



## Soaring High: My First Flight

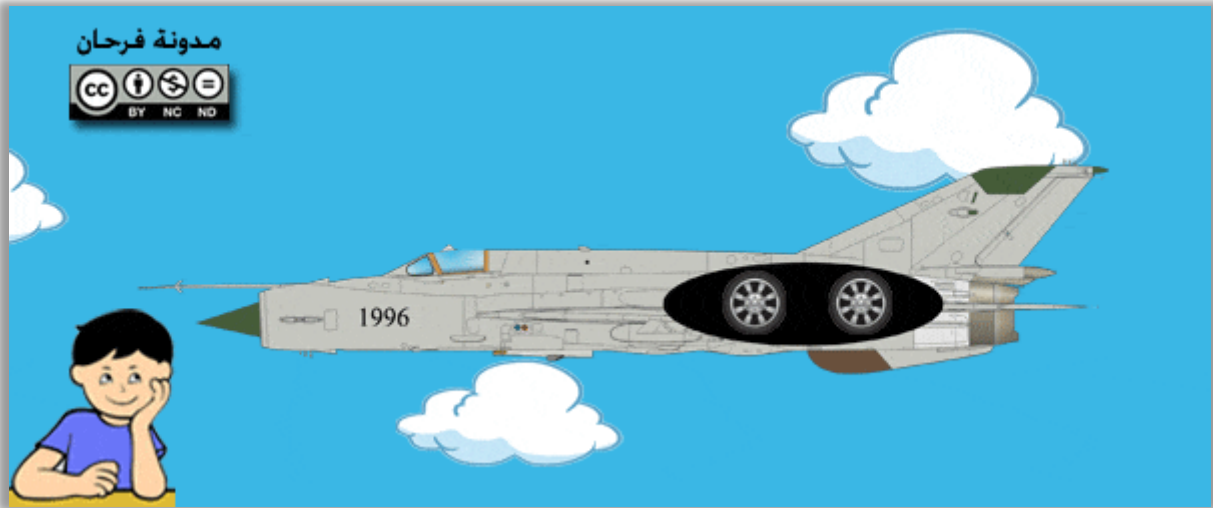
### The Beginning of the Story



Image for illustration only

My story with flying began in 1996 (or 1997), one day there was a celebration related to an occasion (I don't remember it), that day four MiG-21 planes (flying in a diamond formation)

passed over the house coming from the northwest towards the southeast and this image remained imprinted in my memory until today, and after the planes passed, a (curious) question came to my mind about the reason that helps the plane to rush in the air, as it is known (to children) that if we throw (initial thrust) a paper plane, for example, the wings will help it fly for a while and then the plane falls because the thrust ends, but what propels real planes in the sky and prevents them from falling? On the same day, I reached (individually) an answer to this question: As long as cars have wheels that rotate and push them forward, there are also wheels inside planes that rotate (other than the landing wheels) and they are the source of thrust in the plane and the wings help the plane rise in the air. This was my first idea about flying at the age of six (or seven).



### Future Aspirations



Before 2000 we had some old magazines related to engineering topics, and some of these magazines had topics related to aviation and here I was interested in the pictures of planes and pilots that appeared in the magazines that I did not understand anything from because they were in foreign languages. In 2000, we got our first computer, which allowed me to try out my first flight game. From then until 2008, I bought every flight game I could think of. I also looked at a large number of topics and articles on websites, and in 2004, I designed a website with a section dedicated to aviation. I also bought a large number of magazines specializing in defense and armament (such as Arab Defense Magazine). I also wrote a number of basic articles about weapons, as well as comparisons between aircraft and other topics. I also watched a large number of documentaries related to military topics (especially aviation) on TV and the Internet (including the Encyclopedia of Weapons and the History of Weapons, etc.). While working on the Macromedia Flash program, I designed some simple Flash presentations that explained several topics, such as: how a jet engine works, basic aircraft movements, the ejection system in a warplane, the most important types of warplanes, in addition to designing two basic flight games. I also do not forget the aviation movies or movies that include scenes related to aviation, of which I remember (Top Gun, Air Force One, Broken Arrow, Mirror Wars, Behind Enemy Lines...etc), and during this period my old dream turned into a practical ambition to become a pilot, in parallel with the emergence of a new dream to develop a space program through a space agency, university specializations, an astronaut training program, and others.



I finished high school in 2008 and went to join the Air Force Academy, but I did not pass the medical examination (deviated nasal septum). After that, I went to the Military Engineering Academy in an attempt to continue my studies in one of the fields of military engineering,



but I also did not pass the medical examination (leg problems). Since my grades in high school did not allow me to enter the Civil Aviation Engineering major, I began an effort to obtain support that would allow me to travel and continue my studies in either Civil Aviation or Aeronautical Engineering (Jordan, Saudi Arabia, Egypt, Russia), but I did not receive any response or support, and thus my dreams and ambitions ended, and later I found myself in the university major (Faculty of Economics) that my grades in high school allowed me to.

### Flight Simulation Games



Flight simulation games are a type of serious games that are used in flight training (civil and military) for new students, pilots in service, or even aviation enthusiasts. These games have spread and gained great popularity in many societies, but their fame and spread in the developing world remained limited (compared to other countries) to a small number of categories, most of whom work in the field of aviation. Here, this can be confirmed by going online and searching for flight simulators (or aviation topics in general) and seeing the results to know the extent of the disparity in interest in these matters between countries, as there are companies in many countries and for a long time specialized in designing, testing, and promoting these games (which are actually considered simulators for all types of weapons and battles). In the following lines, I will talk about my experience with flight simulators, starting from the first game I tried (JSF) in 2000, up to the last flight simulator (DCS) in 2015. Note that this article can be a reference for those interested in flight simulation.

## JSF: Joint Strike Fighter



- Developer: Innerloop Studios/Publisher: Eidos Interactive
- Year of publication: 1997
- Theaters of operations: Afghanistan/Colombia/Kola Peninsula/Korea
- Available aircraft for the player: X-32/X-35

The Joint Strike Fighter program is a program of the United States Department of Defense to design and manufacture a fifth-generation fighter to replace specific types of aircraft in service such as (F-16, F-14, F-18, A-10, Av-8) in the United States, the United Kingdom, Canada, Australia, the Netherlands and their allies. After a competition between the Boeing X-32 and the Lockheed Martin X-35, the final design based on the X-35 was selected. Which later became the F-35 fighter.

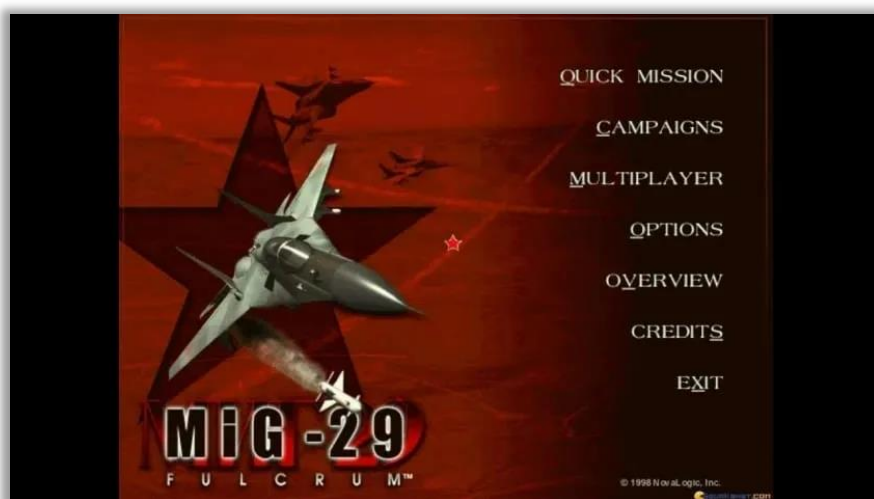
I bought the CD of this game in 1999 before we even had a computer (in 2000), and I started playing this game in 2000 and finished it the same year. JSF simulates the experimental models' aircrafts (X-32, X-35), and actually whoever flew this game in an X-35 got a first-hand experience in flying an F-35, as this game features a simulation which is very close to reality, both in terms of flying and in terms of the integrated helmet display (HMD). Here I remember that the first plane I flew in my life was an X-32. I also tried to fully Arabize this game, but it was not success. Through this game, you can command a squadron of four planes chosen by

the player to carry out multiple missions/campaigns in four different areas and scenarios. You can also carry out direct air clashes (dogfighting) against the computer or against another player (over the network). It is also worth noting here that the rest of the planes in the game can be selected by entering (select plane), then placing the mouse pointer on the right or left arrow to select a plane, then continuing to press the (ctrl) keys simultaneously, and with each click on the (Enter) key, a plane can be selected from the planes in the game (F-22/F16/Mirage5/Mig-29/Su-27/Su-35/Tu-22/il-76/Mi-24/Uh-1/B2/E-3Awacs/A-50Awacs/KC-135). Here, the cockpit cannot be displayed with these planes, and the plane's wheels cannot be seen during takeoff and landing.

