

HPN TO OSH IN AN LSA

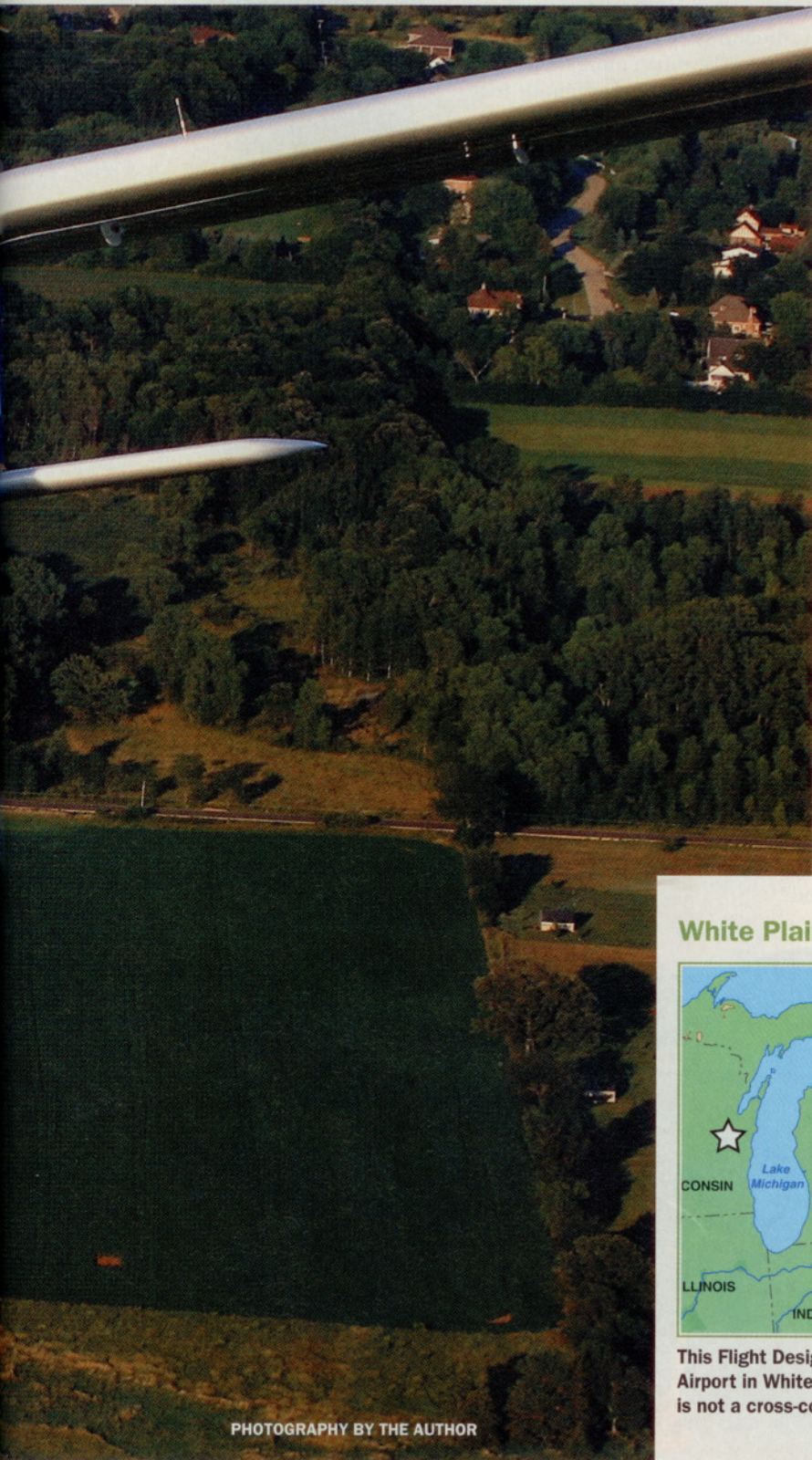
Alphabet soup—or a X/C with great mpg

BY JASON PAUR



AN LSA

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PHOTOGRAPHY BY THE AUTHOR

Pilots tend not to talk much about miles per gallon. Gallons per hour? Yes. Miles per hour? Yes (knots for many, but same idea). But combining gph and mph—well, it's just not something you hear mentioned much. With gas prices where they are today, however, and pilots still wanting to go places, hangar talk about mpg is increasingly relevant.

