

EuroFOX



Slovakian manufacturer
Aeropro has refined and
greatly improved a
kitplane classic

Words Francis Donaldson
Pictures Ed Hicks

> Anyone who has had any exposure to the LAA scene will almost certainly recognise the key features of the EuroFOX. Its name gives it away as a European development of the American-designed Kitfox, which having been in production in various guises for some 27 years is surely one of the most enduring kitplanes of all time.

But the story goes further back than that, for EuroFOX's roots are in the Avid Flyer, which pre-dates even the Kitfox. The Avid Flyer was originally designed by American Dean Wilson in 1983 and went on to be manufactured by Light Aero Inc of Caldwell, Idaho, as a two-seat, side-by-side lightweight STOL kitplane. Coming at the peak of ▶▶



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the ultralight revolution in the States, like many others the Avid Flyer used a two-stroke engine driving the propeller through a reduction drive to give a high thrust-to-weight ratio. Where the Avid broke new ground was in allying this powerplant with a folding-wing airframe, which was a clever blend of modern extruded aluminium tube wing spars with wooden ribs and a traditional welded steel tube fuselage, the whole shooting match being covered with regular doped and painted fabric rather than pull-on Dacron sail covers. The result was to create an aircraft that enjoyed the economy and STOL performance advantages of an ultralight, but a technology that appealed to the traditionalists and newcomers alike.

Dean Wilson is undoubtedly one of the greats of the ultralight movement in the USA, but it took another to make the concept a worldwide hit. If the Avid had a drawback it was that visually, the original Avid Flyer, registered N99AF, was a quirky-looking creation. Avid's sales and marketing partner, Dan Denney, realised that the little high-winger had great potential, but would need an image hike before it could ever hit the big time. While by no stretch of the imagination a designer himself, Denney broke away from Wilson in 1984 and set up his own shop at Boise, Idaho, where he started to produce kits under his own name. The Denney Kitfox was an obvious derivative of Dean Wilson's machine (some components

were actually interchangeable) but thanks to a complete makeover its appearance was transformed.

Denney clearly had a flair for styling, for the Kitfox was not only cheap to build and fun to fly, it was cute to look at. The Avid's clunky tricycle gear with cartoon-style wheelbarrow wheels was gone, replaced in the Kitfox by a tailwheel undercarriage sporting big balloon tyres, taking the aeroplane's image right out of the toy-box and away to all those backwoods airstrips that Idaho enjoys. A big chunk of that manly frontier spirit seemed to come with the package, or so Denney's glossy advertising blurb would have you believe, and there were optional floats, skis, fishing rod holders and cargo pods to go with the action man persona. The funny pointy nose cowl was replaced by an oval bowl which looked for all the world like it housed a little ol' radial engine, complete with 'bumps' for seven cylinders like you might see on a Monocoupe or Stinson. The cowl lines actually did come from a small experimental radial engine that Denney tried out, but while the radial engine was a flop, everyone loved the look of the bump cowl so much that it was carried over even when the engine of choice became the ubiquitous Rotax two-stroke.

The rivalry between the two companies was intense, and the loyalties of the local workforce were split as Denney drew into the lead and became the bigger employer. The Kitfox was

the one which seemed to catch the buyer's imagination in the very early days and while both companies developed their aircraft over the next two decades, becoming faster, heavier and more expensive, the Kitfox's dominance was never really challenged. With more than 4,500 kits delivered, the Kitfox has far exceeded Avid in production numbers, indeed the Kitfox is believed to be second only to Van's in worldwide kitplane sales. The CAA's G-INFO website shows 94 Kitfoxes registered in the UK alone, as against 30 Avids.

QUIRKY HANDLING

The handling qualities of the early Avids and Kitfoxes came in for a fair bit of flak, and were cited as the cause of many take-off and landing accidents with the type, particularly here in the UK. While the Kitfox had been marketed as an ideal machine for basing on a farm strip, owners without much taildragger time soon found themselves in difficulty and there was a period when hardly a week seemed to go by without some unfortunate ending up halfway up a tree or impaled in the airfield boundary fence.

