

# KOLIBER II MODEL 150A BACK TO THE FUTURE

*The Rallye, reborn*

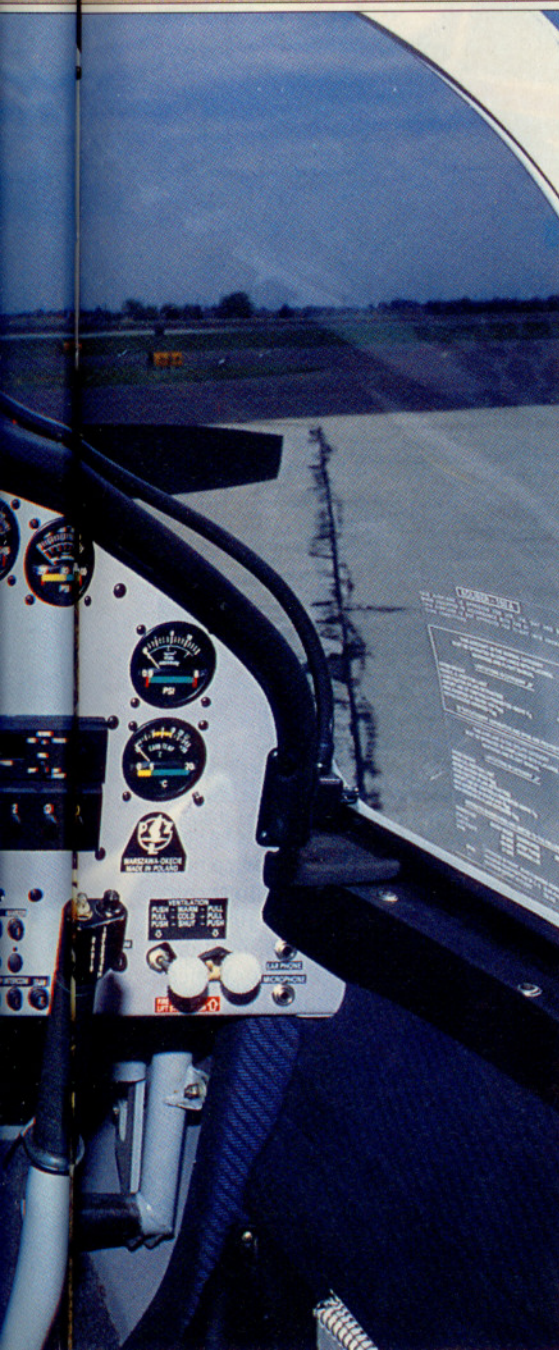
BY THOMAS A. HORNE

**I'M** cruising along at a leisurely 90 knots, canopy slid back, arm resting on the window sill, and the verdant Wisconsin landscape's trundling by just 1,000 feet below. Thanks to that huge canopy, the view is tremendous. A couple of jabs at the stick, and we're in a steep turn. I'm pulling hard and catch a glimpse of the leading-edge slats momentarily extending. The airplane is the Koliber, but it evokes strong memories of flights 20 years ago, in a quirky, fun, and capable French airplane called the Rallye. ■ Back then, it was American general aviation's salad days, with the big four manufacturers cranking out dozens of different aircraft types. The French got in on the act, too. Socata, the lightplane division of Aerospatiale, brought the Rallye series of airplanes to the United States. There were Rallyes of all descriptions, ranging from the "Minerva," powered by a 220-horsepower Franklin engine and marketed by Waco, to 150-, 180-, and 235-hp Lycoming-powered models (one of them a taildragger) sold by a few

PHOTOGRAPHY BY MIKE FIZER







Socata-sponsored American outfits. Unfortunately, the Rallyes flopped in America, and only 70 or so were ever sold on these shores.

Apparently, Americans didn't buy into the Rallye's pitch as a STOL machine; back-country, personal-utility hauler; or benign trainer. In those days, there were plenty of new American-built airplanes that could easily fill those bills.

By 1979, Socata changed course. The decision was made to market the new Caribbean line of singles (the TB-9 Tampico, TB-10 Tobago, and TB-20 and -21 Trinidads) and put the Rallye on indefinite hold.

The Rallye was exiled to Poland. Aero-spatiale struck a deal with Panstwowe Zaklady Lotnicze (PZL) of Warsaw, in which PZL built parts for Socata in exchange for certain production rights to the Rallye.

Now, by virtue of a new type certificate and new parentage, the Rallye has been transformed into the Koliber II Model 150A and certified in the United States under Federal Aviation Regulations Part 23. The Cadmus Corporation, a firm with marketing offices in Northfield, Illinois, and assembly facilities in Drummond Island, Michigan, contracted with PZL to manufacture the Koliber (*hummingbird* in Polish), and now the first two are touring America.

Cadmus' principals are Chairman Clifton Haley, formerly chief executive officer of Budget Rent-a-Car, and President Philip Coleman, a longtime Beech sales executive.

