

Grandpa's Kitfox...Not!

Plane & Pilot

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Takeoff roll on the 100 hp Kitfox is a mere 320 feet, and stall speed is a slow 37 knots

Just a few minutes into my flight with Kitfox's head honcho John McBean, it's obvious the current Kitfox Super Sport (SS) resembles the original kit plane of the 1980s, mostly in name only.

Oh, it has that lovely Kitfox look with the P-51 Mustang tailfeathers, sits like a Kitfox when you look over the cowl in its traditional taildragger stance (tri-gear also available), and sounds like a Kitfox when you crank up the Rotax to spin its composite prop. And the wings fold back for towing, trailering and garage storage, just like the original. But this lovely STOL sport bush plane is to the Denney Aerocraft Model 1 I built in the mid-'80s as the Shelby GT500 is to the original '65 fastback Ford Mustang. Same genetics, vastly evolved bird.

Banking the light-handling Kitfox into tight 360s over the central Florida landscape is an excursion into handling confidence. Unlike the original rudder-hungry version I built, the SS acquits itself well rolling in and out of turns, with just a touch of rudder to keep things centered up.

Most compelling is how solid the airplane feels. If the original kit version's flight personality was somewhat ultralighty, the Super Sport is more responsive and substantial, more like a "real" airplane. The pushrod controls add such a nice "right now" response to the handling. And those trademark drooped, full-span flaperons add snap to the turns, without making it twitchy or easy to overcontrol.

At takeoff and landing speeds, though, the flaperons will still provide strong roll response, so new/student pilots should keep their input light on the stick, or risk overcontrolling. Those flaperons also serve up a cleaner, "fatter" lift envelope for landing. You can drop in at just 36

knots (around 42 knots clean), roll out in just over 300 feet, jump off in the same distance, climb out well over 1,100 fpm and do it all over again. Works for me.



Climbing up, doing stalls, or rather attempting to (it likes to hang docile on the prop in power off/on modes), pulling on flaps or adjusting trim with the electric push toggle is all thoroughly modern S-LSA-worthy. By that I mean this is no rewarmed kitplane with rough finish and eccentric flying habits you need to master before you can fly it comfortably. No knock implied against homebuilts, but some designs can challenge low-timers and traditional spam-can drivers alike, early on.

No, the Super Sport is a fully mature, beautifully finished and refined airplane. It's solid in the air and on the tarmac, and with the big optional balloon tires, it handles the grass and dirt with aplomb. This S-LSA version is wonderfully responsive, comfortable on long trips, yet certainly sporty enough for backcountry operations.

Bottom line? It's fun to fly, well priced against most of the S-LSA market (the kit side of the business helped with that these last tough years), and an all-around example of what an LSA can be, given enough time and market support to evolve its full potential.

Well evolved from its no-frills dirt-'dragger days, the upgraded rig I flew with John McBean had a thoroughly modern panel sporting the latest in electronic gear: a Dynon SkyView EFIS panel, Garmin GTX-327 transponder, and SL-40 NAV/COM and PS Engineering PM 3000A intercom. There's plenty room for a dual glass panel, too.



Paul Leadabrand of Stick & Rudder Aviation demonstrated the cross-country ability of his Super Sport when he flew from Idaho to the Sebring LSA Expo in Florida, and then continued to the Bahamas.

You can light up the Kitfox with an all-LED landing/recognition tip light package and navigation/strobe lights. And the 360-degree visibility afforded by the clear acrylic doors, windscreen, skylight and baggage turtle-deck windows makes for fantastic viewing in all directions.

But even for the \$83,495 base price, you don't have to forfeit the bells and whistles. Standard features include the industry stalwart Rotax 912 ULS 100 hp engine; 27 gallons of fuel; angle of attack (AOA) indicator system with audible alerts (very cool!); dual controls and dual hydraulic toe brakes; and a roomy 11-cubic-foot baggage area aft of the seats rated to 150 pounds—much better than many LSA can boast.

There's also the sexy, stout and lovely Grove Aluminum spring gear, parking brake, cabin heat, carb heat and even fresh-air eyeball vents. Small gear stores under the seats; a four-point lap/shoulder belt keeps you secure for those open-door days, and the interior is well appointed with upholstered seats and tastefully done interior carpeting, finished off with a map/document pocket.

The fabric-covered (2.7-ounce synthetic fabric with high-gloss polyurethane paint), welded 4130 chromoly-tube airframe is a time-honored aircraft technology. To reprise: This is a refined, beautifully handcrafted airplane.

