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A5040 Mini Digital Aircraft MG Servo

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STANDARD

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STANDARD

A6050 Standard Aircraft Servo

36.5g
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.16/.14 (4.8/6.0v)
1.3 @ 4.8v-1.6 @ 6.0v

STANDARD

A6060 Standard Digital Aircraft Servo

36.5g
33.3x18.4x36.6
.16/.14 (4.8/6.0v)
1.3 @ 4.8v-1.6 @ 6.0v

STANDARD

A6110 High Voltage Standard Servo

36.5g
33.3x18.4x36.6
0.2/.14 (6.0/7.4v)
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STANDARD

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RETRACT

A7040 High Voltage Retract Servo

42.0g
44.0x22.2x27.3
1.92/1.39 (6.0/7.4V)
14.0 @ 6.0v-19.2 @ 7.4V

RETRACT

A7010 Thin Wing Servo

14.5g
27.4x10x27.2
.13 /.11 (4.8/6.0v)
3.3 @ 4.8v-3.5 @ 6.0v

WING

A7020 Digital Wing Servo

14.5g
27.4x10x27.2
.11 /.09 (4.8/6.0v)
3.4 @ 4.8v-3.6 @ 6.0v

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A7030 High Voltage Wing Servo

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ON THE COVER

The WACO series of biplanes from the 11920-1940 era were highly attractive subjects for scale modelling. Peter Rake selected the WACO 9, replicated at 1/10th scale, giving a handy size at 36: wingspan. Full size FREE plan feature in this issue.

JULY 2013 NO.164

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CONTACT

WILL YOU CARVE?

Back in May issue, we ran the first part of Ian Turney-White's how-to feature on his technique for carving large wooden propellers. So where did Part 2 go?

Brain fade at the editorial desk is the only answer, but we're putting that right in this issue, so apologies for readers who have been kept waiting - just go to page 48.

TWO DAYS FOR INDOOR SCALE NATIONALS?

As reported by Alex Whittaker in this issue, the BMFA's Indoor Free Flight Scale Nationals, held at Nottingham on April 27th, was a great success, with significantly increased support, both from competitors and spectators.

So much so that, as BMFA Tech Committee rep. Andy Sephon reports, the whole event has grown to the point that a single day just won't do. For next year, the Nottingham venue has already been scheduled as a full two-day event over the April 12/13th. The additional time will thus accommodate Scale Indoor R/C for the first time, with time for both scratch-built models and RTF types.

Also in prospect, after this year's successful demonstration, will be a slot for Scale Indoor Gliders. Several kits are already available including the Veron Slingsby Prefect Mk.1 by SAMS.

NEXT MONTH IN FSM

A fair number of Nieuport types have featured in FSM over the years, including Nieuport 11 Bebe, Type VI H early monoplane, Nieuport 24 and latterly the type 28. But we've never before had the opportunity to present a full construction feature on that most well know of all the Nieuport fighter types - the Nieuport 17.

So ... August FSM will feature Peter Rake's 40" (1016 mm) wingspan, 1/8th scale example, designed for 400 size brushless electric motors. There will be full size FREE plans, backed up with a set of laser-cut parts, scale drawings, colour schemes and Type History - and if we can find one to photograph, then an 'In Detail' photo study too.

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Mounting Dim.	44x17.5mm

.52NX

Displacement	8.52cc (.52cu.in)
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Mounting Dim.	36x17.5mm

.60NX

Displacement	9.83cc (.60cu.in)
Total Weight	487g (17.13oz)
Mounting Dim.	44x17.5mm

.61NX

Displacement	10.0cc (.61cu.in)
Total Weight	721g (25.44oz)
Mounting Dim.	41x25mm

.120NX

Displacement	20.31cc (1.24cu.in)
Total Weight	939g (29.5oz)
Mounting Dim.	46x25mm

.91NX

Displacement	15cc (0.91cu.in)
Total Weight	570g (20g)
Mounting Dim.	42x25mm

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PLANS AND PARTS

BE READY TO START BUILDING AS SOON AS YOU UNFOLD THE PLANS WITH THESE LASER-CUT PARTS SETS

Peter Rake Series

Ponnier 1913 Racer

Model designed by Peter Rake for electric power of the pioneer era racing plane 50" wingspan. Published in FSM December 2006 and January 2007 issues 85 and 86 4 sheet plan.

Plan: £24.95
Cut Parts: £50.00

PLAN384

Peter Rake Series

White Monoplane 1919

Peter Rake's simple to build sport scale model for 3 channel RC and geared 400 electric motor power wingspan 40.5". Published in FSM December 2002 issue 37 2 sheet plan.

Plan: £14.95
Cut Parts: £125.00

PLAN420

Peter Rake Series

Bristol Scout Model 'C'

A 26.1/2" wingspan, sport scale model designed by Peter Rake for IPS electric power, LiPo batteries and three-function control. Published in FSM September 2010 issue 130 2 sheet plan

Plan: £19.95
Cut Parts: £50.00

PLAN352

Peter Rake Series

Pfalz EIII

A 30" scale model of the early WWI Scout aircraft. Designed for electric power by Peter Rake. Published in FSM October 2011 issue 143.

Plan: £9.95
Cut Parts: £35.00

PLAN347

Peter Rake Series

Sperry Messenger

A 30" span, 1/8th scale model designed by Peter Rake for electric power. Published in FSM December 2009 issue 121 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN359

Peter Rake Series

Rumpler Taube

Two sheet plan of the 30" Rumpler Taube by Peter Rake for electric power published in September 2012 (issue 154).

Plan: £9.95
Cut Parts: £39.00

PLAN336

HOW TO ORDER: www.flyingscalemodels.com

WHAT DO THE CUT-PARTS SETS CONTAIN?

The components, in balsa and ply that you would otherwise have to trace off the plan onto the wood and then tediously cut out prior to commencing building! Basic strip and sheet wood not included. Be ready to start building as soon as you unfold the plans!

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RC Scale IC Power

Dornier D.1

Dr Mike Hawkins 38" span 1:6 .86 sport-scale model of a little known German WW1 fighter, for .40-.60 cu.in engines and four-function RC. Published in FSM October and September 2006 issues 82 and 83 4 sheet plan

Plan: £24.95
Cut Parts: £50.00

PLAN386

RC Scale IC Power

Sopwith Dove

An easy to build 49" wingspan for .25 to .29 cu. Engines and three function RC by Norman Holme. Published in FSM January and February 2006 issues 74 and 75 3 sheet plan

Plan: £19.95
Cut Parts: £50.00

PLAN390

RC Scale IC Power

Bowers Fly Baby Bipe

A 54" (1372 mm) wingspan sport-scale RC version of the Pete Bowers home build biplane for .61-.91 cu.in engines. Published in FSM November 2012 issue 156.

Plan: £29.95
Cut Parts: £135.00

PLANMF51

RC Scale IC Power

Chilton DW 1a

This 1/3rd scale version comes from the expert design board of Phil S.Kent and has been built in several sizes. This 96" (2438mm) version features flaps as per the fullsize, suits 1.5 to 1.8 cu.in. four stroke engines, and five function R/C systems. 2 sheet plan

Plan: £22.50
Cut Parts: £125.00

PLAN303

RC Scale IC Power

Corben Super Ace

A 50" (1270mm) sport-scale model of the delightful American homebuilt aircraft. 1/6th scale replica suits .26-.30 four stroke engines, or .20-.25 cu.in. two strokes. Four function radio systems required

Plan: £19.50
Cut Parts: £65.00

PLAN275

RC Scale IC Power

Curtiss Hawk P-6E

A replica of the flamboyant 1930s American biplane fighter aircraft with a very elegant shape. 1:6.4 scale model spans 57" (1450mm) and suits .50-.60 size engines. Conventional wood construction throughout and requires four function radio control. Two-sheet plan

Plan: £19.50
Cut Parts: £90.00

PLAN226

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Simon Illsley's Harvard / AT6 built from the celebrated Flair kit. 66" span, Saito 45 four stroke power. Flew well.

RAFMAA
WARBIRDS OVER WITTERING

Alex Whittaker takes his camera to this prestigious annual invitational event held over the April 26-27 weekend

After a period of a decline in numbers, The Royal Air Force Model Aircraft Association is growing, and its well-attended spring showcase reflected the new ebullient mood. Due to other commitments for *Flying Scale Models* next day at The Indoor Scale Nationals, I could only attend RAFMAA Warbirds on the Saturday - but what a day! A full day's scale warbirding, in bright sunshine, and light winds!

The RAFMAA Experience

There is no event on the scale calendar like RAFMAA. First of all you have to be invited. Then you and your vehicle have to be booked in. You must also to take your passport as proof of identity. Once you get to the chosen Station - this year it was RAF Wittering - you have to be admitted by armed Guards. Once inside, you camp within the strictly fenced perimeter. All very reassuring. Next morning, the Briefing is as crisp and informative as you might expect, and the organisation of the flight line is second to none. Flying began briskly and continued all day. Please accept my apologies if one or two model details are a bit basic. This is because of the sheer pace of the day. Also, being a modeller-to-modeller event, there was no Public Address to fill in any missed details. I was loath to leave my camera post on the flight line whilst the light was so good. Modellers were flying, rushing back to the pits, and returning with yet another warbird! I gave up count at 35 pilots. The good news is that I was able to Hoover up full photo-walkarounds of the new and varied flying scale models for you. They will spool out in FSM over the next few months.

