

AVSIM Freeware Aircraft Review

Section F8

F-86E/F Sabre

Baseline Package (Expansion Available)





Product Information		
Publisher: Section F8		
Description: Military Aircraft Add-on.		
Download Size: 51.4 MB	Format: Download	Simulation Type: FS2004
Reviewed by: Alexis Esguerra AVSIM Contributing Reviewer - December 7, 2008		

Introduction

The air superiority icon of the Korean War. Care to take a guess? It's an age-old debate, and it usually boils down to choosing between two planes. One is the MIG-15, a classic and extremely capable Soviet-made fighter that shocked the allies with it's abilities; the second is the plane that ended up being it's primary adversary in the skies.

That plane would be the F-86 Sabre, North American's six-shooter that wrestled air superiority away from the MIG-15. Generally considered America's first successful combat jet fighter, the single engine F-86 established a whole new set of standards in its day. It may still be hotly argued whether it was the design of the machine or the pilot training & tactics that contributed to the Sabre's success over Korea in the 1950's, but the end results cannot be contested. The F-86 ended up being the victor; with a kill ratio of upwards to an early estimate of 14:1 over the MIG (recent estimate are much less).

I was perusing the web when I came across Section F8 and new team of developers that had settled on the Sabre for a project emulating this symbol of America in the air war over Korean. Its status as a freeware project piqued my interest further. Let's step back in time to the early days of jet combat and see what they've got here.

Installation and Documentation

Installation is a no brainer for the Sabre. The readme file clearly spells out how to extract the contents of the zipped file into your FS9 directory using such utilities as Winzip, however, by going the more rudimentary 'click and drag' route, this

works equally well.

As for documentation, you'll find a couple of HTML files (checklist and reference) and one PDF document (flight manual) in the resident aircraft folder once everything is in place. I was really impressed by this trio; the 31 page flight manual provides an excellent historical view into the Sabre, as well as operating procedures and performance charts; while the Reference and Checklist HTML files will do extremely well for those who prefer to avoid the manual altogether in the haste to get airborne. The Reference file also points out some known minor issues with the package and how to deal with them (example – reloading fuel into external tanks that have been dropped will result in a comparable increase in the flight model's weight, but it cannot be used).

Let's Take A Look

As previously mentioned, there are two Sabres that come with the baseline F-86E/F package, both of them the more common E-variant. The first is Miss Joan, a USAF example assigned to the 336th FW, while the second is a Delaware ANG variant. An expansion package exists that raises the total number of F-86 variations to eleven, adding an F-model (there we go) and a couple of CL-13's (the Canadian-built Sabre) to the mix. For this review, I stuck to Miss Joan and the ANG variations.



I had no qualms to report with what lies on the outside. The reflective texture qualities are great and festooned with stencil and panel details that, while not crisp when looked at close up, give the plane a convincing appeal, especially when viewed from a distance. The cover shot at the top says it all; my wife, who happened to walk in while I was writing this review, asked when and where I had snapped a photo of 'those two planes'.

In cold and dark mode with the canopy opened, you'll find chocks in place, an engine exhaust cover plugged in, flags covering pitot tubes that actually flutter in the wind, and the pilot gone. Rather irresponsibly, he also left his helmet and parachute lying on the left wing (smirk), and I was pleased to note that helmet's appearance varies between Miss Joan and ANG.

Optionally, one can open up the gun ammo bays to peer into the 'teeth' of the F-86 - it's left side ammunition bay. With the Engine Master Switch on, the plane is cleaned up for flight, and an animated pilot is suddenly seated, all ready to go. Lastly, a well-rendered ground power unit is provided when it is time to start up the engine.

Inside, the cockpit is decidedly old tech. I've had the pleasure of flying a restored 1957 T-34 military trainer, and the 2D panels of the Sabre was reminiscent of that real-world bird. The VC cockpit is similarly old and beat up, and one step

better in terms of rendering; the textures are much sharper here than what I found outside and the legibility of the gauges and placards are extremely good.



Accuracy-wise, both 2D and VC cockpits are very close to the researched material. A couple of older photos I found revealed only the presence of an autopilot as the closest thing to an obvious inaccuracy; as this was where the TACAN control panel would be. It cannot be chalked up as a fault, though, as the developers point this out in the Reference document (there will be simmers out there, including yours truly, who prefer to have the comfort of the AP for the long hauls).

Functionally-wise, both 2D and VC cockpits are very good. Every switch, button, and rotary dial that mattered worked in both modes, as did the vast majority of the instruments. The noted exceptions are status indicators for flaps (which I could not find) and gear (which is present, but does not work). Offsetting this, Section F8 coded the status of both items, along with speed brakes, to be displayed in the upper-left corner of the screen.