A Brief, Colorful History

The original Denney Kitfox became so wildly popular (more than 5,000 kits sold) as a low-cost, fun-flying, tube-and-fabric construction homebuilt that it was copied worldwide, and offered domestically in several variants. The original Model 1 that I built was sold as a 400-hour kit (an exuberantly optimistic claim), and sported a classic, round "bump" cowl for the beautiful Pong radial engine that, alas, was never produced.

Over the years, the original design evolved to include the Classic IV with stronger lift struts and gear and a higher gross weight, and a Speedster version with clipped wings and attendant snappy performance. There were lightweight and ultralight trainer versions. Even the current Belite ultralight borrows from the Kitfox.

Denney sold the company in 1992. Rebadged as Skystar, a number of models ensued. One, the conventionally powered Series 7 on which the Super Sport S-LSA is based, cruises at more than 150 mph, has a 700-mile range, carries a 700-pound load and, with a Rotax 914 turbo up front, reaches 25,000 feet!

The new company, Kitfox Aircraft, owned by former Skystar employee John McBean and his wife Debra, still hails from Idaho. All models (two kits and the LSA) come out of the Homedale Airport facility.

True Grit

This closing anecdote demonstrates the Super Sport's cross-country utility. The airplane I flew belongs to Paul Leadabrand, a lanky, 6' 2" pilot from Idaho, who trains in it through his Stick & Rudder Aviation company. "The students like its stability and controllability," he says, and he oughta know: It has racked up more than 680 training flights and 1,700 landings!

Leadabrand brought the immaculate bird—which hardly looked like a well-used trainer—to the Sebring LSA Expo last January. Four good-weather days got him there in 26 hours.

Even six hours of flying per day didn't sap his enthusiasm for hanging out with friends along the route. That's no doubt due to the adjustable pedals, thick, thigh-supporting Confor foam seats and semi-reclined backs I found so comfortable myself. Four days early for the air show, "I was twiddling my thumbs," he says. Solution? Go flying! Off he and John McBean went, in the Kitfox, to the Bahamas!

"What else was there to do?" he quips. This is obviously a guy who digs flying. After island hopping to the end of the chain at Eleuthera, "We cut the corner and returned nonstop to Fort Lauderdale. In two hours, we only saw a lighthouse on a rock, and water, and flew 1500 AGL all the way." For an encore, Leadabrand flew it back to Idaho!

If you're shopping for an affordable, all-American-made LSA epitomizing solid sport, STOL and cross-country credentials, repeat after me: "K-I-T-F-O-X!"

Skin Deep



Since the dawn of manned aircraft and airships, there have been fabric coverings. Even with modern, exotic carbon-fiber composite and all-metal airframes, fabric skins still are common.

There are many causal factors—prime of which are cost and gravity, still the bane of winged flight. Fabric coverings reduce weight and drag, and augment the strength of lightweight frames. They also protect frames from the elements, and can provide complex curve-streamlined fairings such as where vertical stabilizers meet the fuselage.

Pioneers Otto Lilienthal and the Wright brothers covered their aircraft with cotton fabric. In World War II, cotton and nitrate dope—a highly flammable type of paint used to seal the weave—became ubiquitous.

By World War II, more-powerful engines enabled metal airframes; fabric coverings became mostly common for lightweight civilian aircraft. In the 1960s,

synthetic covering materials such as Dacron and Ceconite, which have greater longevity than cotton, became popular. In 1965, the Stits Poly-Fiber process was developed and popularized. It's the covering of choice for Kitfox Aircraft.

Modern fabric covering is typically glued, stitched or otherwise anchored to the airframe, shrunk tight with heat guns and handheld irons, then "doped" with a sprayed-on liquid coating.

Hang gliders and ultralights popularized the sewn-envelope concept that made use of UV-resistant stabilized Dacron sailcloth. The technique still is in use by LSA companies such as Rans Aircraft.

Newer technologies, such as those offered by Stewart Systems and Blue River, use water as the solvent, ideal for builders wishing to avoid the detrimental environmental and health effects typical of volatile glues and dopes.

Some leading examples of traditional fabric-covered LSA that use the glue-on synthetic-fabric process, with heat-shrinking, doping and paint to finish, include the Criquet Storch, Legend Cub and Rans S-6LS (Superflite process), CubCrafters Sport Cub and Aeropro Aerotrek A220 (both use Stits).

Sewn-envelope-style coverings are staples of the X-Air LS and Cheetah tube-and-cable ultralight-style S-LSA.



CubCrafters Sport Cub



Criquet Storch