Vought Kingfisher

The first model I spotted was Graeme Illsley's superb Chance Vought OS2U Kingfisher in RAF colours. This was scratch-built from a blow-up of the celebrated Brian Taylor plan. This delivered a wingspan of almost 80 inches. Graeme moulded his own fibreglass cowl, and also moulded his own canopy. Traditionally built of course, with tissue and dope finish. Exquisitely crafted, and superb from every angle. A lovely flyer on CRRC 26 petrol power. I thought she looked

particularly appealing just before touch down. Every time I see a Brian Taylor design in the air, to my auld eyes, it always looks utterly convincing.

Handley Page Heyford

Dennis Richardson has set himself the task of modelling all the RAF types in which his father served in WWII. His latest is a beautifully finished Handley Page Heyford, a criminally under-modelled classic RAF type. The model was based on the 'Tony Nijhus plan, which was originally designed for electric power. Dennis redrew the plan a bit bigger, and powered her by two new O.S. 30 four strokes. This is a handsome, all-traditional scale model. I noted the superb crew from Pete's Pilots, but also clocked that only the

Up from Devon: Phil Parmiter's very-smart four stroke powered Me 109.

Sneak preview! Dennis Richardson's latest is a twin OS .30 four-stroke powered Handley-Page Heyford. Full details and photos soon.

Very fetching Kittyhawk in RAF scheme. I think it belongs to Bubbles Gould, but may have been flown by Brian Cooper.

We have featured her in FSM, but Mick Burrell's Moki 250cc / 5 cylinder radial powered Yak is a stunning model aircraft. And that sound!!!

Chris Peers and the shadowy "Spartacus" co-built and finished this perfect 108" span, 1/5th scale, ZDZ 80 powered Fairey Firefly. Watch this space!

Mick Burrell's majestic 1/4 scale Sea Fury, powered by a Moki 250c five-cylinder radial.

Mick's Sea Fury has pukka folding wings!

Mick Burrell's 1/4 scale, Moki powered, Sea Fury - superlatives cannot do it justice.

Don't you just love civilian based warbirds? Phil Parmiter's butch 1/3rd scale Piper Cub.

Brian Cooper was flying this appealing Me 109 owned by Keith Durkin.

Chris Harle's impressive Laser 70 powered Fieseler Storch.

Pilot wearing his Mae West! Dennis also flew his new, similarly little-known, Fairey Battle. Another of his Dad's WWII steeds. More details and copious photos of both these cracking scale models, down the line.

Sea Fury

Mick Burrell is an accomplished scale modeller. This season he is campaigning his all-new 1/4 scale Hawker Sea Fury, the previous one being lost in a bad crash. Mick's new Fury has many improvements over the old. However, there are two things that immediately startle the viewer with their scale fidelity: the powered wing folding mechanisms, and magnificent-sounding Moki five-cylinder radial. More details soon.

Junkers Trimotor

Squadron Leader Dempster Hamilton was heading up the mega-efficient RAFMAA Team. He also found some time to fly his

impressive electric powered Junkers Ju 52. Tante Ju had numerous radio channels dedicated to articulated gunners, opening cargo doors, and ejecting parachutists. Dempster had an interesting final approach with a parachutist fouled on his rudder! He brought her back alive.

Flair Harvard / AT6

I know that FSM readers (like me) enjoy seeing classic traditional UK scale kits take to the air again (though these days often from plans). Therefore I was delighted to see Simon Illsley's Harvard being put through her paces. Simon Illsley's Harvard / AT6 is built from the celebrated Flair kit. We forget how compact this classic Duncan Hutson kit actually was, at just 66" span. This pristine example is Saito 45 four stroke powered. I adored the yellow scheme, just like the Airfix kit, of blessed memory. She flew exceptionally well, with no sign of tip-stalling as one or two less practical kits were prone to do.

Percival Proctor

I cannot remember the last time I saw a radio-controlled Proctor flying. This one from the secretive but famed Spartacus, and his young oppo, Chris Peers, was an absolute gem. I gawped in this delight for over fifteen minutes. Imposing on the ground and sublime in the air, I loved her RAF scheme too. Commissioned and owned by Dave Gent, the Proctor is built to 1/4 scale, but looks bigger, and is ZDZ 40cc petrol powered. Full photo-walkaround in FSM soon. Magnificent.

Richard Scarborough's new Thunderbolt bustling in full flap.

Bob Goodliffe's Top Flite kit Thunderbolt, DLE 56 powered, about to touch down. There were many, many, Thunderbolts!

Built by the shadowy "Spartacus", Dave gent's lovely ZDZ 40 powered Percival Proctor.

Ken Sheppard's very pretty Evolution radial powered Fw Steiglitz.

Richard Dalgliesh's 1/7th scale, 58" span, Laser 70 powered Kingfisher, built to the famed Brian Taylor plan.

Dennis Richardson's new Fairey Battle, in his Dad's RAF colours. A very rarely-modelled scale subject, so full photos and details here soon.

Richard Scarborough's very fine Spitfire Mk IX from the superb Mick Reeves kit, looking very convincing on a low pass. 112" span, weighs 32 lbs, 3W 75 power.

L-39 Albatros jet from Gary Pope, which flew very smoothly indeed.

Fairey Firefly

Equally magnificent, from the very same building and flying team, was Chris Peer's Fairey Battle. This model defies superlatives too. She is wonderfully quirky, as per the original, and she flies with great authority. She is built to 1/5th scale, spans 106", and powered by a ZDZ 80 petrol engine, driving a 28x10" prop. She is equipped with Fairey-Youngmann flaps, rockets, cannon, arrestor hook, and a full glasshouse. Note those scale flaps have a full 4 inches of travel. A stunning flying scale model. Full FSM photo-walkaround soon.

Oz Mosquito

And now for something completely different. A deliciously rare scale flavour: a De Havilland Mosquito in bright blue and yellow, with "invasion stripes". This is no phantasy scale model, she is finished in a pukka Australian scheme. The model was built and flown by well-respected UK scale man Ted Cooke. The Mosquito spans 100", weighs 30lbs, and is powered by 2 x Turnigy electric motors. She is covered in Proskin, and beautifully finished. Full description soon. Once again, watch this space.

The Verdict

RAFMAA Warbirds remains the "hot ticket" of the early season. This year we were treated to a superb event, replete with many "new-season" scale models . The RAFMAA Team run this event with micro-metric efficiency, but with no trace of officiousness. They are a happy bunch, and this is a delightful meeting to attend.

Acknowledgements

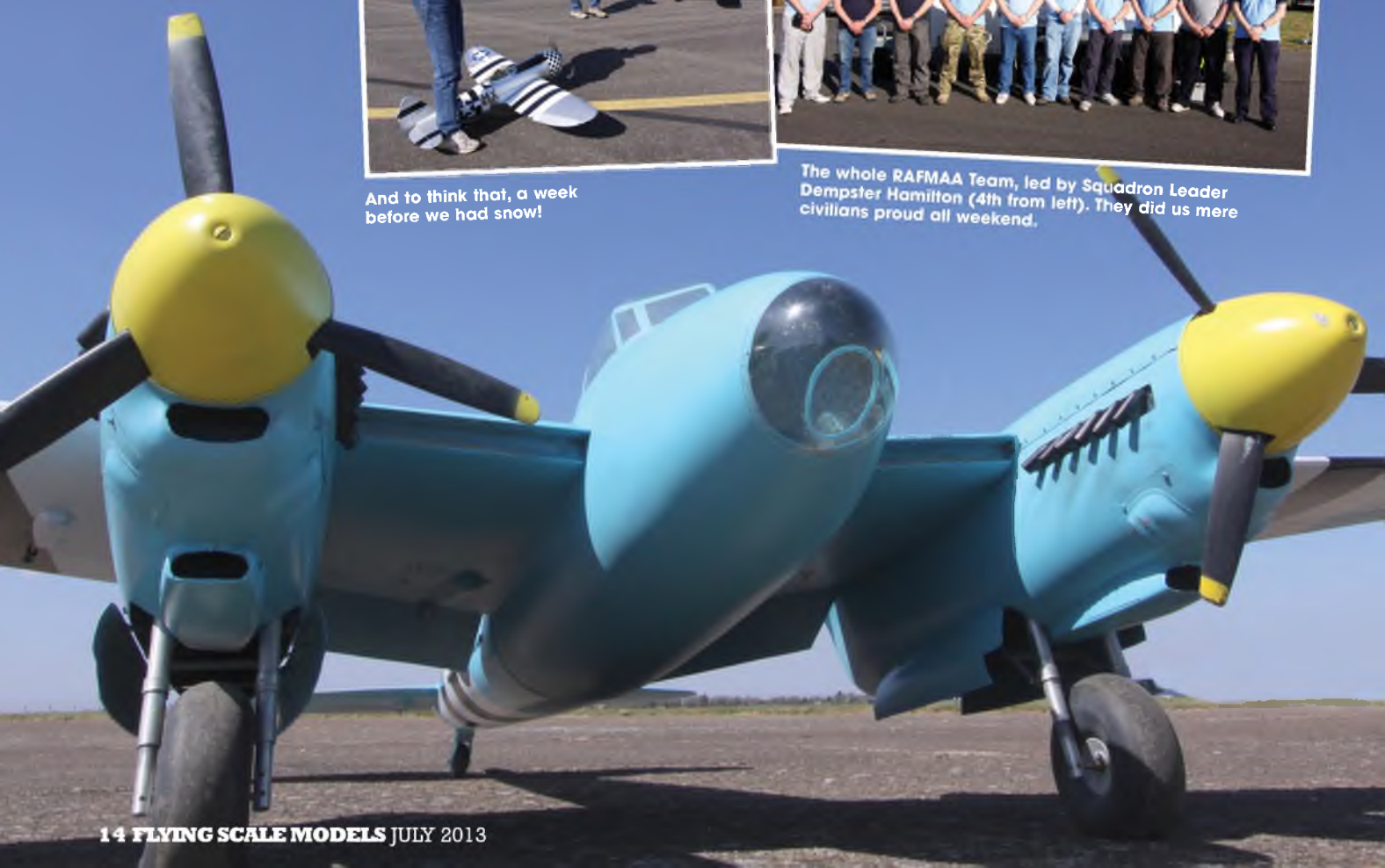
Grateful thanks to Group Captain Richard Hill MA FCILT RAF, Officer Commanding, RAF Wittering for hosting this event. Thanks also for the RAFMAA Team for the invitation to attend.

