

Budget Buy

Friendly flier

Fred Weick's
classic
straddles the
generations

BY THOMAS A. HORNE



Light
Sport

For many reasons, the diminutive, distinctive-looking Ercoupe has earned a place as one of general aviation's most popular light singles. It's a classic design that has held its looks for some 60 years, it has an ingenious design philosophy, it's an easy-to-fly, low-cost entry-level airplane, and, well, it's just plain fun to fly.

The Ercoupe began in 1937 as the brainchild of Fred Weick, a NACA (National Advisory Committee on Aeronautics—the forerunner of NASA)

aerodynamicist who entered the design in a safety competition. And it won. So started the Ercoupe's reputation as a super-safe airplane, forgiving of the most horrendous blunders a neophyte pilot could commit. Weick's goal was to create an airplane that would resist the most destructive accident causes of the day: stalls and spins, crosswind landings, and ground loops.

The very first Ercoupes—112 of them—were manufactured in 1940 and 1941 by the Engi-

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place indeed. You could buy a new Ercoupe back then for \$2,665.

In the immediate postwar years it was assumed that all those veterans learning to fly on the GI Bill would want airplanes of their own, and would use them to both commute to work and to vacation destinations. It was a boom time for general aviation, with manufacturers hoping that pilots would gladly seek out a tame bird like the Ercoupe.



It's the Ercoupe's limited elevator travel that makes it virtually stall-proof. For example, early model elevators only moved up 13 degrees and down 12 degrees. This meant that even with full-aft stick pressures the airplane wouldn't develop true stall angles of attack. Yes, it's possible to dive an Ercoupe, then abruptly haul back on the control column to perform a whip-stall, but the entire wing never completely stalls. Roll control is still available, thanks to those huge ailerons, and outboard sections of the wing remain flying. As for spins, rumor has it that an Ercoupe could spin out of a hammerhead stall, but with 75 horsepower and such limited elevator travel there's not much of a chance of ever getting near hammerhead country.

Coordinated flight is automatic in turns and other maneuvers, thanks to an aileron-rudder interconnect. The interconnect obviates the need for any rudder inputs, so there are no rudder pedals. (However, kits are available to add rudder pedals.) On most Ercoupes, the only pedal you'll see is a single automobile-style brake pedal.

Propeller torque effects (the left-turning tendency) in climbs are minimized by canted engine mounts—which realign the engine and propeller disc so that the prop thrust line points slightly to the right—and the twin-tail design keeps the vertical stabilizers and rudders out of the propeller slipstream, further minimizing control corrections during takeoffs and climbs.

Crosswind landings? Not a problem with the Ercoupe's tricycle gear and yoke-steerable nosewheel. To make a crosswind landing, just land in a crab, and the airplane will straighten itself out automatically. Then it's time for you to steer and brake. The trailing-link landing gear smooths out any firm arrivals.

All these innovations—some of them way ahead of their time—add up to an airplane that can be vexing for a newcomer to fly. After all, habit forces you to stomp on imaginary rudder pedals, and taxiing means you steer and brake as you would in a car. A convertible, that is, since the Ercoupe's side windows can be slid down in their tracks. This lets you taxi—and fly!—in style, with your elbow casually slung over the windowsill.

Flying impressions

There's not much to flying an Ercoupe, and it's this simplicity that leaves you free to enjoy. Check the fuel (there are two nine-gallon wing tanks and a six-gallon header tank), check the oil, turn on the fuel valves, prime the engine two to six times, crack the throttle, and pull on the starter handle. The 'Coupe fires up and it's time to taxi. It's for sure that steering and braking auto-style will be awkward at first.

As Erco Coupe panels go, this one is loaded. A standard-issue 1946 Erco Coupe came with what we'd today call a "partial panel," with the possible exception of a venturi-driven, Army-surplus attitude indicator. With a handheld radio and a panel-mount GPS, plus a transponder, this Erco Coupe's loaded for bear. The control wheels, however, are authentic.

there's very little rudder authority, so you have to keep steering with the yoke to stay on the centerline—and keep forward pressure on the yoke to maintain steering authority. When it's time to lift off—at about 60 mph—you make a deliberate yank on the yoke and snatch the airplane off the runway. This is to prevent settling with a cocked nosewheel, which would definitely not be a fun experience at full power.