### [Download Game Guide](#)



### Mig-29 Fulcrum



-Developer and Publisher: Novalogic/ Year of Publication: 1998

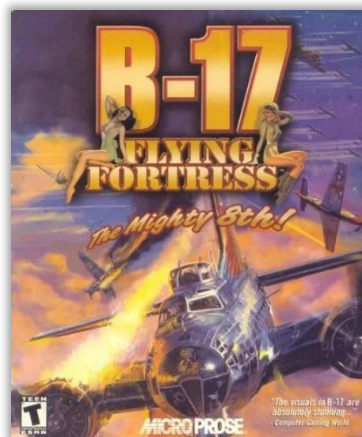
-Theater of Operations: Many areas.

I played and finished this game in 2000 after JSF game. In this game, which was developed and tested with the help of the Russian astronaut and test pilot (Yuri Prikhodko), the player can, within the (Quick Mission) option, begin training in flying the plane and the basics of flying and navigation, as well as training in air combat and attacking land and sea targets, with the help of voice instructions in English and a Russian accent from a specialized flight instructor. Here, different missions can be chosen within different areas and terrains, and the player can also choose to start air campaigns with difficulty increases with each stage the player completes. The aircraft can be armed with various types of air combat missiles (R), anti-radar and anti-ship missiles (Kh), unguided free-fall bombs (Fab) and guided bombs (Kab) in addition to a 30mm machine gun (Gsh) with 150 rounds. The aircraft can also be equipped with additional fuel tanks to fly long distances or stay in the air for a longer period.

[Download Game Guide](#)



### B-17: Flying Fortress





-Developer: Wayward Design/Publisher: Hasbro Interactive

-Year of Publication: 2000/Theater of Operations: Europe/World War II

-Available Aircraft: B-17/P-38/P-47/P-51/Messerschmitt BF109/Messerschmitt Me 262/Fw 190

### About the Game:

Feel the power of flying a real B-17! Learn what it was like to be part of a 10-man crew on dangerous bombing missions over Europe during World War II. Realistic graphics, animations and sounds convincingly recreate every aspect of strategic World War II air battles with twenty-five scenarios where you must manage the strengths and weaknesses of your crew and test your flying and piloting skills. This is your team and they are under your command, and it is your job as the commander to complete the mission and bring them home safely. This game is a true gem among other simulation games with its incredible attention to detail and historically accurate missions, you can really feel like you are fighting in World War II. Take control of any of the ten different crew positions, where you can act as a pilot, co-pilot, gunner, bombardier or communications officer. You can also fly one of the American escort aircraft such as the P-38 Lightning, P-51 Mustang and P-47 Thunderbolt. In addition, you can switch sides and fight against squadrons of B-17s and their escorts by playing as German Luftwaffe pilots, and here you will learn why the B-17 bomber was called the "Flying Fortress" and is considered one of the most powerful and deadly machines of World War II. Over 25 realistic missions, based on real historical events, in which you must lead your crew to victory. The great attention to detail, the fantastic flight simulation, and the historical accuracy give this game a high educational value. ([www.gog.com](http://www.gog.com))

### [Download Game Guide](#)





## YSFlight



-Developer: Soji Yamakawa/ Publisher: Global Star Software

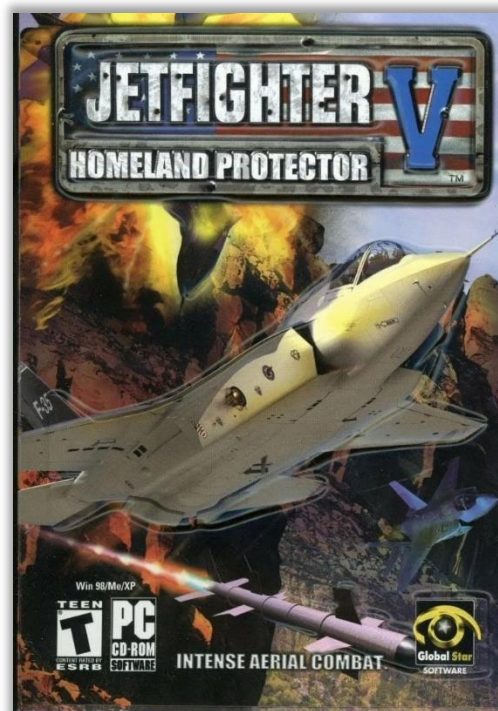
-Year of Publication: 1999/ Theater of Operations: 24 maps of cities or regions included with the game, and an unspecified number of maps that can be added to the game.

-Aircraft available to the player: A large number of aircraft of various types (civilian - military), in addition to a large number of ground vehicles (military and civilian), as well as boats, ships and marine vehicles, fictional aircraft and vehicles, real or fictional living creatures.

The only limits are your imagination, your set of add-ons, and the rules of the server you are using. Under constant development by Soji Yamakawa, the free flight simulator YSFlight offers a growing list of features, with a large selection of maps and aircraft included in the initial download. However, the real strength of the game is its flexible community. YSFHQ features a wide range of new maps, planes, weapons, and gadgets, while the global community provides thousands of additional mods to try out. If you can't find what you really want, do it yourself! With relatively simple mod tools, almost anyone can produce basic repaints, while more effort can be put into producing high-quality jet fighters, transformable mechs, or a man on a bike. Try this amazing free flight simulator today and you'll also find that while it may not have the greatest graphics in the world, it's unlike anything the world has ever seen –And it's all free. ([ysflight.org](http://ysflight.org))



### JetFighter V: Homeland Protector



-Developer: InterActive Vision/Publisher: Global Star Software

-Year of Publication: 2003/Theater of Operations: West Coast/United States.

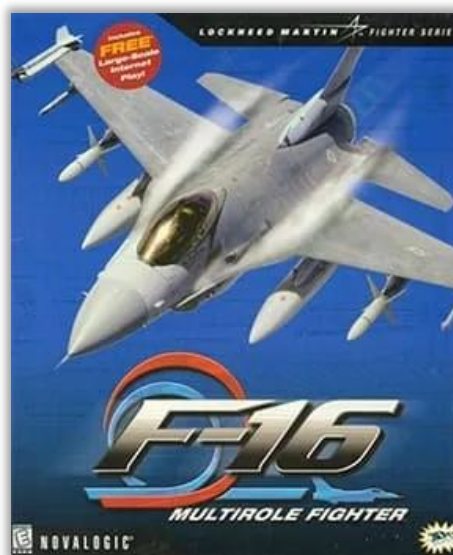
-Available Aircraft: F-16/F-22/F-35

Features over 30 action-packed missions and air-to-air and air-to-ground combat to keep you in the thick of the action. Stunning 3D graphics, environmental audio, and high-resolution satellite map environments. 90,000 square miles of satellite-based flyable terrain in the

southwestern United States. Three Lockheed Martin fighter jets are flyable: the F-16 Fighting Falcon, F-22 Raptor, and F-35 JSF. Realistic flight physics and weapon platforms provide the ultimate challenge. Make every mission count as you fight your way through a puzzle that will keep you guessing at every turn. The game includes a dedicated editor that gives you the ability to create highly customizable solo challenges. Multiplayer features allow up to sixteen players to battle online. (metacritic.com)



### F-16 Multirole Fighter



-Developer and Publisher: NovaLogic/ Year of Publication: 1998

-Theater of Operations: Many Regions

I remember this being the third game in a row that I played and finished in 2000 after JSF and Mig-29. This game was developed in parallel with Mig-29 as both games were based on the same design and simulation platform. This game was developed and tested with the help of

Lockheed Martin test pilot John Fergione. This game is similar to Mig-29 game with different missions and scenarios, as well as different characteristics and advantages of the two aircraft. For example, in this game, you can benefit from the advantages of the F-16 aircraft in using advanced navigation and targeting pods, whether to direct bombs and missiles or see targets from long distances (beyond the pilot's vision) day and night.

