



AT-6 Texan

CAN SEAGULL'S ELECTRIC VERSION OF THE CLASSIC COMBAT TRAINER HAVE WHAT IT TAKES TO STIR THE SOUL? GARY STANLEY FINDS OUT

With a little cockpit detail the illusion will be complete. Isn't she a cracker?

The North American AT-6 Texan is better known to us Brits as the Harvard, a name given to this basic combat trainer when sold to the UK, Canada and New Zealand. More than 17,000 AT-6s were manufactured, primarily in the USA, and in excess of 350 are still airworthy somewhere around the world. Nicknamed the 'Pilot Maker' (hmm... is someone trying to drop a hint in my direction?) or the 'Old Growler' (now I'm sure someone is trying to tell me something...), the AT-6 first flew during 1940. It went on to serve in at least 55 air forces worldwide, training several hundred thousand pilots along the way.

There's no doubting the heritage of the full-size, but this doesn't really translate when meeting Seagull's ARTF version for the first time. The picture on the box lid depicts two non military variants: one blue and white, the other red and yellow - civilian pylon racer colours that don't really inspire. In truth this is a kit that definitely won't leap out at you from the model shop shelf. Removing the kit box lid revealed the blue / white version, well presented with all the parts individually wrapped. The fuselage is huge, indeed the three-part cantilever wing sections look comparatively tiny stored alongside it, which did little to inspire my hopes

that this would be an easy-flying aircraft! Locating the instruction booklet at the bottom of the box, I sat down to read through it. I needn't have bothered retiring to a comfy chair, though, as it didn't take long to skim through its 15 black and white pages. There's not much text yet each page contains pictures of the various stages of construction and seems to cover everything adequately enough.

PROBLEM PARADE

Putting the fuselage on the bench for closer examination reveals just how well the construction is executed. Plywood formers are used with sheet balsa over the top, giving a real

The fibreglass cowl needs a bit of effort to get mounted correctly, whilst the dummy engine that masks the firewall requires cooling holes opening up between the cylinders.

Whilst the box art isn't particularly striking, what's within is somewhat more inspiring.





Low, slow and lovely. As I'm sure you'll agree, Seagull's EP Texan is a lot of model for the money?

Attention to detail is good, small touches like these bolt hole reinforcement pads being a particular case in point.

professional look that's both light and strong. Said balsa is then covered with a sticky-back PVC similar to Fablon which I have to say, despite my preference for a proper heat-shrink film, is nicely applied. The only gripes I had here was that the overlaps at the edge aren't the way I would have chosen to set them, i.e. the overlap is into the airflow.

Removing the outer wing panels from their individual protective bags revealed some damage to the port tip, and the mounting plate for the aileron servo had been cracked off from under the plastic film. A repair would have been possible but it would have meant removing the film covering, and the final result would probably have ended up looking unsightly. A replacement was in order, then, which promptly arrived following a call to UK distributor J. Perkins. I did make some use of the damaged mount, though, as it allowed me to easily size the servos required (I chose Hitec HS81s).

GET IT ON

Faithfully following the guidelines of the instruction booklet, I removed an area of covering from the tailplane and fin and tested them for a dry fit before committing aeromodelling with a little glue to hold them permanently in position. This gave the fuselage a

slightly odd 'basking shark' appearance, although fitting the cowl would soon improve that.

The moulded fibreglass cowl is approximately 7" (180mm) in diameter and requires a little work to mount correctly. Similarly, the dummy engine that masks the front requires holes opening up between the cylinders to permit motor cooling. The manual suggests using cyano to mount this dummy motor into the cowling but instead I entrusted the job to my faithful hot glue gun, figuring that I might have to tweak its position to suit the electric motor.

When it comes to the type and installation of the motor the instructions are quite vague. Perkins recommend their own brand JP C42-20, a brushless outrunner rated at 900kV (RRP £52.95), an example of which was supplied for the review along with a rather large 4s 4300mAh Li-Po (RRP £108). A 70A ESC sourced from eBay for just £20 would handle the power, ultimately delivered to a 12 x 8" APC-E prop.

Two plywood mounts are supplied with the model, so it's just a matter of choosing the one that fits your motor and locating it in a position to suit the cowling. Next on the list is to fit the well detailed, pre-painted canopy - quite a little masterpiece in itself.

