

Logging Flight Time in an "Experimental Ultralight"

There are an increasing number of ultralights that are being placed into the Experimental category. For a lack of a better term, I'll refer to these aircraft as "experimental ultralights." The new Sport Pilot NPRM would create a new category of ultralight-type aircraft, called "light-sport aircraft."

Flight time in both experimental ultralights and the proposed light-sport aircraft may be logged as FAA flight time.

Recently a flight academy in Florida asked USUA Executive Vice-President Tom Gunnarson if flight time in experimental ultralights would be looked upon with favor or disfavor by airline management if a pilot applied for an airline pilot job.

In turn, Tom asked me the same question, since I am an airline pilot, an FAA CFI, and an ultralight instructor. My special niche in aviation is training pilots to fly experimental ultralights. I also train in the FAA-certified Primary Category Quicksilver GT-500.

I have checked out several FAA CFIs to assist me in instruction. All of these CFIs have subsequently been hired by the airlines. These instructors had Quicksilver GT-500 flight time logged in their records, as well flight time in experimental ultralights such as Kitfox, Kolb, Hornet, Buccaneer, and even an Air Creation trike.

Before their interviews the instructors were concerned that the airline personnel director would perhaps consider the experimental ultralight time as an indication that the pilot was inclined to take "unnecessary risks in dangerous machines," or that the flight time would not count as "real airplane" experience.

Since I am passionate about ultralight aircraft, I told the airline candidates that they should be proud of their experimental ultralight flight time. I suggested that they take along some photos of the airplanes to show the interviewer. Except for the Quicksilver Sprint, the other airplanes actually look more like small general aviation aircraft than stereotypical ultralights.

Here's what I told them that I learned from flying ultralights (and experimental ultralights) above and beyond what I already knew about flying from my general aviation and airline experience.

I learned to be constantly aware of potential emergency landing sites within range of engine out gliding distance. This is the number one mantra taught to ultralight pilots, due to the short gliding distance of ultralights and because ultralight engines are not FAA certified power plants.

I learned to discipline myself to fly high over hostile terrain, or detour around it, even if it meant that I couldn't fly straight to my destination.

I learned to fly by the "seat of the pants," because some ultralights have virtually no instruments--no altimeter, no airspeed indicator, no tachometer, nothing. Although it's not recommended to fly without any instruments, some ultralighters do so, since the FAA does not require instruments on ultralights.

I learned to set RPM by the sound of the engine, and estimate airspeed by wind in the face.

I learned to fly without a dashboard in front of me, which acts as an attitude reference for general aviation pilots. This so-called "attitude reference" is one of the first things taught to a general aviation

student. Lo and behold, you really can fly without an instrument panel attitude reference.

I experienced the thrill of flying without being surrounded by a fuselage. I can look straight down at the ground, just like a bird can. Because ultralights are exposed to the wind, I learned to fold maps carefully and put them on my kneeboard for a cross-country flight, and place checklists and extra oil in secure pouches.

I learned precise fuel management, since ultralights carry no more than 10 gallons of fuel. I learned to carefully plan fuel stops on a cross-country flight.

I learned to fly by visual navigation and pilotage. I learned that you can get from "A" to "B" without the use of a VOR. I learned to estimate my time of arrival accurately, so that I could arrive at my destination before sundown.

I learned to maintain the engine, and conduct periodic and conditional inspections, instead of just writing up a problem and handing it to an A&P mechanic.

I learned to explain energy management and aerodynamics to students, so that they would understand the unique characteristics of the "high-lift, high-drag" ultralight wing. This wing causes ultralights to lose lift and airspeed very quickly during the landing flare. This means that one must fly the aircraft right down to the ground.

The high-lift, high-drag design of the wing also causes the ultralight to descend very steeply after an engine failure or at idle power. This means that, when landing without power, one must put the nose of the airplane much further down toward the earth than one does in a general aviation airplane, and keep it down until just before the flare.

I learned to teach students how to assess if enough runway is available to re-land straight ahead in case of an engine failure. I teach students to make a safe course reversal and land downwind in case of an engine failure on departure. This exposure to engine failure training is so beneficial, that I now teach the same procedures in general aviation trainers.