[Download the game guide](#)



## F-16 Aggressor



-Developer: General Simulations Incorporated/ Publisher: Bethesda Softworks

-Year of publication: 1999/ Theater of operations: Morocco/Madagascar/Ethiopia

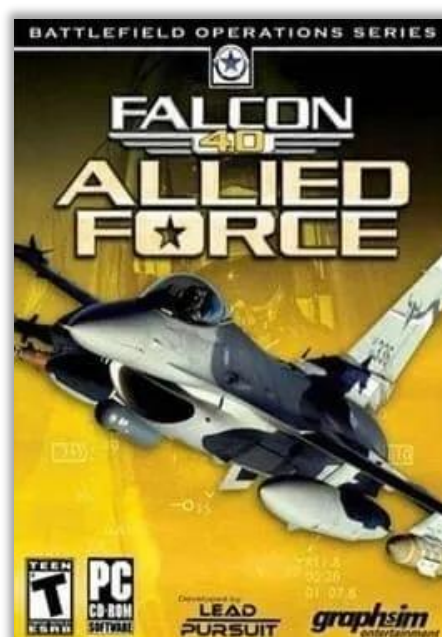


I played and finished this game in 2002. It is known that the F16 Falcon aircraft is one of the most "used" machines in computer flight simulators. The programming team tried to provide the most realistic experience possible. In F16 Aggressor our mission will be to play the role of an air mercenary and participate in 40 combat missions in unstable areas of Africa. We will visit Madagascar, Morocco and Ethiopia, where we will encounter a whole range of possible land, sea and air destinations. For the money obtained after successful missions, we will be able to buy new weapons necessary for performing other missions. The game offers a good flight simulation. (gamepressure.com)

[Download the game guide](#)



### Falcon 4.0: Allied Force



- Developer: Lead Pursuit/ Year of publication: 2005
- Publisher: Excalibur Publishing/Graphsim Entertainment
- Theater of operations: Balkans/Korean Peninsula

It is a simulation that involves a lot of details, so it may take some time for the user to become skilled and able to use all the features of the game. The game is accompanied by a 716-page manual, which can serve as a “quick start” guide to flying a military aircraft. The game focuses primarily on learning to fly and fight in the F-16 Block 50/52, but also allows the user to manage all ground and air mechanisms in missions if desired, or control guided fighters as part of a squadron led by E-3 AWACS. A player that enables many of the realism settings must work with his wingmen, friendly assets such as AWACS, JSTARS, airborne tankers, forward air controllers, and other friendly aircraft if he wishes to be successful. The game provides simulations and training missions for some common situations, such as: landing during engine fire, basic fighter maneuvers (BFM), navigation using on-board instruments, avoiding surface-to-air missiles (SAMs), and using various weapons against air and ground targets. (wikipedia)

[Download Game Guide](#)



## Jane's F-15



-Developer: EA Baltimore/Publisher: Electronic Arts

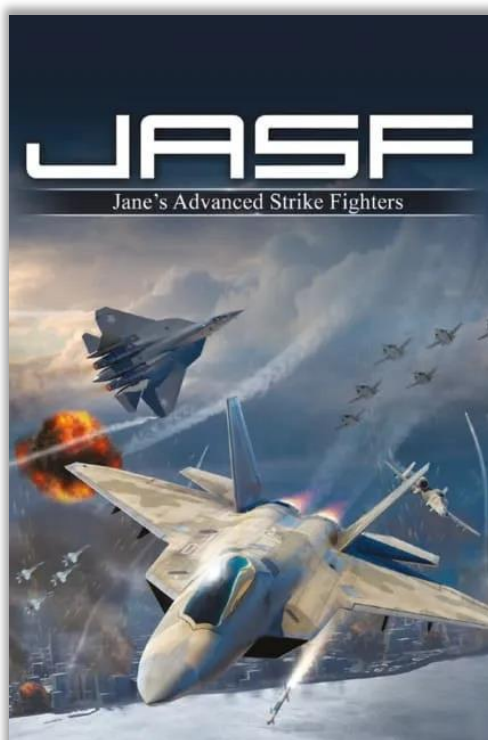
-Year of Publication: 1998/Theater of Operations: 1991 Gulf War

As of the last quarter of 1999, over 125,000 copies of this game had been sold in the United States alone. The game still features a 2D cockpit which also allows the player to switch between the pilot's seat and the weapons systems officer in the back of the cockpit to monitor the various multi-function displays (wikipedia). This game is probably one of the most realistic flight simulation games, and there is a manual included with the game covering all aspects of the onboard systems. The aircraft used in this game is the F-15 SE, which is primarily used to strike ground targets using a wide range of different weapons. Because it is so complex, the F-15 is a two-seat airplane, with a man in the back handling most of the weapons functions. Here you can switch between pilot and co-pilot modes at will. All of the cockpit controls can be operated directly with the mouse. It's not as fast as reaching in and pressing a button in a real cockpit, but you can operate everything while the game is paused. The game is divided into single-player missions, training missions and campaigns, and takes place either in Iraq during the Gulf War, or in Iran. A typical mission involves flying several hundred miles over the desert at an altitude of 100 feet in midnight with careful attention to enemy fighters and SAMs, followed by 30 seconds of intense action over the target, then turn and return to the homebase to avoid the missiles. (gamefabrique.com)

[Download Game Guide](#)



### JASF: Jane's Advanced Strike Fighters



-Developer: Trickstar Games/ Publisher: Maximum Family Games

-Year of publication: 2011/ Theater of operations: Azerbaijan

-Available aircraft: 30 different aircraft



This game is in the (Arcade) style, which is less realistic in flight simulation than (Realistic) flight games.

Over 65,000 square kilometers of continuous terrain, including cities, industrial centers, mountainous areas and deserts. Variety of aircraft: 30 flyable aircraft from the United States, Europe, Russia and China. It also features the best fighters of the latest generation such as the F-22A Raptor, F-35 Lightning II, Su-35 Super Flanker and the Russian PAK-FA. (store.steampowered.com)



## Comanche 4



-Developer: NovaLogic/Publisher: NovaLogic, THQ Nordic

-Year of Publication: 2001

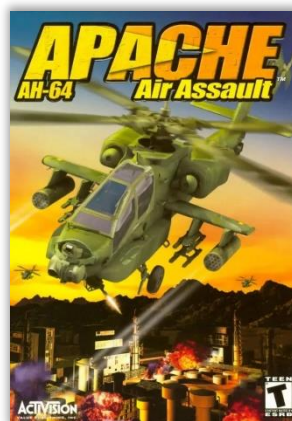
-Theater of Operations: West Coast/US

-Available Aircraft: RAH-66

This fast-paced action game puts you in control of a Comanche RAH-66 helicopter in 6 single and multiplayer campaigns, combining firepower, easy controls, and stunning interactive terrain. Attack non-stop – Blow up tanks, jets, aircraft carriers, helicopters, rocket launchers, and more. Unleash the Power – Launch Hellfire and Stinger missiles, Hydra missiles, and a 20mm cannon. Take to the air in minutes – Master flying and combat on the fly using your keyboard, mouse, and joystick. Stunning Interactive Terrain – Immerse yourself in fully detailed environments where you can fly through urban, jungle, arctic, desert, and marine environments as you protect diplomats, support Delta Force, subdue rebel forces, attack warships, and more. (novalogic.com)



**AH-64 Apache Air Assault**



-Developer: Activision Value/Publisher: InterActive Vision

-Year of Publication: 2003/Theater of Operations: Banhar

This game puts players behind the wheel of one of the most advanced and deadly attack helicopters in Boeing's arsenal. At the press of the F12 key, pilots can choose between Arcade mode and Physics mode, which is based on realistic physics. The Apache AH-64 comes equipped with four main weapons: a 30mm machine gun, Hydra rockets (unguided), Hellfire rockets (guided), and Zuni rockets (unguided but more powerful than Hydra). Over 30 missions will keep pilots busy destroying enemy soldiers, jeeps, trucks, armored vehicles, cannons, rocket launchers, tanks, and gunboats. The in-game help file provides a list of important tips and tricks, such as the most effective use of various weapons, targeting tips, and maneuvering and evasion tactics (old-games.com).



