



You've seen the beautiful color ultralight flying ads. You've watched them fly at airshows. You decide you'd like to try it. So you go to your local airport and inquire about ultralight training.

Lo and behold, you're disappointed to find out that there's no instructor available at your local airport. In fact, the instructors don't even know anything about ultralights.

The problem is that you went to a general aviation airport, a place where you'll rarely find ultralights.

By "general aviation," I'm referring to the light airplanes typically used in flight training, such as the Cessna 150, the Piper 140, or the new Katana. Flight instruction in these airplanes is readily available at almost any municipal airport.

Most general aviation instructors, called FAA "Certified Flight Instructors" (CFIs), do not fly ultralights. So it's difficult to obtain information about ultralights from a CFI.

Ultralights, by Federal Aviation Administration (FAA) regulations, must be flown in rural areas only. Many are flown at small, outlying fields, dedicated to ultralights. These out-of-the-way fields are often more difficult to find than municipal airports. This is the reason that most CFIs don't fly ultralights; they're just not as readily available.

The best place to start looking for an ultralight instructor is from one of the private ultralight organizations. In alphabetical order they are Aero Sports Connection (ASC), the Experimental Aircraft Association (EAA), and the United States Ultralight Association (USUA). See listings at the end of this article.

After you've selected an instructor, your first contact will probably be a telephone call. If there are several instructors in your area, you may want to call each one before making a decision. (The vast majority of ultralight instructors are male; thus my reference to the masculine. However, there are a few female instructors, and it would benefit the ultralight community to have more.)

Choosing your instructor is based on common intuition, to some extent. Is he friendly? Is he available on the days that you can fly? How much does he charge?

There are also some very specific questions to ask, plus other indications for determining an outstanding instructor. Before getting into the detailed questions, it's helpful to have some background information about ultralights and instructors.

You may be surprised to learn that ultralight instructors are not licensed by the FAA. In fact, the FAA exercises minimal control over ultralight flying.

Ultralights are regulated by Part 103 of the FAA Regulations, called "FARs." FAR Part 103 consists of only 13 Sections, as contrasted to Part 61 and Part 91 (99 and 152 Sections, respectively), which controls general aviation.

Remarkably, Part 103 does not even address ultralight instruction. Instead, the FAA has designated the responsibility for ultralight safety, promotion, and training to the three privately operated ultralight organizations, ASC, EAA and USUA. The FAA oversees these organizations, but generally grants them a considerable degree of autonomy.

Each organization has submitted a training program to the FAA for approval. All the training programs are similar, and the general quality of the instructors is the same in each organization.

Ultralight instructors are called Basic Flight Instructors (BFI). Ultralight flight examiners are called Advanced Flight Instructors (AFI).

The Basic Flight Instructor trains student pilots, and prospective BFIs. The Advanced Flight Instructor examines a BFI applicant, a duty similar to the general aviation flight check airman, known as a DPE.

Very few ultralight instructors are also FAA-certified flight instructors. In fact, most ultralight instructors do not even have an FAA pilot's license.

The experience required to become a BFI varies slightly between the three organizations, but generally the minimum flight time is 40 hours. Credit is given to a BFI candidate who is already an FAA-rated pilot. The BFI candidate must also take a written and oral exam, and a flight check with an AFI.

To become an AFI, a BFI must train five BFI applicants and attend an AFI seminar. The AFI seminars are only given a few times a year, at widely scattered locations throughout the US (usually at large airshows).

Many a BFI, who is otherwise qualified to become an AFI, is precluded from doing so because he has not had the opportunity to attend an AFI seminar. Probably less than 10% of ultralight instructors are AFIs. For example, of the 410 instructors on the February 1998 USUA national registry, only 35 were AFIs. In many places, such as Alaska, Indiana, and Nevada there is only one AFI in the entire state.

Next we need to look at the rules that pertain to ultralight training. As mentioned above, ultralight regulations are found in FAR Part 103.

Along with fuel, speed and weight limitations, an ultralight is defined in Part 103 as a single-seat "vehicle." Technically, there are no two-seat ultralights.