It was in the early 90s that John Brownlow rang up PFA HQ to discuss the Kitfox's characteristics. John, then lead test pilot for Marshalls at Cambridge, had been helping members in his spare time with the initial test flying of locally-based Kitfoxes and then



Good to see a quickly detachable cowling for the typically busy Rotax 912 engine installation



checking the builders out on type before they were let loose by themselves. Observing the handling behaviour of the aeroplane, the issues that arose in conversion flying and the story of carnage developing in successive AAIB red-top reports, John put two and two together and came forward with an explanation of what was going on.

What John pointed out was that the Kitfox was short on stability about all three axes, and high on aileron drag especially when the full-length flaperons were lowered to act as flaps. This meant that while, in good hands, the type had excellent manoeuvrability and fingertip control, these needed precise use of co-ordinating rudder with any roll input, something that many pilots were unfamiliar with. Faced with the need to make a smart turn, if you just whacked the stick over like you might in a club trainer, this would result in the Kitfox's nose swinging rapidly around the horizon in the opposite direction to the way you wanted to go, so you ended up doing a crabbing flat turn the wrong way. Not that the Kitfox and Avid were unique in that respect, for many gliders and vintage machines have similar behaviour, but the problem was that the many owners came to the kitplane scene without having hands-on experience of anything but benign-handling trainers, and even when shown how they would often revert to 'trainer mode' and forget their feet in moments of stress.

“The EuroFOX was intended to be sold as a fully factory-built aircraft rather than a kitplane

The high accident rate led to difficulties with insuring the Kitfox in the UK in the early 90s, which resulted in LAA (PFA as it was then) providing a country-wide network of coaches for budding Kitfox pilots so that the techniques for safely handling the aircraft could be passed on. This led directly to the formation of the Pilot Coaching Scheme as we know it today. No surprise that the original Head Coach of the PCS was John Brownlow, who in conjunction with local, Cambridge-based LAAer John Scott was largely instrumental in putting the whole scheme together.

Since then, the Kitfox and Avid have re-established their credibility and market value in the UK, and by respecting their handling characteristics owners have found them reliable sports aircraft just like Denney and Wilson had envisaged. But Light Aero Inc and Denney Aircraft are history now, though both types are still available in a small way in

the USA under other company names (although I suspect these are mostly engaged in spares supply rather than new manufacture).

SLOVAKIAN DEVELOPMENT

Nowadays there are several more modern variants on the same basic theme available, one such being Aeropro's EuroFOX. Aeropro emerged in the early 1990s, based at Nitra in western Slovakia. Starting with a locally-made Avid Flyer, the company followed an independent development process to evolve the EuroFOX, with help from Eurostar manufacturers Evektor of Kunovice in the adjoining Czech Republic.

Unlike the Avid and Kitfox, the EuroFOX was intended to be sold as a fully factory-built aircraft rather than a kitplane, initially as a European 472kg microlight and latterly as a Light Sport machine in the USA. As a microlight the type suffers from the common problem in this class of having a very restricted payload, but in its latest guise with 289kg empty weight and 560kg 'max gross' the EuroFOX has become a much more practical proposition. With its useful load of more than 260kg and a total fuel capacity of 86 litres, the EuroFOX has a touring range of over 600 miles and you can fill the tanks to the brim while carrying two crew of almost 100kg each.

Having seen it at various shows in Europe, my first close encounter with the EuroFOX came in January this year during a visit to



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the immaculate Aeropro factory, conveniently located at Nitra's small GA airfield. I was accompanied by LAAer Roger Cornwell and LAA inspector Adrian Lloyd, both former Kitfox owners who had fallen under the spell of this more modern development and were keen to see the type available in the UK as a kitplane. This visit allowed me to see the manufacturing facility, review the design data with the designer, see the aircraft at every stage of build and sample the demonstrator in flight. I was left with the impression of a well-developed aircraft that had taken the original Avid Flyer/Kitfox concept to a whole new level of sophistication. As such it seemed a very worthwhile candidate for the LAA to take on, providing the manufacturers could be persuaded to release it as a kit that would satisfy the 51% rule, produce a suitable build manual and offer customer build support. My only criticism of the design at that stage was that the EuroFOX could do with a little more fin area to improve the directional stability and help the pilot keep the skid ball centred.

Following this visit, Roger Cornwell negotiated with Aeropro to produce the EuroFOX in kit form and has set up EuroFOX Aviation Ltd to import the kit into the UK. A facility allowing UK builders to start the construction of their kits under supervision at Nitra is also being developed, using expert tuition to help newcomers to the homebuilding scene achieve a high quality result.

