

Sport Pilot, LSA, and The Burgeoning Sport Aviation Market

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There's an old corollary running around the aviation world that compares the creation of new aviation programs and associated regulations with the birthing of an elephant... In other words, they both take forever to accomplish, can't happen without a lot of yelling/screaming/noise, and tend to take on monstrous proportions as time passes.

Such a description seems tailor-made for the Light Sport Aircraft proposals that became part of the FARs just a few months ago. The "Sport Pilot" movement took many years to come together and even with rule-making finally accomplished, there is still much to be accomplished/decided before the industry can sit back and enjoy the fruits of their labors.

The Light Sport Aircraft movement came about gradually, as proposals for "Fat Ultralights" were eventually supplanted by a whole new proposal involving novel new categories for a number of types of light aircraft... including types that were heretofore virtually ignored by the FAA such as powered parachutes and the like. Like it or not, the



Light Sport Aircraft program and Sport pilot licenses are now reality and while the whole program turned out more complex (and potentially expensive) than many might like, it does seem to be an improvement over certification programs that have resulted in GA airplanes that rarely ring the cash register for less than a quarter million bucks.

The new Sport Pilot program is built around a whole new aircraft classification, usually known as "Light Sport Aircraft." Light sport aircraft are small, simple, low-performance, low-energy aircraft though future revisions may widen (as has been promised)

the definition a bit.

To the avionics community, though, there seems to be nothing but opportunity. The first generation of these aircraft are almost always equipped with both communication and basic navigation gear (with GPS being a virtually unanimous default selection), and quite a few of the two seaters are sporting an audio panel, some entertainment interface (for the obligatory CD or iPod), a good comm., a GPS (often panel-mounted), and a transponder/encoder for "serious" airspace. With thousands of these aircraft forecast to be coming into the fold over the next few

years, a solid market would seem to be possible for the burgeoning LSA market and their associated aircraft.

The biggest problem with the Sport Pilot and LSA program, though, is the confusion that resulted over many years of wrangling over the rules and protocols. With a number of associations also wielding their political influence in the process, a great number of deadlines

cally says that the gear must be operated in either the down position throughout the entire flight, or in the up position throughout the entire flight. In other words, it appears that an amphibious seaplane may not take off from land with the gear down, raise the gear, and then land on water. This seems to preclude some well-known amphibians from qualifying as LSAs, though future clarification(s) may ease that con-

have five hours of PIC in each make and model set before they can teach in that aircraft.

- Powered parachutes are divided into “land” and “sea” classes.
- Pilots will be allowed to take a practical test (flight test) in a single seat LSA. The examiner will observe him from the ground. The pilot will have a “single-seat” limitation on his certificate.
- Sport pilots will have to take a biennial flight review (BFR). A pilot with a “single-seat” limitation will still have to take a BFR, and he will have to take it in a two seat LSA.

• The “driver’s license medical” is not as liberal as many people thought it would be. If you have failed your aviation medical exam, you cannot fly with just a driver’s license. If you lose your driver’s license for any reason (like failure to have insurance) you cannot fly an LSA (unless you get a third class medical). If your doctor tells you that you can’t operate a motor vehicle (vision impairment, taking prescription drugs, etc.) you cannot fly an LSA.

• A sport pilot may not fly above 10,000 feet MSL. He cannot fly above 10,000 feet even to cross over high terrain. (If you live near

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came and went, promises came and went, and expectations that once soared, were beginning to ebb (severely) by the time the rule came out. The result is confusion... a lot of it. In an effort to break down the salient points of the rule, we hereby present the current summation we’ve developed to (somewhat) explain what the LSA and Sport Program is ... and isn’t. Your mileage may vary...

LIGHT SPORT AIRCRAFT

- The allowable gross weight is 1,320 pounds. Aircraft operated on water can weigh 1,430 pounds.
- The stall speed must not be greater than 45 knots, and max speed no more than 120 knots.
- LSA cannot have an in-flight adjustable propeller or retractable gear.
- Seaplanes can have “repositionable gear.” The rule specifi-

cern.

- An LSA can have only one engine.
- Hang gliders and foot-launched powered and unpowered paragliders are specifically excluded from being LSA, and a Sport Pilot certificate does not allow a sport pilot to fly a tandem hang glider or tandem paraglider.
- Weight-shift trikes are limited to two-axis control only. No rudder is allowed for yaw control.

SPORT PILOTS

- Contrary to the Sport Pilot NPRM, a sport pilot need not obtain a logbook endorsement for each make and model that he wants to fly. The FAA will create a “set” of similar LSA make and models. You’ll need additional instruction and an instructor’s logbook endorsement for each new make and model “set” that you want to check out in.
- Sport Pilot instructors must



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Denver, you won't be able to fly more than 5,000 feet AGL.)

- A sport pilot must have at least three miles visibility to fly.
- No night flying.
- No towing.
- You cannot demonstrate an LSA for sale if you are a "salesman." (Mind you, the legal definition of a "salesman" has not yet been officially defined.)
- A sport pilot may fly in airspace where radio control is required, but only with additional training and a logbook endorsement.
- Although an LSA is allowed to have a top speed (in level flight) of 120 knots, a sport pilot must have additional training and a logbook endorsement to fly an LSA with a level flight speed of more than 87 knots.

LSA MAINTENANCE

- On "Special" LSA (those LSA delivered "turn-key" flyable by the manufacturer), you are only allowed to do "preventative maintenance," and only if you are the owner of the Special LSA. (Preventive maintenance options are listed in FAR Part 43, Appendix "A".) If you want to do an annual inspection you must attend a 16-hour maintenance course. The 16-hour course only allows you to inspect your airplane for defects, it does not allow you to perform maintenance on the airplane.
- If you want to do actual maintenance on the aircraft, you must attend a maintenance course of 80 hours for gliders and lighter-than-air aircraft, 120 hours for airplanes and 104 hours for weight-shift (trikes) and powered

parachutes. (The original NPRM proposed 80 hours.) Maintenance students must pass a maintenance knowledge test with a score of at least 80 percent.