The FAA refers to an ultralight as a "vehicle," but since no one else does, I'll use the conventional term, "airplane." Note, however, that an ultralight need not be an airplane. There also exist ultralight gyroplanes, gliders, helicopters, seaplanes, balloons, para-gliders, powered parachutes, hang-gliders, and "trikes" (which are powered hang -gliders).

As stated above, there are no two-seat ultralights. The FAA considers a two-seat ultralight to be an uncertified, unregistered aircraft.

When ultralights first became popular in the late 1970s, all training was done in single-seat craft. The instructor used a hand-held radio to guide the student through his first flight. As you might expect, there were plenty of what you might call, "unsuccessful flights" using this method.

To preclude further accidents, the FAA decided that two-seat trainers might be in order. So the FAA granted the three ultralight organizations an EXEMPTION to use two-seat aircraft for training. The Exemption specifically details the conditions under which the two-seater must be operated:

1. It must meet certain weight and speed restrictions.
2. It may be used for instructional purposes only. It cannot be used for other commercial endeavors, such as sightseeing, banner towing, crop dusting, or television traffic reporting.
3. It must be registered with one of the three ultralight organizations. The registration numbers are displayed under the left wing.
4. Somewhere on the fuselage, it must carry the notation: FOR INSTRUCTIONAL PURPOSES ONLY.
5. It may only be flown by an ultralight instructor. Not even an FAA certified pilot, a CFI, or even an airline pilot, may fly a two-seater (with or without a passenger) unless he is either a BFI or AFI.
6. The instructor must carry a copy of his license and the FAA two-seat Exemption while flying.
7. The ultralight instructor must renew his license every two years. He must attend a one-day seminar, and pay a fee to the ultralight organization to which he belongs. (The organization membership fee, BFI registration fee, and the cost of the biennial seminar runs about \$200 per year.)  
  
It's not unusual for an ultralight instructor to let his license lapse, due to oversight, or lack of funds, or for some other reason. You should check to see if his license is current. If not, the training he gives you will not count toward your ultralight license.
8. The instructor must submit a "Record of Activity" every six months to his ultralight organization. The report is mandated by the FAA. If the instructor fails to do so, his authorization to teach is suspended until the report is filed.

Very possibly you have seen ultralight ads which say, "No FAA license required. No medical required." This is true. You do not need a license to fly a single-seat ultralight.

But that doesn't mean that you can learn to fly without training. Even though a license is not required, you cannot expect to fly safely without instruction. Unlike a bird, we are not born with the natural ability to fly.

Even though a license is not required to fly a single-seat ultralight, a license is available from the ultralight organizations. Since you need training anyway, why not apply for a license? It's a nice certificate which represents the knowledge and skill that you've worked hard to acquire.

Besides being proud to exhibit your license, there are several practical reasons to have one. Without a license, there are many airshows and contests which will not allow you to participate. Some airports will not let you fly from their field without a license.

You may need a license to obtain ultralight insurance. Sometimes it's nice to have a license to show to a police officer, after you've landed on a road due to engine trouble.

Remember, even though the FAA does not require that you have a license to fly a single-seat ultralight, you do need a license (an instructor's license) to fly a two-seat ultralight trainer.

Now that you have some background information about ultralights, you're in a better position to evaluate a prospective instructor. As in any profession, ultralight instructors have varying degrees of competence. Some are excellent. Some aren't.

How do you, as a novice, determine who is a good instructor? Here are some specific guidelines.

1. Determine if your prospective instructor is a BFI or an AFI. Chances are that an AFI might have more experience, although that's not always so. Don't refuse to fly with an instructor just because he's not an AFI. Since there are so few AFIs, you may not even be able to find one in your area.
2. Ask your prospective instructor if he has an FAA pilot's license. If so, it's an indication that he has undergone extensive FAA training.
3. Better yet, find out if he is also an FAA Certified Flight Instructor. The requirements to become a CFI are very demanding, even more so than for a BFI or AFI.

On the other hand, a CFI cannot teach in ultralights if he does not also have a BFI or AFI license. The characteristics of ultralights are considerably different from general aviation airplanes, and special training is required to fly an ultralight.