A Real Screamer

Admittedly, I have never heard a F-86E in all its true glory (at least not close up), but the central item of the sound set, the J-79 engine, does have a certain degree of credibility to it. If working with old 707s, 727s, and DC-9s has taught me anything, it's that early jet engines were loud, and the one in this Sabre certainly has that characteristic. It also shared the era's penchants for being one smoky powerplant, and having a rather slow spool up time (especially from IDLE to 63%), two facts that the developers included.

I would be remiss not to mention that F8 also included a ground power unit, which was historically required to start this aircraft. It too is also realistic in its note.

Outside of the engine, there is the usual garden-variety sound set - the whine of the landing gear, switch clicks, the ticking when a dial is spun. All are realistic in their rendition, not overdone, but not underdone either. A good example is when the engine is running and one opens the canopy; the volume level rises significantly, which is what I would expect from any like scenario in the real world.

I also opened up the canopy in midair for the sake of trying, and was rewarded with the sound of the air screaming by. It may not set a new standard, but it certainly proves that the developers went the extra few yards for the sake of authenticity.

Flying The Sabre

After all the inspections and researching, it finally came down to loading up the Sabre for its first flight on my PC. Setting up at my home airport, I opted for the aircraft in its default configuration – full mains with two drop tanks. Throwing the external power switch to on brought the presence and the reassuring hum of the ground generator cart off to my left side. Time to rock and roll.

Starting the Sabre's J-79 was a rather interesting exercise, and strongly reminded me of watching the same procedure in a modern day F-16 Falcon. With the starter engaged and the RPM's at a predetermined level, the pilot moved the throttle out of the CUTOFF detent into IDLE and the aircraft came alive.

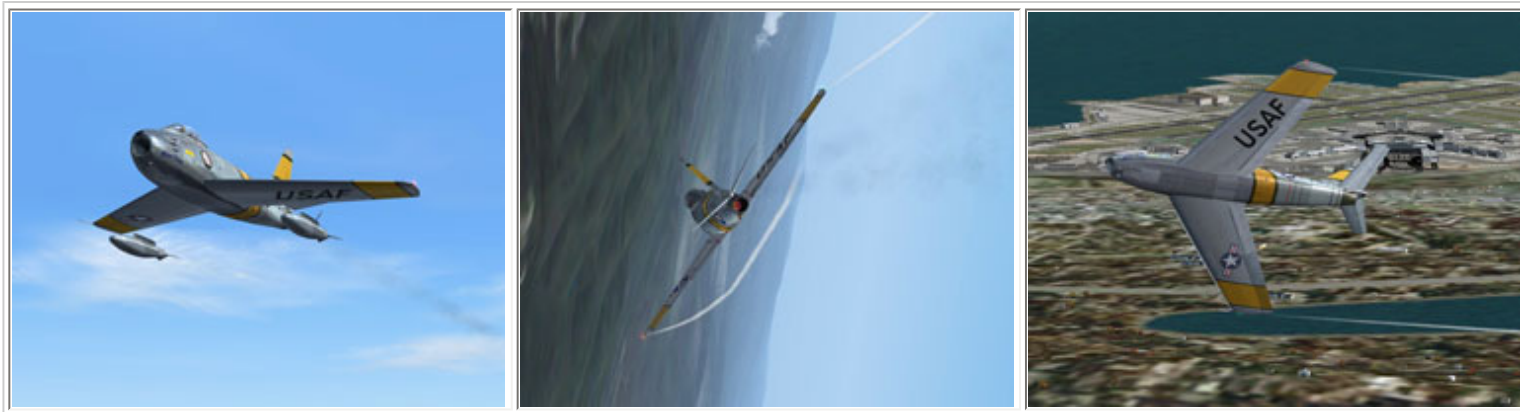
Same was to be found here in this Sabre. At 6%, I advanced the joystick's throttle a touch to 'move' the virtual one out of IDLE, then advanced it further at 9%. The turbojet howled in delight as fuel shot into the combustion chamber, compressed with air, then burned. A few seconds later, the engine took on a more guttural note as the RPM's started settling at 60% with a nice smoky exhaust shooting out the tailpipe erasing any doubts that the plane was running. Clicking off the external power and activating the generator, I had a new level of appreciation for what the developers did here.

Granted, I can't say for certain that this was a 100% accurate F-86 startup procedure, but I was left with the impression that it very well could be.



With full flaps and throttle to the firewall, the Sabre takes a little effort to get airborne, as with any early jet fighter of the day. The good news is once off the ground with some speed built up, it likes to keep things that way. Pointing the nose skyward, the cleaned up F-86 easily maintains a climb rate of approximately 5000 FPM. Very respectable for an aircraft of the era, and it wasn't long before I was at 10,000 feet above the Pacific Ocean.

I initially let the aircraft do the flying, just to see if it worked as advertised in the Reference document, but only for a few minutes. I was here to have some fun with this bird, and that is done with good old fashioned manual arm power. 'Punching off' (ie – dropping) the external tanks, which is visually simulated and seemed to affect the flight model as one might expect, I reconfigured the fuel switches, then started to 'yank-n-bank'.



