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SPORT Flyer

September 2008

For the simple joy of flying

SportCruiser

A quick-build two-seater that offers outstanding value for money

Plus

CZAW SportCruiser

The first examples of this good-looking, quiet, spacious, economic homebuilt are now being completed. *FLYER* takes a closer look at one of the first to fly in the UK

The SportCruiser made its UK debut at AeroExpo in 2006 where it caused a bit of a stir for both its good looks and its extremely aggressive pricing. If you'd ordered one at the show, you'd have paid just £24,995+VAT, and that included a 100hp Rotax 912ULS.

At the time, we predicted that if the price held, you'd see a hundred or more of them in the UK within a couple of years. Well, the price didn't hold (more of that later) but already the UK dealer, Sprite Aviation, has sold over 60 kits, with 36 delivered so far this year. With the cost of avgas having risen by over 20% in the last two years, we doubt that it will be very long before the 100 mark is passed.

In 2006, we managed to briefly wrestle the controls of the Czech-registered demonstrator away from Chip Irwin, but the aeroplanes being delivered, built and issued Permits today, incorporate many changes made as a result of LAA approval. To update the story, more recently, we travelled to Wickenby to take a closer look at one of the best UK examples currently flying.

Peter Grant's aeroplane, G-SCRZ, was basking in the sunshine in front of Wickenby's historic Control Tower. The SportCruiser's good looks and fresh paint were attracting a fair amount of attention from visiting pilots. Sure enough, a few short minutes after sitting down with Peter, we were approached and joined in conversation by an enthusiastic Alpi Pioneer pilot who had flown in. It transpired he had a SportCruiser on order and was understandably keen to discuss the aeroplane.

From the outside, the most obvious change to the aircraft over the last two years is the incorporation of a composite canopy frame which further improves the looks of the aircraft. I'm told that the factory worked through several versions of the canopy frame and the result justifies the effort, both aesthetically and in the increased rollover protection that the LAA requires in order for any new design to meet the VLA design code requirements that they use as a benchmark. The canopy improvement, along

with other changes like the spats, combine to somehow make the SportCruiser look a more complete and finished aircraft than the one on display a couple of years ago.

The improvements continue when it comes to getting in, something achieved by climbing onto the wing with the aid of the fuselage-mounted step, which thankfully is mounted behind rather than in front of the wing. Many of the lighter weight, new generation aircraft sustain a little damage when people unfamiliar with them climb in and out. Some have places where it's best not to stand and almost all of them have places that you don't want to grab or areas that you shouldn't use to support your weight. The SportCruiser is no different, but access has been helped by the addition of a sturdy-looking T-handle between the seats. It's there to grab hold of as you step in, and quite honestly looks strong enough to moor a boat to.

Many small aircraft offer cosy accommodation for larger-than-average pilots, but the SportCruiser's fantastic in this respect, with a cockpit that, at its widest point, is about nine centimetres wider than a C182. The comfortable

seats, while not fully-reclined, are certainly not upright like the Tecnam or Eurostar.

One major issue that has been addressed with the Series Three aircraft is that while the seats remain fixed, the rudder pedals can now be adjusted; previously, the builder chose and fixed the pedal position during the build process – obviously not ideal for group aircraft. There are two sticks and one central quadrant throttle. While stick-top electric trim (both elevator and aileron) is available as an option, 'RZ only has them on the left, a sensible saving in terms of both weight and cost.

It's pretty rare these days to find a new-build aircraft with anything but a glass cockpit and this is no exception. The panel contains a Dynon primary flight display and engine monitoring system, with the central stack containing a removable 495, an SL30 nav/comm and a 328 Mode S transponder. To complete the short cockpit tour, there's a rocker switch that controls the flaps and an electrical controller to change the pitch on the Woodcomp propeller. There are three locations for baggage, a large area behind the seats (18kg) and a locker in each wing (20kg each). Obviously only the space behind the seat is accessible in flight. The nosewheel is free-castoring, so steering is by differential braking, making the aeroplane very manoeuvrable. ▸

Having toe-brakes on top of at least one set of pedals is more conventional compared to the finger-operated brakes that you find on aeroplanes such as the Europa or Tecnam, although to be fair, the difference doesn't take too long to get used to.