Join RAFMAA!

Read this bit carefully! Although it is an invitational event, you should be able to wangle an invitation, by joining RAFMAA. Naturally, only a limited numbers of civilian places are available. RAFMAA will be putting on displays this summer at events such as Wings and Wheels and the Waddington Air Show, so if anyone lives near a RAF station, and wants to join RAFMAA then look them up either there, or at www.rafmaa.co.uk ■

And to think that, a week before we had snow!

The whole RAFMAA Team, led by Squadron Leader Dempster Hamilton (4th from left). They did us mere civilians proud all weekend.



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WACO 9

A 36" span (1/10) model designed by Peter Rake, built and described by Richard Hopkinson.

The Waco 9 was first flown in 1925 and while not as glamorous as their 'Taperwing' types and cabin models that followed, it was a reliable workhorse and there's plenty of virtue in that. If you search for information you won't find that much written on the Waco 9, but there are plenty of photos which show it in all its various guises - trainer, mailplane, crop-duster, and joy-rider. Around 270 Waco 9s were built in 1925-26 before the model was replaced by the improved but very similar Waco 10.

Tail

I started with the laminated parts for the tail and wing tips. The outlines were laminated around foam-core formers. Normally I microwave laminated parts for speed, but this time I decided to leave them overnight to air dry. The result should be the same, shouldn't it? No, as it turns out! The air-dried parts lacked strength and rigidity and in some places the laminations were separating. I had to make the horizontal tail outline anew and nuke the rest to achieve a satisfactory result. You learn something new every day... Oddly I never had this problem before I had a microwave!

The horizontal and vertical tail surfaces are very simple to build. The laminated outlines were pinned to the plan and a few bits of balsa strip and laser-cut parts added. The outlines were then sanded to a pleasing, rounded profile and the tail was done.

The tail outlines are laminated using three strips of balsa but the wing tips are made from four. If you're like me you will seldom use four laminations so don't forget! *(Three-point landing - one wheel, the nose and a wing tip. With that in mind the extra lamination makes sense. PR)*

Wings

Obviously, a prototype builder for a kit or plan should stay as close as possible to the material specified by the designer but the plans call for bass spars which I can't get locally, or even by mail order. I substituted locally grown Hoop Pine which is heavier, but much stronger than bass. An 8mm pine sheet faced with 1.5mm balsa was ripped to width to give the correct 2.4mm x 9.5mm (3/32"x3/8") main spars. The rear spars were

cut down to 6.5mm or 1/4" (close enough anyway) with a utility knife. If you can get bass I recommend that you use it- it's light and easy to work with, and quite strong enough for the job.

Having made all eight spars, it was a simple matter to identify the lower wing ribs and assemble the wings over the plan. Notched trailing edges are included in the parts set and the leading edge was cut from 3/16" balsa. The spars must be tapered at the tip ends to match the thickness of the tip bows.

I drew the top wing dihedral on the plan and worked out how much to pack the lower wings off the board to get the correct angle on the inboard ribs. Since the dihedral angle is small, I don't think this is strictly necessary - you could probably just sand them to fit later, when fitting them to the fuselage, or fill any small gaps with balsa wedges.

The top wing is similar but for the ailerons and strut mounting plates. I built the ailerons with the wings and rough-sanded the false spars and aileron leading edges before removing the wings from the board to ensure they would match reasonably well.

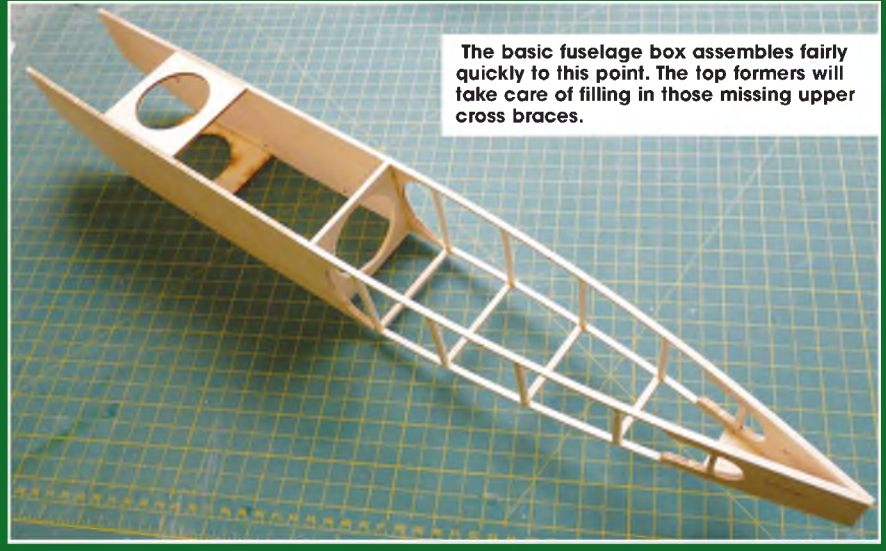
Fuselage

The fuselage is a basic sheet balsa box at the front with an open frame of 1/8" square sticks at the back. I think you could substitute 1/8" square bass with no significant weight penalty but the fuselage is adequately strong with balsa. It's a bit unusual in having horizontal ply plates to support the centre-section and undercarriage struts but it makes perfect sense. I glued the strut support to one side and the undercarriage support to the other, before joining the sides inverted over the plan. It helps to chamfer the fin posts BEFORE adding glue and pinning the fuselage to the board. In my case everything was pulled apart and the rear end sanded very quickly...

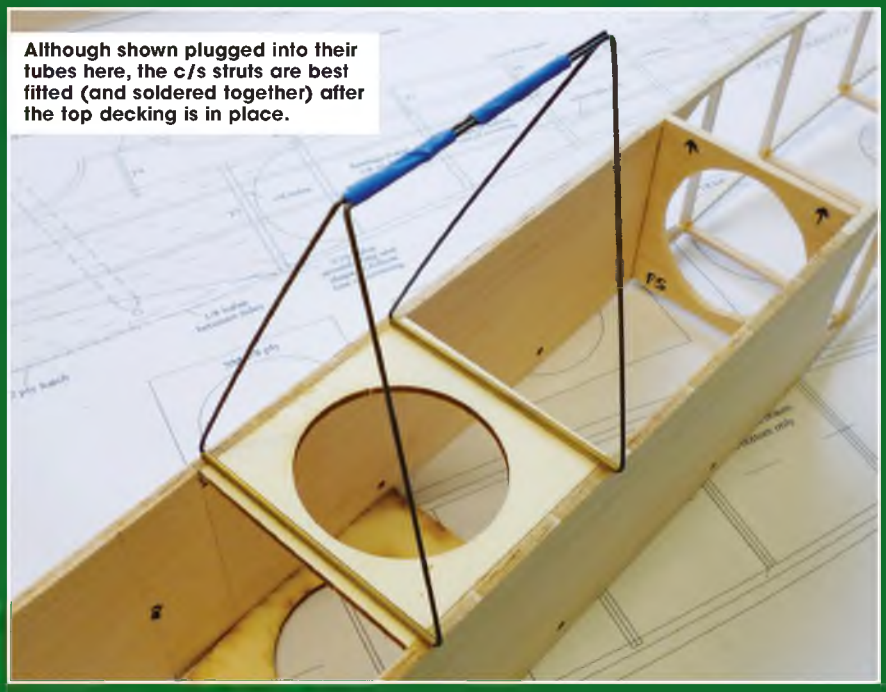
At this point the centre-section struts really needed to be made as the mounting tubes are easier to attach before the top fuselage structure is in place. Care is needed as the struts set the top wing incidence and height, and ensure the wing is perpendicular to the fuselage centre line. With four separate struts you have a bit of leeway but with this arrangement it all has to be perfect. The up-side is that it's very stiff when the struts are joined at the centre. The tubes were epoxied in place and bound with fuse wire as they're all that prevents the wings departing under high G loads, like at the bottom of a loop.

Now was the time to shape and solder the undercarriage legs and axle as I wanted to bind them in place too, and it would be very difficult to do with the top deck sheeting in place. I made a simple jig for the undercarriage- just a piece of 3mm ply with parallel lines for the top sections of the legs and the axle, and a few holes so I could temporarily wire the legs to the jig. Usually I solder undercarriages while mounted on the model but the jig makes it a much more relaxed process, allowing everything to be accurately aligned without damage to the airframe and soldered without burning any holes in the balsa.