### Apache Longbow Assault



-Developer: InterActive Vision/Publisher: Rondomedia Marketing

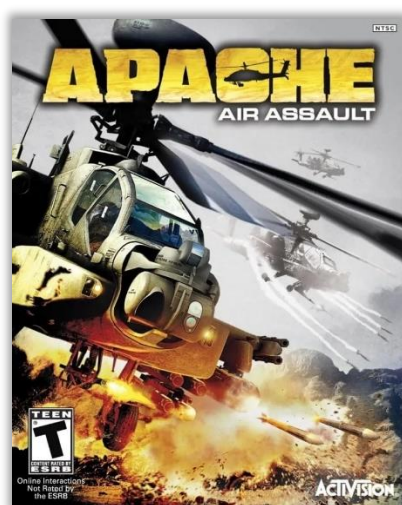
-Year of Publication: 2004

-Theater of Operations: Siberia and the South Pacific

Very similar to the previous version (Apache Air Assault) but this time with the upgraded AH-64D Longbow. It consists of about 30 sequential missions that take place during different times of day and weather in various terrains, including mountains, beaches and seas. It features head-to-head battles with other helicopters, attacks on air defense batteries, ships and ground vehicles, as well as carrying out rescue operations and defense missions. (mobygames.com)



### Apache Air Assault 2010



-Developer: Gaijin Entertainment/Publisher: Activision

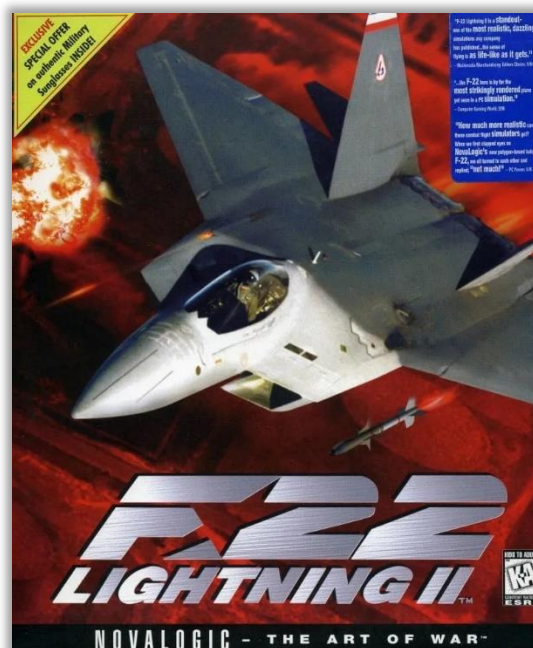
-Year of Publication: 2010/Theater of Operations: Multiple Regions



A new combat flight simulation game based on the Apache AH-64D Longbow attack helicopter. The player takes on the role of three distinct Apache crews, each dealing with what at first appears to be local enemy activity, but ultimately turns out to be part of a larger plan. Gameplay weaves back and forth between the three crews as the action and danger escalate. Apache: Air Assault features 16 multi-stage missions involving air and ground strikes off the coast of Africa, the mountains of the Middle East, and the jungles of Central America, each meticulously created using high-resolution map data taken from real-world satellite imagery. (gaijinent.com)



## F-22 Lightning 2



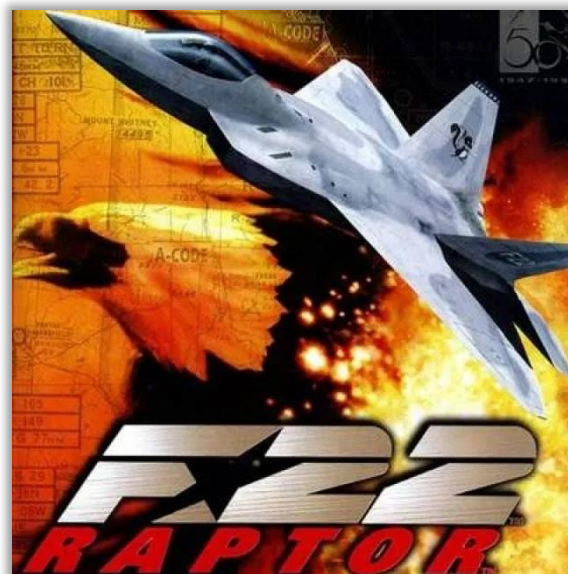
-Developer and Publisher: NovaLogic/ Operating System: Dos

-Year of Publication: 1996/ Theater of Operations: Multiple Regions

I played and completed this game in 2001. In this game the player can choose to fly single missions or a full campaign. The mountains and valleys are accurately displayed, the enemy's AI is good. The aircraft features realistic retractable landing gear, movable steering ailerons, weapons bay doors and air brakes. The player can review and watch the aircraft from different shooting angles, as well as review the weapons of various friendly or enemy forces, air, sea and land, and you can also get all the information you need from the standard HUD screen and advanced radar. (gamefabrique.com)



### F-22 Raptor



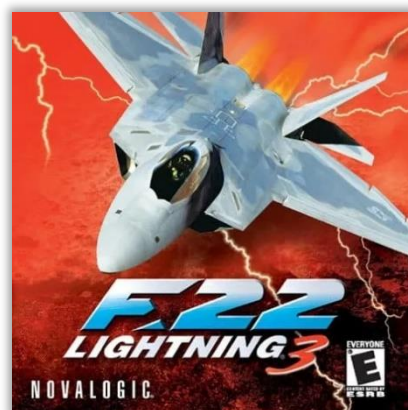
-Developer and Publisher: Novalogic/ Year of Publication: 1997

-Theater of Operations: Multiple Regions

Similar to the MiG-29 and F-16 (1998) games, this game is based on the same design base, and is also considered the successor to the previous game (F-22 Lightning 2) and more realistic. There is a standard 20mm cannon and two types of air-to-air missiles: the radar-guided AIM 120C AMRAAM and the heat-seeking AIM-9X Sidewinder. There is only one type of air-to-ground munition: the Joint Direct Attack Munition (JDAM), a satellite-guided bomb that rarely misses its target. Damage to the aircraft can cause malfunctions in various systems, there are 13 systems that can be damaged that directly affect the aircraft. For example, a damaged fuel system means your fuel will run out much faster. A damaged aileron or elevator will make your aircraft harder to control, and so on. The F-22 Raptor consists of five linked campaigns that include seven to nine missions each, six individual training missions, and 14 additional individual missions. That's 61 missions with a wide variety of missions. The campaigns take you all over the world in all kinds of different terrains: desert, jungle, snow-capped mountains, etc. (gamefabrique.com)



**F-22 Lightning 3**



-Developer: Novalogic/Publisher: Global Star Software

-Year of Publication: 1999/Theater of Operations: Multiple Regions

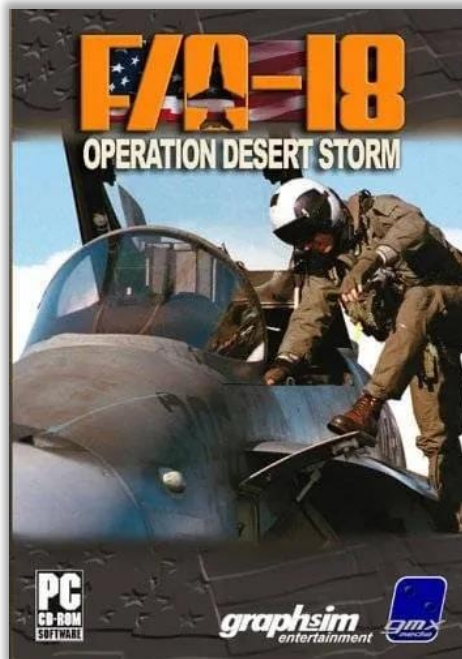
The game features three game modes: Quick Mission, Campaign, and Multiplayer. Quick Missions are a great way to practice and test your weapons. Campaigns consist of a series of missions across tropical, desert, and snowy/mountainous terrain. NovaLogic has built in a comprehensive autopilot feature that pilots use to navigate through all the challenging missions from takeoff to refueling to landing. When the battle heats up, turn off the autopilot and radar and then turn, spin, and avoid enemy SAMs and air-to-air missiles. Shooting down enemy aircraft with Sidewinders and AMRAAMs eventually becomes a breeze since the aircraft's weapons are hidden in pods inside its fuselage. Smart bombs are for the geeks. In this game you can test the dumbest bomb ever, the B61 tactical thermonuclear bomb, and here we will forget the term "surgical strike" as the detonation of this bomb creates a no-go zone within a radius of three miles from the point of explosion. (gamefabrique.com)

[Download the game guide](#): After downloading the file, rotate the view to the left.