Here are two other aviation terms pilots don't seem to mention together much, *light sport aircraft* and *cross-country*. But with more pilots talking about mpg, an alphabet soup of hangar conversations about LSAs, x/c, and mpg can't be too far behind.

Today, more than 80 models are being offered by 64 LSA manufacturers. And even though LSAs are limited by some performance and design parameters, a wide range of capabilities fall into the category. A close look at several models shows a number of aircraft capable of real cross-country flying thanks to cruise speeds at or near the 120 KIAS LSA limit and ranges of more than 600 nm. Among this group are models from Flight Design, Remos, and Evektor, to name a few. All offer the long legs necessary to fly beyond the stereotypical LSA weekend hop for lunch. Perhaps it's no coincidence that the current LSA sales leader is one of these long-legged aircraft, Flight Design's CT.

Flight Design USA President Tom Peghiny has been involved with light aircraft for many years. He chaired the industry committee that developed the standards that define the LSA category. Peghiny says that early on, there was an effort to simplify the certification process for both pilots and manufacturers. The goal was to make flying more affordable and accessible for a greater number of people. But, he says, from the beginning, pilots were buying LSAs with all the options and horsepower

White Plains to Oshkosh



This Flight Design CTLS (left) took a scenic tour from Westchester County Airport in White Plains, New York, to Oshkosh. Think a light sport aircraft is not a cross-country airplane? Think again.

If you're a pilot who often flies alone, or with just one other person, and is often doing so in an airplane that cruises in the 115- to 140-KTAS range—where a large number of small singles cruise—how does a fuel burn of four to five gallons per hour sound?



available rather than the simplest, lightest, and least expensive models. "We are as an industry surprised at how much the focus has turned to this type of an airplane," he says.

Pilots appear to be purchasing fully capable LSAs. They want the latest technology as well as economy of operation. Peghiny says it's not surprising. Early in the development of the light sport category, the industry knew the airplanes were going to be much more than oversized ultralights. "It was apparent that many of the aircraft that would be certified in this category would be suitable alternatives for pilots of existing airplanes," he says. Peghiny highlights the example of a pilot who might be downsizing or simplifying because his mission has changed; he no longer needs four or six seats, especially if they are empty, or an airplane burning 12 or 14 gallons an hour with the annual on the aging airframe running well into the thousands.

On the other hand, some pilots may dismiss LSAs by definition as cross-country machines. After all, the LSA class is defined by a 120 KIAS top speed and two seats. Pilots may take one look at the max speed and can't imagine flying that slowly. Others may be put off by the limited cabin size. If you're a pilot who prefers to talk about cruise speeds with a two or three in the front, or regularly flies with all four or six seats filled, you can stop reading now. But if you're a pilot who often flies alone, or with just one other person, and is often doing so in an airplane that cruises in the 115- to 140-KTAS range—where a large number of small singles cruise—how does a fuel burn of four to five gallons per hour sound?

The CTLs has a 49-inch-wide cabin, adjustable leather seats, three-axis trim, and good visibility. There are nooks and crannies for charts, drinks, and flight bags, and even lunch stowage. Between and just behind the seats is the BRS parachute handle and a fire extinguisher. All features are standard.





From HPN to OSH

It was only an hour or so into the flight that we heard the question for the first time, "Say again aircraft type?"

