2 GHz Dual Core processor and a lot of RAM to go with it. On my system the Falcon is displayed in all its glory at 30 fps average, a tad less fps than the F-18 in the Acceleration pack.



The Falcon X office

Since we've just had a walk around the exterior of the aircraft, let's head into the cockpit. One thing I have to say is that there is no 2D panel anymore in this product, instead you get this wonderful virtual 3D cockpit. This VC contains an accurate modeling of almost every instrument and system you'll find aboard the real falcon. Almost every switch, button, is clickable, using both buttons on the mouse, you can enable a switch by right clicking and disable it by left clicking it, a marvelous concept.



First of all you'll notice that the falcon has 2 Multi Function Displays or MFD's, these MFD's allow the pilot to keep an eye on all the aircraft's systems. In this virtual recreation the left MFD represents the RADAR image, This radar allows you to see the aircraft ahead of you, mark them and fly to them. And the right MFD is configured as a navigation display, showing waypoints, airports, terrain and an overlay of the RADAR data, it will also show you your current weapon load, and the maximum of G's you can pull because of this load.



Now we come to pretty much the largest item in the F-16 cockpit, the HUD or Head Up Display, this projects flight, navigation and combat data on a glass screen in front of the pilot's eye line, this enable the pilot to look out of his aircraft while flying, and still having control of the situation. Directly under the HUD there is the ICP, which controls both the HUD and the DED, the small screen on the right of the ICP. The ICP allows the pilot to adjust

certain settings such as a BINGO alert, which waypoint to fly to, selecting a combat mode GROUND or AIR, and much more!

In real life the F-16 does not have a GPS system, or a FMS that enables the pilot to choose any destination while in-flight. All flight data is pre-programmed by a ground station engineer. The pilot can only choose which way point he wants to navigate to using the ICP.

I could go on and on about the instruments and their function, but this isn't a manual, it's a preview 😊



Also the MLU and the C model have different VSI's, and that has been remodeled in these models as well!



Having said that, it's time for some screenshots, so you can judge for yourself





How does the falcon fly?

Flying the Aerosoft F-16 is a delight, and I do believe it's realistic, on a clean model, such as the Klu Demo F16, you can climb and turn much faster than in an almost fully loaded F-16 with external fuel tanks, missiles and GBU bombs. This model can perform a lot of the tricks I've seen Falcons perform on air shows. But to make the flying easier, the F16 has an autopilot system, which is operated with ease, there are two switches, one for Pitch and one for ROLL, you either tell the plane to keep doing what you're doing, or to keep altitude and fly to a preset heading. And that's no different in this

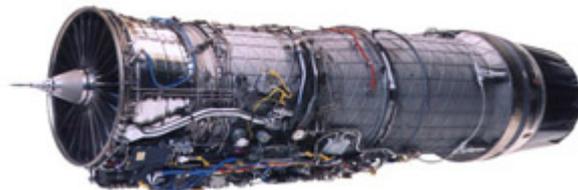
How does the falcon engine sound?

Well having been at plenty of air shows, hearing lots of F-16's I can say with certainty that the sound pack that comes with this product, delivers the sound I remember, a sound of pure power and just wait 'til you engage your afterburner, the sound will literally blow you away.

For all of you who are thinking "what if this guy has a hearing problem? Will I get my full 30 Euros worth?"

No problem there, if you don't believe me, click on [this link](#) it will send you to a YouTube page, this will show you a video created by the makers of the sound pack, a sound pack worth 11 Euros by itself. Pay attention to the sound, the aircraft you'll see is the only freeware F-16 available at the moment, it's made by Kirk Olsson and is available at many of the online freeware FS file libraries.

If you are still not convinced, after seeing that video, that I'm right about the sound of this sound pack, you should probably get yourself a better sound system.



There are a lot of F-16 variants, but which ones are included?

There are well over 15 different models included in this product, each model has more than one texture set. The models go from the F-16 A Midlife Update to the F-16C with Conformal Fuel Tanks on the fuselage. Targeting pods, bombs and several missiles. The included liveries are mainly made by two people who made a lot of texture sets for the LAGO F-16, the Aerosoft A-10 and several freeware aircraft, they are truly masters at what they do. Of course I'm talking about Dag and Vinflyer, my hat goes off to them for adding that extra realism to the already wonderful 3D Model of the F-16. For this add-on they made several liveries of the Belgian Air Component, the Dutch AF, the USAF, the Polish AF, Egyptian AF, Israeli AF, Taiwanese AF, Danish AF, Venezuelan AF, US Navy, Chili AF, Singapore AF, Turkish AF, Greek AF and finally the USAF Thunderbirds. All of these textures are of extreme detail, and they do not give the impression that the airplane is brand new, which is not what you'd expect from an aircraft that was built more than 10 years ago, and has been used regularly. On the next page you'll see some screenshots of a few of the immense collection of included liveries and models.





















The Good Stuff	The Bad Stuff	The Test System	
<ul style="list-style-type: none"> • <i>The models</i> • <i>The sound</i> • <i>The cockpit</i> • <i>The systems</i> • <i>The liveries</i> • <i>The attention to detail</i> • <i>The relative low price</i> 	<ul style="list-style-type: none"> • <i>The hours of complete fun, you can't spend on something else</i> 	Processor	AMD Phenom X4 9750
		Memory	4 GB
		Graphics	AMD Radeon HD3850 512MB
		Sound	Creative X-Fi PCI-E
		Harddrive	Western Digital 250GB
		Controller	Wireless Xbox 360 controller Thrustmaster FlightStick X

This preview was made using Microsoft Windows Vista SP1, FSX Acceleration and Office 2007