4. Ask the instructor how much flight time he has, and how much teaching experience. How many students has he trained? Has he participated in any contests? Is he a member of any ultralight clubs? Is he a full-time instructor or part-time? Can he give you any students' names as a reference?

No single question is determinative of his ability to teach, but the answers help to create a matrix of his qualifications. Obviously it's difficult to ask these questions. You may feel like a police interrogator. But remember, you are literally putting your life in his hands while you're flying.

I personally feel that no self-respecting instructor would have any qualms about answering such questions. He should be pleased that you're the type of person who is careful enough to investigate. He should also be happy to show you his BFI license and Exemption.

5. Another significant item is what type of ultralight he uses for training. Most, but not all, ultralights are open-cockpit. If this is your first flight, you have to decide if you feel comfortable in an open-cockpit airplane, wearing a helmet and goggles. You may prefer to fly in an enclosed cockpit, or at least in an airplane with a windshield.

6. And this question may be one of the most important to you. Will you be able to rent the ultralight and fly by yourself after you've complete your training?

Unlike general aviation flight schools, many ultralight schools do not have ultralights for rent. In some cases the only way that you can fly without an instructor (except for limited "supervised solo" flights) is to buy your own ultralight. Don't be disappointed to learn too late that you can't rent.

What do you look for when you drive out to the ultralight airfield to meet your instructor and see the

ultralight for the first time?

Don't expect to see your instructor dressed in a coat and tie. Ultralight airports are usually windy and dusty. Blue jeans and sweatshirts are the fashion of the day when flying ultralights.

However, you should expect to see a clean, well-maintained aircraft. Be wary if cables are frayed, the wing fabric is faded, or the engine is dripping oil.

Ultralights are not required to be maintained by FAA-certified mechanics. Many ultralights are maintained by the instructor himself. Your safety depends on a well-maintained, airworthy craft.

Recently, the ultralight organizations have mandated that all ultralight trainers have a yearly "Conditional Inspection," similar to the "Annual Inspection" required of general aviation airplanes. The checklist for the inspection is provided by the organizations.

The inspection may be done by anyone who is knowledgeable. It's the instructor's responsibility to verify that the inspection has been performed. Ask him about the Conditional Inspection, and when it was last done.

The instructor should do a thorough preflight inspection of the ultralight, and point out to you what he is looking for. He should show you where items are safety-wired to prevent them from falling into the propeller, if they come loose. He should show you where to look for cracks on the carburetor "boots."

You already know that the ultralight should have registration numbers under the left wing, and the notation FOR INSTRUCTIONAL PURPOSES ONLY on the fuselage. It would also be good if the craft had a parachute. It's not a requirement, but it's a fine safety feature.

If the ultralight needs fuel, the instructor should strain the gas through a special funnel, which contains a filter to trap contaminants and water.

The instructor should explain to you that your flight is not a sightseeing ride, but a true "introductory flight lesson." The ultralight must have dual controls, or single controls that both you and the instructor can reach.

The instructor should have you fill out an introductory "Student Application" form. Don't be surprised if this form also has a waiver attached, in which you acknowledge that you recognize the potential hazards of ultralight flying (as is true of any type of flying). When you sign the waiver you also promise not to sue the ultralight organization which issued the instructor his two-seat training Exemption.

All of the items mentioned above are clues as to how knowledgeable and conscientious the instructor is. Another practice which he may or may not have could be very revealing: Does he use a written checklist?

Even though an ultralight is not as complex as a general aviation airplane, there are still enough things to check to warrant the use of a written checklist. The ultralight organizations and the FAA very much encourage (in fact, almost insist) that a written checklist be used. If your instructor does not use a checklist, and does not teach you to use one, he's not doing his job.