In maneuvers, this Sabre handles just as I would expect. I threw the plane into numerous high performance maneuvers such as break turns, rolls, loops, immelmans, and split-S's. The F-86 has a respectable ability to maintain its energy for most of what I asked of it, but it did remind me at times that its performance envelope is that of a 50's era fighter.

Trying to emulate something more modern, like an F-22 or a MIG-29, by going vertical does bleed off the speed quickly, nor will it snap roll on a dime like an F-16. In addition, F8's reinforced in the air file that the Sabre is indeed subsonic and not intended to break the sound barrier; in a power dive from 17,000 ft MSL, the mach meter froze at approximate .90. She did overstress a couple thousand feet above the ocean at approximately 680 KTS ground speed (measured by the GPS), which I found some online historical references to as the aircraft's maximum speed.



Landings are easy enough. The manual calls for a final approach speed of 135 KIAS, but me being my typical conservative self, I preferred carrying a little extra speed (+10 KIAS). With full flaps and speed brakes out and maintaining approximately 80% – 84% N1, it worked out quite well.

It's important to not get too low and too slow as the slow spool-up speed of the engine, especially below 63%, is simulated. Easing off the power and pitching slightly nose up as I crossed the threshold, she settled down on the pavement with minimal fuss. Braking power is good enough to where airstrips of 5,000 feet are more than long enough to handle this machine.

Going Above And Beyond

I would've been more than satisfied if F8's Sabre stopped here. We've already found good visual modeling with animations, a great flight model, convincing procedures, and an awesome sound set. But F8 opted to go over the top with a number of extras that go well above and beyond what one might expect of a freeware project.

Two items are definitely worth mentioning here.

Fallible Hydraulic System



Operating the landing gear above its designed max extension speed has an interesting side effect of rupturing the hydraulic system. Lower it above 160 KIAS and you can kiss all that hydraulic fluid goodbye, in which case the struts will suddenly freeze in place once the needle reaches zero.

Emergency manual extension is the only way to get them down at this point, and it leaves telltale evidence of its occurrence with the gear doors left hanging in the breeze. It is a refreshing departure in a world where most packages' gear system, payware included, are modeled in a more simplified manner; until the plane is going slow enough to allow for struts movement, they just won't work, but eventually do.

The speed brakes also suffer from the loss of the system, although not 100% as is the case with the gear. Whether or not this is accurate, I cannot say, but there is definitely a slowdown of their extension and retraction speed, which forced me to think further ahead about their use.

Simulated Guns Operation



This feature is not new to the flight simming world, but a nice to have nonetheless. Once off the ground, I moved the Armament Mode Switch to ARM and found myself in control of the six nose-mounted machine guns via the default trigger BRAKE control. It was anything but a minor thrill to see the muzzle flash and smoke emanating from the six .50 cal's, and hear the reports resounding through the cockpit, even if I couldn't hurt anything in Microsoft's world.

Furthermore, and a first discovery in any FS9 package in this regard (at least for me), a warning horn sounds if the armament switch is left on once weight bears down on the gear.

Problems Encountered

In my tests, no issues popped up outside of what was covered in the documentation that accompanied the package. As long as one reads the manual, no surprises should lie in wait for the user.

Performance

- *Baseline Tests Parameters: resolution - 1280x1024x32 locked @ 25.0, detail / autogen levels – MAX, no traffic, no weather.*

Texture load times for the Sabre when switching through the viewing modes was next to zero. At the parameters listed above, I noted an occasional and rather measly 2 FPS drop in performance with the product running in either 2D or VC mode. Needless to say, despite everything that is going on with the Sabre running, it's impact on my system was minimal.

In Closing

It would be easy to rate F8's Sabre favorably. It was clearly a labor of love for its creators, given the combination of visual, audible, animated components, and special features, and thus hanging quite well with other military-theme aircraft simulations out there. However, I cannot stress enough that we are talking about a freeware product that is scoring at minimum on par with the payware competition. In my book, that puts this Sabre in an entirely different class.

' You Get What You Pay For,' is a term that is simply irrelevant when it comes to what Section F8 has here. Not since the

Test System
CPU: AMD 64 X2 +3800
RAM: 2.0 GB
Video: NVidia 6800XT PCI-e X2 (SLI), 256MB each
Sound – SB Audigy
Joystick – MS Sidewinder FF2
Flying Time: 15 hours

release of one TU-154 package some years back, have I ever been so floored by a package that did not require me hauling out the credit card.

F-86 Sabre is a testament to the efforts of the developers, and proves beyond the shadow of a doubt that the best things in life can indeed be had for free.

What I Like About The F-86E/F Sabre

- Everything, everything, and everything!
- Oh yes... it's FREE!!!

What I Don't Like About The F-86E/F Sabre

- Not a single, solitary thing!

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