BUILT FOR SPEED

An EZ alternative for the powerplant tinkerer

BY MARC E. COOK

Aldous Huxley once opined that "Speed, it seems to me, provides the one genuinely modern pleasure." In that sense, and that sense alone, Huxley and E-Racer creator Shirl Dickey appear cut from the same cloth. At first glance, Dickey's Rutan-inspired two-seater seems little more than a side-by-side Long-EZ knockoff, an expedient way to design an airplane on someone else's homework.

But that's not the whole of the story. Instead, the E-Racer began with Dickey's quest for speed. He'd already built a Long EZ, but soon began to feel the need for additional alacrity. As a complication, there is a limit to the amount of extra thrust and weight that may be fitted to an EZ without clanging against airframe limitations.

Taking the situation into his own hands, Dickey crafted a new fuselage that mostly resembles the tandem-seat Long EZ, but which carries two abreast in a 42-inch-wide cabin. Placing both humans together freed up room behind, which Dickey promptly filled with a highly modified Buick V-8 engine. Turning a 1.75:1 gear reduction drive, the liquid-cooled, all-aluminum 298-cubic-inch engine makes an estimated 240 horsepower at 5,000 rpm. Dickey prefers to keep a conservative maximum of 4,000 rpm for cruise, yielding 191 knots true at optimum altitude on about 12 gallons per hour.

A conventional aircraft powerplant also may be fitted to the plans-built E-Racer. The MK-II model (the V-8 version is the MK-I) will house a Lycoming O-320 of 160 hp, although larger engines can be made to fit. One advantage of using a conventional flat engine is greatly improved baggage space. What's more, Dickey is willing to listen to builders who would like to try other aviation and auto-converted engines. That's an unusual stance for a plans producer, and it represents something of the E-Racer's niche—to be a willing partner to a trailblazing homebuilder's imagination.

Departing the EZ norm in other ways, the E-Racer employs fully retractable gear with main legs crafted from carbon fiber. In Dickey's airplane, they are lifted with a lever-operated hydraulic pump. E-Racer main spars have heftier caps and shear webbing, giving a claimed 25-percent increase in wing stiffness; the trailing edge, unlike that of the EZ, is straight from tip to cowling. In addition, the vertical stabilizers are flush with the leading edge of the main wing, not set back as they are on the Rutan birds. Otherwise, the main wing is identical to an EZ's, and the exposed area of the Roncz canard is likewise the same.

Even at the higher 1,800-pound maximum weight (the EZ was 1,325 pounds) the E-Racer is an energetic performer. As is typical of canard pushers with fixed-pitch props, the initial runway acceleration isn't neck-snapping (especially so at the 5,042-foot elevation of Prescott, Arizona's Love Field, where we flew the E). Once off and climbing at about 105 knots, the E-Racer begins to scoot, showing better than 1,500

fpm in admittedly choppy, uneven air. Claimed rate of ascent is 2,500 fpm.

Aside from the unusual movements required by the center-stick-shod, motorcycle-style throttle, the E-Racer feels much like a heavy Long EZ. Control harmony is good, being heavier in pitch than in roll, and the airplane shrugs off turbulence well.

Right now, the E-Racer plans cost $250. For the same price, there's also the King Racer version, which has a longer cabin and a 2-inch-wider fuselage. You can buy many of the components—from the landing gear legs to whole wing assemblies—prefabricated, from a booming EZ-support cottage industry. Estimated construction costs are hard to pin down, given the bewildering array of options; expected build time is pegged at 1,500 to 2,000 hours. Which is to say that the E-Racer is one genuinely modern pleasure in reach of the enterprising builder. □

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