My second exposure to the type came this summer with the opportunity to fly Roger Cornwell's 'UK prototype' G-CGYG for which Aeropro had designed, built and tested a taller fin and rudder. The aircraft was cleared for flight just in time to be tested and make a debut at the Sywell Rally, albeit still under the aegis of a Permit to Test rather than a full Permit to Fly. It was entirely appropriate that the independent flight test of the EuroFOX against CS-VLA handling requirements was carried out by none other than John Brownlow, whose involvement with Kitfoxes and Avids over a long period, as well as the similar Mission 108, made him particularly well placed to evaluate Roger's blood-red high winger.

MAJOR DIFFERENCES

While outwardly similar to the Avid and Kitfox, under the skin the EuroFOX is a very different animal. Gone is the peaky two-stroke engine, for the EuroFOX embodies the popular Rotax 912 or 912-ULS, beautifully installed under conventional glass fibre cowlings. To accommodate the extra weight of these reliable four-stroke engines, compared to the original two-strokes, the wings have been swept forward a few degrees to realign the centre of lift with the centre of gravity. At 9.1m, the EuroFOX's wingspan is intermediate between that of the STOL and Speedwing variants of the Avid, and Regular and 'Speedster' models

of the Kitfox, giving a wing-loading that is a compromise between the best blend of STOL and cruise performance.

The EuroFOX's flat-bottomed wings are built up around similar tubular aluminium alloy front and rear wing-spars to the Avid and Kitfox, but the EuroFOX does away with the undercambered wooden ribs of the earlier types so that the fabric-covered wings are completely aluminium structured, making a much more robust and neater job all round. The plywood wing ribs have led to one or two serious continued airworthiness concerns over the years with the Avids and early models of Kitfox, as the part which extends out of the trailing-edge to support the flapperon hinges has proved a bit fragile. The EuroFOX mounts the flaperons on aluminium brackets which don't suffer the same vulnerability.

The Junkers-style flaperons on the EuroFOX are beautifully moulded as a glass fibre composite sandwich surrounding the tubular steel flapperon spar, rather than the aluminium wrap-around skin and foam core that are familiar on the American competition. By adopting European glider technology, the EuroFOX's flaperons approach aerodynamic perfection without giving anything away in terms of weight or longevity. Each flapperon carries two external mass balance weights, one at the tip, and one near the centre of its span.



Conversely, Aeropro has switched the construction of the moulded fibreglass fuel tanks, the tanks in the EuroFOX's wing-roots being of welded aluminium construction, better suited to the additives in mogas fuel. There's no fear of your tanks coming unstuck with the EuroFOX.

The EuroFOX has similar welded steel tube fuselage and tail surfaces to the Kitfox and Avid, the multiplicity of small-diameter chrome-molybdenum tubing being TIG welded at Aeropro's factory. Experience has shown that for a high-wing aircraft the welded steel tube truss type fuselage is hard to beat in terms of strength-to-weight ratio or crash survivability. The EuroFOX can be fitted with either a nosewheel or tailwheel undercarriage, both using a similar main gear (other than its positioning) of cantilever composite construction. The nosewheel version, reviewed here, uses a forward-inclined cantilever type noseleg, rubber-sprung, and nosewheel steering conferred from the rudder pedals via a pair of Teleflex cables.

Folding the wings of the EuroFOX is a ten-minute job requiring just the removal of a piece of rear decking behind the rear wing spars, to make room for the wing-roots to swing around, then disconnecting the flapperon pushrods from the cranks that emerge from the root ends of the flaperons. Finally, the leading-edge root-pins are removed allowing the wings to

“Folding the wings of the EuroFOX is a ten-minute job requiring just the removal of a piece of rear decking ”

be swung back, hinging around the rear spar root-pin and wing-strut connection. Fuel lines and pitot pipework are routed next to the rear spar joints so that they don't need to be disconnected for wing-folding. Nevertheless, it's a good idea to check the pipe runs carefully after unfolding the wings, to make sure the pipes haven't become kinked in the process. Altogether, the wing-fold operation is time-proven and straightforward (you can have it on the trailer 15 minutes after landing) and can be done single-handed, although a second pair of hands certainly helps.