We were receiving flight following over eastern Pennsylvania, having left Westchester, New York, in the morning on our way to Oshkosh. The plan was to explore the cross-country capabilities of an LSA. Of course, any airplane can be flown cross-country, and plenty of Piper J-3 Cubs have made the trip from coast to coast. But the question is whether or not the aircraft would make a practical, comfortable, and usable platform for trips beyond short pleasure flights.

In other words, is this an aircraft a pilot would choose to fly cross-country?

"Eight-Six-Zero-Lima-Sierra is a Flight Design CTLS, Charlie-Tango-Lima-Sierra," was my reply to New York Center. It was a question that we would hear several times as we made our way across the eastern half of the nation. On a few occasions in less busy airspace, the initial query would be followed by a question or two about the LSA.

"What does it look like? What's the cruise speed? Does it burn much fuel?"

The same questions were heard at airports (except for the "what does it look like?" part). While there are several

hundred Flight Design CTs flying in the United States, the distinctive composite aircraft still attracts attention focused as much on the capabilities of an LSA as the model itself.

One of the first things pilots notice about the airplane is cockpit space. The fact that it only has two seats doesn't mean it isn't roomy. The CTLS cabin is 49 inches wide. The seats are adjustable, and there was plenty of head and leg room for my six-foot frame.

Of course only having two seats means you don't have the back seats and a baggage compartment to fill to the brim. But for this trip, with a little



bit of planning I was easily able to get everything I needed for a weeklong trip into the airplane—including camera gear, computer, and a watermelon. The CTLS's baggage compartment is located in the central fuselage behind the seats and is accessed via small doors on each side of the airplane. Because of the limited dimensions of the baggage area, it's important to have a few smaller bags, or a soft bag that can be pushed into the voids. A large suitcase or even a standard carry-on doesn't work. There are also shelves behind each seat for items that might be needed during the flight.

Flying the CTLS is a simple affair. This shouldn't be a surprise for a class of aircraft designed to simplify flying. It does take a little getting used to for pilots accustomed to larger, heavier, and less slippery airplanes. This mostly has to do with the unique sight picture over the small composite nose, and the ability to glide from abeam the numbers and onto final with the power at or near idle. The long wingspan and slippery fuselage make for a very good glider.

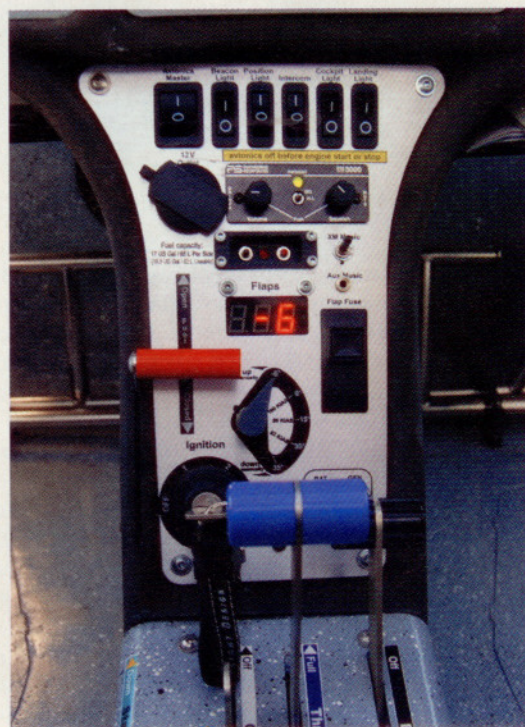
On the trip to Oshkosh I was joined by a friend who at the time was finishing her private pilot certificate. The CTLS was her first non-Cessna 172 aircraft and she found it an easy transition. Another observation from the 172 driver had to do with all of the new equipment and tech-

The CTLS comes from the factory with a dual Dynon glass panel, two-axis autopilot with altitude hold and ascent/decend features, a Garmin 496 with weather capability, and a Garmin radio and transponder. The control sticks have push-to-talk switches, and the pilot side has an autopilot switch. On the console (below), starting left to right, the controls are for pitch trim, choke, throttle, and a single brake lever. The red lever is the fuel valve.

nology that is in the airplane. Because of the simplified certification process that allows for non-TSO'ed equipment, the CTLS is equipped with a dual-panel glass cockpit from Dynon that costs a fraction of certified glass panels. An autopilot is also on board, as is a panel-mounted Garmin 496. All of these avionics give the airplane a modern feel compared to the older training fleet.