There's a clever moulded step to replicate the sliding canopy of the full-size, and although this is fixed on the model I thought it was a nice touch. The canopy mounts with just four screws, although the manual recommends gluing as well. The whole thing screams out for a pilot (or two), and it's a shame that none is supplied - it's at the top of my 'to do' list, though.

As outlined above, the wing is supplied in three parts. A centre-section supports the two outer tip panels, with a tubular aluminium joiner set between the spars. Epoxy is used to glue the panels together, although since no incidence pins are included to ensure correct alignment, the process can be a bit fiddly. Typically, I further complicated the issue by trying to make both joints simultaneously, instead of concentrating on one at a time. Anyway, I finally managed to achieve the correct alignment by pushing a modelling pin through the joints at the wing t.e. to keep the panels stable whilst the 30-minute epoxy cured. Finally, the gaps between the three sections are covered over with a strip of blue sticky-back plastic (that doesn't quite match the wing colour!).

The simple wire undercarriage is enhanced by fairings, these glued to

Aileron linkages are straightforward and fuss free. Again HS81 servos are quite up to the job and fit the pre-made servo apertures perfectly.

Fellow club members have been impressed by the method of construction, overall finish and how she flew.

Plastic fairings add a touch of authenticity to the simple wire u/c.

Nicknamed Old Growler and Pilot Maker by those who flew it, the Texan trained thousands of pilots... Not in these colours, mind.



plastic saddle clamps that straddle the wire legs from behind. With this each undercarriage leg is clamped into a wing-mounted block using the conventional saddles provided in the hardware pack. The tail wheel is soon fitted, a fairly standard unit that's surprisingly tall, sitting the tail quite a way from the ground. As is the established norm these days, all of the Texan's control surfaces are attached with Mylar hinges, these being secured with a wick of cyano.

HEY GOOD LOOKIN'!

With all this taken care of and the wing joints well cured it was time to assemble the main components for a quick mid-build bench-top viewing. The transformation was incredible. From basking shark beginnings the Texan had suddenly become a model aircraft. It sat on the bench looking mean and proud, like a British bulldog. Even the wife was impressed, and



that's a tricky endorsement to get at the best of times!

Having admired the model from every angle it was back to work, installing the servos. This was quite straightforward, the only testing part being to get the leads down through

the wing as they need to exit through a small circular hole in the centre panel. The three-part assembly hadn't allowed an opportunity to fit a draw string, but I soon dropped one through using a small weight and the assistance of gravity.

A quick note here about the separate elevator servos required to drive the back end. If your transmitter doesn't have the necessary mix to operate the two opposed elevator servos, you'll need a servo reverser in one of the lines. Don't be tempted to alter the servo orientation as the mechanical linkages will end up being quite different, and differential throw will result.

The control horns are standard plastic ARTF cheapies that need to be bolted on, requiring the builder to drill the necessary holes through the respective surfaces. Meanwhile, the pushrods require bending and cutting to the correct length, although it should be noted that nothing in the final installation is at all tricky. The Rx mounts easily onto a pre-cut tray that's slotted to accommodate some

DATAFILE

Name:	EP AT-6 Texan
Aircraft type:	ARTF semi-scale warbird
Manufactured by:	Seagull
UK distributor:	J. Perkins Distribution Tel. 01622 854300 www.jperkinsdistribution.co.uk
Wingspan:	62 $\frac{1}{2}$ " (1587mm)
Fuselage length:	47" (1184mm)
Wing area:	4.4 sq. ft. (0.4 sq. m)
All-up weight:	5.3 - 6 lbs (2.4 - 2.7kg)
Wing loading:	19 - 22oz / sq. ft. (5.8 - 6.7kg / sq. m)
Motor used:	C42-20 brushless outrunner
Prop used:	12 x 8" APC-E
Battery used:	Energy Pro 20C 4300mAh
ESC used:	70A



kind of retainer. Velcro straps as sold in car accessory shops are ideal.

The flight battery also has a slotted plywood tray, which places the pack between the rear of the dummy engine and the forward wing locating bulkhead (bear this in mind when gluing the dummy radial engine in place). There's a major constraint here as the resulting installation means that the battery is almost impossible to remove from the model unless you're prepared to remove the prop and cowl every time. This invariably means that if you use a physically large battery (like me), you'll almost certainly be charging it in the model.