## F/A-18 Operation Desert Storm



- Developer: Application Systems Heidelberg
- Publisher: GMX Media/ Year of publication: 2005
- Theater of operations: Operation Desert Storm

Fly over a thousand square miles of stunningly realistic terrain based on satellite imagery and see through the eyes of the pilots who sailed during Operation Desert Storm. Realistic simulation of the flight dynamics of the F-18 Hornet. About 30 missions involving combat operations from aircraft carriers. Advanced enemy aviation and artificial intelligence for SAM operators. (gamesindustry.biz)

[Download Game Guide](#)



## Tom Clancy's HAWX 2



-Developer and Publisher: Ubisoft/ Year of Publication: 2010

-Theater of Operations: Multiple Regions

-Available Aircraft: A Large Number of Aircraft

A stunning simulation of modern air warfare, where the player, as a member of the top-secret H.A.W.X group, can fly different generations of aircraft that include advanced technology. Fly as an elite tactical pilot, go head-to-head in close-range dogfights, take off and land from land and sea bases, conduct precision night bombing, track your targets with silent drones, use mid-mission refueling. Actual high-resolution commercial satellite imagery from GeoEye™ ensures an amazing degree of realism. (ubisoft.com)

The game allows takeoff, landing and occasional mid-air refueling. Landing allows the player to rearm. The game has changed the focus from fire-and-forget missiles to operator-guided or unguided munitions. New weapons include rockets and precision bombs. To further discourage the player from using guided missiles, some enemy aircraft will constantly dispense an infinite number of flares, leaving machine guns as the only option. (wikipedia)



## Strike Fighters: Project 1

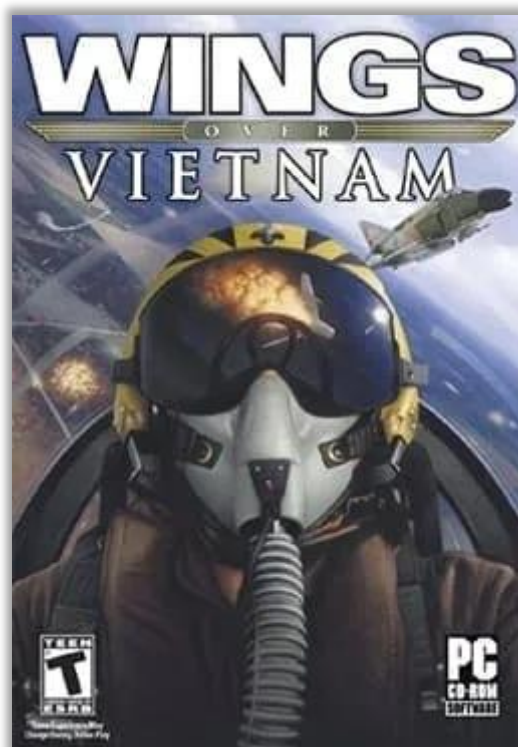


- Developer: Third Wire Productions/Publisher: Strategy First
- Year of publication: 2002/Theater of operations: Middle East
- Available aircraft: A-4/F-4/F-100/F-104

The game is based on a fictional 1960s era when guided missile technology was still in its early stages of development, giving you control of four legendary American aircraft from that era covering a variety of air superiority and ground attack roles. The aircraft design is excellent inside and out with accurate color schemes, decals, a great 3D cockpit and fully functional instruments. The player will engage in dogfights with Soviet aircraft such as the MiG-17, MiG-19, MiG-21, Su-7, Tu-22p supersonic aircraft and the An-12 transport aircraft. (oldpcgaming.net)



### Wings Over Vietnam



- Developer: Third Wire/ Publisher: Destineer, Bold Games
- Published: 2004/ Theater of Operations: Vietnam
- Available aircraft: A-4/ A-6/ A-7/ F-4/ F-8/ F-100/ F-105

This game is based on the design of the previous game (Strike Fighter P1) with significant improvements in terms of maps, aircraft, simulation and more. In this game, the Vietnam



map is slightly reduced so that there is less time to fly to the target, and also because air-to-air refueling is not included in the game. According to the Vietnam theater, the player will face threats from surface-to-air missiles (SAMs), primarily the SAM-2, and a variety of deadly anti-aircraft artillery (AAA). (wikipedia.com). In this game (like most simulation games) the player can choose between easy simulation or hard simulation mode, and accordingly the player can gradually train on the game by facilitating the simulation (in terms of flight, weapons and surrounding environment) and then moving to the more realistic hard simulation.



### Wings Over Europe



-Developer: Third Wire / Publisher: Bold Games – Empire Interactive

-Year of publication: 2006

-Theater of operations: Germany

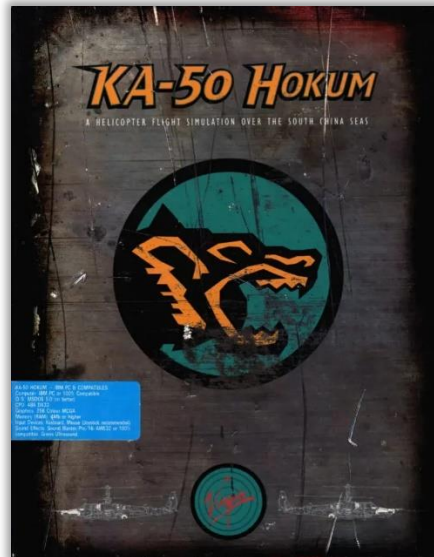
-Available aircraft to the player: 12 different aircraft.

This game covers the period from the sixties to the mid-eighties during the Cold War. This game is also based on the design base (Strike Fighter P1) with significant improvements in terms of maps, aircraft, simulation, etc. In this game, the map of Germany is slightly reduced so that there is less time to fly to the target, and also because air-to-air refueling is not included in the game. In this game, the player can choose from one of the three main campaigns available, and the player will also face threats from Soviet aircraft and air defenses in East Germany. Some types of aircraft that the player will fly can also use guided bombs (GBU-12) and guided missiles (AGM-65). (wikipedia.org)

This game was later turned into an open source game, where players can add and fly a large number of aircraft from different countries, which greatly expanded the possibilities and scenarios of the game.



## KA-50 Hakum



- OS: Dos/ Developer: Simis Limited
- Publisher: Virgin Interactive Entertainment, Inc./ Year of publication: 1995
- Theater of operations: Indonesia
- Available aircraft: (Ka-50), (Mi-8), (Ah-1), (Lynx).

It is an old game that works on the (DOS) operating system. In this game, you are the commander of a helicopter carrier that roams Indonesia with a group of four helicopters available on it. These helicopters are the Ka-50 (attack), Mi-8 (attack/transport), Westland Lynx (attack/transport/anti-ship), and AH-1 (attack). Here the player can plan missions in terms of the schedule and choose the appropriate aircraft for the mission, which is based on previous reconnaissance flights. Missions range from intercepting pirate boats, escorting and securing ships through pirate waters, providing air support, landing a commando battalion in the jungle, rescuing pilots behind enemy lines, and more. (mobygames.com)

## Top Gun: Combat Zones



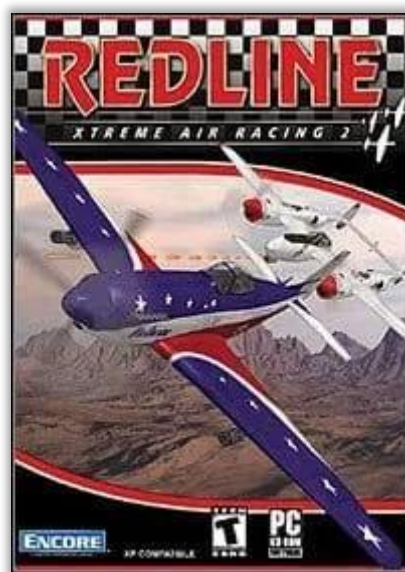
- Developer: Titus Interactive Studio/Publisher: Mastiff
- Year of publication: 2001 (2003 for Windows)
- Theater of operations: Vietnam/Middle East/Arctic Circle
- Available aircraft: F-14/ F-18- F-22/ F-4/ F-35/ YF-23/ Osprey/ Harrier

In this game, the player can perform many missions such as: destroying air, ground and sea targets, providing air support for evacuation, or escorting allies. Each mission includes a time limit. The player's weapons include bombs, a machine gun, and several types of missiles. The map informs the player of nearby enemies. The player can view the game from inside the cockpit, or can choose from several external views of the aircraft. Points are awarded to the player for actions such as flying close to buildings or performing certain aerial maneuvers. With the Quick Start option, the player can create a custom mission with selectable settings such as the number of enemies and the playing location. (wikipedia.org)





### RedLine: Xtreme Air Racing



-Developer: Victory Simulations/ Publisher: Encore Software Inc.

