

For many years now TopFlite, in USA, have had a reputation for fine quality, all-wood kits and their recently updated 'Gold' series has continued this tradition into slightly larger models than the original series which is a growing trend, I think.

I did not have to think too long when offered the opportunity of reviewing the Bell P-39 Airacobra kit as it had long been an ambition of mine to build a TopFlite kit. Their range consists of several warbirds and civilian aircraft and now a growing collection of large scale warbirds too - so there's something for everyone!

The kits are extremely well presented, full colour boxes showing the assembled model whet the appetite and a range of accessories are also available, including quality air retracts specially designed by Robart for each model.

The Airacobra kit just oozes quality, even before the box lid is opened. Inside, the wood quality is superb, the die cutting on the ply is exemplary and all hardware is of a decent quality.

Very clear, easy-to-understand plans are included, as are several vac-formed ABS components and a very comprehensive assembly manual which takes the builder from start to

finish without drama. I really could not wait to start building this one, as it promise several months of traditional balsa bashing with not a scrap of foam in sight!

The builder is given the option of building the P-39 as a straight four function models with fixed undercarriage or with flaps and/or trike retracts. It was my intention to go the 'full house' route and consequently a set of Robart retracts were ordered (more of this later).

I found it very helpful to read through the assembly booklet a couple of times before starting construction as it gave me a 'feel' for the way the model was to be assembled. A comprehensive parts list and scaled-down plan are provided within the booklet and I found these two items very useful during assembly.

Right then, let's get out the glue and make a start!

TAIL SURFACES

In the handbook, assembly begins with the tail surfaces which consist of a balsa skinned framework for the fin and horizontal tailplane, while the elevator and rudder and made up on a centreline sheet core with ribs either side.

The basic tailplane framework is built over the plan with the ribs having removable alignment 'tabs' on them to air

true assembly. These are trimmed off when sheeting the underside. All sheeting is from 1.5mm balsa and no problems were experienced here, the instruc-

tions being very explanatory. The fin is constructed in an identical manner.

TopFlite provide their own special hinges which are like a kind of fibrous mylar. Now, I'm a big fan of mylar hinges anyway and found these to be excellent and easy to install.

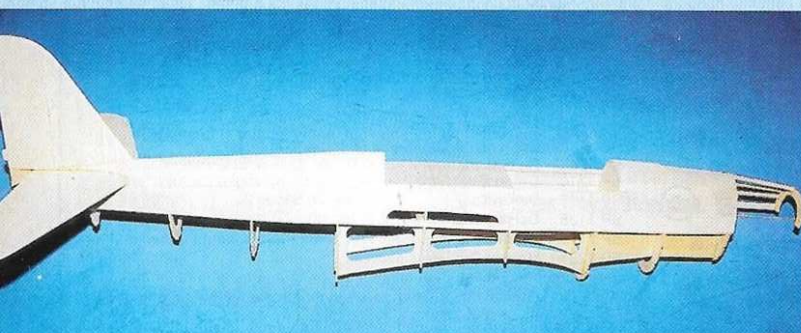
The elevators are joined by a metal joiner wire which incorporates a horn for the elevator operating 'snake'.

It's important to ensure that full and free movement is available on these surfaces and so the leading edges of the rudder and elevator are bevelled in order to achieve this.

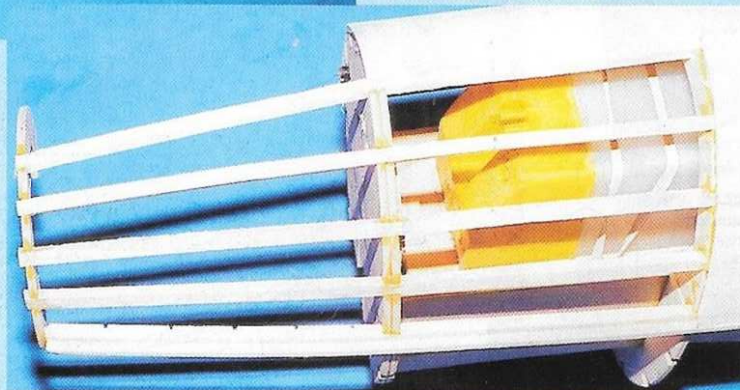
FUSELAGE

The basic construction of the fuselage consists of top and bottom halves built over the plan on a horizontal crutch. The engine (.61 upwards) is side mounted on the right hand side.

