Olympic Airspace – we show you how

FLYER

FREE Landing Fees Save £44

www.flyer.co.uk

MAKING YOU A BETTER PILOT

JUNE 2012 £3.95

EXCLUSIVE

EXTRA 330LX

› Extra performance
› Extra power › Extra fun!

iPad update

Pilot apps reviewed

Baron 55

The ultimate piston twin…

PLUS
- Lecomber on verticals
- Sun 'n Fun news
- Win Yeovilton Air Day tickets
- Flying to Arran

9 770957 764096 06 JUNE 2012 £3.95

p22
Extra
330LX

FLYER CLASSIFIEDS: all the contacts you need, from flight training to aircraft for sale. Starts page 68

Extra 330LX

Steve Jones flies an incredibly versatile, high-performance 'lifestyle' machine, as capable of touring as Unlimited aerobatics

When asked if I would fly the new Extra 330LX I said, "Yes." Why? The clues are in its name. I liked the sound of the second 3 which hints that this is a 300 with a bit more poke than the previous, the L which means low-wing, therefore I will be able to see reasonably well on the ground and hopefully not taxi into buildings and buses, and the X which hints at some added factor. Persuasion was not required.

Anyone familiar with Extras will spot that this is not a new design. It is an updated version of Extra's perennial 300L, the main upgrade being the 315hp Lycoming IO-580 in place of the industry-standard 300hp IO-540 previously used. Bolted to one end of this engine is the latest version of MT's well-proven propeller and to the other end is an airframe which years ago became the benchmark in advanced aerobatic aircraft. The whole package ought to be pretty bombproof if not cutting-edge.

All is as expected until I glance into the cockpit. Ye gods! The owner of this five-hour-old aircraft ticked quite a few of the manufacturer's innumerable option boxes. Twin Aspen Electronic Flight Displays, a Garmin 430 GPS plus transponder and a comm radio, fuel computer, electrically-adjustable rudder pedals plus leather seats and individual cockpit heaters for front and rear occupants. This is an impressive cockpit, nearer to Learjet than Pitts Special. Am I going to need all this to go aerobatting I wonder? Some of it seems like fitting a music system to your racehorse, but it all looks pretty lightweight, so it shouldn't reduce performance greatly. This is a fully-certified aeroplane with lots of gizmos such as nav and strobe lights, and a stall-warner fitted as standard.

The walk-round inspection reveals few surprises but some differences from the previous models. The ailerons are from the single-seat aerobatic competition 'SC' model. They have large, new, horn balances at the tip. This added surface area, forward of the hinge-line, should assist the pilot in deflecting the ailerons at medium- to high-speed. This horn also allows the use of smaller 'spade' servos underneath the aileron, which reduces drag and aileron inertia. Less control force normally means zippier rolls. All part of the 330L's 'X' factor. Good!

UK Dealer Mark Jefferies gives me a quick course on the cockpit. We don't have time for a full explanation of the EF Displays, so I select the 'turn-it-on-and-look-at-it-in-amazement' option.

Anything anyone does involving the cockpit of an Extra must start with an explanation and understanding of The Canopy. Imagine being handed a toddler with a Ming vase for the day. You are going to spend the whole day at windy airfields,

with all the distractions and paraphernalia of flight, and all day you are totally responsible for the protection of this toddler and priceless item. If you understand this, great – if not, read it again! Never ever leave The Canopy open and unattended for a moment - it won't look after itself; a decent wind or prop-blast from another aircraft or helicopter will cause it to slam closed and break. Never ever push it forward when it is not locked-closed as pushing it forward is how you jettison it, whether you want to or not. Of course, The Canopy is not priceless, but it is €11,000 plus shipping. Most owners are only forgetful once. The toddler is unharmed in this demonstration.

Climbing in is easy, but care should be exercised to avoid standing on the aileron pushrods that run through the lower cockpit, they are not designed as steps. I sit down, turn on the master switch and use the pair of instrument panel switches to adjust the rudder pedals. These switches move a pedal each, so afterwards I turn around to visually check that the rudder is still in neutral with the pedals centred.

Strapping in to the seven-point Hooker Harness takes a couple of minutes and once adjusted leaves me satisfyingly immobile. The cockpit is fairly small and cluttered but everything is to hand apart from the fuel cock, which is hidden low on the right side. Out of sight could mean out of mind, so Extra has fitted a large picture/placard prominently above it. Fuel selections are 'off', 'both wings' or 'acro'. This latter acro tank in the forward fuselage has been increased in size to 67 litres, which is great news as the previous smaller version was pretty limiting. The wing-tanks are required to be empty for aerobatics, so I leave the selector at acro. I do a careful scan-check of all these switches and gizmos to ensure everything is set correctly, but the important items are making sure the avionics are off for engine start and that The Canopy is closed and locked.

