

Flying the Red Rocket: Ed Swearingen's SX300

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BY THE EDITORS OF PRIVATE PILOT

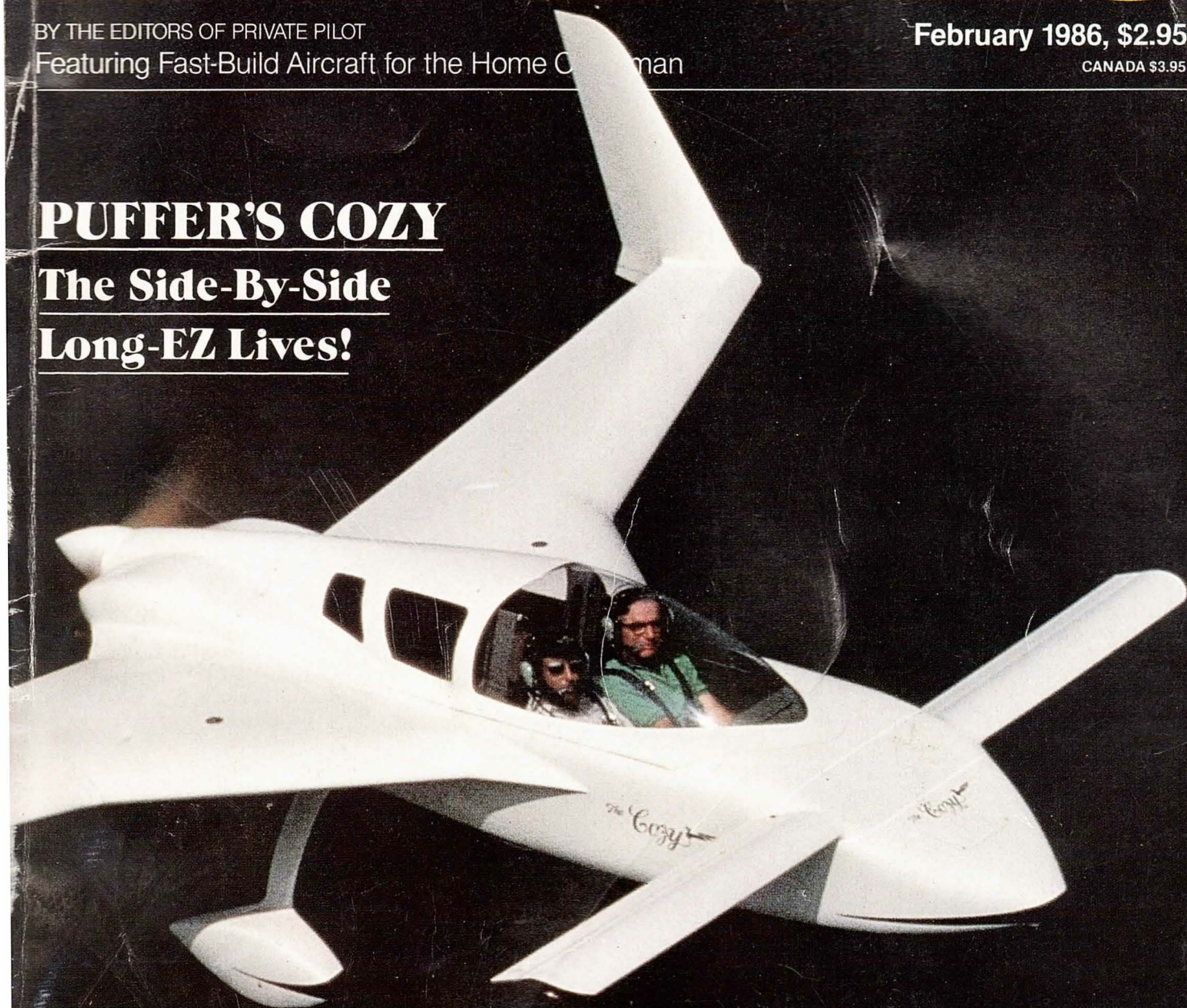
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PUFFER'S COZY

