



Dan Wroe circles Talisman Field in his Quad City Challenger. He hangsars the aircraft at the private airstrip near Grasonville, Maryland.



Dan Wroe circles Talisman Field in his Quad City Challenger. He hangars the aircraft at the private airstrip near Grasonville, Maryland.

In the movie *Bull Durham*, there is a classic scene in which several of the players gather on the mound in the middle of the game. Kevin Costner, playing the lead character, reminds his teammates that, in the end, they all play baseball because “it’s fun, dammit.” It is a reminder not to take themselves, or the game, too seriously, and it reminds everyone how Costner’s character has lasted for so many years playing minor league baseball. It sure isn’t the money.

That mindset carries over to flying as well. For all the reasons that we conjure up for learning to fly, be it to utilize an airplane for business, to save time, to travel to exotic locales, or for the sake of building a career, the only thing that can ultimately keep someone coming back to the airport is that flying is fun. We just need to be reminded every once in a while.

There are various ways to recapture the fun in flying. Some pilots take up soaring; some pursue a tailwheel endorsement; some splurge on a helicopter rating. And then there is ultralight flying. Art Kudner and Dan Wroe, both 40 years old, are dealers for the Quad City Challenger, an ultralight that operates on both wheels and on amphibious floats. The Chal-

The view from here

Ultralights and the love of flying

BY CHIP WRIGHT

PHOTOGRAPHY BY MICHAEL P. COLLINS

lenger is a high-wing ultralight with a tube structure covered in Ceconite, and an excellent overall safety record. I was able to get a ride on Kudner and Wroe’s Challenger demonstrator in 2001, and they recently invited my father and me to try a more extensive flight to get an honest feel for what might be required to comfortably—and safely—solo one. Past experience told me that ultralights as a whole are simple, yet deceptive, that two or three times around the pattern were not going to be enough. Turns out I was right.

The timing of my flight last summer would be interesting because it occurred at about the time that the new light-sport-aircraft regulation kicked in. The new rules will have a dramatic effect on the ultralight community (see “The Skinny on Fat Ultralights,” page 93).

For years, ultralights had a reputation for being dangerous, and without a doubt, some pilots operated their equipment in such a way that they did little to favorably sway public opinion. But so often, whether the aircraft in question is an ultralight or a Boeing 747, it isn’t the equipment that is at fault, but the actions of the pilot. While there have been equipment-related failures, most accidents are still pilot induced, and I suspect that the early rash of ultralight accidents fit that description as well.

Under FAR Part 103, which still governs true ultralights, it isn’t necessary to have a pilot certificate to operate an ultralight. That means training isn’t required either. But the fact is,

most ultralights are built to resemble—and fly like—airplanes. The same laws of physics certainly apply, which means that if you overstress the airframe, you increase the likelihood of structural failure. It may not happen on that flight, but it might happen later when operating well within the safe confines of the design limitations. Failure during a “normal” flight caused by a previous event do little to enhance the reputation of any aircraft. Alternatively, if you operate an ultralight the way it is intended to be flown, you can safely enjoy many hours of accident-free flight. Over the years, the Challenger products have proven among the safest and most popular.

In order to encourage training and improve safety, a number of years ago the FAA, in conjunction with the U.S. Ultralight Association (www.usua.org), created an exemption that allowed two-person ultralights to be flown, as ultralights and without N numbers, strictly in a training environment so pi-

The evolution of ultralights lately has led to more and more options and designs for pilots to choose from, including enclosed cockpits with cabin heat.

lots could learn how to safely operate in single-seat craft. The result was a marked improvement in the accident record. A bit of definition is in order here. A pure ultralight has a single seat and meets the other criteria of Part 103. If you see an ultralight with two seats with no N number, it can operate under the guise of an ultralight only if being used for training; passenger joyrides are prohibited. These are the type of ultralights affected by the new light-sport-aircraft regulation. If there is an N number, then what you see is a registered homebuilt that can legally operate as any other homebuilt aircraft, meaning that if you are a certificated pilot you can give rides to your friends (assuming any initial flight test time has been completed).

So, just what is it that makes ultralight pilots so enthused about their hobby? Flying an ultralight is pure seat-of-the-pants flying. It's not as pure as gliding, in that there is an engine, but it's simple, unsophisticated, and, well, it's fun, dammit. Part 103 restricts powered ultralights to a single seat, an empty weight of 254 pounds (not including floats), a

Dan Wroe and George Silver work on the Challenger (right). Art Kudner watches as Wroe paints the tail (below, bottom). The mouth of the Chester River is a good place to practice water landings (left). Wroe aligns masking tape before applying red trim (below, top).



ISMAN FIELD



maximum stall speed of 24 knots, a fuel capacity of not more than five U.S. gallons, and a maximum forward speed of 55 knots. Looking at those limitations, you know going in that you won't fly far, and it won't happen fast. Trips will be local, with perhaps a slightly longer journey for the \$25 hamburger (ultralights are much cheaper to own and operate than most light airplanes). The evolution of ultralights lately has led to more and more options and designs for pilots to choose from, including enclosed cockpits with cabin heat, which increases the ability to fly year round. Other options include the level of sophistication in the panel.