Erco Coupes are ground lovers, so expect a long ground run, and a meek climb rate. Best-rate-of-climb airspeed is 70 mph, and under standard conditions you should see something like 400 fpm at the -C and -CD models' 1,260-pound maximum gross takeoff weight.

At altitude I tried some stalls. Power off, yoke full back, feet off the pedals, and wait while airspeed bleeds off. And wait. And wait. As advertised, the 'Coupe didn't buffet or roll off into a stall. The only indication of an aerodynamic compromise was a monster sink rate on the vertical velocity indicator: 1,000-plus fpm down. Turning stalls were equally well behaved. The wings' huge dihedral kept rolling moments under control, and there was never any pronounced drop of the nose at the moment of "stall."

And yes, we had the windows down. It's a bit noisy, but what do you expect? The only downside to open-air flying is a 5-mph cruise speed penalty. Clean, we could have seen a 120-mph maximum-power cruise airspeed. Instead, we flew around at 115. Big deal. I don't know anyone who flies an Erco Coupe for speed.

"You can turn it just by sticking your hand out in the breeze," Richards said. So I tried it. (Note to the blasé: Please prepare yourself for the force of the prop blast and relative wind! The Erco Coupe may not be a speed demon, but your arm doesn't know that.) Muscles

The airplane I flew for this report is operated by the Frederick Flight Center at the Frederick Municipal Airport in Maryland (photos on these pages were taken of another Erco Coupe at the Spruce Creek fly-in community near Daytona Beach, Florida; see sidebar on page 61). CFI Scott Richards is the Frederick-based Erco Coupe's main instructor, and he checked me out in N3438H, a 1946 415-C that has the very popular Continental 85-horsepower engine conversion, the rudder-pedal conversion, and a wooden, climb-pitch propeller. In the absence of that single floor-mounted brake pedal, I had to use the hand brake—a center-mounted T-handle.

That car steering has some important ramifications during the takeoff run. Even with the rudder-pedal conversion





Ercoupes can be cramped and short on headroom, but the view makes up for it. Although you'll stomp like mad the first time you fly an Ercoupe, there's just one foot pedal—for the brakes. Don't look for four-point harnesses—a simple lap belt was the restraint du jour back in the Ercoupe's heyday.



taut, I reached for the sky...and the 'Coupe made a standard-rate left turn!

Back in the pattern, we had a chance to attack a minor crosswind component of about 5 knots. Did I feel uncomfortable flying sideways to touchdown? You bet! But the 'Coupe straightened itself out as soon as the nosewheel was planted. Then it was time to drive back up the taxiway for more practice.

This time the task would be to demonstrate a high-sink-rate approach, the kind you might have to make if you realized you were overshooting your desired touchdown point on the runway. The Ercoupe instruction manual—a quaint compendium that includes hand-drawn illustrations and leaves a lot to the imagination—refers to making a steep approach at 60 mph, rocking the wings 20 to 30 degrees while coming down final. "With the wheel full back... height is lost quite rapidly," the manual says, and it's not lying! While this is effective in losing altitude, I'd much rather recommend better approach planning



over what amounts to a steep mush at low altitude. Pull the power and the Ercoupe will drop like a stone anyway, with or without banking from side to side.

The Ercoupe saga

The Ercoupe company went through many owners, and the line includes several different versions. By far, the most plentiful Ercoupes were 415-Cs, built by ERCO in that banner year of 1946. But the boom went bust the next year, when only 415-D and -CD models were sold. From 1948 to 1950, just 213 Ercoupes were built, and the company then was bought by Universal Aircraft Industries, which sold Ercoupe parts only. Universal then sold the company to the Forney Aircraft Co., of Fort Collins, Colorado; it built 163 Ercoupes under the Forney F-1 and F-1A name in 1958 and 1959.

In 1965, it was Alon Inc., of McPherson, Kansas, that bought and started building 297 Ercoupes, now called A-2 Alon Deluxes. In 1968, it was Mooney Aircraft's turn to build Ercoupes, which it called, first, A-2A Alon Cadets. Then the airplane was given a conventional empennage and tail design and renamed the M-10 Cadet; 59 were sold.