Here's an example of some of the items that would be on the Before Start and Before Takeoff checklist:

#### BEFORE START

1. Fuel quantity checked
2. Oil quantity checked (for oil injected engines)

3. Fuel selector ON
4. Brakes SET
5. Throttle IDLE
6. Choke ON
7. Propeller area CLEAR
8. Time of engine start: RECORDED

## BEFORE TAKEOFF

1. Choke OFF
2. Engine gauges NORMAL
3. Engine run -up COMPLETED
4. Magnetos CHECKED (for dual magneto engines)
5. Controls FREE and move in the correct direction
6. Trim SET (if installed)
7. Strobe light ON (if installed)
8. Seat belt fastened
9. Intercom: CLEAR and cord secure (so it won't get tangled in the propeller)
10. Parachute ARMED (if installed)

You can see just from the sample checklist above that there is a need for a written reminder. Even the most experienced pilot can occasionally overlook something important. You would feel pretty uncomfortable if you encountered some rough air and discovered that you forgot to fasten your seat belt. Amazingly, people have actually fallen out of airplanes.

There are other indications as to how professional your instructor is.

He should let the engine warm up several minutes before takeoff, to stabilize the temperatures in the piston and cylinders. He should use the entire length of the runway for takeoff. Don't let him tell you that you don't need to use the whole length because ultralights "lift off in a few hundred feet."

It is true that an ultralight will break ground in a remarkably short distance. But many ultralights do not climb well after takeoff. It may take a whole minute to gain 500 feet. Wouldn't you rather do your climbing over a nice prepared runway, where you could easily land if you had engine trouble, rather than over a forest of trees?

After takeoff, your first flight should be fun. Better yet, it should be thrilling! You've waited years, perhaps, for this moment.

A good instructor would never do anything to cause apprehension, especially in your first flight. No showing off, no steep turns, no "stalls," no buzzing the airport, no hard pull-ups.

Even on your first flight the instructor should let you take the controls and talk you through some simple maneuvers, such as gentle climbs and shallow turns. He should explain things to you in simple layman terms.

On the first flight, he doesn't need to tell you about the "downwind leg," "adverse yaw," "engine torque," "angle of attack," and "relative wind." You'll learn all about these things later. Your first few flights should just be "getting acquainted" sessions with the sights and sounds of being in the air.

If your instructor talks non-stop throughout the flight, he's succumbed to the common instructor's plague known as "Instructor Motormouth." This is driven by his desire to tell you everything you need to know about aviation in the first two lessons.

Unfortunately, it takes a long time to learn all you need to know, just like any other avocation. You need to be taught at a slow, deliberate pace, or you'll be overwhelmed and discouraged.

After you begin your formal instructional course, most of the explaining should be done on the ground, before you fly your daily lesson. I firmly believe that you will get the most out of your time in the air if your instructor spends at least an hour of "ground instruction" with you before each flight.

It's much easier for you to assimilate new concepts and procedures in a quiet, comfortable classroom, than in a noisy airplane buffeted by wind. Most of the talking that the instructor does in the air should consist of quick references to what he previously told you about during the ground instruction period. In my opinion, 20 percent of your flight should consist of oral instructions, 20 percent flight demonstration, and 60 percent silence.

After your lesson, your instructor should spend at least one half hour discussing the flight, answering questions, and filling out your logbook. He should give you a reading assignment to prepare for the next lesson.

If your instructor schedules one student right after the other in rapid succession, with no ground instruction before and after your flight, he's not doing you any favors. Proper ground instruction is vital to efficient learning.

Conversely, you should expect to pay for the ground instruction, probably the same fee per hour as you pay for the instructor's time in the air. Believe me, it's worth it.

Speaking of fees, how much should you expect to pay? Ultralight flying is a little less expensive than general aviation flying, but there is not as much difference as you might expect.

If you are training at an ultralight flight school, the school has the same business expenses as a general aviation school: business license, hangar rent, telephone bills, maintenance, insurance and advertising. The ultralight itself can cost from \$15,000 to \$30,000, the same as some used Cessna 150s.

As with other costs around the country, prices will vary. But a ballpark figure is about \$60 to \$80 per hour for instruction, for both the instructor and the ultralight vehicle. To achieve your ultralight pilot's license requires 10 hours minimum flight time.

Add in the cost of books, ground instruction, association fees and the price of lunches for your instructor, and the total comes to somewhere around \$1,500. The cost for the BFI is considerably more: probably about \$4,000. But then you'll be an instructor yourself, and you can charge for the fun of doing something that you used to pay for.

That's incentive enough to become an instructor yourself. Just remember to follow the guidelines in this article, and be as great an instructor as the one who taught you.