There's a certain zeal about the Koliber venture. For Cadmus, the project isn't just the resurrection of an old design. It's an attempt to breathe new life into general aviation. Coleman hopes that the Koliber's relatively low price (\$89,500), friendly flying characteristics, and sporty look will attract new blood and reanimate those disenchant-ed with aging trainers. "If they won't pay \$89,500, they won't buy anything new," says Coleman.

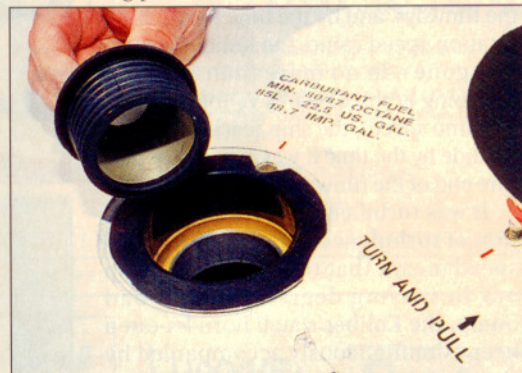
The Koliber does deliver a lot of bang for the buck. The base price includes a well-equipped Narco panel, with a Mark 12D nav/com, an ID-824 VOR and local-izer receiver, an altitude encoder, a PS Engineering PM-1000 voice-activated intercom (with stations at all four seats), strobes, and a lighted vertical card compass. Two optional IFR panel packages are available, for up to \$16,000 extra. Although Narco is Cadmus' supplier of choice, customers can opt for Bendix/King radios, a Century horizontal

situation indicator, and other goodies. Customers also have a choice of climb or cruise propeller, at no extra charge.

In spite of the new panel accou-trements, the Koliber is still an old-fash-ioned Rallye at heart. This means that pilots new to the airplane will face a few surprises. Most are pleasant.

Preflights are conventional in most regards, with the one big exception being a check of the wing leading-edge slats. With two people—one per wing—gently pulling on each wing leading edge, the slats are extended and checked for freedom of movement and symmetry of deployment.

These slats deploy automatically whenever the wings enter a high-angle-of-attack situation. It's the presence of low-pressure air at the leading edges that "sucks" the slats out of their normal resting place—flush with the rest of the air-



foil. The slats are the Rallye's—er, Koliber's—signature design element, designed to make for very low (39 KIAS with full flaps) stall and approach speeds and virtually harmless stall behavior—more on this in a bit.

Euro-oddities crop up in other things such as the fuel-ump-drain containers, the fuel caps, and cockpit symbology. Fuel samples are drained into a glass baby bottle. Fuel caps are rubber plugs, secured in place by serrations and force of hand. Little pic-tograms, intended to vault language barriers, show where the flaps and elevator trim are set. There's another surprise at the tail: What look like rudder cables are really stainless-steel rods.

It's an easy step into the cockpit because the canopy opens wide, allow-ing front- and back-seaters to come and go with a modicum of grace.

Preflight complete? Then it's brake and fuel on, mixture rich, master and boost pump on, a couple of strokes on the throttle, and turn the key. Like the Robin DR 400 we reviewed ("Robin DR 400," February *Pilot*), the Koliber's left-seater has a choice of throttle hands. A center-mounted throttle makes sure an

instructor has a say. Another throttle control at the captain's left lets him/her work the control stick with the right hand and the power with the left, a setup that most pilots prefer.

Taxiing can be a chore in quartering tailwinds. Like the Grumman/American General singles, steering is by differential braking of the main landing gear; the nosewheel casters and the rudder's out of the loop completely. If the wind's much past 10 to 15 knots, you'll be stomping hard on one pedal or another and going slowly to or from the active.

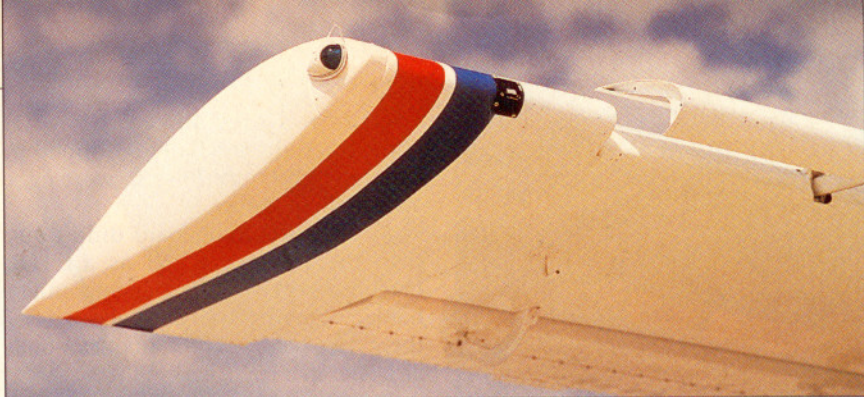
Takeoffs are a real thrill. The book says you'll lift off in 550 feet and clear the hypothetical 50-foot obstacle in 1,300 feet. But that's with no wind. When I flew the Koliber out of Chicago's Pal-Waukee and the Janesville, Wisconsin, airports, it was about 60 degrees Fahrenheit and there was up to 20 knots of wind down the runways, and by the time the 37-KIAS rotation speed came, the Koliber was up and gone—in no more than 300 feet. Climbing at the 61-KIAS  $V_x$  (best-angle-of-climb speed), the ship reached pattern altitude by the time it was over the departure end of the runway.