With the aforementioned bits firmly attached to the fuselage I added the formers for the sheeted section of the upper deck. At this stage the rear deck formers were left off as I felt sure to break them while



The basic fuselage box assembles fairly quickly to this point. The top formers will take care of filling in those missing upper cross braces.

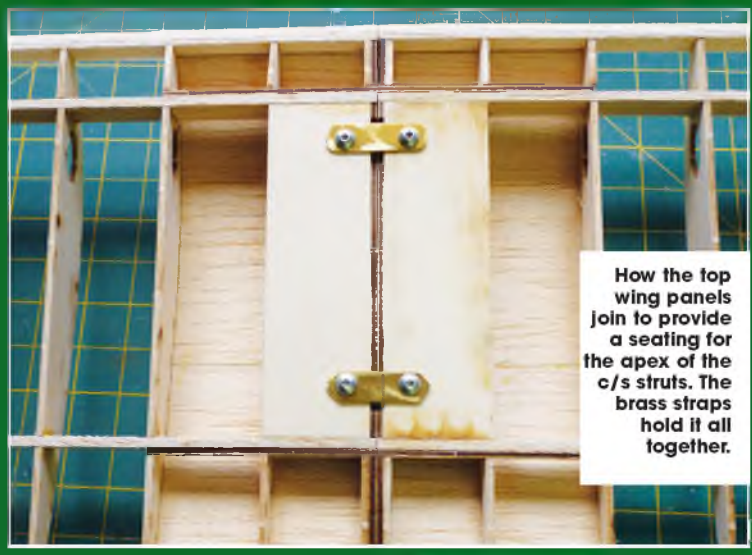


Although shown plugged into their tubes here, the c/s struts are best fitted (and soldered together) after the top decking is in place.

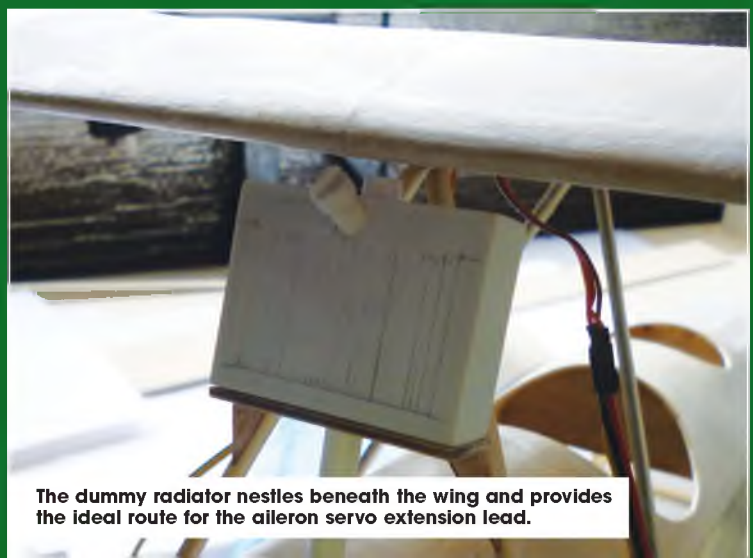
A simple jig aids alignment while soldering up the landing gear wires.

Whilst generally similar to the bottom wing panels, the top wings have the added complication of ailerons.

How the aileron servo attaches to its' ply plate. Not much spare space between the ribs for bigger servos.



How the top wing panels join to provide a seating for the apex of the c/s struts. The brass straps hold it all together.



The dummy radiator nestles beneath the wing and provides the ideal route for the aileron servo extension lead.

The mandatory naked model shot shows off the uncomplicated nature of the model.

carving and sanding the cowl. The upper deck was sheeted in three pieces because all the 1.5mm sheet on hand was rather hard. With more suitable wood it should be possible to do the sheeting in one piece. I made duplicates of F3 and F4 from scrap balsa to give more gluing area at the joints in the sheeting. It pays to take care to get a neat edge to the sheeting as the bottom edge of the deck should form a nice, sharp border to the open framed section and will show rather obviously through the covering.

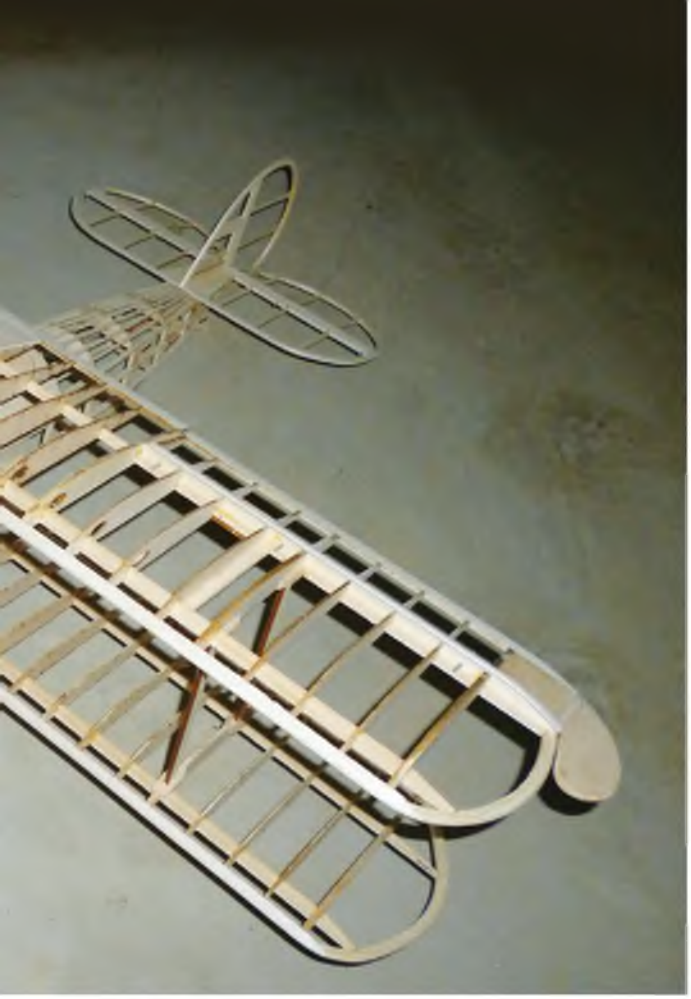
The next step was to build up the cowl from sheet balsa. This is a bit tricky as there is nothing to locate the nose ring until the cowl is built, but you can't build the cowl without knowing where the nose ring will go... I solved this problem by bolting the motor in place, cutting a ply disc with the same diameter as the nose ring, and bolting the disc on the motor shaft so as to locate the nose ring the correct distance from the firewall. The space behind the nose ring was then progressively filled with pieces of block balsa.

When all the carving and sanding was done I slapped a coat of sanding sealer on the sheeted areas and proceeded with the stringers. The upper rear deck consists of seven stringers, the outer two on each side being bowed outwards ever so slightly to achieve an equal distance between them at every former position. This is not necessary but I felt it would look better under the covering. The side stringers are both straight. I measured their distance from the top longeron on the plan and marked their positions but final alignment was done visually from the rear.

The front hatch was carefully cut from the cowl. It's retained by small magnets and some ply tabs to stop it wandering. The lower hatch is simply a rectangle of 1.5mm balsa with a smaller piece of balsa glued on top. The smaller piece accurately locates the hatch between the fuselage sides. The lower hatch is also retained by 3mm diameter magnets.

Covering

In my opinion, doped and painted finishes beat iron-on covering by a large margin, particularly on scale models. But, having recently got hold of some Polyspan, the Waco seemed a suitable guinea-pig with which to experiment. Actually the Polyspan was not a completely unknown



quantity - when I was a kid building control-line models, we used a very similar product although it was called Interfacing and we bought it (or our mothers did...) from dress shops.

Polyspan can be treated just like any shrinkable fabric except that, unlike tissue and silk, water has no effect on it. It can be stuck to the structure with dope but I find it easiest to use *Balsaloc*. Once securely attached a fairly hot iron is used to shrink the covering before applying three or more coats of thinned dope. *Polyspan* has a fairly gentle shrink and can be tightened without putting much strain on the structure. I have found it does sag slightly with changes of temperature until it's doped. If there are any wrinkles after doping it can still be heat-shrunk.

There is most definitely an 'inside' and an 'outside' to *Polyspan*. It's quite hard to tell but one side has tiny fibres sticking out and if you try to dope, sand, and paint that side you'll wind up with a fuzzy mess and have to re-cover the part.

The sheet balsa areas on the forward fuselage were covered with tissue. I use *Esaki* tissue, which is more popular on free-flight models but can't be beaten for a smooth, light finish. The tissue is applied wet so it's a good idea to apply a coat of dope to the balsa first. Flat pieces of tissue can be floated across a bowl of water before being draped on the model, curved or oddly shaped pieces can be laid in place on the structure dry before being wetted with a small paintbrush. Usually I wet the tissue a bit more before applying dope since the idea is to let the dope dry before the water evaporates. The result is a smooth, shiny surface that takes paint very well. The tissue can be applied dry and doped but chances are it will result in a less than smooth finish.

Finishing

Once shrunk and doped, and it's easy to tell when the surface is sufficiently filled with dope; *Polyspan* can be very lightly sanded before painting. I prefer Humbrol enamels for their opacity, ease of use, and high gloss. Generally I thin the paint with lacquer thinners, around 50:50 for initial coats and progressively thinner for subsequent coats if a shiny finish is desired.