I have had pilots from all aspects of aviation checkout with me in ultralights--general aviation pilots, military pilots, government pilots, FAA examiners, and airline pilots. Some of these aviators were quite cocky and over-confident, claiming they "wouldn't even need a checkout to fly a little toy." Every single one of these pilots would have crashed on landing if I had not been there to assist, because they flared too high and dissipated airspeed too rapidly. I learned that no pilot is immune to the laws of nature, no matter he much proclaims his superior flying skills. Everyone needs to learn something about some unfamiliar aspect of aviation, no matter what his previous flying experience.

When an airplane is placed into the Experimental category it must undergo a "Phase I" flight test period. During that time the "test" pilot must determine the flying characteristics of the aircraft, in a fashion similar to that done by the manufacturer of a general aviation FAA certified airplane. He must determine the takeoff and landing distance, the best angle of climb and best rate of climb, the best gliding speed, the stall speed, and so on. The FAA has published a guide to the testing procedures called AC 90-89A, "Amateur-Built Aircraft and Ultralight Flight Testing Handbook." It may be found on the web at <http://av-info.faa.gov/dst/amateur>.

I learned about flight-testing experimental aircraft and ultralights. I learned that even a well-known kit

plane can have some nasty surprises, like aileron flutter and an almost uncontrollable roll due to one wing being at a slightly greater angle of incidence than the other. I learned to take a multitude of precautions before the first flight: wear a Nomax fire-resistance flight suit, alert the airport rescue team, and fly early in the morning in calm wind. Don't let a crowd of spectators subtly pressure you into taking off before you're completely ready.

I learned to fly at precise airspeeds and dictate the parameters of flight into a tape recorder. I learned to determine the exact takeoff and landing distance with the help of an assistant who placed markers on the runway. I became an EAA Flight Advisor to help other builders prepare for their first flight in a new airplane.

I learned that children, in particular, love ultralight flying. Since there is no FAA regulation regarding the minimum age to fly a single seat ultralight, it is legally possible for a kid to get involved in aviation at a younger age than he can in general aviation. In connection with the EAA's "Young Eagles" program, I have given introductory flights to youngsters from all walks of life. I've discovered that ultralight flying is a great way for a father and son to bond and share something "cool" together.

One would be amazed that even poor students and children from disadvantaged backgrounds will make a remarkable turnaround in school after becoming interested in aviation. I tell them that they need to have good grades, study science and math, and stay out of trouble if they really want to have a career in flying. No membership in a gang can compete with the pride and self-esteem that a teenager feels when he makes his first solo flight.

Most of all, ultralight flying reacquainted me with the pure joy of flight. After many years in aviation, airline pilots and professional flight instructors tend to think of their occupation as just another job and a way to make a living. I know a flight instructor who refuses to do a maintenance check flight because he isn't going to get paid for it (there's no student on board.) I'm often the only one who volunteers to do check flights, without pay, just for the fun of flying.

Teaching ultralights is so much fun, that each evening I can hardly wait for the next day to arrive so that I can get back to the airport and launch into the air. How many people can say their occupation is also their favorite hobby?

None of the flight instructor airline applicants was handicapped by the experimental aircraft flight time in his logbook. In fact, one applicant actually benefited from the experimental time. Here's how:

Most airline pilot applicants are subjected to a battery of difficult questions to test their judgment, such as "what would you do if you were a newly hired co-pilot and your Captain continued to fly an instrument approach below the FAA legal minimums?" This is a very difficult question to answer. On the one hand, if a new co-pilot did nothing he would be participating in an illegal and possibly unsafe act. On the other hand, by what means can a brand new co-pilot admonish an experienced Captain? New hire applicants hate this type of question, and the many similar ones typically asked by the interviewer.

During his interview, the applicant "Bob" was nervously waiting for this barrage of questions while the interviewer looked through his logbook. The interviewer noted the Quicksilver flight time, and remarked had never heard of this type of airplane. Bob took out a photo of the Quicksilver and explained that it was an experimental ultralight. The interviewer was so intrigued by the airplane that he gave Bob the opportunity to extol the virtues of light aircraft, just as I have done in this article. Before long the allotted interview time was up, and the interviewer was so sidetracked that he completely forgot to ask the

standard tricky questions. Instead, he praised Bob for his passionate love of flying and dedication to all forms of aviation.

The following week Bob was hired by the regional airline.

While not everyone will be hired by an airline, I feel that everyone should be proud of his experimental ultralight time. What anyone has learned from flying ultralights--and experimental ultralights--will help him become a better overall pilot.