

Seagull Decathlon



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CHAMPIONS
THE CAUSE OF
QUALITY AND
VALUE WITH THIS
SPORT-SCALE
AEROBAT

powertrain I figured there shouldn't be any reason why I couldn't throw the Decathlon around the sky whilst enjoying a little relaxing slow flight when the mood took me.

BITS AND BOBS

You'll forgive me resorting to the time-honoured reviewers' cliché



As you can see there's plenty of cooling through the large battery access aperture on the underside of the cowl.

Although Seagull kits are made in China, J. Perkins (UK distributor for the range) tell me that they've worked very closely with the factory on this new EP series, which is why they're especially pleased it. As you can see, we've chosen to test the 50" Decathlon first and I plan to tell you all about it very shortly, but not before I've told you the price - £59.99. Not many pennies for a Solarfilm covered, laser-cut, ARTF model, is it? Anyway, park this for a moment and we'll return to the thought at the end.

If your grass is any longer than this you'll probably have trouble keeping the model upright when landing.

HERITAGE YOU CAN TRUST

The old adage of not fixing something unless it's broken applies



to the EP range which is based on the Seagull i.c. line-up. Accordingly, the Decathlon is joined by electric versions of the Extra 300, Spacewalker and PC-9, the only new design being the X-Ray 3D aerobat. All are of about 50" wingspan and retail for that magic £59.99.

Perkins were happy for *RCM&E* to review any of the models in the line-up so we picked the Extra 300 and the Decathlon. The Extra 300 review will be along soon but I was keen to fly the Decathlon simply because it made a pleasant change from the stacks and stacks of lightweight 3D Yaks, Edges and Extras, all desperately trying to attract our hobby budget.

With a semi-symmetrical wing section, low weight, and punchy

when I say that the package is typical ARTF - well made and nicely presented - because it is. The fuselage structure is a work of art, a work of laser cut art in fact; supremely light, very strong and beautifully built. As you might expect, the wings and tail feathers follow the trend.

The Decathlon has been designed for 600 size electric motors or brushless equivalents. It's obvious that the model has also been planned around the weight and size of a typical 3s Li-Po battery and, as such, squeezing in an 8 - 10 cell pack of NiMHs would undoubtedly add too much weight and compromise the performance. I really wouldn't suggest doing this.



These are the wheels included in the kit but larger ones would be better if you can find some. They'll probably look better, too.

Take my advice and strengthen the wire u/c leg torque blocks on the inside.

Micro servos pulling 1 - 2kg are the order of the day for this one (Hitec 55s or equivalent will do nicely), whilst any size and shape of receiver unit will sit happily in the cavernous fuselage space. Mind you, as is always the case, the lighter it is the better!

Seagull's instructions take the form of a photo-step booklet which, generally speaking, is perfectly adequate, although a little more explanatory text wouldn't have gone amiss at certain stages. Plug-in wings and screw-on tail feathers suggest that the model has been designed to be taken apart for storage or transportation, the useful travel carry-box suggestion at the back of the manual being a more obvious pointer.

NUMBER TIME

I fitted the motor suggested by Perkins, i.e. one of their EnErG-Pro 3514/14 brushless outrunner units from the range that was tested by Nigel Hawes in his October 2006 Fly Electric column. These super little motors are supplied complete with a mount, nuts, bolts, and a prop drive unit. A scan of the Perkins website revealed that the 3514/14 should pull around 35 amps on 11 x 7 or 9 x 6



Wheels aside, make no mistake this is a fantastic little aeroplane.

props, so my Jeti 40 amp controller looked just the job. Moreover, since the anticipated flying weight would be around 32 - 44oz, and with the web figures suggesting 340 - 400 watts from the motor (depending on the prop used), I calculated an acceptable ballpark figure eclipsing the 100 watts per lb minimum margin that's often suggested for electric models.