The wings and tail are silver *(Humbrol 11)*. The silver paint covers quite well but it can be hard to see uneven patches under artificial light. The first trip outside into the sunlight for a photo revealed some areas that needed more paint. The

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WACO 9

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Swooping in for a low pass. The model has proved easy to fly, stable and predictable.

control horns were painted grey as photos suggest a light colour not too different to the silver fabric.

The fuselage is also silver but for the cowl and a short section of the upper deck which are blue. This was the standard factory colour scheme for the Waco 9 and there seems to have been very little variation.

My model was originally based on a photo of a plane registered '1184'. Towards the end of the project I discovered that '1184' was a temporary registration and the aircraft was actually registered NC3391. To my amazement that actual airframe has survived and is being restored. I was able to contact the owner and restorer, Dennis Harbin, and I'm very grateful for the information he gave regarding colours and markings. The lettering style and positions are correct as they come direct from the remnants of the original fabric.

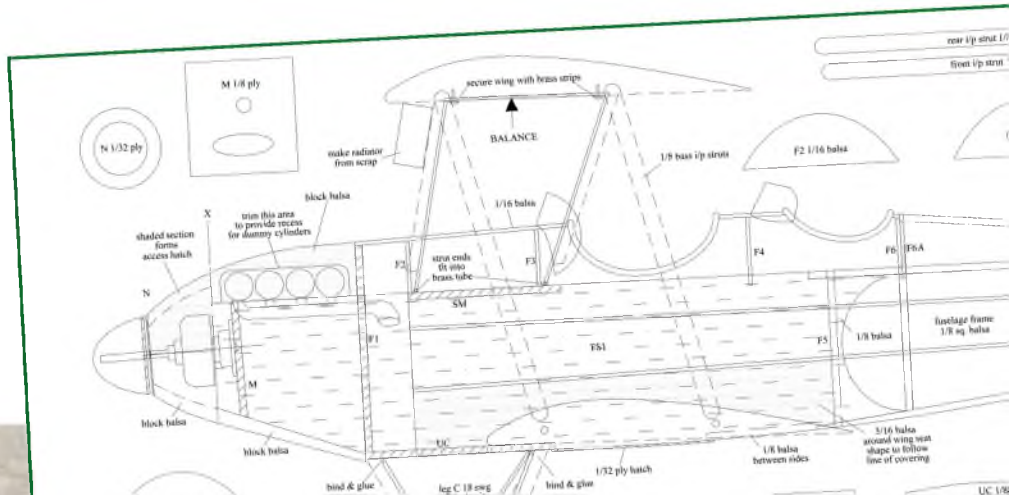
The large registrations on the wings are hand-painted. I marked the outlines lightly in soft pencil, painted the lines using a spring-bow pen, and filled them in with a small brush. The characters for the registrations and Waco titles on the rudder were individually cut from black-painted decal.

Details

The most prominent details are the exposed Curtiss OX-5 cylinder heads and valve gear. This was approximated using some photos of a disassembled OX-5 as a guide. The valve gear uses a distinctive arrangement with a single rocker for the exhaust valve and dual rockers for the intake. A jig was used to make eight identical rocker linkages from fuse wire. The large exhaust manifolds were carved from balsa. Top and bottom pieces were glued each side of a 0.4mm ply centre to impart some strength to the cross-grain parts and also provide a template for shaping the balsa. Not much can be seen of the cylinders themselves so short pieces of plastic tube did the job and being a liquid-cooled engine there are, mercifully, no cooling fins! There is a sheet metal 'hump' on the inside of each cylinder bank; on the real aircraft these fairings cover the inlet manifolds. The fairings could be included when building the cowl but I left them until later, carving them from pieces of 1/4" balsa faired in with lightweight filler.

The radiator is another necessary scale feature. For this I made a four-sided box from balsa and skinned it with plastic card. The front and rear faces are plastic card scribed to simulate the radiator core. I added a filler tube and cap to the top tank. The aileron servo wires enter the top of the radiator and pass down into the fuselage through the cool water return pipe to the engine- a very convenient solution for hiding the wires. The rubber section of the return pipe was made by wrapping the plastic tube with paper masking tape which was painted flat black. The hot water pipe to the top of the radiator is made from soft brass tube with short sections of black heat-shrink tube to represent the rubber hoses. Hose clips are made from 18g fuse wire.

The radiator is mounted on a shelf, which I made from a piece of 1mm ply. The



brackets that attach the shelf to the front centre-section struts are made from 0.4mm ply to add some strength to the radiator mount.

The aircraft were commonly flown without the detachable spinner cap, leaving the propeller bolts exposed, or without any spinner at all, but I think the model would look rather unfinished without the scale spinner. I made the spinner from glassed foam with a ply backplate. Small self-tapping screws hold the spinner to the plate from behind. It's very awkward to screw the spinner to the backplate but with a bit of luck I'll only have to undo it occasionally to replace a broken prop. The mass of the spinner is low so I didn't make any attempt to balance it, which in any case would have been quite difficult.

Wheels are a ply-balsa-ply sandwich with foam cord tyres. Waco supplied the aircraft with very stylish aluminium wheel covers but many were removed to reveal the wire wheels- or maybe there was an economy option without the covers. The only photo of my chosen subject shows exposed wire wheels but I decided to compromise and replicate the wheel covers as it seemed a whole lot easier. I made a profile template and turned up balsa covers using my Dremel mounted horizontally. They were covered with tissue, which turned out quite well.

The cockpit padding is split silicone tube painted brown. The centre-section and undercarriage struts are faired with strips of bass, covered with tissue and brush-painted after the main paint job was complete. A pilot is necessary in my opinion. The Waco is flown by a 1/10 *Williams Bros.* pilot kept in place with magnets. He also flies a few other open-cockpit models of around the same scale including my Peter Rake IPS sized Sopwith Camel.

There are a few small detail parts that enhance the look of the model- and draw the eye away from less than perfect bits! I added the small, square door or air outlet on the right side of the cowl. The position of this door varied from one aircraft to the next. A gauge is mounted in a little external fairing in front of the forward cockpit. Finally, rigging was made from 28 gauge beading wire, anchored in eyelets made from cut-off fish hooks. It's not too hard to rig a model with wire but it has to be fairly tight. If the first couple of wires are correctly tensioned, subsequent wires will not cause them to slacken off. The tail was rigged with 0.5mm 'stretchy thread' also used for beading. I felt

Lots of interesting details here. The dummy engine, hatch separation line and the way the radiator hoses neatly disguise the servo lead. Also clearly seen is the glassed foam spinner.

that the tension needed for wire rigging would be too much for the tail surfaces. The stretchy thread appears to be some kind of silicon material and it looks quite good at this scale. After the first couple of flights the rear lift wires (running from the lower rear spar to the upper interplane strut ends) were replaced with stretchy thread as even a gentle nose-over would rip the rigging anchors out.

Since this is meant to be a practical scale model I didn't go overboard on the propeller but I did paint it tan and grey to give an impression of the wooden prop with grey-painted fabric on the tips. You could go a bit further with simulated wood grain and brass leading-edge sheathing at the tips, but I didn't want any balance problems and I also didn't want to spend a lot of time on the prop in case it didn't end up being the best one for the model.

Final assembly

I soldered the wheel retainers on before fitting the wings and tail to the fuselage- it's rather difficult to set the fuselage on its side with them in place- then fitted the radiator, which is trapped in place by the top wing. The aileron servo wires, still without connectors at this stage, were fed through the radiator tube so that the top wing could be attached using brass strips and small sheet-metal screws as per the plan. A small amount of 30 minute epoxy was carefully put in the strut sockets and the lower wings were joined to the fuselage, the struts plugged in, the lower wings jigged up, and everything was carefully checked by measurement and, more importantly, eyeball before the epoxy cured.

Since the fin has a tab that slots into the horizontal tail they were glued before joining the tail to the fuselage. The tail seat was still nicely square after covering, thanks to the robust rear fuselage construction.

Radio installation

The aileron servos and pushrods were installed and the aileron throws set before the top wing was permanently attached to the fuselage. It's a really good idea to fit the aileron pushrods before rigging the wings. It could be done with the rigging in place but why make life difficult? The rudder and

elevator servos are mounted upside-down in the rear cockpit area for easy access. I made intermediate cranks to take the strain from the control cables and also to allow easy servo replacement. I always do this when using cheap servos with closed-loop controls although I've seldom had to change a servo. In this case both the servos failed while I was setting up the control throws. Very unusual, but for once the effort put into making the cranks paid off.

All the control cables exit through short sections of Teflon tube- small diameter pushrod outer from my DLGs serves perfectly for this. Peter got the cable lead-out positions absolutely perfect as the top elevator cables just barely touch the leading edges of the horizontal tail. I added tiny wire loops to prevent chafing. I suspect the real thing had leather rubbing strips.

The battery goes on top of the under carriage mounting plate and the ESC fits in the front fuselage bay immediately behind the firewall. There's not much scope for providing an air inlet for the ESC but I chose one with plenty of headroom for the current so it shouldn't get particularly hot.

..The receiver ended up in the front cockpit. Three cheers for 2.4GHz- not only for the technical advantages but also I do appreciate not having an unsightly antenna trailing behind a scale model.

Ready to go...

Ready-to-fly, the model weighs 592g (20.9oz) with a 2200mAh 2S battery. The battery was adjusted until the model balanced very slightly nose-down at the point indicated on the plan and no extra nose-weight was necessary- in fact until the last minute I thought it was going to need a small weight in the tail. Controls were set with as much throw as possible and 20% exponential as a starting point. I used a little bit of aileron differential but it's hardly vital and the need for differential can only be judged after the model has been flown anyway.