-Year of publication: 2003

-Theater of operations: United States, Alps, England, Arctic, and Southeast Asian islands

-Available aircraft to the player: 70 aircraft

It is primarily an air racing game in which the player competes with other competitors in the sky. Races include approximately eight 5 km long courses, with up to 16 participants, and the game contains several modes such as: single race, free flight, racing championship, and air combat. We can choose from 70 aircraft including dozens of World War II aircraft that can be

modified to the player's liking (changing the engine, for example). Each aircraft has a specific simulation model that seems to reproduce the actual behavior of the aircraft in the sky. Air combat between aircraft can also be carried out using machine guns. The game also contains an attractive encyclopedia of the aircraft in the game, with their history and detailed technical data. There is also a commentator to comment on the races within the game. (gamepressure.com)



## Ace Combat 2



- Developer and publisher: Namco / Year of publication: 1997
- Theater of operations: West Coast / United States
- Available aircraft to the player: 24 different aircraft

I ran this game on Windows using a dedicated program for running PlayStation games, and it is the second game in the (Ace Combat) series that I have played after (Ace Combat 3). In this game, the player controls one of 24 different fighter planes across 21 different missions, each with different objectives to complete, including intercepting an enemy squadron, destroying a specific aircraft carrier, or protecting an airport from enemy fire. There are two options in the game that determine the difficulty of the simulation, "Beginner" and "Expert". In the "Beginner" level, the player plays in the less realistic (Arcade) mode of the simulation, and with the "Expert" level, the player can perform realistic flying movements such as rolls. The game was a commercial success, selling over 500,000 copies in Japan by May 1998. It was praised by critics for its gameplay, graphics, variety of missions, and improvements over previous versions of the game. Some also consider it one of the best flight simulation games on PlayStation. (wikipedia.org)



### Ace Combat 3



-Developer and Publisher: Namco/ Year of Publication: 1999

-Available Aircraft: 23

The first game in the Ace Combat series that I played on my relatives' PlayStation. This game was based on the design and simulation of the previous version (Ace Combat 2). Plot of the game:

The events of the game take place in a (fictional) world where absolute economic power and multinational corporations have replaced government and the rule of law. The largest of these corporations are Neucom Incorporated and General Resource Limited, two fierce competitors who have competed against each other for power for many years. Despite peacemaking efforts by the Universal Peace Enforcement Organization (UPEO), war eventually breaks out when Neucom launches large-scale strikes against General Resource, forcing UPEO to deploy a series of warplanes to end the rivalry between the two companies and bring an end to the war. In the game, the player pilots one of 23 different aircraft divided into four separate battle groups and must complete a selection of the game's 52 missions depending on their group. These missions range from destroying enemy aircraft squadrons to protecting a base from enemy fire. One mission involves flying a spaceship, with one mission taking place above Earth in outer space. (wikipedia.org)





## Ace Combat: Assault Horizon



-Developer: Project Aces/Publisher: Bandai Namco Games

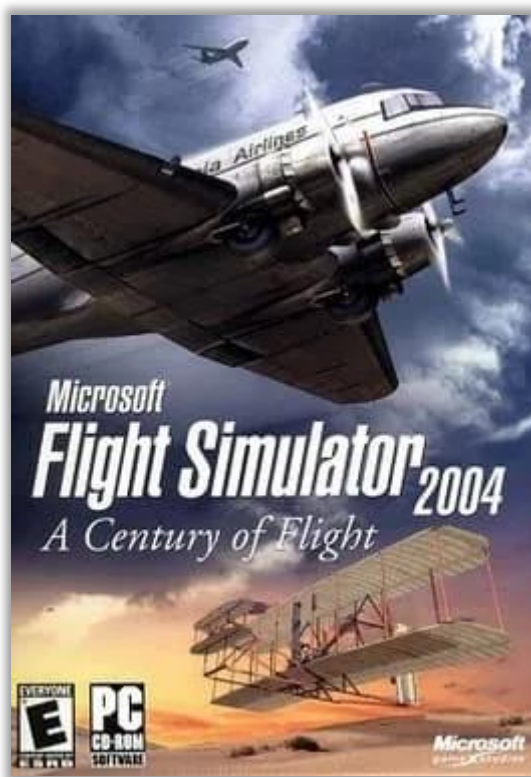
-Year of publication: 2013 (for Windows)

-Available aircraft: A large number of aircraft

The game itself takes place between 2015 and 2016, in locations in East Africa, the Middle East, Russia, and the United States. The game features two control modes: "Optimum", which prevents the player from performing a full roll (Arcade mode), and "Original", which gives players full control of the aircraft. The game received generally positive reception upon release, with critics praising the game's settings, graphics, and soundtrack. Over 1.07 million copies were sold worldwide upon release. Most of the game's (virtual) protagonists are members of the United Nations Task Force 108, a joint NATO-Russian military organization primarily assigned to deal with an insurgency spreading in East Africa. (wikipedia.org)



## Microsoft Flight Simulator 2004



-Developer and Publisher: Microsoft Game Studios

-Year of Publication: 2003

-Available Aircraft: 24 (9 vintage and 15 modern)

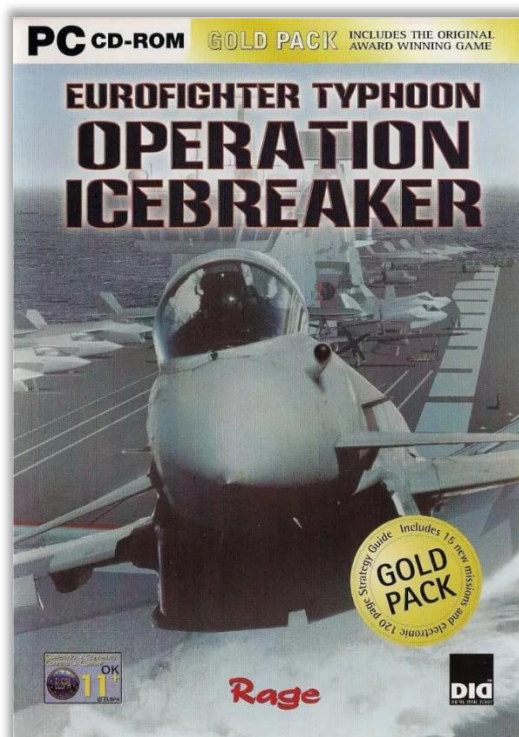
I purchased this program in 2005, and (in that time) the program comes in the form of five CDs that are fully installed on the computer. This simulation program and game was released to mark the 100th anniversary of the first flight by the Wright brothers. The program included an improved weather engine that provides realistic 3D clouds and realistic local weather conditions for the first time. The program also allows users to download weather information from actual weather stations, allowing the simulation to synchronize weather with the real world. Other improvements from the previous version (FS2002) included better ATC communications, GPS equipment, an interactive virtual cockpit, and more miscellaneous elements such as hangars, street lights, silos, etc. The game sold 670,000 copies, earning \$26.8 million in the United States alone by August 2006. (wikipedia.org) The game was later turned into a full-fledged open-source simulation program, allowing a large number of enthusiasts within the aviation community to design a large number of addons to the game such as aircraft (civilian and military), maps, airports, and various updates. The latest version

of the Microsoft series (Flight Simulator 2020) appeared on (August 18, 2020) and supports virtual reality technology (VR).

-Flight training: The game contains an entire section dedicated to flight training from scratch, all the way to advanced levels of flying. By connecting the game to the Internet, you can obtain complete materials (documents, instructional manuals, and videos) from licensed aviation professionals. If you want to become a pilot, many flight schools recommend that their students use Microsoft's series of simulators on a regular basis. The training is also beneficial for current pilots who want to maintain their flying skills. You can practice flying at night, flying in bad weather, dealing with crashes, and more. Real pilots can also practice flying in advance on virtual routes in the game that mimic real-world routes, all using real-world flight plans and weather. The learning center is supported by comprehensive documentation including a guide to the main topics, links to flight lessons, manuals and other useful materials. (flyawaysimulation.com) (Adapted by the writer)



## EuroFighter Typhoon: Operation Ice Breaker



-Developer: Digital Image Design / Publisher: Rage Software

-Year of publication: 2003 (2001) / Theater of operations: Iceland

In my opinion, this game, as well as Lock on: MAC, partially includes scenarios and hypothetical events that later came to life in various forms and titles, and I played and finished this game in 2004. The scenario for EF-2000 assumes a conflict between NATO and Russia in 2015 over Iceland. The game contains two possibilities to start playing, either directly where the player finds himself in the air facing enemy aircraft, or the player chooses six pilots from a group of pilots belonging to several countries within NATO, then the player begins to carry out the missions.

