


## review: Microsoft Flight Simulator 4.0

Reviewed by Brian J. Thomas

Type: Flight simulation.  
Publisher: Microsoft Corporation/Bruce Artwick Organization.  
Mail Order: \$39.00  
Requires: Mac Plus or greater, mouse, 1 MB RAM (2 if running System 7.0).  
IMG Rating: 

[Taxi to Runway 36](#). Stretching the limits of the term “game,” Microsoft Flight Simulator (FS4) seeks to be many things at once. Part simulator, part flight instructor, and part game, it defies a one-dimensional description. At the heart of the program is a team of design engineers at Bruce Artwick Organization (BAO) who “share an interest in aviation and computer graphics simulation.” It’s no coincidence that BAO’s engineers have pilot ratings ranging from private pilot to instrument flight instructor, and their vision of what a flight simulator is stretches from quiet sailplanes to raw-meat Learjet turbofans.

loading Flight Simulator is an easy self-install application, however don't expect the rest of FS4 to be such a cakewalk. The number of features and options is rivaled only by the size of the manual explaining them all (228 pages), yet it does a superb job at covering all of those features. Once loaded, you'll find yourself sitting on Runway 36 of Chicago's Meigs Airport in a Cessna 182, one of six stock aircraft that come ready to fly in FS4. Choosing either the mouse, keyboard, or joystick as your "hands," push the throttle to the firewall and the Cessna's 180 hp piston-engine grumbles to near-redline. Directional control is easy as you accelerate to Vr (rotation speed) and fly off toward Chicago's notorious North Side. Press the "S" key now and watch the control tower's view of your initial climb as you twinkle into the distance, and then cycle the view to Chase Plane, showing your 182 cruising high above the Sears Tower and Lake Michigan's icy depths.

Enroute now, you decide you would rather be piloting a Lear 35G above Seattle's hissing espresso bars, so you press P for pause, make a couple of menu selections, and presto!—there you are, t-fans whining in the background, accelerating to cruise as you make your approach into Sea-Tac Airport. Don't like the weather? Well, prove old Mark Twain wrong and do something about it, using the many parameters controls on the pulldown menus.

FS4 provides this kind of versatility and much more. Perhaps you've never even been in an airplane before. No problem—FS4 offers a full set of flying lessons, beginning with the basics of "attitude flying" and moving to advanced maneuvers such as power-on stalls and even aerobatics. First the "instructor" flies the lesson while simultaneously providing on-screen text instructions, then it's your turn at the controls, followed by a critique of your performance.

Of course, you're not limited to just these two aircraft either. Hop in your Schweitzer 2-32 sailplane and use computer-generated thermals to climb to a higher vantage. Or jump into the venerable Sopwith Camel biplane and buzz farmhouses. Better yet, design your own flying machine, derived from one of the two "experimental" aircraft provided, right down to such engineering details as aspect ratio and center of gravity. Like lots of power? Put 600 horses under the cowling—and then good luck flying such a beast, because your design flaws may be your undoing.

**Cleared for Takeoff.** As you may have already guessed, there's a lot more to FS4 than just flying around looking for cattle to buzz. Beginning with the manual—one of the simulation's most impressive features—both new and old aviators will find a fanatic attempt to emulate the rigors and complexities of real-world flying. The instructive sections on instrumentation, aerodynamics, and navigation rival those of the FAA itself, and the serious computer pilot will not be disappointed.

As for the flying "world" itself, FS4 covers over 10,000 square miles, including the US, Canada, Mexico, and Caribbean. FS4 pilots can embark upon long cross-country trips

culminating in an official FAA instrument approach in minimum weather conditions, and then a missed approach if the weather is just too ugly. And as for that weather, FS4 offers you full environmental control, including cloud layers, multi-level turbulence, wind shifts and frontal movements, and every pilot's nemesis—thunderstorms. About the only thing FS4 doesn't simulate is structural icing.

Graphics—a key point in any simulation—are of excellent quality, albeit somewhat sparse. While aircraft are crisply rendered, terrain features are bland and one-dimensional for the vast majority of flying territory. Which perhaps is just as well, since FS4's weakest point is redraw speed, which on anything less than a Ilsi (68030 20 MHz) in color is choppy flying at best. On a modular (B&W) Macintosh the redraw speed may slightly improve, but the poor quality of the one-bit graphics makes the scenery difficult to view, and combined with a 9" screen—forget it. Sounds are limited to engine ambient noise, marker beacons, and landing/crashing, but they are all high quality and remarkably accurate (except for maybe the crash noise, which sounds suspiciously like when you tap a guard rail in Spectrum HoloByte's VETTE!). Notably missing is a sound for gear retraction and extension. In real-world flying, the latter especially is a heartwarming sound indeed.

Changing parameters in FS4 is reasonably easy, relying on pull-down menus (and some key equivalents) for just about everything. As for flight controls, FS4 has gone a long way toward making a large number of variables easy to change, both with key commands and mouse-pointing. For slower Macs this is especially helpful, since changing to less complex parameters (e.g., no sounds, dynamic scenery, clouds) brings an increase in graphics speed.

**Prepare for Approach.** Despite its ambitions, FS4 manages to pull off what few games can—appeal to a wide range of pixel-bound pilots. For the beginner, the excellent manual, in-flight instruction, and ease of use all make FS4 a must-have for anyone interested in armchair aviation. For the more experienced pilot, however, much depends on personal preference. Those who like lots of action and stress in a simulation probably won't find much in FS4 to induce a sweat. The "Entertainment" features of FS4—a couple of weak leftovers from previous versions—take up only six pages in the manual, and rightfully so. I'd like to see much more development of challenging game scenarios added in the next version, perhaps situations taken right out of real life such as picking up banners from ground poles and Blue Angels-type formation flying. Maybe even—Bill Gates forgive me!—a military aircraft option where one could fly advanced combat lessons in a T-38 or similar (you can only do so much with a Lear). Or better yet, a realistic helicopter simulation—maybe a Bell Jet Ranger or Agusta.

On the technical side of my wish list, airborne weather radar, loran/GPS navigation, and more airports with instrument approaches would all be welcome additions; however, the most significant missing features are a scenery designer and a less limited aircraft designer (in FS4 you have great control over design specifications, but your aircraft will always look very much like one of the two "experimental" aircraft that come with FS4). It can be expected (based on the DOS version's success) that Microsoft/BAO will not overlook these designing features in future revisions.

**Summary.** All told, FS4 is a remarkable achievement and significant improvement over the previous version (it also holds somewhat of a record for time between versions). When compared to the few other flight simulations available for the Macintosh, it holds its ground well, and will continue to dominate the charts if only for its wide audience appeal. Version 5.0, already the talk of Vaporware Central, is a release that many followers of this unique simulation are waiting for with open checkbooks. :-|

**Pros:**

- 16 or 256 colors.
- Numerous and multi-level features.
- Excellent documentation.
- Technical accuracy.

**Cons:**

- Slow on lower-end Macs.
- Poor graphics in B&W.
- No scenery designer.