CONSTRUCTION

The Decathlon doesn't take long to put together, in fact the relative ease and speed of construction are a genuine reflection of the thought and

development that's clearly gone into the model. A few squirts with the cyano', a dab of epoxy, and she's pretty much complete. In truth I guess I should expand on that a little more, but really there's little to comment on. The moving surfaces use cyano' hinges whilst the wings plug together with an aluminium tube. Wing bolt holes are pre-drilled and the captive nuts pre-installed in the fuselage. Oh, and if you can't stand sticking in windows, you'll be pleased to hear that the canopy glazing is pre-fitted. Moving on, the spat and wheel section is a quick cyano' job using wooden wheel collets along with a plastic spat retainer, and the motor drops into place with complete ease.

Incidentally, motor installation uses a mount which you won't be surprised to learn is a precise fit with the pre-drilled holes in the ply stand-off.

I encountered a tricky moment with the motor in that I found I couldn't screw the outrunner to the mount as the shaft was protruding from the wrong end. The motor had been supplied with a view to attaching the mount to the front of the unit and not the rear, as is required for the Decathlon. Clearly I

Those long summer evenings are just the time for a few flights with the Decathlon.

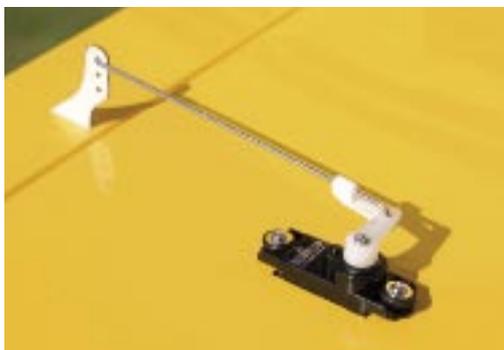


That classic Decathlon scheme is nicely represented.

would have to push the shaft through to the other end... somehow!

In the absence of motor instructions I chatted to Perkins who guided me through the process which entailed removing the shaft collet and shaft grub-screws, pulling the casing apart, then tapping the shaft through to the other side with gentle-ish taps from a wooden mallet. Anyway, the process proceeded smoothly and my re-assembled motor was very soon ready to run.

Tail feather servos are housed just under the horizontal stabiliser and with an aileron servo in each wing, some direct, slop-free control



I used GWS mini servos all round. The swing keepers are mine so do note that if you go this route your wire bending needs to be accurate!



The canopy window is pre-fitted, otherwise I'd have painted the interior.

response looked promising. The horns are laser-cut plastic pieces that just require some help with cyano' to fix 'em in place. As an aside, although I religiously check these after every flight, they've been just fine so far. I did, however, discard the servo arm screw-lock connectors which I really don't like using in this application. Swing clip retainers are far better although they do demand accurate wire bending without a v-shaped adjuster mid-length.

As a final flourish, to make me feel like I'd engaged in some creative modelling, I added some

Solartrim covered, balsa wheel leg fairings. These make the u/c legs look far better and the spats seem less like two yellow eggs flying in close formation!

PRE-FLIGHT

My clamp ammeter showed the wooden 11 x 7 prop pulling 40 amps at full throttle, the plastic 11 x 7 reading a little less. As such I decided to prop-down to 9 x 6 just to make life a little more comfortable for the 40 amp ESC.

The battery is strapped to a removable tray which slides into

place from the underside, just behind the nose. Since this area is exposed to plenty of cooling air, I strapped the ESC just behind the motor. Control throws were set to the test flight rates suggested, and the model balanced just a little nose heavy by shifting the battery tray forward.

FLIGHT

With such a low wing loading and plenty of power on tap it was no surprise to see the Decathlon leap away from a hand-launch. The model will take off from grass but the small wheels dictate that only the very smoothest of surfaces will guarantee the absence of a broken spat or some other mishap.