- An applicant for an LSA repairman certificate must take a maintenance course for each class of LSA.
- LSA will be subject to Airworthiness Directives ("AD") notices.
- Maintenance must be performed in accordance with the general aviation standards of FAR Part 43.
- There can be no alterations made to an LSA unless it is approved by the manufacturer or the FAA.

LSA EQUIPMENT

- All two-seat LSAs must have an ELT.
- LSA will be required to have a transponder to fly within Class B and Class C airspace, and the Class B "Mode C veil."
- LSA must comply with FAR 91.213 (Inoperative Equipment) also known as the "Minimum Equipment List." This means that if you're on a cross-country flight and your tachometer breaks, you cannot fly home until it's fixed.



ULTRALIGHT TRAINING

- The two-seat ultralight exemption for ultralight training will expire on January 31, 2008. After then, ultralight BFIs and AFIs will cease to exist.
- All "fat" single seat ultralights and all two-seat ultralight trainers must be FAA-inspected and converted to "experimental" LSA by August 31, 2007. (Apparently, if an ultralight trainer is not converted by August 31, 2007, it becomes a lawn ornament.)
- After an ultralight trainer is converted to an experimental LSA a sport pilot instructor may use the converted experimental LSA as a sport pilot trainer (for compensation) until September 1, 2009.

- An ultralight pilot must take his sport pilot practical test by January 31, 2007.
- Prospective LSA examiners who inspect and issue experimental LSA airworthiness certificates (DPEs) must attend a three-day FAA course.

SPORT PILOT TRAINING

- Prospective sport pilot examiners must attend a five-day FAA course.
- Sport pilot instructors must have 150 hours of flight time.
- A sport pilot must be at least 17 years old, a sport pilot instructor 18 years.

Abbreviated summary of the minimum required flight experience to be a sport pilot:

- Airplane: 20 hours total, 75 mile solo cross country
- Glider: 10 hours total
- Gyroplane: 20 hours total, 50 mile solo cross country
- Powered parachute: 12 hours

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total, 10 mile solo cross country

- Weight shift (trike): 20 hours total, 50 miles solo cross country

Abbreviated summary of the minimum required flight experience to be a private pilot weight shift or powered parachute:

- Powered parachute: 25 hours total, including three hours of night flight, and a 25 mile solo cross country
- Weight-shift: 40 hours total, including three hours of night flying with a 75 mile night cross country, and a 100 mile solo cross country

Summary of sport pilot instructor requirements:

- 18 years of age
- Knowledge exams on aeronautics and fundamental of instruction
- Practical test
- Have a sport pilot certificate or higher rating. A sport pilot instructor may teach private pilot weight-shift or private pilot powered parachute if the sport pilot instructor has at least a private pilot rating himself.

Required flight time:

- Airplane: 150 hours total time, 25 hours of cross country time
- Glider: 25 hours flight time
- Gyroplane: 125 hours flight time (at least 50 hours in a gyroplane) and 10 hours cross country
- Weight-shift: 150 hours total (50 in weight-shift), 25 hours cross country
- Powered parachute: 100 hours total (50 in a powered

parachute), 15 hours cross country

- Five hours in the same make and model “set”
- The sport pilot instructor must renew his instructor’s certificate every two years, just as a general aviation instructor must do.
- An ultralight instructor must transition to sport pilot instructor by January 31, 2008 if he wants credit for his ultralight flight time.

MISCELLANEOUS

- In the original Sport Pilot NPRM the FAA estimated the cost of implementing Sport Pilot (to the government and to the pilot community) to be \$40.3 million. After the OMB said that the FAA’s economic figures were hogwash, the FAA went back to the chalkboard and revised their estimate of the cost of sport pilot to \$221 million!

Deadlines to Remember:

September 1, 2004—This was the effective date of the Sport Pilot rule. It was also the deadline for an ultralight pilot to register with a national ultralight organization in order to have his ultralight flight time count toward his sport pilot certificate.

August 31, 2005—Deadline for recreational pilots and higher rated pilots to acquire the necessary flight time to apply for a category and class rating limited to a specific make and model of experimental aircraft.

January 31, 2007—Deadline for an ultralight pilot to take his sport pilot practical test if he wants his ultralight flight time to

count toward his required sport pilot flight experience.

August 31, 2007—Last day that an experimental certificate will be issued to a “fat” ultralight or two-seat trainer.

January 31, 2008—Deadline for an ultralight instructor to take the practical test for sport pilot instructor and still receive credit for his ultralight instructing experience.

January 31, 2008—Ultralight two-seat training exemption expires.

September 1, 2009—Last day to be able to use an ultralight converted to an experimental LSA as a sport pilot trainer for compensation.

Boil all this down and what you have is a slightly simpler set of pilot licenses for equally simpler airplanes that will only be flying VFR and (for now) during the day, as well as a new set of aircraft certification criteria that are both simpler to administer and created by an agency OUTSIDE of the FAA (ASTM). The most exciting aspects of this is that limited commercial use is now allowed, the imposition of an FAA supervised industry certification program that will enable these aircraft to more easily find financing, and a hoped-for option that (in comparison to the entry level of GA) these aircraft will offer in the form of a cost effective entry-level program for new aviators to operate a new generation of aircraft, and (hopefully) to become the next generation of aircraft owners. ■