Using the excellent booklet



Above: two views of the basic fuselage showing the ply wing seat crutch. Surface sheeting wraps around the formers. Right: detail of the nose section showing the stringers that support the wrap-around sheeting of the half-cowl.



TOPFLITE P-39

ANDY WARD builds this off-beat WW2 fighter

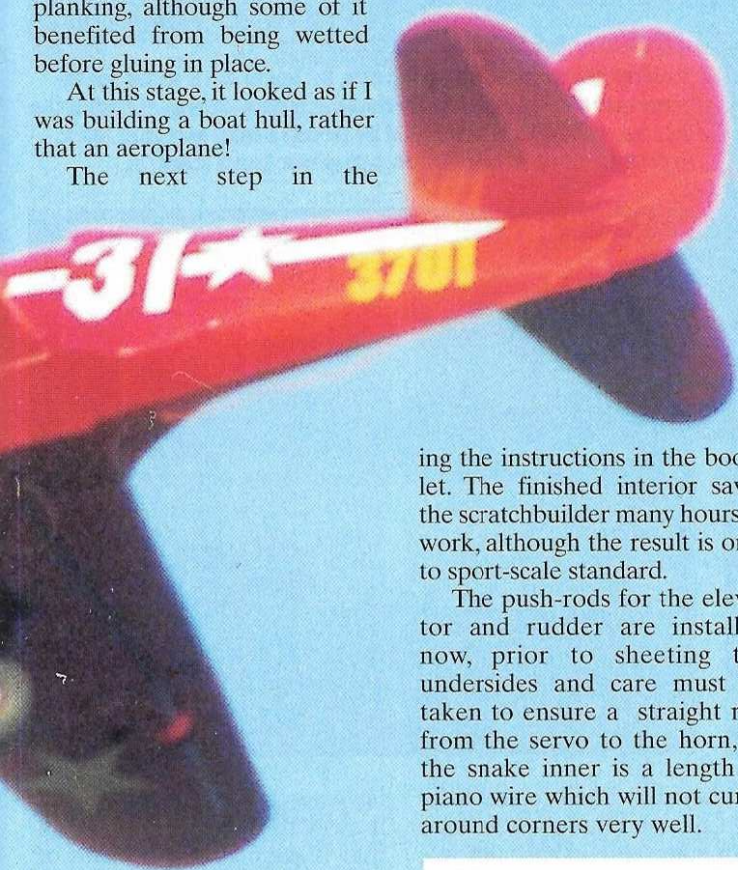
photos for guidance, it was straight forward to build the basic crutches, although some of the die cut fuselage formers needed easing out with a knife and sanding smooth. Longitudinal balsa stringers were then attached and the whole assembly sheeted with the 3/32" (2mm) balsa provided. Most sheeting is achieved without resorting to the dreaded planking, although some of it benefited from being wetted before gluing in place.

At this stage, it looked as if I was building a boat hull, rather than an aeroplane!

The next step in the

COCKPIT INTERIOR

TopFlite market a range of vacuum formed cockpit interior mouldings (and pilots) to go with their kits. I chose to install one in my P-39 and soon had the plastic parts cut out and glued together. With the addition of paint and a little weathering, the effect is very good and the whole assembly glues to the fuselage follow-

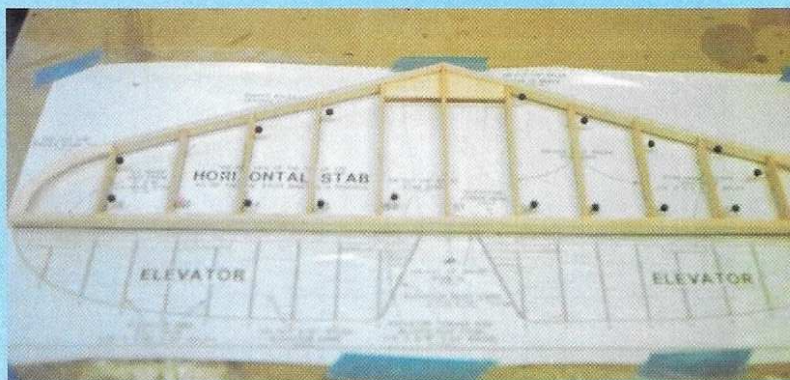


ing the instructions in the booklet. The finished interior saves the scratchbuilder many hours of work, although the result is only to sport-scale standard.