N8102Q, the Challenger that I flew, has an electrical system for the battery and starter (to avoid hand-propping). In addi-

tion, it has an airspeed indicator, an altimeter, cylinder head and exhaust gas temperature gauges, a tachometer, a Hobbs meter, and a wet compass. Radios or transponder? Nope, just an intercom, and when a radio is needed, it's a handheld. Pilots and builders can, though, add all the gadgets and gizmos they want, but at the penalty of money, weight, maintenance, and general aggravation. Besides, ultralights are all about simplifying our needs. But are they fun—and how!

Kudner and Wroe of Grasonville, Maryland, have never lost sight of the fact that flying, in its purest form, is about having a good time. Neither has ever had a desire to fly the big or the fast, and Wroe likes to brag that the largest airplane that he has ever flown is a Cessna 172. As dealers for the

Because the floats were installed, the climb performance was more anemic than it would have been had we been using just the wheels. But hey, when 500 feet is your goal, you don't need great climb performance.



Heading into the late-afternoon sun, Dan Wroe lands his Quad City Challenger on Runway 24 at Talisman Field.

Quad City Challenger, they have made a business out of exposing pilots to the world of ultralight flying, and their enthusiasm is infectious. Wroe got it right. He talked about his experiences flying in the vicinity of so many pleasure boats, and the thought has often struck him that he has looked down from his \$15,000 ultralight and looked at a boat going slower than him that might cost \$45,000 (probably much more), costs more to insure, has less utility, burns a whole lot more gas, and is more regulated by bureaucracy.

The two-seat Challenger, the demo model we will use today, starts at \$12,900. The single-seaters start at \$10,700. Kudner says that their Challenger costs about \$35 an hour to operate, which covers fuel, oil, insurance, and maintenance. Insurance costs him about \$750 a year on amphibious floats, but he doesn't carry hull insurance. He also includes an engine reserve in that \$35 an hour based on 100 flight hours a year. Options and upgrades can add to the cost, especially if the buyer opts for floats and doors, for example. But as Kudner likes to say, with a smile, "We don't need to try real hard to sell this. It sells itself." Indeed it does.

Flying from Kudner's family farm on the Eastern Shore of Maryland, they have access to two of my favorite forms of flying: flying from grass strips and flying off the water. The two-seat Challenger they use for demonstrations is an amphibious model with more than 1,000 hours on the airframe. Wroe, with land and sea ratings on his private certificate, provides the demo flights. His preflight briefing is thorough, almost as if he is teasing you by making you wait to go flying. A quick discussion about the construction of the airframe, including items to note on the preflight, is followed by a demo on entry and egress, retraction and deployment of the landing gear, and the departure and approach profiles. Once in the seat, Wroe makes sure you can comfortably reach and manipulate the controls, especially the rudder (more on this

later). If not, he can fix that. My only question before takeoff regarded the lateral limits of the Washington ADIZ (Air Defense Identification Zone), which I knew was just to the west of the farm. Wroe smiled. He said that the ADIZ is less than 1,000 feet away from the shoreline, and avoiding it would be easy at less than 70 mph. You have to like that.

Once the 50-horsepower Rotax 503 engine was started, we taxied down one of the three grass runways to use the one most favored by the winds. The grass was wet, and Wroe wanted to minimize the ground roll as much as possible. He also wanted to taxi a bit to let the engine warm up. Once ready to go, we added full power and started bouncing down the runway. Before long, it was time to rotate. I eased the stick back, the Challenger broke loose from the grass, and we flew in ground effect for a few seconds to gain speed, then climbed out at 55 mph.

This being a flight about having some fun, we immediately turned out over the water, climbing to a cruise altitude of 500 feet. Because the floats were installed, the climb performance was more anemic than it would have been had we been using just the wheels. But hey, when 500 feet is your goal, you don't need great climb performance.

In honor of the ADIZ, we stayed close to shore, heading for a small inlet with some smooth water to practice some splash and goes and water taxiing. Because the Challenger is small and doesn't go all that fast, you can make some very steep descents without building up a great deal of airspeed—which we did. We dove toward the water like a sea gull, and as we leveled off, we added enough power to maintain about 55 mph. We leveled off and flew in a flare for a while, Wroe talking the whole time about what the landing picture would look like. Once he was finished explaining it, we descended the last couple of feet, reduced power, raised the nose slightly, and landed. The most disconcerting thing

about your first landing on water is that pilots often have a preconceived notion from pictures on television of a silky-smooth landing. Wrong—it's much more noticeable than landing on a runway. Smooth is relative. The fact is you bounce a little bit, like a boat at high speed, until you slow down and allow the floats to settle into the water.