It was turbulent, too. The combination of turbulence and the slow climb speed meant that the slats would pop out in varying degrees. With a bad bump, the Koliber's stall horn let out a beep, simultaneously accompanied by slat extension.

Steep turns and other maneuvers are a special treat, what with the panoramic view and the novelty of working a stick. Because of the slat action, power-off stalls are completely unremarkable. You just keep pulling and pulling, the slats extend, the stall horn goes off, and the Koliber heads earthward. No stall break, no wing rocking, just a 1,500-or-so-fpm mushing descent in a level attitude. That's why the French call the old Rallye the "parachute plomb" (lead parachute). To achieve a proper stall break, you have to perform a power-on stall with a fair airspeed deceleration.

The Koliber's sporty looks give it the air of an aerobatic airplane. However, unlike the original Rallye, the Koliber is placarded against spins. That's because today's FAR Part 23 spin requirements are much more stringent than those the old Rallye had to face under the early CAR Part 3 rules. Cadmus wanted to keep costs down by skipping the FAR Part 23 spin tests.

Landings are uncomplicated affairs. With the flaps set at their full (and only) 30-degree setting, you fly final at 65 KIAS, then flare at 54. The slats—you guessed it—thump forward again during



*The Koliber's slats automatically extend at slow airspeeds and make for docile stalls. At or below 92 knots, the canopy can be fully opened—but say goodbye to loose objects.*



the flare, and the Koliber can seem to come to a halt prior to touchdown. Maybe this is where Cadmus picked up the hummingbird theme.

No doubt about it, the Koliber is a safe airplane. Whether it's in pattern work, the stall, or landings, the airplane just doesn't seem to have a mean bone in its body. Though it's of foreign manufacture, the Koliber's flight characteristics are completely conventional.

All of this means that the Koliber is an excellent airplane, either as a trainer or four-place cruiser. For students, there are just enough chores to keep you on

your toes but virtually no threat of a sudden, killer stall. For those wanting a new, relatively inexpensive cross-country airplane, the Koliber's four seats, 105-KTAS cruise speed, and nominal 325-nautical-mile range make it excellent for typical stage lengths. Every pilot will appreciate the 150-hp Lycoming O-320's proven reliability.

This summer, Cadmus is going all out to market the Koliber. Electric pitch trim—sorely needed in the old Rallye—was recently made standard and is just one example of how the company has improved on the original design. Flight

schools, flying clubs, and rental firms get a 5-percent discount off the list price.

The company says that each of its five dealers (Valentine Aviation at the Fort Lauderdale Executive Airport; Million Air at Teterboro, New Jersey; Sky Ontario Aircraft in London, Ontario; and Midwest PZL Sales at the Drummond Island Airport) have ordered two airplanes. The first customer delivery of a Koliber will be to Million Air's flight school and should have taken place by now.

Will the Koliber take hold or repeat the performance of its predecessor? Cadmus is proud of saying that it's an American company, which just happens to have a factory in Poland. (In large part, it's Poland's low labor costs that keep the Koliber's price tag down. By the way, Kolibers are built in Poland, then containerized and shipped to Drummond Island. There, they are reassembled, and delivered.)

That's one part of the equation for success. A quality service and parts organization is another, and this aspect of the Koliber project has yet to be tested. But with so many American-made components, and a factory response time of no more than two weeks to deliver the most work-intensive parts, Cadmus appears to have this in order as well.

It's always encouraging to see a new airplane making the rounds, even if it does harken back to an earlier incarnation. We welcome the reappearance of this classic design. □

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#### PZL Koliber II

Base price: \$89,500

#### Specifications

Powerplant	Lycoming O-320-E2A, 150-hp
Recommended TBO	2,000 hr
Propeller	Sensenich 74DM6-O-58, or -56, or -54
Seats	4
Empty weight	1,205 lb
Gross weight	1,874 lb
Useful load	669 lb
Payload w/full fuel	414 lb
Fuel capacity, std	46.7 gal (42.5 gal usable)

#### Performance

Takeoff distance, ground roll	550 ft
Takeoff distance over 50-ft obstacle	1,300 ft
Max demonstrated crosswind component	20 kt
Rate of climb, sea level	670 fpm
Cruise speed/endurance w/45-min rsv, std fuel (fuel consumption, ea engine)	
@ 75% power, best economy	105 kt/3.75 hr
4,000 ft	(10.1 gph)
Service ceiling	12,100 ft
Landing distance over 50-ft obstacle	1,040 ft
Landing distance, ground roll	450 ft

*For more information, contact Cadmus Corporation, 466 Central Avenue, Northfield, Illinois 60093; 708/446-2644, 708/446-2749.*

*All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, sea level, gross weight conditions unless otherwise noted.*

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