NEATLY FINISHED

Approaching the EuroFOX on the ground, you can't help but be struck by the neatness of its finish, especially in the tricky areas around the windscreen and doors where the fairings, fabric and paintwork are particularly tidily implemented. The twin cockpit doors are large and top-hinged, each held closed by a rotary catch at the bottom edge. Whereas the doors on the Kitfox and Avid were renowned for popping open unexpectedly in flight, the EuroFOX doors include an automatic, cable-operated, secondary latch-pin at the rear which keeps all secure.

The high quality impression grows as you move to the cockpit, which is upholstered to hide the tubular framework and with seats, panel and controls all beautifully crafted, a far cry from the somewhat frugal appearance of many of its American cousins which were sold as a much more basic kit. There's a single, central, push-pull, vernier-type throttle (more of which anon) accessible to both crew, which also goes for the floor-mounted mechanical flap lever between the seats, and a small elevator trim control. The wheel brakes are operated with toe-brakes on the left set of pedals only on this aircraft, dual brakes being optional. A T-handle next to the throttle on this aircraft operates the glider tow release.

Pleasingly, there's a push-pull control for adjusting the airflow through the oil cooler, allowing a quicker warm-up on first start, and a cockpit heater is fitted, which also provides a windscreen de-mist capability, both of which will no doubt be much appreciated come the winter months. Fuel quantity is visible in sight-gauges mounted in the wing-roots and there are three on/off fuel cocks – one in each wing-root to manage the flow from the respective wing-tank to the polythene header-tank behind the seat, and a third on the left cockpit sidewall, by the base of the instrument panel, to cut off the flow from the header to the engine compartment. Bleed back fuel circulates continuously to the left tank, so if flying with on only one tank, you should ensure it's the left one. Roger always flies with both tanks open, feeding the header tank (neutralising the need for an aileron trimmer); he sees no benefit to operate otherwise.

An electric fuel pump, mounted under the pilot's seat, helps fuel feed forward from the

header tank, the flow from wing-tank to header being by gravity. A very worthwhile feature is an electrical sensor near the top of the header-tank which lights a warning lamp on the instrument panel if ever the header-tank starts to empty, indicating to the pilot that he has either to turn on a wing-tank, or if they are both on that he only has four litres of usable fuel remaining and he'd better find a place to land in the next 10-15 minutes. Finally, there's a rectangular cubby hole in the panel in front of the passenger, ideal for in-flight storage of charts and flight guides, something sadly lacking in many competing types.

There's a deep upholstered baggage bay behind the cockpit, placarded for up to 20kg and big enough to take a couple of overnight bags. The baggage bay unit is removable for access to the rear fuselage area for maintenance. Aeropro has done well to find room for a baggage bay in an area often taken up by the mixer unit for the flapperon controls on sister types.

FLYING THE EUROFOX

Strapping into the EuroFOX is easy and there's plenty of head and legroom. Neither seats nor rudder are adjustable. Cockpit width is wider than a Cessna 172 at 44.5in and the instrument panel seems a comfortable focussing range ahead of your eyes. The geometry of the four-point harness seems close to ideal. Start-up is instantaneous using the standard Rotax technique of choke and a fully-closed throttle, the combined keyed master/start switch seeming very car-like. Separate mag switches are fitted allowing you to turn on the ignition only after you've twisted the key and the engine has started cranking over, as Rotax recommend.

With its steerable nosewheel and excellent view all round, taxiing in the EuroFOX is easy. However, the ergonomics of the vernier throttle take a bit of getting used to. You can make very precise adjustments to the throttle setting by twisting the vernier knob, but to give a quick blip of throttle (to get moving on soggy grass, for example) you have to depress the button in the middle of the vernier throttle knob either with your thumb or the ball of the hand. Either way, it seems to make you feel a bit cack-handed and it's very easy to get either no response or much more than you want.

The vernier-type control might make things a bit interesting when manoeuvring among other parked aircraft, until you've got the knack. Lazy instincts may tempt you to set a bit more throttle than you need and then ride the brakes to moderate your speed, which won't do your brakes much good. On LAA recommendation, future examples of the type are to have a simple friction throttle rather than a vernier unit.