The push-rods for the elevator and rudder are installed now, prior to sheeting the undersides and care must be taken to ensure a straight run from the servo to the horn, as the snake inner is a length of piano wire which will not curve around corners very well.

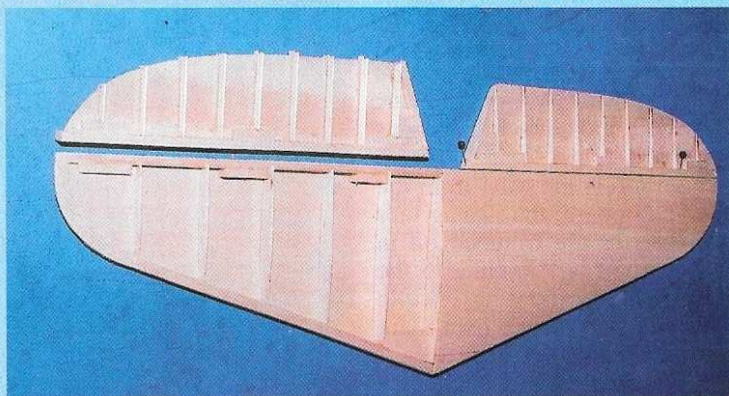
sequence is to mount the tailplane and fin into the supports on the top fuselage half. It is of course, vitally important that the tailplane is glued on squarely and I checked this by measuring from a fixed point at the front of the fuselage to the tailplane tips. A little adjustment to the tailplane seats was necessary.

It's also essential at this stage to place the elevator joiner wire in place before fixing the fin as it would be impossible later.



Above: the basic tailplane structure, laid out over the plan.

Below: the tailplane, partially skinned and the elevators, showing the centre outline base sheet, with ribs added. Note, those on the left, not yet trimmer to shape



One final job before completing the fuselage sheeting is the installation of the mounting plates for the nosewheel retract. We had to use another make of nosewheel unit and leg as the Robart item was not forthcoming.

No problems were encountered here, but please ensure

was to make up the bellcranks which operate them from the servo. Again, all the hardware for the construction and operation of the flaps is included in the kit and the quality of the components is good.

The basic wing construction is assembled with the interlocking spar and ribs, followed by the

that the retract unit is placed far enough forward to let the noseleg retract fully into the fuselage, without hitting the wing dowl plate.

All parts are supplied in the kit for the installation of a fixed undercarriage (except for the wheels).

WING CONSTRUCTION

Having decided to install the flaps on my P-39, the first job

installation of the retract mounting plates. If you intend to use the specially designed Robart main legs as I did, a small modification to the units is needed before installation. The air cylinder has to be moved from one end to the other. This is a simple operation and just takes a few minutes to do. Air lines and servo leads can then be installed and a wheel well liner made up from Plasticard (or thin ply).

RCOBRA



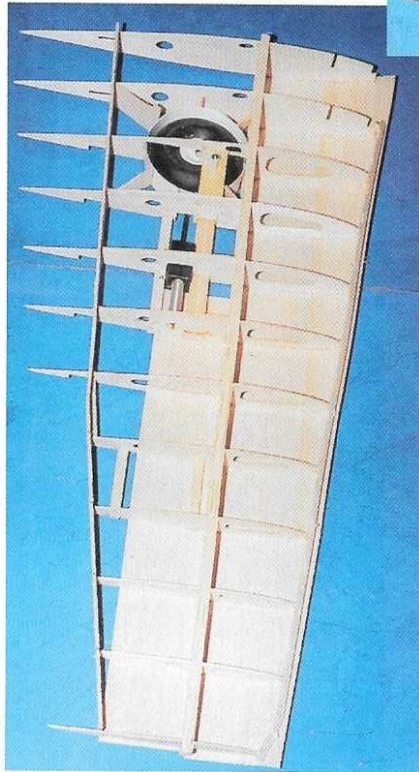
The ailerons are operated by a separate servo on each surface. The servos are fixed to the hatch covers and the resulting short linkage to the horn eliminates all slop and is very positive. The wing is then skinned using sheets of 1.5mm (1/16") balsa which are glued on with PVA or Aliphatic glue and held down with weights until dry.

On lifting the wing from the building board, the jiggling tabs on the ribs are trimmed off in preparation for skinning to the top surface of the wing. Prior to this, the wing dowel fixings are installed and the flap linkages.