Which, in the name of fun, we didn't do. We immediately added power to stay on the step, and pulled the stick all the way to our guts. As the Challenger gained some speed and the elevator gained effectiveness, we relaxed the back-pressure on the stick, and waited for the floats to become airborne, bouncing merrily on the water. Once on the step, the transition to flight was quick and smooth. We circled around the inlet again and did two more landings, each one a little more mine and a little less his than the one before. Being used to flying larger aircraft, and knowing from my experience as a flight instructor the challenges that some pilots have in re-

indicator. From the first takeoff, I had trouble keeping that string straight. I constantly needed to add right rudder, and just when I thought I was getting the hang of it, the string would go off to the side, and I'd feel Wroe kick the rudder and chastise me for my sloppy technique. It turns out that I was just a little too short for the rudder settings, and we should have taken action before we took off to make it easier for me to get some leverage. For the rest of our flight, I tried to follow through on the rudders, but Wroe, sitting behind me with his legs partially wrapped around me, did the bulk of the work. I am not ashamed to admit that the rudder problems alone were enough to prevent either Wroe or me from declaring me ready to fly solo that day.

Flying straight and level was not particularly difficult. The sight picture through the windshield becomes almost second nature after a few minutes, and a quick glance at the altimeter every few minutes verifies that you are where you want to be. Steep turns took some practice to get the rudder input down



Dan Wroe preflights the Challenger (top), helps to strap Carl Deakyne into the back seat (right), and turns the aircraft around on the bank of the Chester River (above).

learning the sight picture in smaller aircraft, I was afraid that I would tend to flare early. Instead, my biggest problem was judging the speed and rate of closure to the water. The only explanation I can think of for this is the fact that the tandem seating and open cockpit—OK, no cockpit—of the Challenger provided a change in my peripheral vision, and it was clear that I was going to need some practice. Being ready to solo today was going to be a challenge.

After a few landings, we climbed out to do some sightseeing and some airwork. Prior to the flight, I had been briefed that the need for rudder was going to be far greater than I was used to. In order to provide some feedback, Kudner and Wroe had taped a piece of yarn to the windscreen of the Challenger to act as a yaw

The skinny on fat ultralights

The Sport Pilot and Light-Sport Aircraft initiative doesn't spell the end of FAR Part 103 ultralights or ultralight pilots, but it does open up some new opportunities.

The new rules have the most dramatic effect on so-called "fat" ultralights—those that weigh more than the 254-pound legal limit for powered craft. While in the past there was an exemption for two-seat ultralights used for instruction, owners now have to apply for airworthiness certificates and registration numbers by January 31, 2008. The same goes for those who were flying single-seat aircraft that exceeded the legal limit.

Those who want to continue to fly under Part 103 without government scrutiny can continue to do so, but the initiative provides an incentive for ultralight pilots to obtain sport pilot certification. This would open up a new world of

aircraft that they can fly and provide privileges for flying in controlled airspace in properly equipped aircraft.

Ultralight pilots and instructors who were registered with one of three ultralight organizations before September 1, 2004—when the rule went into effect—can receive credit for the aeronautical and flight proficiency requirements toward a sport pilot certificate. A knowledge and practical test would still be required. Pilots and instructors who were registered after that date would need to meet all the requirements under the sport pilot rule. Ultralight instructors of the future will have to hold sport pilot flight instructor certificates to teach in the heavier and now registered two-seat aircraft. For more information on the regulations, see AOPA Online (www.aopa.org).

—Nathan A. Ferguson

pat, but required surprisingly little effort to maintain altitude. They can at first seem a little unsettling, given that there is no way to measure bank angle, and you are not protected by a traditional fuselage. It didn't bother me, but others might want to start with shallower turns to get more comfortable. For those who can handle not having structure all around you, steep turns are a hoot.

Stalls were the most pleasant surprise of all. The Challenger will pitch until it loses elevator authority, but the break is gentle, more of a wobble than anything. There is nothing unpredictable or scary, especially if the string is kept straight.

After doing airwork, we did more sightseeing, watching bald eagles and herons feed along the bay. As we headed back toward the farm, we took full advantage of the flexibility of the machine we were in. From 500 feet, we dove down to within a foot or two of the water, and went at full speed. The speed sensation that low to the surface is mesmerizing and thrilling. As we approached a sand bar, we climbed another few feet, crossed over it, and dropped back down. Out in front of us, we saw a couple motoring along in a boat, their wake indicating they were in a hurry.

You can easily measure the capability of an ultralight with only 50 horsepower. It may take a bit, but flying from a safe distance, I could slowly see us catching up to the boat, and eventually passing it, which we did. Kudner and Wroe's words ring true: "You can go this fast for \$15,000 in an ultralight or \$45,000 in a boat, or the \$100,000 you might spend in a production airplane." Too bad the average person isn't aware of this kind of flying.

Even though we were headed back to the farm, I wasn't quite ready to call it quits, so we did three or four more splash and goes, each a little better than the one before. I could tell that I was still a little tentative, but more practice would get that out of my system. A few more hours of this, and I'd be ready, safe, and confident to go it alone. I would then be free to feel the wind on both arms, have the ability to go fast or slow, and enjoy the low cost of operation, the incredible wraparound view, and the fair-weather-only operating environment that all enjoy themselves in an ideal mix called ultralight flying. **AOPA**

Chip Wright, AOPA 1086994, of Hebron, Kentucky, is a CRJ captain for Comair.