One of the pre-take-off actions is to set the pitch of the prop to fine. One disadvantage of the fitted variable-pitch controller is that setting it to fully-fine will mean an overspeed on full throttle. If you ask us, the variable-pitch controller is a hiccup in a fine aeroplane. Having to change the pitch for different flight regimes, and then needing to monitor it for overspeed in descent, departure or even level flight, is verging on madness. No, all variable-pitch propellers are much better when they're controlled by constant-speed units, and we were heartened to hear that Peter has now received LAA approval to replace his pitch control unit with a Woodcomp constant-speed unit. Hurrah!

The owner

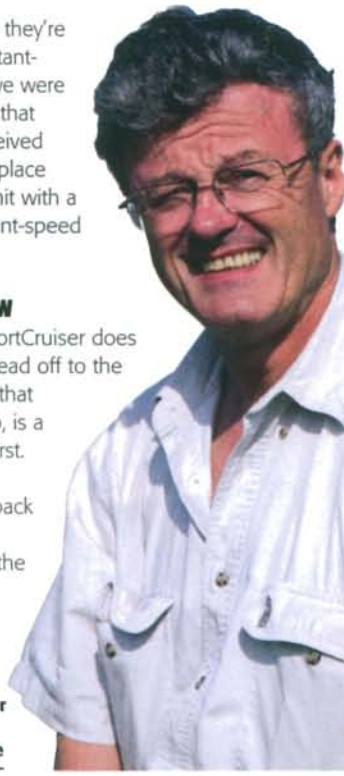
PETER GRANT STARTED to fly back in 1978. He has owned and flown a series of aeroplanes ranging from Austers to Jodels, an Arrow, a C182 and a Tri-gear Europa. Peter had always wanted to build an aeroplane, possibly as a retirement project and settled on the SportCruiser because of its good looks, space, performance and, of course, outstanding value for money.

Although he didn't keep a minute-by-minute record of the build-time, Peter estimates that it was completed in around 500 hours. The kit arrived with significant amounts of work already completed (part of the PFA/LAA approval process concerned the amount of 'building' a builder has to do) and there were no major issues that proved difficult to overcome.

Although the aeroplane is beautifully finished, and flying, as is often the way with kit aircraft, there are some potential modifications in the pipeline. Peter has already bought a Woodcomp constant-speed controller which will replace the variable-pitch mechanism as soon as LAA approval comes through – plus he's also considering a retrofit of some of the forthcoming changes designed to improve the control harmony.

Room with a view

On take-off the SportCruiser does seem to want to head off to the right, which, given that there's only 100hp, is a little surprising at first. However, like all aeroplanes, once back in their natural environment with the wind only relative again, things improve



Peter Grant, builder and owner of one very fine aeroplane

Spacious, uncluttered and practical cockpit

Despite only having 100hp care needs to be taken during take-off

significantly. The best rate of climb is 65kt, which in theory will give you over 1,000fpm. In practice, this reduces the forward view far too much for my liking, the laid back seats and relatively long nose not helping in that department. Unless you have a very good reason for performing a maximum performance climb, lowering the noise to improve both the view and the flow of cooling air is the way to go, all the time taking care not to overspeed through having too fine a pitch set on the propeller.

In general handling terms, the SportCruiser, while certainly not the best in class, is not unpleasant. The rudder weighting is about right but it is very sensitive in pitch and surprisingly heavy in roll. While the handling doesn't encourage you to fly the aeroplane exuberantly, it does translate into a very stable touring platform once properly trimmed. With a very low wing-loading, you'll notice the turbulence, but the good stability means that you are not constantly fighting to keep altitude and heading.

The large canopy and light stick force in pitch make it quite easy to overpitch and climb in turns – that's not a problem in cruise and I'm sure that pilots will get used to it quite quickly, but it is worth watching if flying a slow circuit into a short strip.

In terms of cruise performance, anywhere between 100 and 115kt seems comfortable. As you might expect, the faster you go, the louder it gets and the more fuel you burn. Economy cruise should return about 115kt at about 17lph.