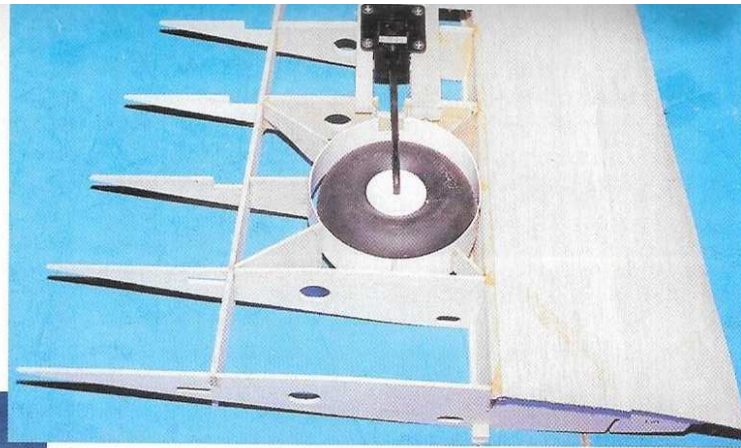
The ailerons are built on a sheet core, in the same manner as the elevators and rudder and centre-line hinged, while the flaps are bottom hinged and use the excellent Robart type hinges which need a 3mm hole for installation.

I managed to knock off quite a few of the rib ends at the flap position during the course of the wing construction and these needed to be fixed on again in order to complete the wing skinning over the flaps.

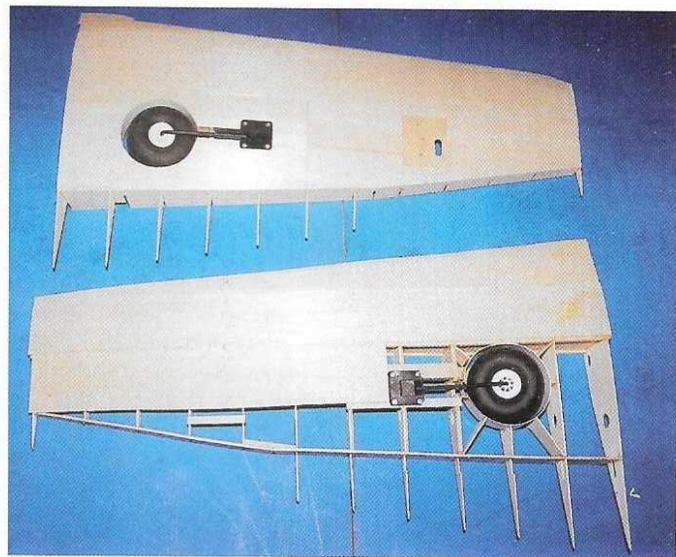
The wing is attached to the



and exhaust stacks, plus a lovely clear cockpit canopy. The wing fillets need cutting out with extreme care and then trimmed back to the cut lines with a sanding block.



The wing underconstruction. Top left: here, the bottom skin is applied and the wheel wells installed, together with the undercarriage, close-up of which is also seen top right. Left: a further view of the partially skinned wing panel, Below: the wheel wells again, with U/C units, with wheels, tucked snugly in.



I secured mine to the fuselage side and the ply fillet base with some thin cyano and was pleased with the result.

The canopy is again cut to shape with care and the fuselage recessed at the front of the cockpit to accept the canopy moulding. I attached mine with R/C Modellers' Glue, after painting the cockpit and installing the pilot.

The parts of the removable engine cowl were made up as per the instructions, but in the end, I did not use it as I would

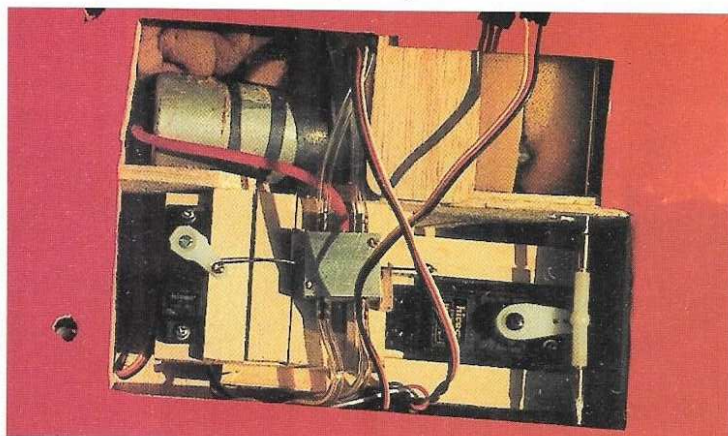
have needed to cut so much off it away to fit round the engine that it seemed like a waste of time.