**The Side-By-Side
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**BUILDER TIP:
PROJECT TABLE**

Yes, you can purchase Cozy plans and a periodic newsletter, obtain a complete bill of materials and a number of prefabricated parts, and have full-time builder support from Nat Puffer who originated the side-by-side modification of Burt Rutan's Long-EZ. Irrespective of what has happened at Rutan's operation in Mojave, California, Puffer is going full-steam ahead with his Cozy. Since Burt Rutan withdrew from further sale of plans, Puffer has continued with his Cozy project. He has a 500-member newsletter and has spent \$5500 in printing to bring his

total backlog of plans to 500. He continues to send royalty checks to Burt Rutan for the licensing agreement allowing him to use Long-EZ technology and says that these checks are being cashed.

We talked with Nat in Phoenix, Arizona, after his move from Minnesota. He advised us that he had recently visited Alpha Plastics and has approved them as a vendor for specified materials. Puffer reported an increase in his Cozy sales following Rutan's withdrawal from the business. He feels that some of this increase was due to the unavail-

ability of new Long-EZ plans, but that much of the increase was due to seeing the first plans-built Cozy fly at Oshkosh. The people who are inquiring about the side-by-side plans because the Long-EZ is no longer available are being screened very carefully by Puffer to make certain that they are not too heavy to operate the Cozy safely.

Nat and Shirley Puffer originally

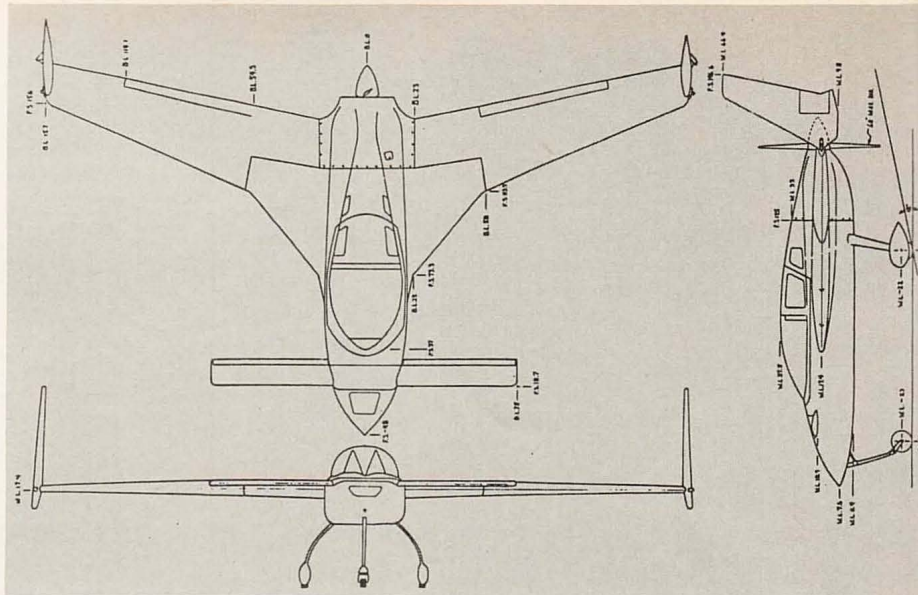
You might not be able to get Long-EZ plans, but there's plans, parts and support for the Nat Puffer's side-by-side-seat Cozy.



built the Cozy for their own use and it later evolved into a plans-built airplane. The Puffers together weigh only 280 pounds and the maximum design front seat combined load is 340 pounds. The designer advises that space limits the single individual to 6 feet tall and 185 pounds.

