

The Falcon's Story

The long birthing of a biplane

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■ ■ "You can't miss me. I'll be the one with the red hair and orange sport coat." And shiny white shoes and imprinted shirt and diamond stickpin and white Cadillac de Ville. No, there's no mistaking this man for any other. He is C. E. Pitner—"jes' call me 'Red'"—president of "the biggest aircraft company in the state of Tennessee." It is also the smallest, for Falcon Aircraft Corp.—that's right, Falcon Aircraft Corp.—is the only airplane maker in the Hog and Hominy State.

Falcon Aircraft is not too well known outside of Tennessee primarily because Red now spends most of his time inside



Tennessee and, secondly, because Falcon Aircraft hasn't really produced any airplanes. But it will, that's a promise from Red Pitner himself, and a Pitner promise is not to be taken lightly.

Lest the saga of Pitner and his plane become too jumbled, we'll begin at the beginning.

As a boy, Red, like many of us, was fascinated by airplanes but he was poor, the depression was grinding on and airplanes would have to wait. Red wasn't the type to moon over Waco's at the local Knoxville strip. Even now he regards such people with mild contempt. Says he, "I never was an airport rat. All they do is to sit around and look at airplanes and talk shop. My time is too valuable."

Then came the war, the Marines, Guadalcanal and, after that, architectural school. And in 1952 Red put his time into making money as an independent representative for several electrical product manufacturers. His timing was right since government and industry were constructing enormous facilities in the Tennessee Valley area. Red made his money.

Success kept Red on the road a lot, so in 1963 at the age of 39, he drove into Cox's Sky Ranch and signed up for flying lessons. E. L. "Smokey" Moore, a former military and corporate pilot, was his instructor and during the course of their long association—Red's still working on getting that ticket—a friendship was forged. As the lessons progressed, Smokey told Red of his long-held dream to manufacture an open-cockpit biplane he had designed and refined over the years. Red was intrigued with the idea—after all, there were no fun-flying, wind-through-the-wire airplanes then in production—and Smokey nurtured that interest by producing sacks full of scrap paper covered with detailed engineering drawings of his dream machine.

Finally Red had seen and heard enough and as the two men sipped coffee at Spike's restaurant in Knoxville, he made a proposition: they would form a company and build Smokey's airplane. Smokey would supply the know-how and Red would supply the money. The split would be 50-50. The pact was agreed to then and there. The two instant industrialists arrived upon a name for the product and their enterprise with equal dispatch: a Ford Falcon automobile pulled into Spike's parking lot; Smokey glanced and said, "How about 'Falcon?'" to which Red immediately assented. And so was born Falcon Aircraft Corp., producer of the Falcon F-1 biplane. Never again would Falcon Aircraft's milestones be passed so quickly and painlessly.

Smokey spent one-and-a-half years and Red \$75,000 in building the first Falcon. And once it was completed, the boys were too low on funds to continue, a chronic condition at Falcon Aircraft. This interlude in development lengthened when it was discovered that Smokey was terminally ill with cancer. Just prior to Smokey's death in 1969, Falcon went public and in the next four years raised about \$500,000.

Some of the money was spent on the construction of two aircraft to be used by the FAA for flight and static tests during type certification trials. Some of the money was spent to build a small manufacturing plant at the Jamestown, Tenn., airport and to equip it with the tools, jigs and material needed in the manufacture of airplanes. Some of the money was spent on consulting engineers, fabricators, lawyers and the like. In the end, all the money was spent, but not before the FAA issued Type Certificate A 16SO to Falcon Aircraft. It is a document of which Red Pitner is justifiably proud. It says Falcon Aircraft builds planes to the toughest standards in the world. It took him 10 years and tens of thousands of hours to get it, but Red thinks that document will someday reap him and his fellow stockholders millions of dollars.

Right now, as always, money's a little tight at Falcon and Red's working full time without pay (Falcon's never paid him nor any other officer a dime) trying to scrounge up the capital he'll need to go into full production. He refuses to build airplanes on a piecemeal basis and will accept no customers' deposits until production is underway.

"We thought once we got the type certificate, the money would be easy to get, but it's an intangible asset. It's not worth a damn."

According to state law, shareholders in Falcon Aircraft must be residents of Tennessee, a somewhat equivocal re-

quirement since Red seems to know everyone in Tennessee on a first-name basis, but some folks seem a bit skeptical about his airplane business. Laughs Red, "This is the world's worst place to build airplanes. The people in East Tennessee don't even believe in electricity yet."

But not to worry. Red is an optimist. He *knows* he'll find the necessary money to get the Jamestown factory, already in limited production, humming. "A blind hog will find an acre if he roots long enough, and I just haven't rooted long enough," philosophizes Red. James McDonnell would never get away with a statement like that, but then James McDonnell doesn't build biplanes in East Tennessee.