At this stage, the model was essentially complete and I could assemble it and take a few steps back, admire the result and think about colour schemes.

FINISHING AND COVERING

The finishing and painting part of any aircraft is my favourite part of all and to this end I began to search for an unusual scheme, different from the universal military Olive Drab.

Research revealed that several Airacobras were raced after

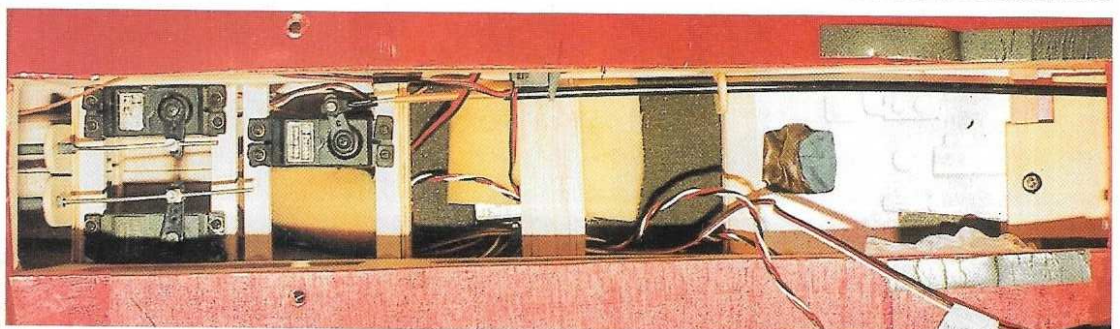


fuselage by two dowels at the front and a pair of nylon bolts at the rear in the usual fashion. It's essential to align the wing correctly on the fuselage in the same manner as the tailplane.

FINISHING PRIOR TO COVERING

There are several moulded plastic components on the P-39, including the wing fillets, cowl

Left: wing detail, showing undercarriage air-ram switch and the aileron servo. Below: radio system installation in the fuselage centre section.





Andy Ward is justly pleased with his P-39

Above: Andy left the engine only half cowled. Below: the simple, yet effective flaps really slow the P-39 down for landing



WW2 in civilian colours, one of them being red, with white trim. So, with red Glosstex to hand, this scheme became the natural choice.

Before covering, I painted out the inside of the wheel wells, flap bays and engine bay and applied a generous coat of fuel proofer around the engine area.

A couple of nights' work with the covering iron saw the model covered in the red Glosstex and the wing fairings were sprayed with matching enamels, as was the cockpit canopy after masking out the frame members. The addition of race numbers and some white stripes cut from white Solarfilm brought the airframe to life. I'm very pleased with the look of my model and it certainly turns heads where-ever it goes!

ENGINE AND RADIO

A two stroke 0.61 engine is recommended and to this end I fitted a K&B 65, which would give me ample power with a 12" x 6" prop. I do not possess an engine of this size in two-stroke, so my thanks go to colleague Mal Pennell for the loan of the engine.

I used a SLEC yellow 9oz. fuel tank and in-line fuel filter.

The operating hardware for the retracts, including the air reservoir was placed in the wing centre section, there being plenty of room there. All servos used are the standard 148 size, except for the mini servo which operates the air valve.

The receiver and nicad pack were so placed as to achieve the recommended centre of gravity without the need for additional ballast and the model's all-up weight ready to fly is exactly 9 lbs., which falls nicely in the suggested TopFlite range of 8-10.5 lbs. In fact, I cannot see how the model could be built to weigh 10.5 lbs

unless it is covered in sheet lead of course!

Having performed a range check on the radio and set up all the surface throws to the manufacturer's recommended settings, there was only one thing left to do - fly it! Due to a persistent air leak on the undercarriage system, the wheels were locked in the down position for the first test flight and to be honest, I've not yet traced the leak, which I suspect may be in the controlling air valve or the noseleg, neither of which were from Robart.

FLYING

The considerable thrust from the propeller suggested that the P-39 would not need a very long take-off run and so it proved to be. With the model tracking down the centre line of the runway,

a squeeze of up elevator saw the Airacobra climbing away.

With power reduced to about 2/3rd, the model flew in scale-ish fashion and very little trim input was required, indicating that for once, I had built a straight model! Rolls were very scaly on the recommended throws and the model was altogether very stable and predictable in flight.