From ground airports or aircraft carriers, here the player has the freedom to choose any pilot at any time, as this game is distinguished from other flying games by the close-to-real simulation of the lives of pilots during wars, and here the game takes place in real time (24 hours a day that can be accelerated according to the player's desire) during which the pilots can be seen in different situations: in billiard halls, while sleeping, in the medical clinic, while receiving mission instructions with the rest of the pilots or individually, while preparing the plane for takeoff, and if a pilot successfully carries out his mission and returns to his base, he can be seen receiving praise from the commander, and if the mission fails or gets out of

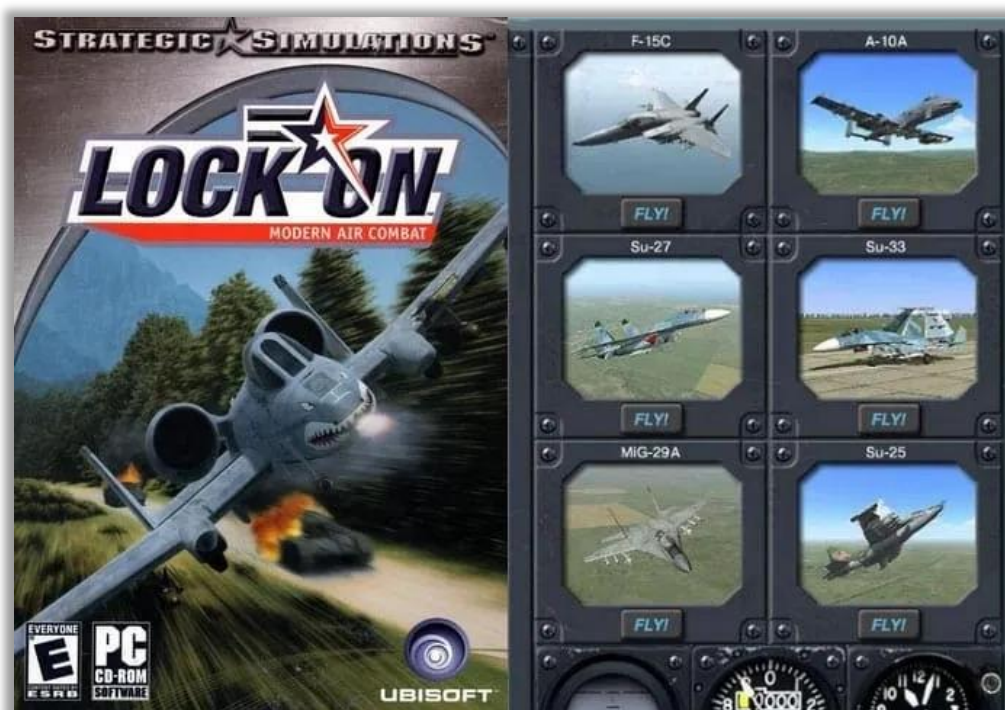


control, the pilot can be seen receiving blame from the commander and the matter may reach imprisonment. If the plane is hit and shot down, the pilot may die. If he succeeds in getting out of the plane, he may remain for a period of time on land or in the water. Here, the cases vary between being rescued by friendly units and returned to receive praise, reprimand, treatment, or imprisonment, or being killed or captured by enemy forces and taken to prison. Here, too, the cases vary between his death, being investigated and then killed, being freed, or escaping from captivity. All these events and many more can be experienced by the player with six pilots he chooses in advance to carry out specialized operations that include engaging in air clashes using advanced (Asaram) and (Meteor) missiles, as well as targeting enemy ground and naval forces (ships and submarines) using bombs and guided missiles (such as Brimstone) and unguided missiles. The missions also include dealing with intensive attacks by large numbers of drones, bombers (Tupolev), attack aircraft (Mig-27 and Su-25) and combat aircraft (Mig-29, Su-27 and Su-35), in addition to carrying out missions to destroy enemy sites and escort and cover missions for friendly aircraft such as (Harrier, Viggin, Gripen, Hercules, Lancer, Chinook, Lennox and others). This game may not be very strong in terms of graphics, but it certainly gives the player, after completing it, a unique opportunity that is rarely found in any other flight simulation game. The game also features the unique experience of the integrated helmet display (HMD).

[Download the game guide](#): After downloading the guide, rotate the view for the file



## Lock On: Modern Air Combat



-Developer: Eagle Dynamics/ Publisher: Ubisoft

-Year of publication: 2003/ Theater of operations: Western Caucasus and Crimea

-Available aircraft for the player: F-15/A-10/Mig-29/Su-25/Su-27/Su-33

I will put a detailed description of this game in order to avoid a long description in the next two versions (FC2/ DCS). I played this game between 2005-2013, i.e. for (10) years that included thousands of flight hours and watching various scenarios for air, sea, land and air defense weapons, and it is thus the game I have tried the most. In this game, you can fly six aircraft (4 Russian: Su-25/Su-27/Su-33/Mig-29) and (2 American: F-15/A10), as the game includes a dedicated training program that includes most of the basics of flying, combat, and dealing with different situations. You can also carry out air campaigns dedicated to several aircraft, and you can design dedicated missions or simply watch different combat scenarios between different land, sea, and air weapons in different combat environments and weather conditions...etc. The game also presents an encyclopedia that includes all types of weapons and equipment available in the game with the characteristics of each. As for the Mig-29, there are three models in this game (A/S/G), and the German version (G) is similar to the version (A), as it can be equipped with a 30 mm (Gsh) machine gun with 150 rounds, and there are (6) weapon hardpoints under the wings that can be loaded with air combat missiles (R-60/R-73/R-27R,T) and unguided air-to-surface missiles such as (UB-8 launchers and S-24 missiles)

and unguided bombs: free-fall (Fab), fuel-air-explosive (ODAB), cluster (Rbk, KMGU), incendiary (ZAB), flare (SAAB) and anti-runway (BETAB), and the plane can carry up to three additional fuel tanks (one of them under the fuselage), and the plane contains an infrared search and tracking system (IRST) to detect, track and deal with air targets, and this system is connected to the pilot's helmet and thus can be used effectively in clashes Close air combat using (R-73) missiles. As for the (S) model of the aircraft, in addition to the above, the aircraft can be loaded with active air combat missiles (R-77) and (R-27ER, ET) missiles with a longer range than its predecessors, in addition to the possibility of using an electronic jamming device to mislead enemy radar-guided missiles. The Su-27 is the plane I have flown the most out of all the planes in all the games I have tried, and the version in the game is dedicated to air supremacy, as this plane (of the larger class compared to the MiG-29) is characterized by a long range and a longer stay in the air, and the plane can carry weapons under 10 hardpoints (6 under the wings and 4 under the fuselage), as the plane contains a machine gun similar to the MiG-29 and can also be loaded with missiles (R-73/R-27R, T, ER, ET, EA, EM), and the plane contains the (IRST) system, and it can also be equipped with electronic jamming pods for enemy radar-guided missiles that are carried under the outer ends of the wings.



*The picture after carrying out a mission at a long distance in which all the aircraft's weapons were used, after which the aircraft was hit by a missile that affected its ability to continue and then ran out of fuel, so I had to make an emergency landing in an open area where I took the pilot out of the aircraft the moment its wheels (which later collapsed) touched the ground so that the aircraft could continue and then stop in this position.*

