

activity eight

Radio Control Flight Simulator for Your Computer

OBJECTIVE

The senior member is introduced to a flight training software that actually uses a full-size radio controller to fly a series of aircraft on the computer.



BACKGROUND

Someone gives you a call. "Hey, there's a radio-control fly-in over at the Green Valley Park. Let's go check it out!" So you arrive and are totally shocked to find at least 300 people watching and maybe half that many working on radio control airplanes!

Radio control model aircraft has reached a high level of technology and now they have everything

from helicopters, to huge model warbirds, to scale speed jets that cost thousands of dollars. "RC" as a hobby is big business and getting started can involve a major expenditure of capital. Even the ARF (Almost Ready to Fly) models take "some" time to build and then there's the cost of the radio transmitter. Getting serious about R/C is a hobby into which a very large sum of money can be poured.

There is, however, another option and if you crash your airplane, you simply hit the "space bar" on your computer's keyboard and you are ready to fly again. It's a radio-control FLIGHT SIMULATOR for your computer. And it uses a real hand-held Futaba controller. This set up is a way for you to learn how to fly R/C airplanes, gliders, helicopters, and high speed jets complete with scenery and sound, for about one-third of what it costs to get a full-size model up and running with full radio equipment. There are several R/C simulators on the market and in this AEX activity, we are going to feature the RealFlight R/C Simulator, Generation 2. It features 19 different airplanes, 12 helicopters, 5 flying sites and over 500 adjustable parameters.

NATIONAL SCIENCE STANDARDS

Content Standard E: Science and Technology

- Abilities of technological design
- Understandings about science and technology



The author's first generation G2.



The latest controller has a USB connection or an interlink to another transmitter.

The company, Great Planes, offer the RealFlight R/C Flight Simulator in two basic versions: one is the Generation 2 and the other, Generation 2 "Lite." The Generation 2 Lite can be run on computers with a little less power than the "big boy," Generation 2.

Let's take a look at the system requirements of the Generation 2 "Lite."

- Windows® XP, 2000, ME, 98 (local administrator access required)
- Intel® Pentium® 300 or equivalent
- Dire X™ 8.1 (or above) compatible video and sound card
- 3D accelerated video card with 8 MB (or more) RAM
- 64 MB RAM
- 500 MB hard drive space
- 4X CD-ROM Drive
- Interlink Controller System Requirements
 - USB Port and a compatible FM or FM-selectable transmitter.
- The "Lite" version offers 10 airplanes, 2 helio and 3 skill levels for every aircraft.



So, if you lust for a warbird, but don't have the hundreds of dollars it takes to get one ready to fly, here's your "desktop option." Author's wife, Karen, is about to launch a P-51 Mustang. Notice the controller... with this technology, development of your flying skills should transfer directly to the flying field.

The Generation 2 "heavy" requires quite a bit more power to run its system since there are more aircraft and more detailed scenery. The requirements are:

- Window® XP, 2000, ME or 98 (again, local administrator access required).
- Intel® Pentium® 300 or equivalent (the optimum would be an Intel® Pentium® 600)
- Dire X™ 8 (or above) compatible video and sound card (optimum would be a 3D accelerated video card with 16 MB (or more) RAM (VooDoo 1 and 2 are not supported).
- 64 MB RAM (optimum would be 128 MB RAM)
- 500 MB hard drive space
- 4X CD Rom Drive

The airplanes featured in this software are created using high resolution graphics. The images are taken from actual photographs using real radio control models. The models even have exhaust and smoke, which can even be customized to the color set by the pilot.

The terrain of the flight sites includes trees, grass, buildings, rocks, and many other features that can be added, or deleted from the background. The sites can be customized with obstacles and when your R/C aircraft hits one of the "inserted" features, it does crash!



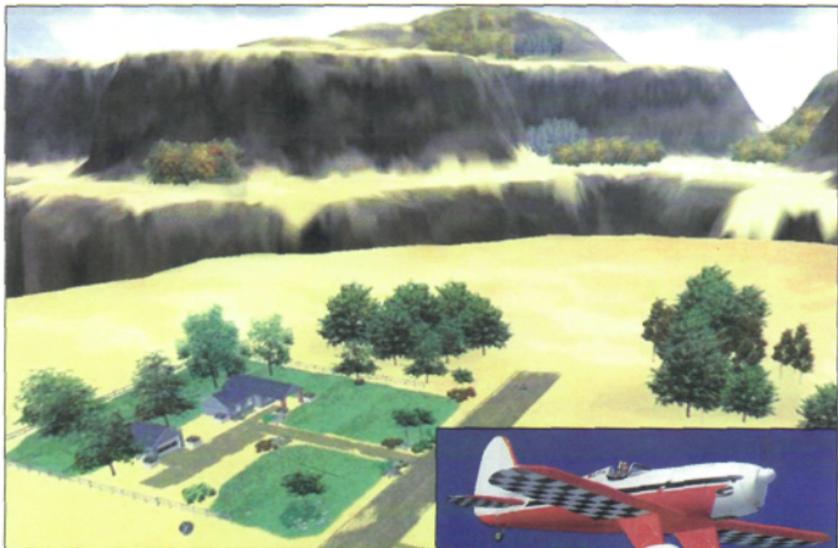
This is what Karen sees after takeoff with the gear up and flaps down.

Now, this may sound silly, but you can actually include your own MP3 sound file and have music while you're flying. There is also an "Advanced Flight Recorder"® that allows the pilot to record and play back flights. These are especially useful when you use the "onscreen transmitter" that allows you to watch stick movements during the recording. Like they say on the TV infomercial, "...amazing, but wait!"

This program has a VFI or "Virtual Flight Instructor." You can access pre-recorded maneuvers for all skill levels, and see how it's done. You can even put the transmitter on screen and see the stick movements as they happen in the maneuvers.



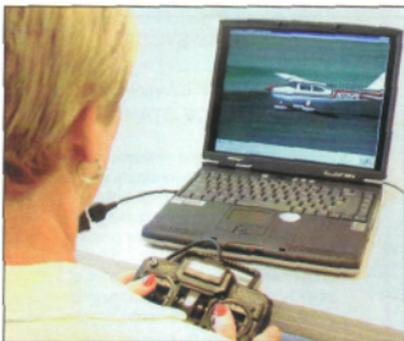
The VFI or Virtual Flight Instructor can help you in numerous ways, even flying a Jet Ranger.



The simulator offers five different flight sites.



One of the most attractive aircraft ever built is included in the inventory of simulated aircraft. This is the Ryan STA and is available, as an actual radio control model in several versions (electric or fuel) and as an ARF.



And of course, you have to try one of CAP's great service aircraft, the legendary Cessna 182.



And, if you absolutely, positively have to go fast, there's the Canadair F-86 Sabre. This one will test your reaction times!