The glass panel, autopilot, and 496 with satellite weather make for a very capable cross-country platform. Being able to sync the autopilot to a GPS flight plan and scan the upper Midwest for thunderstorms or instrument conditions (LSAs are VFR only) makes the CTLS the kind of aircraft most pilots would choose to fly cross-country. This is the kind of system that reduces pilot workload and fatigue over long legs up to five or six hours.

As for the performance of the CTLS, considering that it's powered by a 100-horsepower Rotax engine taking only small sips of fuel, the numbers are impressive. Departing Lock Haven, Pennsylvania, after paying homage to the grandfather of LSAs, Mr. William T. Piper, we were still climbing at a respectable 500 fpm as we neared our cruise altitude of 8,500 feet. In level flight, cruise speed settled to a very respectable 123 KTAS burning 5 gallons per hour. Similar numbers would be repeated throughout the



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trip; a few more knots can be squeezed out if you want to set the power closer to 100 percent and more than 6 gallons per hour. This kind of speed might not set any records, but it is going to have you passing many 172s and Cherokees. And to bring in the often-ignored letters, this works out to be about 29 mpg assuming no wind, which is much better than the 12 to 14 mpg you might expect from the other aircraft.

The CTLS has 34 gallons of fuel capacity and a 550-pound useful load. Cruising at 123 KTAS this translates to a range of more than six hours and around 775 miles with VFR reserves. Throttle back and you can extend the endurance even more.

A testimonial

Several LSA customers are enjoying the same kind of long-distance flying.

Yossi Friedman originally bought into the LSA as a cross-country machine out of necessity. The Israeli-born hedge-fund manager always dreamed of flying, and first thought about pursuing a pilot's certificate while completing his Ph.D. at Stanford. A minor medical condition prevented him from pursuing the dream.

A fortuitous business lunch in New York City some years later would get him off the ground. The lunch was with a former Navy fighter pilot trying to get some of Friedman's business, and turned into a 172 ride around the city. Eventually Friedman learned about the then-new light sport certificate through his new friend and now instructor, bought a Flight Design CTSW (the predecessor to the CTLS), and completed his training shortly thereafter. Since that time a few years ago, he discovered he would be able to get a private pilot certificate and earned the ticket last summer (an instrument rating is next on his list).

Friedman has used his Flight Design CTSW extensively for both local flights around the Northeast, as well as some true cross-country flights. Trips to Florida and back have become the staple of his travels, and this past summer he and his nephew made a trip to the Bahamas in his LSA. "My longest leg ever was a five-hour leg from Tennessee to Connecticut," says Friedman, who now has more than 400 hours in his logbook. "It's very comfortable, fuel efficient, fast, and fun."

For many of his longer flights it might have made more sense to fly commercially, or even charter an airplane. But Friedman prefers flying LSA even if 120 KIAS is the limit. "I enjoy the sensation of piloting the plane myself," he says. "The freedom to make all the decisions, it's just a feeling I don't get in any other context in life."

With a private certificate now in hand, the 44-year-old doesn't plan on trading in his CTSW. He says he plans to continue flying the airplane, and he says it's now a choice rather than a necessity.

Stories such as Friedman's, as well as the trip to Oshkosh, demonstrated that an LSA is a more than capable cross-country machine. You might not win a point-to-point race with a 182, an Arrow, or an SR20. But in an aircraft such as the CTLS you can fly similar legs in a reasonable amount of time and, thanks to impressive mpg numbers, need to buy less than half as much fuel to fill up the tanks when you get there. **ACPA**

Jason Paur is a freelance writer and photographer and private pilot living in Seattle.