As you might imagine, the tilt-forward canopy provides a great and uncluttered view; it is also a pretty effective greenhouse – thankfully there are a couple of NACA ducts on each side of the fuselage that provide much needed cooling air on a hot day. If you need an even greater blast then a quick side-slip or prod of the appropriate rudder will get you even cooler (at the expense of your companion).

All new approved designs that I can think of have docile slow-speed handling, and the SportCruiser is no exception. There's some airframe buffet and then a general mushing; this seemed to be the case both with and without flaps. I'm sure that it's possible to provoke something that would be interesting and exciting, but you'd have to try quite hard, or alternatively have your hands full with something else and get seriously distracted.

If you're used to flying something with an air-cooled engine, or something heavier, then you'll need to have a little think about the circuit and try to get your head around what may seem like abnormally slow speeds. Certainly, flying downwind too slowly results in a nose-up attitude and that lack of forward vision, due to those laid-back low seats and the long nose.

The Rotax 912 is a liquid-cooled engine, so pulling the power back from a higher setting to just above idle when on base won't result in any cracked cylinders; putting the flap in results in negligible trim change and then it is just a case of flying the correct approach speed. If you are stepping into the SportCruiser from a Thruster, Eurostar or C42, then no problems. ▸

Legal moves

IT WOULDN'T BE fair to write about the SportCruiser without mentioning the financial issues that are rumbling in the background. Back in 2006, Slavia Capital invested in CZAW and in return they took 49% of the shares. Over the next year or so it seems that Slavia's people and Chip Irwin did not always work or play well together. This has resulted in a struggle for control with Comminvest, which some have linked with Slavia Capital, filed a petition for bankruptcy against CZAW in the Czech courts. The courts have yet to rule, requesting more information.

It is perhaps worth looking at deliveries to UK customers. Sprite Aviation, the UK dealer, has so far delivered 42 full kits to UK customers. By the end of this year that figure is expected to reach 65. On ordering a SportCruiser, customers are expected to pay a $5,000 deposit which is held in a protected client account with OPMAS. Thirty days before delivery a stage payment of $15,000 has to be paid, with the balance being paid on despatch from the factory.

In order to reassure his customers, Sprite Aviation's owner, Graham Smith, currently visits the factory regularly to check and supervise the despatch of kits.

Other contenders

COMPETITION FOR THE SportCruiser? That depends on your perspective. If it is a genuine fast-build metal aeroplane that you want, then you are looking at either the Tecnam Sierra or the Eurostar EV-97A. If you are prepared to spend a bit more time building the aeroplane then you would probably add the Alpi Pioneer to the contenders list, and if composites and speed are your thing, the MCR01 should also find a place.

Evektor and Tecnam

The Evektor EV-97A, more commonly known as the Eurostar (Sportstar in LSA land), is the 'Group A' version of the microlight. The differences are minimal but include a higher mauw, of 480kg (the microlight version is 450kg) and an extra fuel pump. Thanks to this extra available load the Group A versions are often painted where the microlight versions are bare aluminium to save weight.

The EV-97A is powered by the 80hp Rotax 912 UL and so burns even less than the frugal 100hp 912 ULS. Max fuel on the Eurostar is 70lt and this is the smallest of the bunch. That will still give about five hours endurance, so the only real downside is missing out on the extra fuel duty drawback if you are heading overseas.

The Tecnam Sierra is possibly one of the sweetest-handling light aeroplanes that we have flown. Tecnam is one of the bigger players in the microlight and LSA market and ships the vast majority of their aircraft as ready-to-fly. The Sierra is the kit version of the P2002 JF, which is available in Europe as a fully-certificated, factory-built VLA.

Weights & loads (kg)

	mauw	empty	useful
Evektor	480	260	220
Tecnam	580	340	240
SportCruiser	600	355	245

If, however, your last few landings were in something heavier, then without a bit of coaching, there's every chance that you'll have 10 or 15kt in hand so you can expect to float a long way. The laws of physics don't change for Czech aeroplanes, so fly the right speed and you won't float down the runway.