So how does the EuroFOX behave in the air? The original Kitfox and Avid Flyers were renowned for feather-light handling and manoeuvrability, albeit at the expense of conventional stability and control harmony. Yielding to criticisms from various regulators, the later models of Kitfox, such as the nosewheel Vixen and tailwheel Mk 7, were set up to behave much more like certificated aircraft. This resulted in a much improved accident rate, for those who could handle them – some of the tractability of the early models had undoubtedly been lost. How would the Slovakian machine shape up in comparison?

Opening the vernier throttle deliberately to the stop, the EuroFOX is off and climbing ▶



The rear window panel is quickly removable for excellent access to the flapperon linkage. Note neat luggage compartment

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GLIDER TOWING

A TWIST TO this particular project is that while the EuroFOX was initially designed purely as a sports-plane, the LAA tests have included an evaluation of the aircraft in the glider towing role. Experience in its native Slovakia over seven years has shown that it offers a more economical means of towing a glider aloft than regular tugs. The EuroFOX is used frequently at the European gliding championships and the Pribina Cup, held at the Aeropro (EuroFOX) production base of Nitra airfield in Slovakia. Through this exposure many UK glider pilots already have experience of the EuroFOX's abilities as a tug.

G-CGYG is fitted with the standard 'towing pack' as provided by the Aeropro factory. This additional equipment includes:

- Tost tow hook with additional supporting fuselage framework
- DUC three-blade Windspoon fine-pitch propeller
- engine-cooling duct and air inlet for additional engine cooling during continuous towing operations
- secondary fuel boost pump
- fire-sleeving of fuel lines in engine bay, to reduce likelihood of vapour lock
- quick inspection oil level hatch in top cowl
- shimmy-damper on nosewheel versions
- panel-operated tow release mechanism
- rear view mirror so the tug pilot can monitor the glider position.

G-CGYG has been involved in towing trials at Shobdon by local Chief Tug Pilot Adrian Lloyd, the glider pilot being Phil King, a glider pilot with many years experience. The tests were carried out using the normal Herefordshire Gliding Club aerotow rope, which is polypropylene and about 170ft long, has Tost rings at each end and short nylon rope weak-links at each end with a nominal breaking strain of 1,000lb. In addition, a small radio receiver from the standard HGC tug (Rallye 180 G-BTUG) was transferred to the EuroFOX for the trials. This unit enables a launch director on the ground to signal, 'take up slack', 'all out' and 'stop' to the tug pilot by means of amber, green and red lights. The unit is fixed by Velcro tape and is considered to be carry-on equipment not subject to any airworthiness regulations.

Two gliders were used for the tests, a single-seater LS8-18 flown in 18m mode without any water ballast and a two-seater Twin Astir, which was flown first solo and then dual. All tests were flown off short, mown grass. The first tests were with high ambient temperatures, calm conditions and a light crosswind. Later tests were with a strong crosswind and strong turbulence. Throughout every test, every aspect of the launch (take up slack, ground run, take-off, climb, and release) was completely normal and remarkably, despite having only a 100bhp Rotax 912-ULS engine, the performance (length of ground run and rate of climb) appeared subjectively to be similar to that with a 180bhp Rallye 180T. The average rate of climb when towing the LS8 as measured by an onboard datalogger was over 520fpm with an elapsed time of 3min 51sec to 2,000ft agl.

On one test, the glider pilot performed two 'boxing the slipstream' manoeuvres in which the glider is



Glider's eye view of the EuroFOX during the tow

purposely moved out of position behind the tug, both vertically and laterally, to see whether this causes any problem with the tug aircraft's tail being dragged around by the influence of the tow rope. Despite the light weight of the EuroFOX compared to a standard tug, this was found to be completely normal. In the strong turbulence in the later tests, the EuroFOX seemed to be thrown around by the turbulence more than a heavier aircraft would be, but this was not a problem from the perspective of the glider pilot.

The pilots involved concluded that the EuroFOX performs extremely well in the tugging role and, from the perspective of both tug and glider pilot, presented no problems. The EuroFOX will not be suitable for launching heavily ballasted Open Class gliders from short airfields, however it appears to be an excellent option for less demanding aerotowing duties. The EuroFOX was noticeably quiet compared to the standard tug, causing less noise nuisance, is much more fuel economic and, with its liquid-cooled engine, free from the shock-cooling problems that beset air-cooled engines in this type of operation.