At a good height, the model was slowed for the stall test, when it just nodded its nose gently, without any dramatic tip stalling.

After reducing power and deploying the flaps, I noticed very little trim change and so I can confirm that this model would be a very good one for a first 'flapped' aircraft. It could be landed quite slowly with flaps deployed, whilst still maintaining aileron

control right down to touch down.

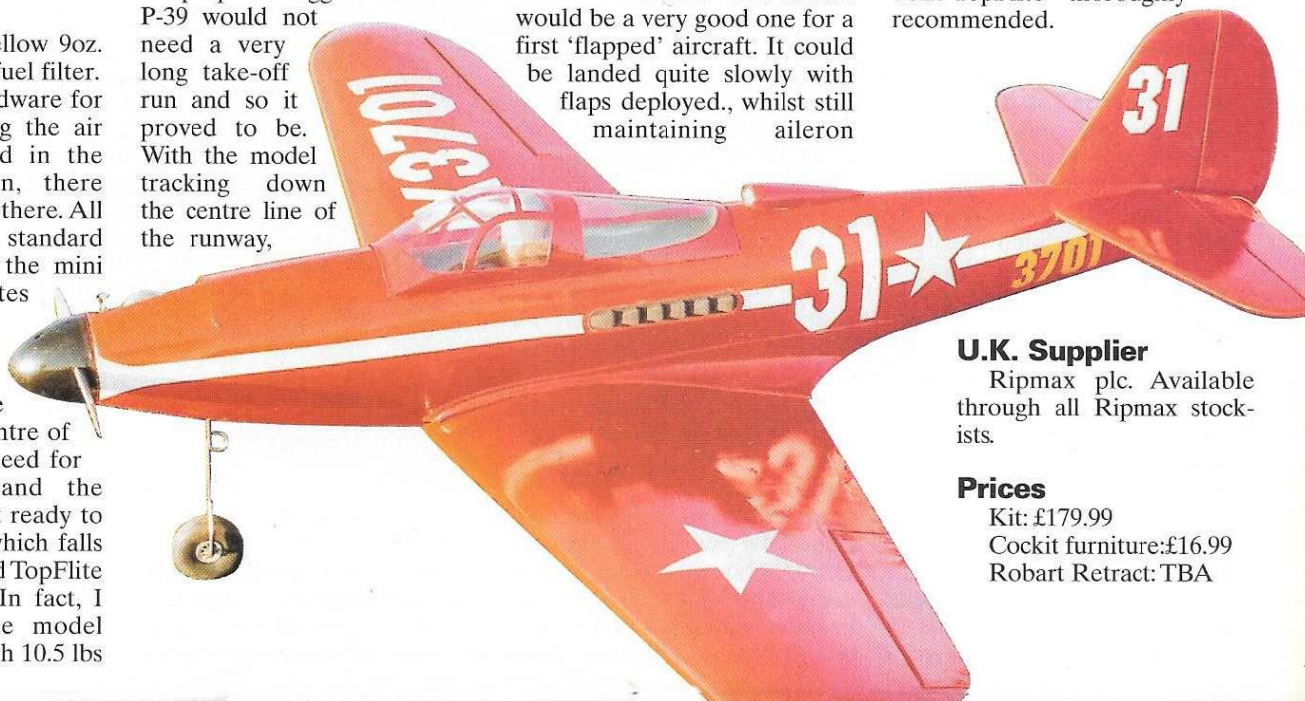
On subsequent flight, the aerobatic potential of the model was explored and it is capable of all scale manoeuvres with ease. Landings without flaps deployed are faster, due to the clean aerodynamic lines of the machine, but still no problem. I'm sure my P-39 will get lots of flying - if only I can sort out the retracts.

SUMMARY

Well, the TopFlite P-39 Airacobra certainly hasn't disappointed me. I thoroughly enjoyed the building process, which took about eight months due to various factors outside my control (like non-availability of the retracts when I needed them). I'm pleased with the finished article

Purists may criticise the colour scheme as being a little non-scale, but so is the engine and silencer sticking out the side.

All-in-all, a very well performing model that I look forward to flying much more. Well done TopFlite - thoroughly recommended.



U.K. Supplier

Ripmax plc. Available through all Ripmax stockists.

Prices

Kit: £179.99
Cockpit furniture: £16.99
Robart Retract: TBA