Some models feel just right from take off and I'm pleased to say the Decathlon is definitely one of them. A few clicks of trim soon had her flying hands free and after that the



The Decathlon isn't a beginner's model but it would make a great follow-on trainer.



Landings are a straight-forward undertaking, indeed I was surprised how well the small wheels and spats coped with short grass. That said, I'm sure normal length grass will induce a nose-over flourish at some stage in the process. The model will float down perfectly on a calm day but needs some throttle management to bring her in on windy ones, although this would apply to most models of

Superbly smooth and effortless flight is what you'll get with the Decathlon, with a lovely scale appearance thrown in for good measure.

model treated me to one of the most enjoyable test flights I've experienced for many years.

You'll find that she's very difficult to stall and although the precise stall speed will depend on the C of G location, with a slightly nose heavy set-up I couldn't achieve anything other than a gentle mushy nose drop. In a strong wind and at the same C of G setting, she doesn't do anything at all!

The Decathlon is pretty sprightly even at the suggested starting rates and there's plenty of power for loops and rolls, the latter being more axial than I would have expected. Even with a slightly forward balance inverted flight was easy to maintain with a touch of down elevator. Sometimes a very slight amount of rudder is required to help start a turn, especially when climbing out after a slow, low pass. Mind you, this trait hasn't been significant enough to provoke me into mixing rudder with aileron. She's pretty snappy too, again, even with a forward C of G - sticks in the corners will have her cavorting around in a fashion sufficient to embarrass many purpose-designed aerobats.



Very occasionally a little rudder seems to be needed for turning, but it's nothing that requires particular attention.

DATAFILE

Name:	Decathlon
Aircraft type:	Semi-scale sport aerobat
Manufactured by:	Seagull
UK distributor:	J. Perkins Distribution Ltd. Tel. 01622 854300 www.jperkinsdistribution.co.uk
RRP:	£59.99
Wingspan:	51" (1300mm)
All-up weight:	35oz (985g)
Wing area:	434sq. in.
Wing loading:	12oz / sq. ft.
Control functions:	Aileron, elevator, rudder, throttle
Rec'd motor:	3514/14 EnErG
Rec'd battery:	2100mAh 3s Li-Po

Just before the first flight I replaced this 11 x 7 wooden prop with a 9 x 6 Graupner CAM prop.

course. Oh, and it's good to know that she won't drop a wing at any stage in the process.

Flight times are respectable but will depend on throttle management and prop size. I found that 7 - 9 minutes of general flight on the 9 x 6 was easily achievable, although I always land with some amps in the tank. This prop size seems just right for the model so to date I've really not seen the need to change up, indeed the Decathlon will climb vertically on the 9 x 6 for 5 - 10 seconds before losing its urge. Clearly, propping-up should improve this a little.

As I say, those wheel spats will take some punishment in longer grass where a conventional landing will be all but impossible, even at a slow landing speed. Spat wheel clearance is pretty limited so although the light wheels supplied are there for a purpose (i.e. they're light) fitting some larger, heavier items shouldn't compromise the performance given the level of power on tap. A string of long-grass nose-over landings eventually broke the internal ply u/c mounts, so it's best to beef these up with a little plywood at the



construction stage. Unless, of course, your patch is a bowling green!

PERFECTION?

Landing gear issues aside, the Seagull EP Decathlon is a delight, there's no other word for it. She's very well made, easy to assemble, looks great and flies beautifully.

The Decathlon is big enough to be a viable everyday model for the club flightline, yet small enough so that an affordable brushless propulsion system will deliver a satisfying performance. The motor and battery

combination I've used is probably a little more powerful than necessary but, as always, it's better to have more grunt than less!

I suspect that some of the other models in the Seagull EP range will be a little more sprightly and perhaps attuned to pure aerobatic and 3D flight, but for a good, all-round satisfying sport aerobatic flying performance combined with an attractive semi-scale appearance the Decathlon is all you'll need. You won't need me to tell you that £59.99 is a sensational price.