The usual start routine for an injected Lycoming works immediately and a smooth but far away rumble is apparent. Oil pressure and electrics work as advertised, so I take a moment to turn all the avionics and EFDs on. After a minute or two I am rewarded with very pretty pictures of Attitude and Direction Indicators on one EFD with a map on the other. Crikey, I would love to sit and fiddle with all this stuff but I ought to go flying. Taxying the Extra on grass could not be easier, a little power gets us moving and the steerable tailwheel makes the necessary weaving effortless. By tradition I hold the stick back, but there is a fair bit of weight on the tail while on the ground so it is not vital to do so for normal operation.

Steve Jones

Steve Jones, along with Red Bull Air Race World Champion Paul Bonhomme, makes up the Red Bull Matadors team, one of the UK's most dynamic aerobatic teams. A captain with BA, Steve has been flying in displays since 1993 and was the UK Freestyle Champion in 1995 and overall British Aerobatic Champion in 1996. With the Matadors, Steve and Paul fly fly Sukhoi 26s or Sbach 341s in their formation displays and when racing, Zivko Edge 540s.

Concert pianist pedals

With everything warmed up and checked, G-GOFF is ready for departure. Conditions are perfect, there is a 5kt wind blowing straight down Little Gransden's grass runway and no other

All boxes ticked when it comes to cockpit kit

You can see more photos from this flight test on the iPad edition of *FLYER* and on the Editorial Extras section of the *FLYER* forum at *forums.flyer.co.uk*


The seven-point harness leaves the pilot satisfyingly immobile

traffic. I line up on the centreline, straighten the tailwheel and hold the stick well aft of neutral. I do a quick final run through of what to expect then smoothly apply full power.

Acceleration is rapid, with just the smallest right-biased rudder inputs necessary to maintain track. There is no forward visibility but ample peripheral vision. A little forward stick lifts the tail and a few seconds later we are airborne. Not much drama with that then.

I force myself to keep raising the nose to achieve an approximate maximum rate of climb speed of 90kt. This requires a steep and unnatural attitude but does get me to 2,000ft 53 seconds from brake release. Normally about 110kt would seem to be a comfortable speed and attitude for climbing. The footwork during take-off (and landing) is straightforward, but economy is the word. The 330LX has a fairly powerful rudder coupled via springs to the steerable tailwheel. This means that especially with the tailwheel on the ground, overcontrol is the thing to be guarded against. Think of the gentle pedal work demonstrated by a concert pianist; that is what the Extra likes. Light shoes and a deft touch, little-and-often. If you go at it like you are treading a vat of grapes, the aircraft will run around all over the runway and probably groundloop. That will not be its fault.

On reaching a civilised 110kt, I throttle back to 24in and reduce rpm to 2,400. At these arbitrary figures we are not making too much noise but retain sprightly performance. Climbing to a safe aerobatic or long-range cruise height will not take long in a 330LX. On arriving at 3,500ft, I experiment with the controls. I am mindful that Va is 158kt, meaning full-control deflection is not permitted above that speed. It is a limitation that could easily and accidentally be overlooked in this aerodynamically slippery machine, so care is essential.

Extra ailerons have always been good but these are an improvement on earlier versions. They boast increased roll-rate while retaining the instinctive quality to their feel. From my first attempt, I have no trouble stopping a fast roll pretty much bang on wings level. It feels very intuitive and is a very pleasant surprise. Aileron design and set-up is one of the Dark Arts but this is excellent. 400° per second is the quoted rate, not barking-mad or industry-leading but enough to grab your attention whatever you are trying to achieve.

From 145kt I tweak the nose up a little then bang on full-left aileron. Five rotations take just over six seconds including starting and stopping, so I wouldn't argue with their quoted roll-rate. Afterwards however, I find myself having to do a quick roll to the right to arrest my spinning head. It works and I can move on. The elevator is light and the stick-force doesn't increase much with increasing g loading. Therefore a little care is needed at very high speed or with an unsuspecting passenger so as not to overdo the g. The rudder is light and moderately powerful. The 1g stall comes at about 58kt indicated and is benign, as are the accelerated versions that I try, all producing a bit of pre-stall buffet and a small wing-drop. Power-off spins, upright and inverted are classical, gentle and predictable. Rotations are fairly slow and easy to stop.

As ever with spinning, I ensure I have the luxury of height. There is no time to experiment with power or aileron effects (thank heavens) so I don't dwell. Likewise flick (snap) rolls; I try a few and it blats around very smartly. I would want to do more to get it just right, but it is an Extra, I can feel that it will do them well, so I move on.

Descending to 1,500ft, I set 2,700rpm and full throttle. The indicated speed settles around the 170kt mark, maybe a tad more. I check for traffic, pull into a vertical climb, and wait. ▸

In the air, visibility is excellent, apart from the straight ahead bit

Effortlessly we beam straight up with just slightly increasing right rudder necessary to stop us wandering off left as the speed falls. We come to a complete stop at 3,400ft. There is just time for full-left-rudder to stall-turn before we would start falling backwards.