The SportCruiser may not be perfect, but it is a thoroughly pleasant aeroplane that is more than capable of long-distance touring without breaking the bank. By any traditional measure, it has lots of room, great visibility, good short-field performance and a decent turn of speed in the cruise.

If that was the whole story, then we'd be saying that the SportCruiser is a very worthy competitor in the two-seat, quick-build, good fuel economy class – but we haven't even mentioned one of its greatest assets yet. The SportCruiser offers outstanding value for money. The price may have increased since its introduction in 2006, but at the same time the dollar has weakened and the Euro strengthened.

Right now, in our opinion, that makes this aircraft a bargain.

The current approved, quick-build kit price including a Rotax 912ULS and VAT paid is $68,115 delivered to Sprite Aviation in Dover. That's very hard to beat. ■

Flying examples are still quite rare in the UK and draw attention wherever they land

The unobstructed canopy offers the occupants excellent visibility

LAA approval

BACK IN 2006, Chip Irwin, Czech Aircraft Work's CEO, was telling people that the SportCruiser would sail through the PFA approval process (the LAA rebranding was then only a twinkle in Graham Newby's eye). Depending on who you (or Chip) spoke to, full approval was anything from a few months to a year away. At the time, we spoke to Francis Donaldson (the LAA's chief engineer), who had already flown the aircraft to find out if there were any show stoppers – there weren't. But full approval only came two years later. That's a pretty standard time frame, and one that seasoned observers were expecting.

During that process, the PFA/LAA suggested several detail changes to the SportCruiser design; things like the control stops and flap actuators were either redesigned or changed. To its credit, and ultimately its benefit, the factory embraced the changes, incorporating them into the standard design that also ships to the USA as a fully-built, ready-to-fly LSA.

Graham Smith, SportCruiser's UK agent, has no hesitation in saying that the PFA/LAA approval process has resulted in a better aircraft, so while US buyers of the LSA SportCruiser may not realise it, they're flying a better aircraft thanks to the UK's LAA.

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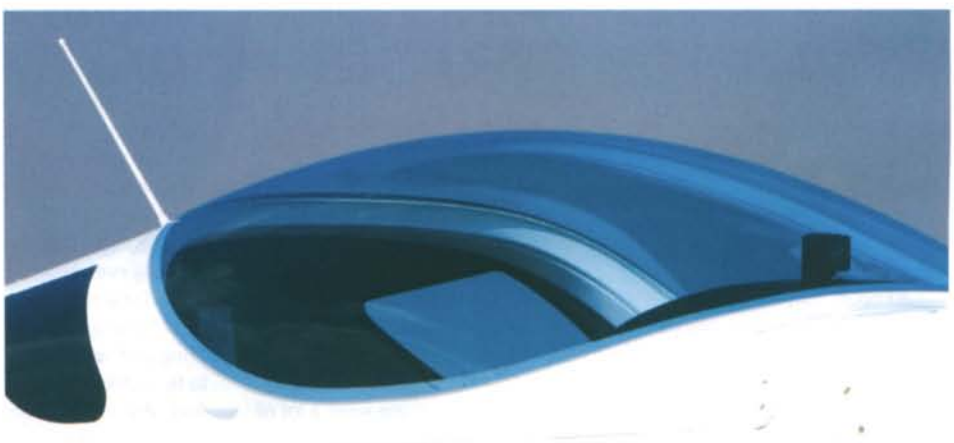
Twin budgets

AIRCRAFT ALWAYS HAVE a couple of budgets over which the buyer or builder has a degree of influence. There's obviously the financial budget – it's easy to spec up an aeroplane and to significantly add to almost any base price – you could add 50% to the base price of the SportCruiser in avionics alone if you tried. There's also the weight budget and that's something that becomes far more important with lighter smaller aircraft.

A SportCruiser will have about 250kg of useful load if it is built lightly, but it is easy to eat into that. For example, a BRS option is available but that will take 17kg away; add an autopilot and you've lost another 6kg. Want leather upholstery? No problem, but it means sacrificing another 2kg. All of this can add up and if you choose all of them that's about another two hours' worth of fuel that you won't be able to load.