In 1974, Mooney sold the design to Univair Aircraft Corp., of Aurora, Colorado. Univair (www.univair.com) continues

to build parts for Ercoupes, but does not manufacture the airplane.

As the Ercoupe evolved, many changes were made. Too many to describe here in detail, but they included powerplant, trim control, canopy design, fuel venting, kiddie seat, and aluminum wing upgrades. (The first Ercoupes have fabric-covered wings.) There are even Ercoupes out there on floats and skis. And I've heard of one Ercoupe modified with a JATO (jet-assisted takeoff) bottle for rocketlike climb trajectories (see "Test Pilot," page 130).

Back to the future

Now that light-sport-aircraft (LSA) certification has arrived, the Ercoupe is being rediscovered. With max takeoff weights of 1,260 pounds, the early Ercoupes (the 415-C and -CD models; -D and subsequent models have 1,400-pound maximum gross weights) easily fall within the light-sport weight limit of 1,320 pounds. Owners of some of these models modify their airplanes so as to lose empty weight and boost useful load, fitting them with wooden propellers, and removing wheelpants and radios. The airplane's forgiving nature, slow cruise speeds, fixed gear, two seats, and single engine round out the LSA compliance package. To meet LSA provisions, airplanes also cannot have stall speeds greater than 45 knots/52 mph and maximum cruise speeds more than 120 knots/138 mph. Meeting those requirements is no problem for the Ercoupe. Add the airplane's conventional looks and cockpit (compared to some of the flimsier-looking LSA designs out there) to the mix, and you have the makings of a great potential demand for this bargain-basement airplane.

Prices

Ercoupes have always been economy airplanes, and that tradition continues. You can buy many Ercoupes/Forneys/Alons/Mooney Cadets for anywhere between \$10,000 and \$20,000. As always, price depends heavily on the condition of the airframe, and the engine's status in the overhaul cycle. The

Dylan Sawchuk (left) is learning to fly in Glen Davis' rudderless Ercoupe.



This rod sits atop a float in the six-gallon header fuel tank, just forward of the windshield. When the rod starts to descend, you know you've used up the fuel in the wing tanks. Based on a nominal, 5-gph fuel burn, you've got an hour to get on the ground.

A charmed life

Ercoupe owner Glen Davis shares his flying machine

BY JULIE SUMMERS WALKER

Luck. It's a word that makes people wonder. How did he get to be so lucky? How can I be lucky enough to win the lottery? Win the girl (or guy)? Win the job I want? In the Oscar-contending movie *Match Point* the word *luck* propels an entire film. Is it luck or is it skill that makes a successful life?

Glen Davis would probably say it's a little bit of both. For 19 years now, Davis has been the official business and family photographer for the Forbes family, publishers of *Forbes* magazine and heirs to the financial dynasty launched by B.C. Forbes in 1917 and later greatly expanded by his jet-setting son Malcolm. A gulleless 25-year-old

who worked in his father's camera shop as a photographer, Davis wrote to Forbes in 1983 inviting himself to one of Forbes' motorcycle parties (the billionaire author of *Around the World on Hot Air* and *Two Wheels* loved sharing the road with anyone who shared his passion for motorcycles).

After the first Saturday party, Davis sent a thank you note, and four Saturdays later he'd become a regular, always armed with his camera, recording the day's events. At one of these occasions, Forbes approached Davis

and said with regret that he wouldn't be seeing him for a while; he was off to Paris to attend the opening at a museum where he had his famous Fabergé egg collection on loan, to Germany to ride his Harley and fly hot air balloons, and then to his palace in Morocco. But the flamboyant Forbes then stopped and said to Davis, "Can you come along and photograph my travels for the magazine and my next book?"

From 1987 until Malcolm Forbes' death in 1990, Davis circled the globe, photographing Forbes' life, his family, and his adventures. After the funeral, Davis told Steve Forbes he understood if the family no longer needed him, but the younger Forbes said he had already discussed it with his brothers and would like Davis to continue with the company. Davis' life continued on its charmed course—with assignments such as covering Steve Forbes' bid for president and taking on other challenging photo assignments.