With the airworthiness and operational issues seemingly well proven, the LAA and BGA are currently working with the CAA to explore the legal ramifications of using amateur-built aircraft such as the EuroFOX for aero-towing in the BGA club environment, where there may be an 'aerial work' element involved, which would normally preclude the use of a Permit aircraft. Since several of the LAA Permitted Austers remain cleared for towing duties, with CAA's blessing, and the obvious benefits to the use of aircraft of this more economical format, let's hope the negotiators can reach a successful conclusion.



Despite its lowly 100hp, the EuroFOX has no problem towing a two-seat glider

away in just over 100m, the left-swinging tendency held in check with the slightest pressure on my right foot. Clearly, with a 100bhp Rotax 912-ULS engine producing 56% more power than the original two-stroke 532 or 582-powered Avids and Kitfoxes, this more than makes up for the EuroFOX's slightly greater weight and wing-loading. Using the relatively coarse-pitch, three-blade propeller on Roger's aircraft, climb rate is 780fpm at max gross weight of 560kg, climbing at 70mph with the Rotax turning at just 5,200rpm at full throttle (max continuous is 5,500). Levelled off, bringing the rpm back to 4,200 produces a comfortable cruise of 100mph, although at 4,500ft she will do 125mph at full throttle, the fact that this still only yields 5,300rpm being another indicator that the prop is pitched very coarse.

At the other end of the speed spectrum, at the stall she waffles along with the stick almost on the back stop, letting you know that she's being abused by a light airframe buffet from 50-55mph and strong back-pressure being needed on the stick accompanied by the nose hunting slightly up and down. Go that bit further and the nose eventually drops through at an indicated speed down around 43 to 48mph, depending on power setting. She shows no marked tendency to drop a wing, power on or power



Very nicely appointed cockpit has a bright and airy feel thanks to extensive glazing

off, with the ball in the middle, although the right wing was slightly more prone to drop than the left. Allowing the ball to be out at the stall resulted in a wing-drop that is nevertheless controllable within 20° through normal use of the controls. Dropping the flap lowers the stall speed by just 3mph to 45mph at idle power. Overall, these are benign stall characteristics befitting an aircraft which, in STOL mode, may need to be manoeuvred at speeds quite close to the stall to squeak into a particularly short strip.

Looking at the roll rate, with co-ordinated rudder the flaperons produce a maximum roll rate of around 30° a second with full application at 80mph, reducing to about 20-25° a second with 'full flap', which is still adequate. The tendency for the roll authority to reduce with flaperons lowered is another point which has raised criticism on other flaperon-equipped types, leading to difficulty in approach path control in gusty conditions. In the EuroFOX this effect has been minimised by restricting the range of travel of the flaperons to a moderate level in the 'flap' sense. In turbulent conditions, a flapless approach to land can be used if you want to keep maximum control authority available to deal with low-level disturbances.

THE FLAPERONS

A notable feature of the flaperons is that they produce instantaneous roll response with very small deflections. Control forces are very

“A notable feature of the flaperons is that they produce instantaneous roll response with very small deflections”

light, thanks to their narrow chord and being aerodynamically balanced around the hinge-line. The result is a willing responsiveness, which is very pleasant in normal flying, though perhaps not matched by their ultimate effectiveness with higher angular deflections. Also apparent though is that the friction in the system combined with very light roll control forces means that the stick doesn't centre very well laterally – if you push it either way and then release, there's a centring band about three inches wide within which the stick stays where it's put – you have to centre the stick manually or be left with a residual creeping roll-off effect. Not that there's a lot of friction felt in the system statically, or in normal flight.

Curiously, this feature is not something you're aware of unless you go and look for it – at least in day VFR flight – as thanks to negligible free play in the system, with a good visual horizon,

the task of finding the stick position to zero the roll rate is undemanding enough to be subconscious. The poor centring of the roll control is not strong enough to overcome the dihedral effect in the recovery from a sideslip with stick release. Despite the technical drawback of a wide friction band, in real terms the feel of the controls is very pleasant. An added benefit of the wide friction band is that you're not aware of the effect of asymmetric fuel weight if flying one only one wing tank.