"You can quote me. We're in business to stay. This company will produce aircraft and we hope to deliver aircraft by late summer."

If Red is able to meet that end-of-summer deadline, his first customers will at least have a few months left this year to enjoy their purchases. A Falcon cockpit would be an awful place to be in winter, for it has no heat. But then heaters and doors and rivets and radios are all accoutrements of a tamer side of flying—the world of Cessna, Piper, Beech, et al ("cabin jobs," is how Red describes them). If you want such niceties, you'll not want a Falcon.

Red's not selling comfort. The Falcon is awkward to enter and unbelievably loud once underway. It is skittish on the ground, sluggish in the air and its occupants must suffer hurricane winds while progressing at Volkswagen speeds. It is an infernal machine. But just as there are people who love trolley cars and steam locomotives and paddle-wheeled river boats, there are those who will gladly suffer the abuse of a Falcon F-1, for it is a biplane, that near-mystical flying machine, wrapped in cotton and controlled by stick, rudder and eyeball. To those people such joy is a steal at \$23,750.

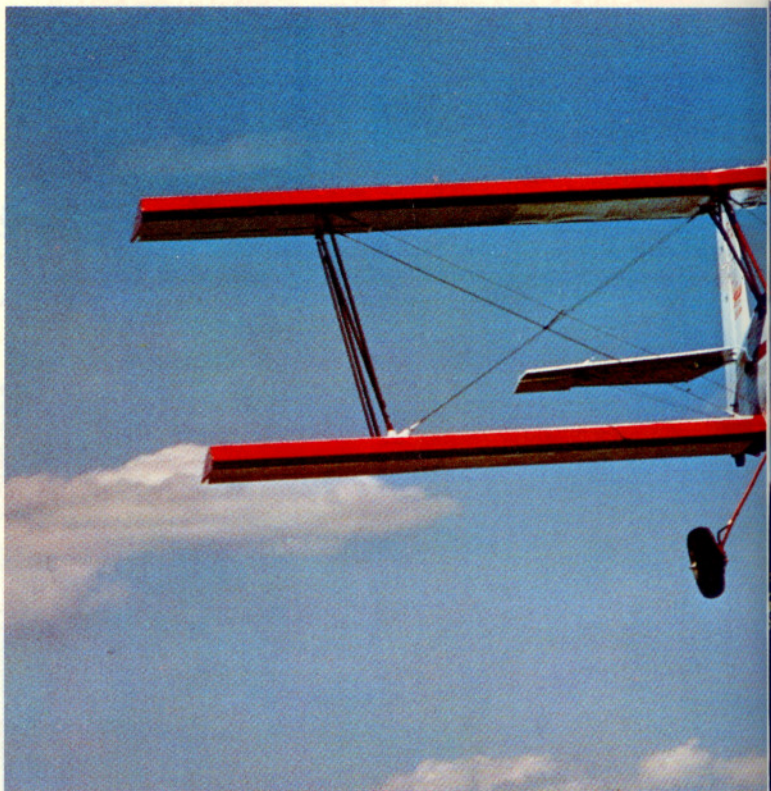
Red thinks flying clubs and FBOs will be a major market for the F-1 since "they already have their cabin jobs and they'll want these little play pretties to play with." The Falcon's built for hard play.

The fuselage, empennage and upper wing center section are constructed of 4130 chrome-moly steel tubing, the wing spars and ribs of Sitka spruce, the engine and cockpit cowlings and leading and trailing edges are aluminum, while the gear is steel. The whole assembly is stressed for 7 Gs. positive and negative. It's a very tough bird.

With Clark Y airfoils, a total wing area of 200 square feet, and a gross weight of just 1,900 pounds, the Falcon should be a climber. It is not. Its best rate of climb is listed as 597 fpm at sea level, under standard conditions. And despite four ailerons, the aircraft maneuvers rather slowly. The blame here can probably be fixed behind the 80-inch McCauley prop—the 150-hp Lycoming O-320 is just too little engine for driving all that drag. Red acknowledges the problem.

Another strike against the Lycoming, one that could not have been foreseen when it was selected for the Falcon, 12 years ago, is its diet of now hard-to-find 80-octane fuel. Replacing the engine with a larger, 100-octane mill would involve only minor modification to the aircraft and indeed, Red anticipates offering a 235-hp ag and a 285-hp aerobatic Falcon in the future. The F-1 is not certificated for aerobatics.

As one would expect, the Falcon is spartan; you get only the essentials when an aircraft's non-essential. Each cockpit has throttle, mixture, elevator trim and carb heat controls along with stick, rudder pedals and toe brakes. Both holes have a sensitive altimeter, airspeed indicator and tachometer. The ignition, compass, alternate static, mags, master and fuel switches are in the rear hole (solo is approved from the rear seat only) and the engine gauges are slung from the bottom of the top wing. Gascolators—see-through tubes—hang below each of the two 14-gallon gas tanks housed in the center wing



section and serve as both fuel gauges and sump drains. And that's about it.