As for the (Su-33) aircraft, it can take off and land on the aircraft carrier (Admiral Kuznetsov) and is also distinguished by the possibility of refueling in the air via (IL-78) aircraft or other (appropriate) supply aircraft of various countries. The aircraft can carry weapons under (12)



hardpoints (8 under the wings and 4 under the fuselage). In addition to everything we mentioned about the (Su-27) aircraft, the (Su-33) aircraft can carry out ground attack missions with unguided weapons (the same weapons as the MiG-29, in addition to the S-13 launchers and S-25 missiles) or naval attack missions using the same previous weapons as well as using the (KH-41) guided missile. The Su-25 is considered a very practical air support aircraft, as it has a built-in aiming device in its nose to help aim and direct weapons to hunt down targets (often within the pilot's range of vision). The aircraft can carry weapons under (10) hardpoints under the wings (some of which are multiple, which increases the number of weapons carried). Here, the aircraft can carry light air combat missiles (R-60) to protect itself as well as to target hovercraft and aircraft that cover enemy forces and fly at low speeds. The aircraft can also carry unguided air-to-surface weapons (the same as the Mig-29 and Su-33) as well as guided air-to-surface missiles against radars, ships, and various land and sea targets (Kh-58/Kh-25ML, MP/Kh-29L). The aircraft can carry a radar jammer and up to (4) fuel tanks. The American A-10 is similar to the Su-25 in terms of the missions it performs. The version in this game is of the A type, which can be equipped with AIM-9X close-range air-to-air missiles. It also has a built-in day/night targeting pod connected to a screen inside the cockpit that allows the pilot to track and engage various targets. The aircraft can carry weapons under (10) hardpoints (some of which are multiple, which increases the number of weapons carried). This includes free-fall bombs (MK82/83/84), cluster bombs (MK-20), unguided rocket launchers (Hydra), and laser or TV-guided missiles (AGM-65). One of the most important features of the aircraft is its 30 mm seven-barreled Gatling machine gun with 1,500 rounds (fire rate of 70 rounds per second). The aircraft can also be refueled in the air. The F-15 is the American counterpart of the Su-27, and the version in this game is of the C type, which is designed for air supremacy. Here, the plane can carry up to three additional fuel tanks, as well as a 20 mm machine gun and the Active radar-guided AIM 120C AMRAAM and the heat-seeking AIM-9X Sidewinder and the semi-active radar-guided AIM-7P Sparrow air combat missiles under (8) hardpoints. For example, the plane can, using its advanced radar (in a certain period previously), track and deal with (8) air targets at the same time using AMRAAM missiles (AIM-120). The plane can also refuel while in the air. Later, this game was transformed into an open-source game, where players can use certain programs to make modifications to the game, especially replacing existing planes with additional planes (from the game or outside it). Here, the player can try out all types of planes (fighters, bombers, helicopters, imaginary planes, etc.). For example, it is possible to fly a MiG-31 plane and use its long-range missiles (R-33/37), and use Phoenix missiles (AIM-54C) on board an F-14 plane, as well as take off and land with F-18 and Mig-29K planes on board aircraft carriers. That is, the player can now design additional scenarios and use the game with greater capabilities that he was not

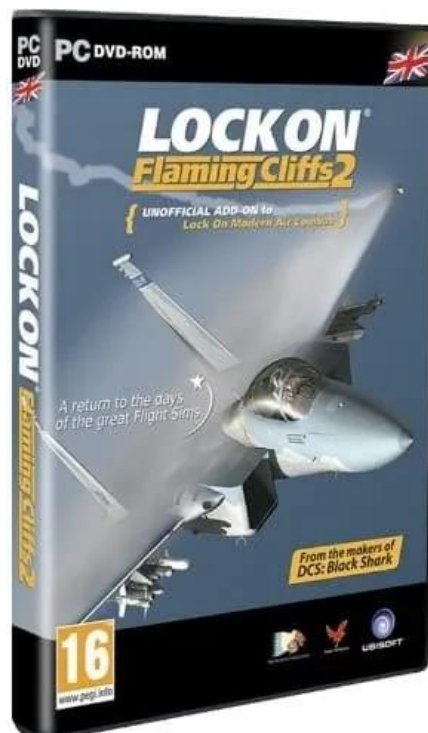


able to do within the limits of the game available previously (he was only able to watch it). Finally, I remember that I tried in the beginning with this game to Arabize it, but this attempt was not crowned with success due to limited resources and lack of support.

### [Download Game Guide](#)



### Lock On: Flaming Cliffs 2





[Farhan2030.com](http://Farhan2030.com) | [Flanker.ae](http://Flanker.ae)

-Developer: Eagle Dynamics/ Publisher: Ubisoft

-Year of publication: 2010

-Theater of operations: Western Caucasus and Crimea

-Available aircraft for the player: F-15/A-10/Mig-29/Su-25/Su-25T/Su-27/Su-33

It is a game developed from the game (FC) which in turn was developed from the game (Lock on: MAC), and here I will not elaborate on the explanation as I have covered most of the points that I remember from the previous game. In the current version (FC2), you must first download the previous game (Lock on: MAC) and then purchase the version (FC2) and install it to start playing it (I got the game from a friend in 2010). The most important modifications in this version: Graphics modification, many addons to the game, new missions for the aircraft, from my experience I remember: for the (MIG-29s) aircraft it is now possible to equip it with six active missiles (R-77), and for the (A-10) aircraft the upgraded version (C) was added which I was unable to fly it due to a bug in my version of the game, for the (Su-27) aircraft it is now possible to equip it with unguided bombs similar to the (Su-33), and one of the most important add-ons to the game is the (Su-25T) aircraft, which is upgraded from its predecessor, as the new aircraft carries a larger amount of fuel (the aircraft's main fuel tank has been expanded), and the aircraft has also been equipped with an advanced daytime targeting system integrated into the front of the aircraft connected to a screen in the aircraft cockpit that allows the pilot to monitor, track and engage targets from distances beyond the pilot's vision and using guided missiles the same as the previous Su-25 missiles in addition to the (S-25L) laser-guided missile and the (Kh-29T) TV-guided missile and (Vikhr) missiles mainly anti-armored targets and personnel concentrations (can be used to target low-speed air targets), the aircraft can also carry TV-guided bombs (Kab-500kr) of the fire-and-forget type, a night aiming pod can be added under the fuselage, and the aircraft can carry air-to-air missiles (R-60/73). This game was later developed into the version (FC3).



### DCS: Digital Combat Simulator



-Developer: Eagle Dynamics/ Publisher: The Fighter Collection

-Year of publication: 2008

-Theater of operations: Western Caucasus and Crimea

-Available aircraft to the player: SU-25T/ TF-51 (the rest of the aircraft and simulators come as paid products)

The Digital Combat Simulator or (DCS) is the result of successive developments of the game (Lock on), and it is the best flight simulator currently available in the world, and it is divided into (DCS World) which is free and contains the basic map of the Caucasus as well as the ability to fly the aircraft (Su-25T, TF-51), and (DCS Series) which are additional separate

products, in this simulator the aircraft (Su-25T) and (TF-51) were made available for free to players, and the rest of the aircraft were converted into separate products that can be purchased through the game's website and added to the simulator. There is also the game (Combined Arms) to simulate ground weapons and air defense weapons included in (DCS), and there are also a large number of additions in the form of products (maps, airports, etc.). This simulator features highly realistic simulation and graphics, and also supports virtual reality (VR).

DCS World is widely known as a “study card” – players must take care to learn how to operate the aircraft just like a real pilot would. The aircraft in DCS are meticulously modeled, including interactive buttons and switches in the cockpit, accurate flight dynamics from real-world data, and even often unique sounds. (wikipedia.org)

It should be noted that this game was the last one I completed in full (all Su-25T missions) in 2015, after which I replayed some old games in 2016 and 2017 before retiring from flight simulators.





## New Games

### Virtual Reality (VR) and Augmented Reality (AR) Simulations



#### Virtual Reality Simulation

Later, new games appeared that support Virtual Reality technology, and thus constituted a qualitative shift in the field of simulation games. These are games that I have not tried, including: (Microsoft FS2020), (Helicopter Simulator VR 2021), and (VTOL VR), which are explained in the following video:



## Flight Training by using Augmented Reality (AR)



Augmented reality (AR) differs from virtual reality (VR) in that VR is a completely artificial environment, and in this artificial environment you cannot see the real world. But in augmented reality, you can see everything in the real world and add artificial objects to it (like Pokemon Go game), and in the case of using augmented reality for flight training, these artificial objects (such as airplanes) can be driven by artificial intelligence or by operators on the ground or in the sky, and here the pilot can in just one mission train to refuel and then join a virtual flight squadron and then enter a virtual battle, or any scenario you can think of (skiesmag.com), and (RED 6) company has been designing and testing the Airborne Tactical Augmented Reality System (ATARS) since 2018 on a Berkut 540 test aircraft, and one of the most important benefits of this system is reducing the costs of training pilots in addition to creating countless flight scenarios, which prompted the US Army in 2021 to fund the company (RED 6) with \$ 70 million (for five years) to start integrating and testing the augmented reality system in pilot training (red6ar.com), and the following video explains the above:





Dear reader, if you find this content useful, please consider supporting us by choosing any of the following means of support, in accordance with your capabilities:

1-Sharing this article.

2-Buying my book: "[Introduction to Balance Theory](#)".

3-Support us directly through the following page:

[Support Us](#)

4-Review our services through the following page:

[Our Services](#)

**THANK YOU**  
for your support