This is where the article usually says *'..I waited until conditions were perfect...'* or something like that. Sometimes that's simply not possible and after waiting a fortnight for decent weather we had a relatively calm day and I had to make the best of it. It was very hot and the gusty wind was changing direction every few minutes. As I stood ready to launch the wind dropped to nothing, which is not ideal but better than chucking it downwind due to a sudden change!

At 75% throttle it flew straight and level away from my hand. A touch of up elevator had it climbing gently and I relaxed as we negotiated a couple of gentle turns. There is a tendency to continue rolling into a turn even after the ailerons are centred, but you can haul back on the elevator almost without a care. Stalls involve a gentle nodding movement and loss of directional control but I had to really work at it to provoke a break. The elevator is positive and progressive, the ailerons are effective and a bit sudden in their effect around neutral, and the rudder is oddly ineffective. Maybe it's partly blanked by the radiator and large front windscreen. Luckily the model flies nicely on aileron and elevator alone.

One suspects the Waco 9 was limited to fairly basic aerobatics although they were used for skywriting and crop-dusting which implies a certain ability. Loops are easy and look rather nice as it motors slowly upwards at full throttle. Rolls are fine if not exactly quick and for scale effect it's fun to see how slowly they can be done. Although the model performs perfectly adequate axial rolls I usually make them a bit barrelly as it seems more in keeping with the prototype. Stall turns also look good but you need full rudder and use it early. I tried a few spins for the sake of form but it takes a concerted effort to get into a spin and only a momentary loss of concentration to accidentally recover! It's fair to say the model is pleasant and stable and the controls are effective and progressive.

Landing couldn't be easier- point at the strip, reduce power, don't get too relaxed and remember to flare just above the ground. As with most draggy biplanes it helps to carry a little power down to the ground to ensure elevator authority for the flare but it glides in quite nicely if the speed is kept up. It's unlikely to stall but one might find the ailerons a bit sluggish if it gets too slow.

No trim adjustment was needed during the first flight and there is very little pitch change with power changes. In case you think I'm laying it on thick for the article by saying it flew perfectly right off the board, let me assure you that's exactly the way it was.

I must admit that I don't do too many ROG take-offs due to the nature of my various flying fields but eventually I found a suitable site. The take-off run is easy to manage with right rudder to control the swing as the tail comes up. There's no tendency to nose over (unless you're silly enough to give it full throttle from a standing start on grass...). There were no problems landing either and the flare and roll-out were easy to judge and control. The ineffective rudder is not a problem but you need to think about it before take-off and be prepared to use the full rudder throw if necessary.

The Waco 9 is a fairly stately aircraft and there is a lot of fun to be had in trying to fly the model in a prototypical manner. Weighing in at over 900kg fully loaded and with a modest 90hp the take-off run is fairly long and the climb-out is made at a shallow angle. Scale-like take-offs are great for sharpening up your rudder skills! The wing loading is quite low, resulting in a flat approach and a floaty touch-down. This is harder to do with the model simply because once the tail is down it stops almost immediately.

The Waco 9 is yet another delightful model by Peter Rake. It's easy but very satisfying to fly. Thanks to Peter for the opportunity to build the prototype and special thanks the Dennis Harbin of Rag Bag Aero Works Inc. for his generosity and patience in answering my questions and providing detailed information about the colours and markings. ■

Cruising gently past the little Waco 9 shows off her shapely lines.

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The advanced trainer aircraft that served in many air arms worldwide and also became a counter-insur-gency ground attack aircraft. Examples illustrated are from France, where the type served for many years as the 'Fenec'. (100 plus images)

North American P51D Mustang CD79
The definitive bubble canopy Merlin Mustang. In de-tail, showing several restored examples. This is the Fantasy of Flight Museum's overpolished example, but the close-up detail is all there. (102 images)

North American P51B/C CD78
First of the Rolls Royce Merlin engined Mustangs, this collection depicts the Fantasy of Flight Museum's re-stored example, with overly polished plain metal surfaces. Much detail. (102 images) Also, 41 images of The Fighter Collection's P-51C in bare metal restoration, showing much surface and internal airframe detail. A real bumper bundle! (over 140 images)

North American B25 Mitchell CD77
Fantasy of Flight Museum's example. Photographed soon after superb restoration. Full nose to tail detail. (74 images)

North American AT6 Harvard CD76
AT-6, SNJ, Texan, Harvard – call it what you will. 55,000 were built – this example is in U.S. Army colours, with comprehensive close-up detail, nose to tail. (76 images)

North American A36 Invader CD75
The ground attack variant of the Alison engined P-51A. Photos, in detail, of the world's only airworthy example. (69 images)

Morane Saulnier MS406 CD74
French WW2 fighter that fought in the Battle of France, 1940. Swiss restored example (92 images)

Monocoupe CD108
The Monocoupes were side-by-side two-seat light-planes of mixed wood and steel-tube basic construction with fabric covering. A braced high-wing monoplane with fixed tailskid landing gear, and the reverse curve rear fuselage lines that were to become one of the signature identifier features of the Monocoupes. 55 photos

Miles Magister CD73
A firm favourite with scale modellers, this extensive collection of images depicts two examples in different Royal Air Force training colour schemes. (100 images)

Messerschmitt ME109G CD72
The 'Gustav' saw Luftwaffe service from late 1942 on-wards. Subject version of this collection is a tropicalised G-6. (110 images)

Messerschmitt Bf109E CD71
The 'Emil' was the version of this WW2 fighter that was the mainstay of the Luftwaffe fighter force during the Battle of Britain in 1940. (150 images)

Me 410A – 1/U2 CD107
For those who fancy a twin, but something outside the 'normal' favourites, consider the Luftwaffe's final 'destroyer' heavy fighter that packed a powerful punch 79 photos

Martin B-26 Marauder CD70
The Fantasy of Flight Museum's example, photo-graphed pre-restoration, soon after it was flown into the Museum site, thus in original, unrestores condition. (100 images)

LVG C.VI CD69
The sole survivor of its type from the WW1 era, photo-graphed in extensive detail. This is the machine house at and flown from the Shuttleworth Collection airfield, Old Warden and now in storage, awaiting display at the RAF Museum. (110 images)

Luton Minor CD68
Just one example of this light aircraft, to which the owner has added many mods and variations. (32 images)

Luscombe Silvaire CD67
The elegant late 1940s U.S. light aircraft. Several examples provided, with much close-up detail for modellers. (74 images)

Kawasaki Ki100 CD66
A study of the late WW2 radial engined 'emergency' development of the Japanese Ki 61 Hien (Tony) that provided an unexpectedly superior performance for the squadrons of the Imperial Japanese Air Force during the closing stages of the Pacific war. (60 images)

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On Silent Wings by Chris Williams

SCALE SOARING

The last time around I described, at some length, the construction of my then current project, the 1:3.5 scale Rhonadler 35. The main unknown concerned the experimental blending of old and new wing sections in the form of the full-size Gottingen section at the wing root for scale authenticity, blended to HQ35/12 out to the tip for more modern efficiency and enhanced low-speed behaviour.

That was the hope, anyway, but all during the construction process, the seeds of doubt were nagging away in the old subconscious. Once completed, unfavourable conditions meant that, in a desperate attempt to answer the questions, the model was taken to a suitable place, and hand-launched on the flat into a freezing 10mph wind. To my delight, she appeared to be a consummate floater, even the feeble impetus from an old geezer like myself enabling her to glide quite some distance indeed.

That was one question answered, then, the deeply undercambered Gottingen part of the wing had lowered the stalling speed, thus allowing more and more up-elevator to be applied to delay the reuniting of skid with grass.

A week or so later, the wind shifted around to a nearby slope, and testing could begin in earnest. The conditions were fairly robust, and I wondered if she would penetrate into the wind at all, or simply sink down and embrace the fence that lines the front of this particular slope; no problem as it turned out, the Rhonadler simply proceeded out in front of the hill looking, to my eyes at least, particularly gorgeous.

Mark Snipz' ASH 31 samples the light air at White Sheet.

Author with his newly completed 1:3.5 scale Rhonadler 35.

The Rhonadler in action at White Sheet (Barry Cole pics).

I proceeded straight away to test the stall, which, once again, was a non-event, the model simply nodding gently before resuming flight.

It was at the third landing of the session where things started to unravel. Turning crosswind on the last part of the approach, it immediately became obvious that there wasn't enough height to get around back into wind, and the model ended up dumping itself gracelessly into the hill with a distinct sideways component. The loud crack that accompanied this embarrassing event did not presage well, and it soon became obvious that the strain on the cantilevered wing and fuselage interface had been too much; the wing now sat at a wholly unnatural angle to the fuselage and, worse still, the all-moving-tail had mashed up the fin with all the AMT mechanism inside.

The difficult repairs were made, and a week or so later saw man & machine up at White Sheet Hill in Wiltshire. With my pal Smallpiece behind the camera, we proceeded to record both film and stills, and to marvel at the beauty and grace of this vintage machine. (No originals exist, with the exception of a modern, non-flying replica at the Wasserkuppe museum in Germany). With the experience of the previous disaster in mind, I found myself unable to go back far enough in the landing circuit, and ended up with a long series of overshoots until finally, she came to rest, once again with the wings

Pat Teakle with his new 1/4 scale Mucha IS2.

The IS2 in action at the White Sheet event.

at an unnatural angle. The repairs, it seemed, were not up to scratch, and some more serious re-thinking was going to be required.