The composite canopy frame is now extremely elegant

Grassroots

When the best regulation is deregulation

EASA is consulting on its new light aircraft pilot's licence, but not everybody is happy with the proposals. **Philip Whiteman** reflects on the way aviation regulation is now heading

Like flying, motor racing has been subject over the years to increasing regulation in the name of safety, much of it very unpopular. Famous – some might say infamous – motoring writer Denis Jenkinson rather neatly caught the mood when he said, "The bullshit only stops when the engines start."

It's tempting to feel just the same about flying. Tempting, yes – but is the feeling justified?

While motor racing has for many years been regulated by the Fédération Internationale de l'Automobile, European General Aviation has only recently come under the control of the European Aviation Safety Agency – and this seems to be causing much hand-wringing in certain quarters.

For example, I recently read comments regarding EASA's draft proposals for the European Light Aircraft Pilot's Licence, apparently decrying the idea of a 20-hour basic course as unsafe.

Such comments came across as oddly reminiscent of the aspersions cast by some of the stuffier US commentators on the reduced-hour Light Sport Aircraft training requirement.

I'd say the evidence provided by decades of training glider and microlight pilots in the UK overwhelmingly supports the idea that pilots can safely be trained to fly simple aircraft in a relatively small number of hours.

20 hours may look at first glance a very short time, but don't forget that this is a *minimum* training requirement. Quite rightly it has been left to instructors to clear individual students for solo flight and sign them off for cross countries etc, and you will only pass the various tests and examinations when you demonstrate the ability to do so, regardless of how many hours you have flown.

Less complex, yet superior aircraft should be marking the dawn of a new era in light aviation

"Past regulation has almost unfailingly worked like a ratchet; once the screw was turned, there was no going back."

For many years you could qualify for a UK PPL in 40 hours. A few people used to do just this, but the average was more like 55 hours.

The JAA PPL added more hours still, but by the time this was imposed, people were – quite rightly – beginning to question the value of further increasing the minimum training requirement.

The problem is that past regulation has almost unfailingly worked like a ratchet; once the screw was turned, there was no going back. And there were a lot of people queuing to put their shoulder to the regulatory wheel, more often than not citing safety as their motivation. After all, if 40 hours was just about sufficient training to produce a safe pilot, 45 hours could only be safer...

Widening gap

At the same time, it was ever more apparent that the gap between high-tech, high performance aeroplanes and simple aircraft, both the legacy type personified by my old Cub and a whole tranche of new designs like the various Funks and the Flight Design CT, was opening ever wider.

Did you really need 45 hours of flight training, including instrument flying and radio beacon navigation, to fly a VFR-only, non-radio Cub? And why couldn't you operate a Funk in the UK?

The CT at least lent itself to weight paring that would allow it to slip into Britain under the wire as a microlight, but this was the time, don't forget, when our national regulator, the all-powerful CAA, stood as great monolith, immovable in its conviction and impervious to criticism.

Or so it seemed. The first cracks in the wall appeared from within, when a new generation of CAA staffers both opened the door to the nascent National Private Pilot's Licence and turned on their head the medical requirements (I will never forget chief medical officer Simon Janvrin announcing this sea-change in policy with the statement that "we are stopping too many people from flying").

The NPPL might not have seen many takers outside the microlight world, where it replaced the PPL(D), but it has proved to be a straw in a wind that has blown with rising strength these last five or six years.

Almost unbelievably, to those of us who have been in the game since the 1970s, thanks to constant lobbying by the flying associations we have now reached the point that the national aviation authorities have not only been challenged to justify the costs and effectiveness of their regulation, but ultimately their own existence.

Of course, some things never change – just look at the number of CAA people who are now working for EASA and, as any aircraft engineer will tell you, the battle is far from being over on all fronts – but rational thinking has triumphed over a safety system that was to a great extent based on beliefs, rather than real evidence.

EASA may talk in a version of Eurobabble that isn't to everybody's ear, but it is one voice to which I am happy to listen, at least when they are talking about the LPL. ■