The only Falcon flying right now is the aircraft used by the FAA for flight testing, not a production airplane, and thus not really an aircraft well suited for a magazine pilot report. The airspeed indicator has no "V" speed markings, the tach had no yellow or red line, there was no VSI, no temperature gauge and no intercom. Needless to say, there is as yet no operator's manual for the F-1.

Further frustrating attempts for flight data was the fact that Dennis Almond, Falcon's friendly and occasional chief pilot, flies the F-1 by sound and feel, not numbers. "Maybe that's wrong," he shrugs, then smiles, "but that's the way I fly it."

And so we began. Almond donned leather cap and goggles, hit the ignition and the Falcon exploded in cacophony. If you've never flown in a biplane, its noise comes as quite a shock. The sound at low rpm's is deafening, but when airborne and diving, you'd swear someone had opened the gates of hell. Conversation is impossible.

As typical with most biplane designs, forward ground visibility in the F-1 is zilch and S-turns are advised when taxiing. Once cleared for takeoff, Almond lined up on Knoxville McGhee-Tyson's 6,000-foot Runway 22L and all 150 horses gave forth a horrendous sound. The wind was directly across the runway from the right at about 10 knots and the temperature was in the 80s. The Falcon's tail was up at 30 mph indicated and we were flying at 65 mph IAS after a ground roll of approximately 800 feet. Forward visibility during level flight is poor; during climb it is terrible.

After landing at a small private strip nearby, we switched cockpits and were off again, about 100 pounds shy of gross weight. The wind was calm and temperature in the low 90s and about 900 feet of runway was required to get the Falcon flying. With the airspeed pegged at 70 (best rate of climb) the aircraft groaned skyward at 400 fpm.

Elevator and aileron controls were surprisingly heavy, but when level and trimmed, the aircraft drives as steady as a deuce-and-a-half. An advertising spec sheet lists the F-1's maximum cruise at 106 mph, and at 2,800 feet with the tach showing 2,500 rpm, we got 95 mph IAS. Stalls were very mild and straight ahead; the horn blared at 60 indicated and the buffeting came at 48.



Although neither speedster or aerialist, the Falcon is without peer for it is a production line biplane with a sticker price of \$23,750. Photos by author.

Although such data lacks precision, it is fair to say that the Falcon is an aircraft of very modest performance. But it would be very unfair to leave it at that for performance—good numbers—is not what the Falcon's about.

To understand why the Falcon will probably sell despite its lackluster abilities, one has to fly the aircraft on a sunny afternoon at about 1,500 feet over farmland. Roll it into a bank and look down on the cornfield. There you'll see a shadow, a biplane shadow, slicing through the stalks, across a dirt road, over a red barn. You're flying in a time warp: Welcome to 1925. The engine's thunder becomes muted, actually pleasant, and your ears are so attuned to the roar that they can discern a separate whine within it—the whine of wind being severed by flying wires. When you hear and think

Specifications		Performance	
Engine	Lycoming O-320-A2B 150 hp @ 2,700 rpm	Takeoff distance	800 ft
Propeller	McCauley, fixed-pitch 2 blade, 80 in diameter	Over 50 ft obstacle	
Wing	Upper 27 ft 1 3/4 in Lower 25 ft	Rate of climb	597 fpm
Length	23 ft 1 in	Maximum speed	120 mph
Height	8 ft 3 3/8 in	Maximum cruise	106 mph
Wing area	200 sq ft	Range	300 sm
Wing loading	10 lb/sq ft	with 30 min. reserve	
Passengers and crew	2 (tandem)	Landing distance	800 ft
Empty weight	1,290 lb	Over 50 ft obstacle	
Useful load	610 lb		
Gross weight	1,900 lb		
Power loading	13.3 lb/hp		
Fuel capacity	28.4 gal (26.2 usable)		
Oil capacity	8 qt		
Baggage capacity	25 lb		

and sense these things, the black gauges become unimportant. Yes, like Dennis Almond said, you fly by the sound and feel, and you are safe and in control and exhilarated. The "cabin jobs" will give you better service, but they can't give you this special experience. Only a biplane can.

And Red Pitner makes biplanes. True, he's not the only one. The Great Lakes is back and it's a far better performer; you could liken it to a thoroughbred, and it lists for \$35,000. Then, too, there's the Pitts Special, the quarterhorse of the class, which, with two seats, goes for \$31,843. So why not one more? One with modest performance, modest price and sure, steady control. Sort of like a Tennessee Walker, the gentleman's mount.

Red would like that analogy. □



Red Pitner (above) and the first of his promised flock of Tennessee Falcons.

Falcon Aircraft still builds planes the way God meant them to be built, with wood and wire and cotton.