Recovering, I reduce to climb power and try a couple of tumbles; they don't go very well, not much happens. I add a bit more power, a load more speed and try again. Two things spring to mind. First, the term chalk and cheese, because suddenly we are whanging around the sky, end-over-end like a swatted fly. Second, that this is not my aeroplane. The question is answered, it certainly can tumble nicely, given a bit of airspeed and power or rpm, but not something to be doing with someone else's pride and joy.

Day/VFR tourer

With the whacky stuff out of the way I reduce power to 23in/2,300rpm and take stock of the situation. For a moment I pretend that this isn't a World Championship capable aerobatic aircraft. Long ago, the attitude indicator toppled during the aerobatics but everything else is merrily working away. I have more gizmos than I could shake a stick at in this Grand Tourer. I could be cruising at 155kt or more over Europe, using the EF Displays to ease the workload in reduced visibility or over the sea. Squawking and with strobes blazing, planning on 400nm range plus reserves, baggage in the back, other half in the front, cockpit heaters on, looking forward to a week's holiday far from home. I am not in the most comfortable seating position but this is fully adjustable so I could certainly improve my lot for next time. How does all this make me feel? Pretty contented, as long as the en route weather is OK. This is a day/VFR aeroplane. ▸

But stop pretending about touring, let's go and try a landing on grass. I set 22in/2,200rpm for a neighbourly return to Little Gransden. I check fuel still set to acro, boost pump on, also that no strap ends from the front-seat have moved so as to foul rudder or brake movement – N.B. I also did this check prior to spinning. In a descent, this gives about 180kt so I need to plan ahead. A couple of miles from the field I reduce power to 17in to get the speed under control. Working backwards, for landing I want a trickle of power and about 75kt over the hedge, so about 85kt turning final. There are no drag or lift devices on this aeroplane so side-slipping is the tool of choice for drag variance – I will need some of this slip on final anyway, to see the runway. A gentle descent at these speeds requires very little power, the 330LX glides well.

There is no other traffic so I join downwind reducing through 140kt. The view is good apart from the usual straight-in-front bit, which requires a little weaving to check for surprises ahead. The aircraft is rock-steady as the speed continues to reduce; for the first time I get to use the lovely little electric elevator trim switch on the stick – sheer luxury. As we turn onto final, I add a bit of right rudder and smidgeon of left stick; this keeps the left side of the runway in view. Controlling the speed is fairly easy but the power is close to idle. I increase the side-slip and add a little more power; this seems to give more immediate control of the speed and approach path allowing me to arrive at the threshold as desired.

During the flare I remove the slip, close the throttle and await the unexpected. There is a gentle rumble from the tailwheel and we are down on three points. There then follows… not much really. The grass softly decelerates us while I gently apply the little-and-often rudder inputs to keep us in the middle of the wide grass area. The tail seems happy to stay on the ground, or I can lift it up for a while to see ahead and reduce tailwheel wear on rough surfaces. Assuming currency on tailwheel aircraft and a sensible runway, the approach and landing really are that undemanding. I have flown various Extras off tarmac, which does make them more directionally lively than when on grass, but the combination of rudder, steerable tailwheel and brakes makes it as drama-free as you wish. With practice, significant crosswinds do not present any problem. I vacate the runway, turn off all the non-essential electrics and gently taxi back to park.

So, what is the Extra 330LX? Is it an Unlimited Level World Aerobatic Championship contender? Is it an unlimited touring aircraft? A military or civilian training aircraft? The answer, to a certain extent, is yes to all of these things. But I and many potential purchasers of this aircraft will see it as a sort of 'lifestyle' machine, a kind of Porsche 911 turbo. It is an incredibly versatile, high-performance sporting vehicle that, if you are lucky enough to be able to afford it, can be an extremely fulfilling thing to own. Porsche owners rarely attack the relevant lap record at the Nurburgring, likewise 330LX owners probably won't enter the World Aerobatic Championships, but in both cases, everyone knows that they could if they really wanted to. In the meantime, owners will happily satisfy themselves by enjoying this remarkably versatile piece of sporting machinery in whatever way they ruddy well want to. I wouldn't argue with that. ■

TECH SPEC
EXTRA 330LX

DIMENSIONS
Length 7.2m/23ft 1in
Height 2.6m/7ft 9in
Winspan 8m/26ft
Wing area 10.7m²/115ft 5in²

WEIGHTS & LOADING
Empty weight 1,422lb/645kg
mtow 2,095lb/950kg
Fuel 49.7g/189lt

PERFORMANCE
Vne 220kt/253mph
Stall speed (at mtow) 60kt/69mph
Manoeuvring speed ..... 158kt /182mph
Rate of climb 2,740fpm
Take-off to 50ft 248m/814ft
Landing from 50ft 548m/1,798ft

COST
€281,000 + VAT

ENGINE
Lycoming AEIO-580 B1A 315hp

SEATING
2

CONTACT DETAILS
www.extraaircraft.co.uk

The 330LX boasts an extra 15hp when compared to the 300L