That's the state of play at the time of writing, then, the Rhonadler back in the repair shop gathering dust whilst a new project is grabbing my attention. It may be that a new, re-designed fuselage will be required, but what is not at issue is that the Rhonadler will fly again! (If you think my description of her in the air a trifle over-egged, judge for yourself by putting THE RHONADLER FLIES AGAIN II into the YouTube search box)

White sheet scale fly-in, 5th May

There are some days you are glad to get over and done with. Then again, there are days you wish could never end, and I'm glad to say that this was one of the latter days. The White Sheet club's main slopes face in a westerly direction, and for quite some years now, any attempts at holding a scale event have been foiled by persistent easterly winds. (Or rain. Or gales) So when this day dawned with consistent forecasts of a light sou' westerly, it came as no surprise that by the time my pal Motley and myself turned up, the parking spaces along the track were rapidly filling up.

Blinking like a pack of recently de-hibernated bears, we turned our winter paled faces to the unaccustomed sunshine and simply couldn't believe our luck. This was all due to the perspicacity of Event Director Steve Fraquet, of course, although one couldn't help harbouring the suspicion that he couldn't believe it, either. First up under the Williams' microscope was the latest creation from that old slope hound, Pat Teakle. This was a scratch-built, one-quarter-scale version of the Mucha IS 2, a Polish-built sailplane designed for the newly invigorated gliding movement of that country after WW2. It is often interesting to compare the differing methods that modellers apply to those pre-maiden moments, when all that work is about to undergo the ultimate test. "What about it, then , Pat?" urged the crowd of those interested spectators that are always drawn to occasions like this. "Well", said the lad, "...let's see if she wants to, first". He carried the model to the slope edge, hoisted her, radio off, over his head and made what can only be described as a mock launch. "Yep", he declaimed, "I reckon she wants to", and by gum, it seemed as if she did. Thus psychologically fortified, he launched her for real and the Mucha sailed away like an old hand.

Antonia Gigg had brought along her collection of small-scale glass machines, each packed with as much technology as it is humanly possible to cram into a small space. Take her re-vamped DG1001M: as if an up-and-go electric motor, retract and tow-release wasn't enough, take a shufti at the rest: vario, two servo slow-down boards to enable the up-and-go to pop up at a scale speed, HD camera in the nose for the FPV, 8.8 Gig transmitter for the camera feed, coupled to a clover-leaf aerial, three (count 'em) batteries, three servos, receiver and, oh yes, a pilot figure too! Flying small scale gliders in light conditions, even with a supplementary power unit, is not for the faint-hearted, and Antonia's creations certainly had a high entertainment value, much appreciated by the onlookers.

It's unusual to see a scale flying wing in action at such an event, but on this occasion we had two... Richard Alford's Horten 3F has been a regular performer at White Sheet events over recent years, but Chris Wynn's Backstrom Plank only hove into view at the same event last year upon the occasion of its maiden flight. With a slightly rearward CG, this really entertained the troops with some impressive aerial cavorting about.

The second flight started well, but unbeknownst to its pilot, the receiver aerial had been ripped out in the maiden landing, and therefore the second flight did not end well. Given the foregoing, then, and the fact that it had taken Chris

Idyllic scene at White Sheet.

a whole year to put her back together, it came as no surprise that on this occasion he was well stricken with nervousness. It was well into the day, a day when lift was liable to take to its heels and go elsewhere moreover, before he felt strong enough to commit to the inevitable. (Of course, it could be that he had tired of all the mickey-taking). The wind was barely a zephyr, but other gliders were happily riding thermals, so he committed her to the air.

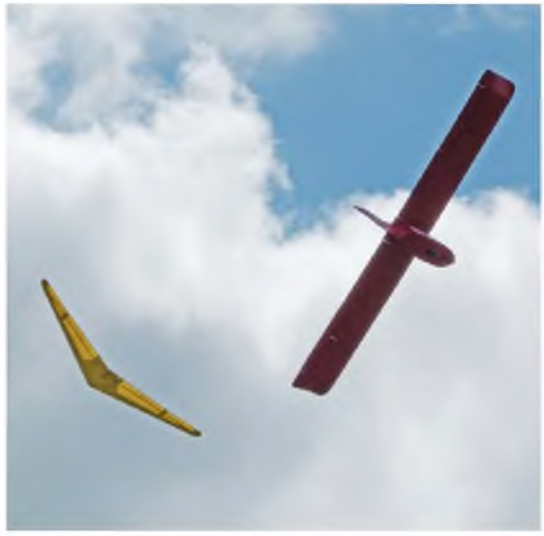
At that precise moment, as if some unkind god had flipped a switch, an unholy gale blew up, and hats, dust and bits of grass flew into the air, along with the hapless Plank. To his credit, Chris stayed calm and carried on, as the saying goes, and despite being tossed about like a cork in a whirlpool, the model flew surprisingly well, and landed with accruing any damage. Later flights with both the Backstrom and Horten in the air together made for a brave sight indeed, even if the two of them came uncomfortably close at times.

I am truly indebted to one of the spectators present, one Paul Williams, who had casually remarked on the Scale Soaring UK forum on the Friday before the event that he planned to come along in the hope of seeing the Rhonadler 'in the flesh'. "You'll be lucky", was my first thought given that, as previously described, she was in the repair shop in need of some serious re-design. Ten minutes later my second thought ran along the lines of 'well, it wouldn't harm to take a look at the thing, would it?' One think led to another, and before you could say 'club fees' a serious pre-event panic was taking place. I won't go into too much gruesome detail, but the burning of the midnight oil saw two massive aluminium brackets irretrievably locked to two mightily beefed-up formers, thus giving the wing joiner box something a bit more substantial to sit on. I have also come up with a new, practical philosophy-of-repair on the following lines...don't faff about painting & making good any repairs until they have been flight tested, as there's nothing the Gods of Aviation dislike more than a shiny, un-damaged model.

The work was well worth the effort, as the Rhonadler had four or five flights, one with an impressive height-gain in a thermal, with celebratory loops-before-landing to round things off.

After such a long and cold winter, it was double the pleasure to spend a day in glorious weather amongst like-minded folk surrounded by a veritable feast of scale sailplanes. Thanks must go to Event Director Steve Fraquet (for his perspicacity) and the White Sheet Club for hosting the event. If Steve can manage something similar for the next one in June, than he may well become a deity himself...

Chris Wynn's Backstrom EB-1 Plank flies at last!



The Plank and Richard Alford's Horten 3F were often in close proximity.

Antonia's much modified DG 1001M in action.

Antonia Gigg launches her diminutive DG1001M.

In the pits at the White Sheet event.

Surviving Free-flight

Part 2: How to select a suitable subject for your first free flight scale model

Your new subject needs to be something that takes your fancy, because it is going to consume a good deal of your building time and you need to maintain your enthusiasm level. Most modellers appear to think that there are all sorts of bonuses and extra marks for building biplanes, triplanes or ones with twiddly knobs on! Such is not the case.

The only bonuses are for multi-engine aircraft and those are only added to your flight score if you get that far! Bi-plane subjects are popular because the modellers like to build them and they make excellent stable scale free flight subjects. A well-built Piper Cub will score just as many static points as a well-built Sopwith Triplane. However, some subjects make better flying propositions than others - a Spitfire for example, would be more difficult to trim than a Tiger Moth, because of its higher wing loading and flying speed, but they both make similar-sized holes in the ground, if not trimmed correctly!

Generally, any model subject can be made to fly scale free flight, but some are more likely to survive the trimming stage better than others. You are only limited by your imagination, enthusiasm - and Documentation.

The power source?

If you wish to fly rubber or CO2/Electric powered models, there is currently (currently - electric, get it?) a fantastic array of kits, plans, motors, batteries and rubber available - if in doubt, take a look at the current *SAMS* catalogue.

In the larger power class, the options are not so good, as there are few accurate plans - and virtually no kits. *Aeromodeller* published a vast range of power scale plans, which are now incorporated into the *My Hobby Store* plans range (many in the their 'X-List') but nearly all are poor renditions of the subject aircraft, with stretched, lifting tails and pendulums controls left, right and centre, which must have been in fashion in the dim and distant past.

Documentation, documentation, documentation...

Whichever power source you choose and whichever balmy aircraft takes your fancy, the golden rule to always follow, is *"Get the documentation together before putting pencil to paper, or cyano to balsa"*. I guarantee that every kit or plan, no matter who the originator is, is littered with scale errors. You need to cross check photographs and scale drawings, correcting plans where necessary, until you think you have captured the character of the aircraft.

Show a like-minded scale fan your efforts and see if he can pick holes in it - it's usually the case!