The Puffers' move to Mesa was planned long before Burt Rutan's announcement that he would no longer sell any plans. The Puffers live just one mile from Falcon Field where they have half a hangar and a request for a full hangar. "We really intend to spend full time pursuing our aviation interest," said Nat. "The thing which keeps most people from retiring early is that they don't have anything else to do. We are fortunate in having more work to do than we have time. We intend to spend full time on builder support. Of course, we plan to attend every airshow possible; in Minnesota we just were not able to consider all the shows down south."

Nat and Shirley developed their side-by-side Cozy with designer Rutan's reluctant approval. When they first broached the project to Rutan, the answer was identical to that of other designers when someone opts to change a final design: "No!" A year after the initial conversation, the Puffers were well on their way and on their own. They had decided that the minimum cockpit width would be à la Cessna 150 and the engine would be moved back slightly for center-of-gravity considerations. Other basic changes included position of the gear, canard span and control figuration. Eventually Burt relented, checked the modified drawings and, after seeing the airplane fly at Oshkosh in 1982, offered to license the Puffers to commercialize the Cozy using Long-EZ plans and technology. After considerable soul searching, the Puffers decided to go ahead with the project and began to tailor their lives accordingly. They then made a set of plans for a slightly larger cockpit to increase utility and had them carefully proofed and released for builders in late 1983. Puffer estimates that the Cozy will take perhaps 100 to 200 hours longer to build than the Long-EZ. Unlike the Long-EZ, the Cozy has a keel down the middle of the entire fuselage not only for added stiffening, but also to house the heater duct, wiring and control cables. All engine and flight controls except the side sticks are



Plans for the Cozy modification of the Long-EZ are still available. An additional 100 to 200 hours of work goes into the wide-cockpit variant.

mounted on a console above the keel and between the seats.

At least two of Puffer's builders nearing completion are using 150-hp engines rather than the original 115-hp Lycoming O-235. The Cozy developer's comment was: "Ethically, I cannot recommend something I haven't proven. The 150-hp engine results in a heavier

and hotter airplane. I know some of the things which are necessary to install a larger and heavier engine, but I'm not sure that I know all. We all know that homebuilders always figure they can go one or two steps beyond what the designer recommends. My responsibility is to recommend the safest systems and not to encourage people to use up the safety factor built into the design?"

And that's the way Nat Puffer sees it. □

FOR MORE INFORMATION, contact Co-Z Development Corp., 2046 N. 63rd Place, Mesa, AZ 85205; 602/981-6401.

Cozy

Prices: Plans, \$210; newsletter, \$5 a year; information kit, \$8.

Specifications:

Wingspan 26.1 ft.
Wing area 95.6 sq. ft.
Overall length 16.78 ft.
Overall height 7.91 ft.
Wheel track 5 ft.
Wheelbase 7.58 ft.
Landing gear type tricycle, retractable nosewheel
Seats & configuration 3, (2 side-by-side plus rear jumpseat)

Engine:

Lycoming O-235, 118 hp.

Weights and Loadings:

Gross weight 1500 lb.
Empty weight 900 lb.
Useful load 600 lb.

Calculated Data:

Wing loading 15.69 lb./sq. ft.
Power loading 12.71 lb./hp
Payload, full fuel & oil 288 lb.

Performance:

Maximum speed, sea level 193 mph
Cruise speed, 75% power 187 mph (@ 8000 ft.)
Cruise speed, 40% power 143 mph (@ 12,000 ft.)
Range, 75% power (@ 8000 ft.)....1200 s.m.
Range, 40% power (@ 12,000 ft.)...1800 s.m.
Rate of climb, sea level (gross) 900 fpm
Glide ratio 17:1
Service ceiling (gross) 20,000 ft.
Minimum speed 60 mph
Approach speed 85 mph
Takeoff ground roll 1050 ft.
Landing ground roll 950 ft.

Manufacturer:

Co-Z Development Corp.
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Mesa, AZ 85205
602/981-6401

Source of information: Co-Z Development Corp.