AILERON INPUT

Now for the acid test. I looked at the adverse yaw with aileron input, to see how the EuroFOX with its taller fin responds to a turn input on aileron alone. Starting with the flaperons in the 'neutral flap' position, climbing at full power at the best climb speed of 70mph, I made some tentative roll inputs to left and right, leaving the rudder alone. The skid ball swayed out slightly in unison with the stick, but the nose started tracking in the correct direction around the horizon after only a tiny pause. For the 'worst case', it was feet off the pedals, and the test was more difficult because the EuroFOX, having no rudder trimmer, naturally tries to yaw left in this full power, low-speed condition. Nevertheless, though the skid ball was now way out to the right, the EuroFOX still responded adequately to roll inputs and would be controllable in this condition.



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Finally, we repeated the test but with the flapperon fully lowered as flaps, the configuration which was the downfall of many flapperon-equipped aircraft because of the much greater adverse yaw and reduced roll authority that results. Once again, the EuroFOX can be made to enter and recover from turns reasonably smartly on flapperon alone, either with the rudder held fixed or left to its own devices. Partly this has been done by limiting the flap deflection, for there's not a huge change in descent rate with full flap selected, but nevertheless adequate for the job, especially in an aircraft that loves to be sideslipped like this one does.

A GOOD COMPROMISE

After half an hour in the air I concluded that in the EuroFOX, Aeropro has found a very good compromise between STOL, stability and controllability. With the taller fin and rudder she is now stable about all three axes – not strongly so, but stable nevertheless. Directionally, she is on the loose side even with the new fin and rudder, but not enough to cause any difficulty and still compliant with the CS-VLA requirements, which the LAA is assessing the aircraft against. Too stiff and she would be resistant to sideslipping, which has always been a Kitfox/Avid forte. Most importantly, the EuroFOX still enjoys the manoeuvrability of Dean Wilson and Dan Denney's earliest models, making it great fun to fly.

While manoeuvring, the vernier throttle has been no great problem, indeed the ability to make precise power adjustments by twisting the knob has been rather a luxury. On the approach to land, however, I feel unsettled by it, for there's a feeling that if I wanted a quick jab of power to kill the sink rate in wind shear, or to cushion a bounced landing, then I'm not going to be able to get the power on quickly enough to do the job – or I may get more than I bargained for. This is the nosewheel version of course, and I can't help thinking that I'd feel even more uneasy approaching to land with this throttle in the taildragger model, where a bounce is more likely and I may need a burst of power to curb a developing groundloop.

Despite these reservations about the throttle control, selecting full flap we potter in over the hedge at 60mph, carrying a little power, and she rustled down onto the ground and rolled to a stop using very little space.

To conclude, one can't help but be impressed by the quality of this aeroplane. OK, it's not the fastest in its class, but that's not what short field flying is about. This is a highly-refined sport plane which combines useful go-anywhere performance with practicality and comfort.

I liked:

- the high quality presentation
- the flight handling
- the get up and go
- the low-fuel warning light
- cabin heat and windscreen demist system
- controllable oil cooler airflow
- the door catches
- classic Kitfox wing-fold (without needing to drain the fuel tanks)
- the deep baggage compartment
- aluminium fuel tanks
- all-aluminium wing structure

I didn't like:

- the vernier throttle (to be replaced by a friction-type throttle on subsequent kits) ■

EUROFOX



SPECIFICATIONS

PERFORMANCE

Empty weight (average a/c): 289kg
Mtow (LSA category): 560kg
Useful load: 270kg
Vne: 143mph
Stall (with flap): 40mph
Max cruise (4,600rpm): 110mph
Climb at mauw: 816fpm
Range: 620sm

DIMENSIONS/WEIGHTS

Wingspan: 9.125m
Length: 5.73 m
Height: 1.72 m
Wing area with flap: 11.4sqm
Wing loading: 39.47 kgm²
Fuel (6ltr header): 86lt
Engine: Rotax 100hp 912ULS

Contact: UK Agent EuroFOX Aviation Ltd
www.eurofoxuk.co.uk 07923 441269

DETAILS

Top: wings folded, the EuroFOX is easily handled by a single person

Middle: 20 minutes and you're ready for flight

Bottom left: the bowed doors provide useful additional elbow room

Bottom right: composite flaperons with sturdy metal attachment brackets