With the decals duly applied (the box-top picture is the only real guide as to their position), all that was left to do before the first flight was confirm the correct centre of gravity and program the radio to the recommended control throws.

WINTER WARMER

Mother Nature eventually abated her wintry onslaught, making way for a weekend of decent weather. With the batteries topped up and an appointment with the photographer made, it was off to the home patch for

the long-awaited maiden flight. The day actually proved to be better than the weather forecast had predicted, with blue sky and a light south easterly. The only downside was that the horrendous recent weather had played havoc with our normally pristine runways, and fellow pilots walking on waterlogged ground had done little to improve the surface. I wondered if the Texan's small wheels would cope with the rutted runway but I wasn't going to shy away from trying, so after the ground shots where completed the model was lined up ready for the off.

As the power was fed in, and with a little elevator to stop her tipping forwards, she rapidly accelerated and lifted off effortlessly in all of 20'. Despite the rather large airframe, the C42 motor was taking no prisoners. Settling into a left-hand circuit and with some up trim fed in she was straight and level, looking for all the world like a much more expensive scale replica.

After some low level camera passes it was time to see just what she could do. Gunning the power saw a brisk climb skywards but, alas, the fun was rudely interrupted by my 8-minute

alarm, a time that I'd set as my best guess at battery duration based on a static test. In reality the Texan needed much less power to fly, and I'd clearly underestimated the flight time. On finals she just floated in on that big wing, and although I kept the airspeed reasonably high at this point the touch-down was quite elegant, riding with the tail high until almost stopped. As she slowed down the elevator lost the authority to keep the tail down as the long grass grabbed at the undercarriage, and she nosed-over gently. No harm done, though.

With the Li-Po charged for the second session and photographs 'in the can', I could now give her some stick. Once again the take-off was uneventful although this time I extended the roll-out, the large rudder giving plenty of control to track her true as the speed picked up. Into the air and with a good climb to altitude, the throttle was eased back and up elevator applied to create a stall. As she started to slow up with her nose high the Texan began to sink. Then, as further speed was bled off, the left wing dropped and she began to show signs of an incipient spin. Not a problem at altitude, but it

Whilst the pre-painted canopy is well detailed, it's a pity there's no one in the office to appreciate it!

Those familiar with the AT-6 in traditional military dress may not be overly impressed with the pylon racer covering job - makes a change, though!



Hitec HS81 servos are good enough for this job and help keep the weight down at the back end of the model.

There's plenty of ground clearance at the back thanks to a fairly tall tail wheel unit.

Keeping speed on during the first landing approach proved prudent, given the Texan's liability to tip stall when pushed.

did confirm that it had been a good idea to keep the airspeed up on that first approach!

Having recovered from the stall investigation she was immediately put back into the circuit - loops, rolls, chandelles and stall turns were all performed with a new level of grace that flying a scale replica seems to bring out in a pilot. There's something about the presentation of a scale aircraft that stops the stick banger in you from coming to the fore.

I still had issues about the stalling speed as it wasn't something I'd ever really encountered before and, as one of our more experienced pilots demonstrated, pull that loop too tightly and she'll let go. With a further mental note made I extended my repertoire to slow rolls and stall turns, followed by purposeful spins and recoveries. All of these were no problem at all, and it quickly became clear that the Texan has few (if any) vices. There's certainly nothing that will bite unexpectedly, and after a prolonged series of flight testing even the tricky tip-stall has proven to be predictable and easily managed.

Nosing over at the final stages of the landing roll-out is a persistent



problem, but I'm putting that down to the long grass and my poor throttle management on the deck. My instructor seems to be able to land it well enough, anyway!

THUMBS UP

Peruse the accompanying photos and I'm sure you'll agree that the Texan looks good from all angles, whether on the ground or in the air. My initial lack of enthusiasm for the model on opening the box is now long

forgotten. Fellow club members were impressed by the method of construction, overall finish and not least how it flew. With a low RRP of just £79.99, I don't think you can go wrong. Just remember to keep the air flowing over the tail, don't pull too tight-a corner, and it won't bite you. As some who had a stick-stir during its test flights remarked - it's a big old pussycat really, and while she might not win any scale events, Seagull's EP Texan is a real pleasure to fly.