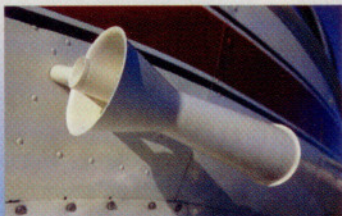
So what does all this have to do with flying and the Ercoupe? Well, a successful life lived well often means the lucky guy gives back to others. Davis is that guy. He learned to fly in 1976, influenced by his father's stories of World War II as a radio operator in a PBY Catalina. He helped his father finally get his private certificate when his dad was 70, and the pair shares ownership of a Grumman Tiger. But Davis had a childhood friend who deeply wanted to learn to fly. He had polio as a child and has use of only one of his legs. Davis got his instructor rating so he could teach him, but the airplane was the real problem.

And here's where the Ercoupe comes in. Because the Ercoupe has no rudder pedals, it is often used to teach pilots with disabilities. Davis thought, "Eddie could fly this."

Davis found the 1946 Ercoupe (featured in photographs in this and the main story) for sale in *Trade-A-Plane*. "So many of these older airplanes are not maintained as well as they should be and are held together with bubble gum and bailing twine. I had to walk away from several I looked at. I asked the seller who performed its maintenance, and he said his wife. She's a commercial pilot and an A&P. This was a pristine aircraft," says Davis. Eddie soloed after just 10 hours of instruction.

The Ercoupe is still used for instruction and is hangared now at Spruce Creek, a fly-in community near Daytona Beach, Florida. Davis donates its use to the local EAA chapter. The latest recipient of Davis' generosity is Dylan Sawchuk, a 16-year-old boy with spina bifida, who is currently taking flight lessons in the Ercoupe. Dylan soloed in December. "He just beams when he flies," says Davis. "It gives him the freedom he's never been able to enjoy."





To turn it into a convertible, slide down the canopy halves (above). Venturi (inset top left) powers vacuum gauges, and trailing-link landing gear (inset top center) cushions those firm arrivals. The 'Coupe's wing (inset top right) is fat and docile; this one has a leading-edge-mounted landing light.

closer an engine is to its recommended time between overhauls (TBO), the less the airplane is worth. Really pristine restorations can run up to \$30,000 or so. Recent postings in *Trade-A-Plane* can give you an idea of what to expect. One advertisement touted a 1946 415-C with a Continental 85-horsepower engine upgrade (85-horsepower engines were made standard in the 1948-to-1950 415-E and -G models), 3,100 hours' total time, 988 hours since major overhaul, and 205 hours since top overhaul for \$29,900. Another ad for a 1946 415-C—also with the 85-horsepower engine—asked for \$13,500. But the owner mentioned minor surface corrosion.

Pitfalls and opportunities

Which brings us to the caveats in buying an Ercoupe. By far, corrosion is the biggest deal-killer, which is understandable in airplanes pushing 70 years. Be especially wary of airplanes that have aluminum or Ceconite wings. Most don't have inspection plates, and undetected corrosion can and does lurk inside. Fabric-covered models

breathe better, of course, so corrosion may be less of a problem. Still, many Ercoupes have lived most of their lives tied down outdoors, where condensation in the fuselage and wings makes a nice home for corrosion—no matter the wing covering.

Information and support

Anyone considering an Ercoupe should tap into the resources offered by the Ercoupe Owners Club (EOC). Membership dues are \$30 per year, which includes a subscription to *Coupe Capers*, its official magazine. The EOC, which has been serving Ercoupe owners for decades, is a treasure-trove of specifications, maintenance and service information, Ercoupe lore, flying yarns, and much more. For more information, visit the Web site (www.ercoupe.org). It's worth scouting out—even if you're simply curious about this classic and its eclectic aficionados.

But for those who are in the market for one of these low-cost classics, it's nice to know that parts, expertise, and good company are readily available. This was plainly evident as Richards and I taxied up to 3438H's tiedown spot. Within minutes a dozen gawkers had assembled around the airplane, wanting to know everything about it. As its pilots, we became a congenial mix of experts and showmen. Meanwhile, the friendly looking airplane stole the show—which is why the Ercoupe is still going strong after almost 70 years.

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i Links to additional information about Ercoupes may be found on AOPA Online (www.aopa.org/pilot/links.shtml).

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