Engines

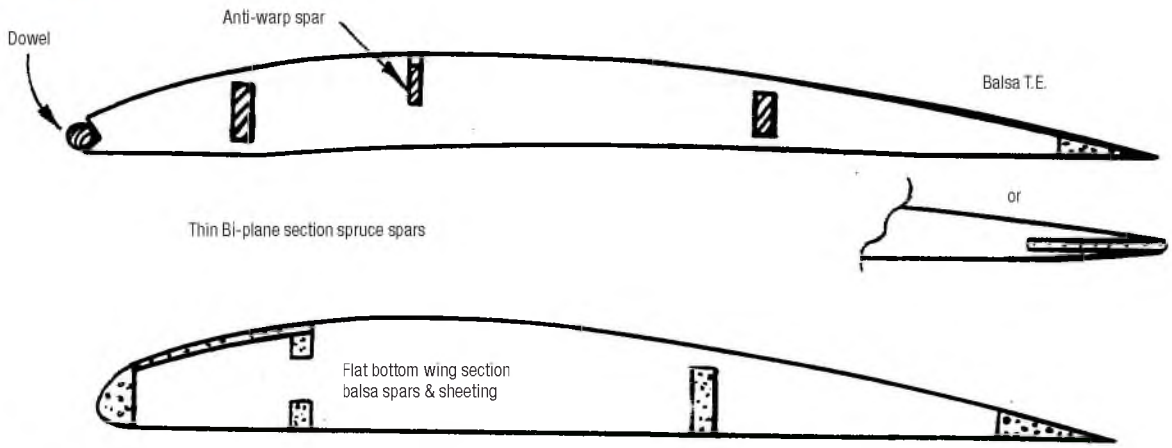
There has never been such a large selection of CO2 or Electric motors as we are faced with today. Derek Knight produces the popular KP 01 and KP 02 electric motors, chargers and batteries and the growing popularity of 'Park flyer' R/C models mean that a of small power trains are available.

CO2 motors range from the tiny to the large practical Gasparin, or Tornado-sized motors.

The current state of the diesel engine

Scale by Andrew Hewitt

FIG 1: Basic wing construction



"The only bonuses are for multi-engine aircraft - and those are only added to your flight score if you get that far!"

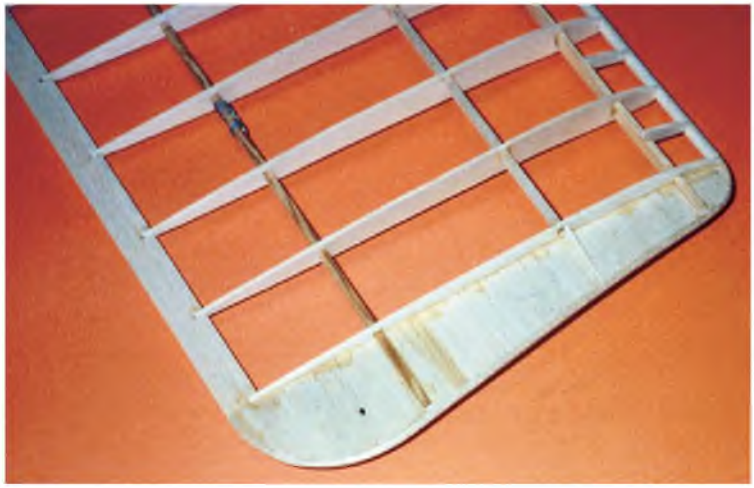
market is far less well well-servedfor the scale modeller that it has been in the past, but Progress Aero Works (PAW) make an excellent and wide selection of engines from 0.5cc upwards single ball raced vintage classic, which makes an excellent scale model engine, because of its large propeller swinging ability.

The Irvine Mills 0.75cc is the perennial favourite, if you can find one (these are no longer produced. The Irvine /Mills range also included their 1.3cc Mills, which is better than the early-1950s original engine. The Indian reproduction Mills is cheaper, but not so powerful, so, provided you do not build too heavy, these are a good alternative.

Why do we use diesels? Answer - because these can turn a large diameter propeller at reasonable revs - a large disc of slow moving air, rather like a steam engine, is what we require. A small propeller at unearthly revs, makes a scale model difficult to control and is much less efficient for the slow speeds that we fly. Hence we require engines giving high torque - the rear induction Mills engines have never been equalled for this ability and, as a bench mark, a very good Mills 1.3 will turn a 10 x 3 at 8,000 revolutions. The rear induction makes the engine easy to cowl and operate.

The other major advantage of a Mills is that it is very easy to start over a wide setting range. This is very important during a competition when nerves are strained! For a first scale model, I recommend you stick to the 0.5cc to 0.8cc engine sizes, and models between 28 to 40 inches span. Being small and light. these 'bounce' well and will resist beginners failings. For the full-blown scale nut, then

Tail surfaces using a sheet core. Outlines can be balsa, ali tube, or cane.



Thin section wing structure, using spruce spars and sheet tips.

OUCH! Andrew has learnt his lessons the hard way - luckily, his Camel features all the design techniques described in this series!

Take off is always a crucial time for these delicate models - if the model turns crosswind, the gusts can lift a wing, causing a cartwheel and subsequent damage. Here, Mike Smith's Martinsyde Elephant catches a crab!

FIG 2

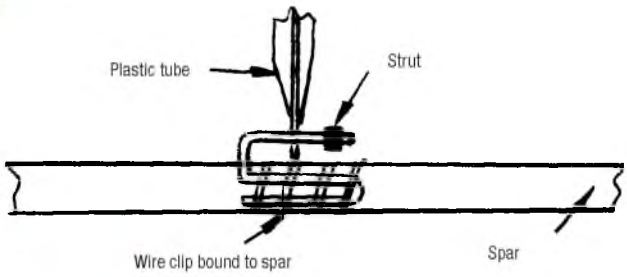
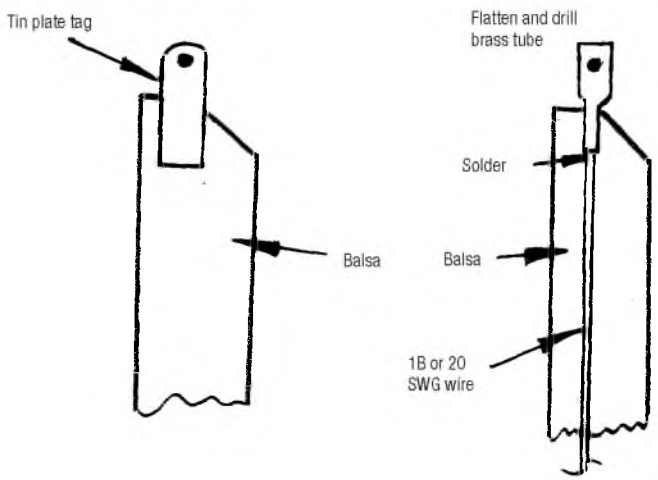


FIG3: Strut construction



the 50" biplane is ideal, weighing two pounds for 1.5cc power, packed with detail. These fly better, but are less forgiving.

Construction

This part of the article will deal with the design and construction of diesel, or heavier electric models, since the information about the CO2/Electric and rubber models is readily available in the various kits and plans already mentioned. If it is your first foray into FREE FLIGHT SCALE and you have no drawing experience, you can do no better than update an old plan from the *AeroModeller* range. Using your well-researched documentation, correct all the inaccuracies in outline, rib spacing, etc., as best you can. Alternatively, seek out the free *AeroModeller* plans of the SE5a, DH Moth, Avro Avion and the Albatros C.III, which have good outlines and need very little modification to produces a competitive scale model

Wings, struts and tail

For thin, undercambered biplane wings, use a hardwood dowel leading edge of about 3/32" or 1/8" diameter, as it requires quite an 'arrival' to break one. It also simplifies building and requires little sanding (See Fig 1). Wing spars should be centrally disposed, so that they don't appear through the covering and should also be made from spruce, normally 1/4" x 1/8", or 3/16" x 1/8". Make sure you only buy straight wood, if it does bend during storage, you can straighten it using a steam iron, but the BENDS may return later, resulting in a warped wing.

Wing ribs should be light 1/16" sheet balsa, or medium to hard 1/32" sheet, depending on spacing along the wing. For a larger two-seater, think in terms of dozens of ribs and hundreds of riblets (my

SOURCES

PAW ENGINES: Progress Aero Works, Union Mill, Union Street, Macclesfield, SK11
SAMS MODELS: The Chapel, Sandon, Buntingford. Herts. SG9 0QJ
KNIGHT & PRIDHAM LTD: Castle Road, Rowlands Castle Hampshire. PO9 6AS

favourites). The 'Sandwich Method' makes short work of these. Cut the spar position as accurately as you can, to minimise the chance of warps and stresses being built in. Trailing edges need to be thin, to represent the full size aircraft. This can be represented in two ways. Firstly, by using solid balsa 1/8" x 1/2" sanded to a wedge, or by slitting the rib tails and inserting a strip of rock hard 1/16" balsa sheet. This removes the tell-tale spar position marks.

An auxiliary anti-warp spar of 1/8" square, or 1/8" x 1/16" spruce situated at the position of maximum camber, helps prevent warps. This spar is situated just below the surface, so as not to show through the covering. Thicker wings used by later aircraft are easier to build, allowing the spar to bebalsa and positioned nearer to the surface for maximum strength.

Wing tips are made by the core method of 1/32" sheet, with the tip outline simulated by aluminium tube, cyanoed in place. This trick is borrowed from the radio scale fraternity and is very easy to master. The aluminium tube gives a super thin and stiff wing tip shape and looks very attractive, once the covering has been applied.

When building wings with spars in the centre of the ribs (i.e: below/above the surface, carefully sand the edges of the spruce spars so that the ribs will slide over them snugly. The two spars and multitude of ribs are dry-assembled, then pinned down over the corrected plan - and finally glued in position. I prefer to use wood glue (PVA) for this, rather than the instant 'grab it and regret' type.

Ailerons are best built in-situ with the wing, but separated before covering, before gluing onto the completed wing. Wing root ribs need to be hard 1/8" balsa, faced with 1/64" or 1/32" ply, which prevents the covering pulling the rib out of shape.

Struts

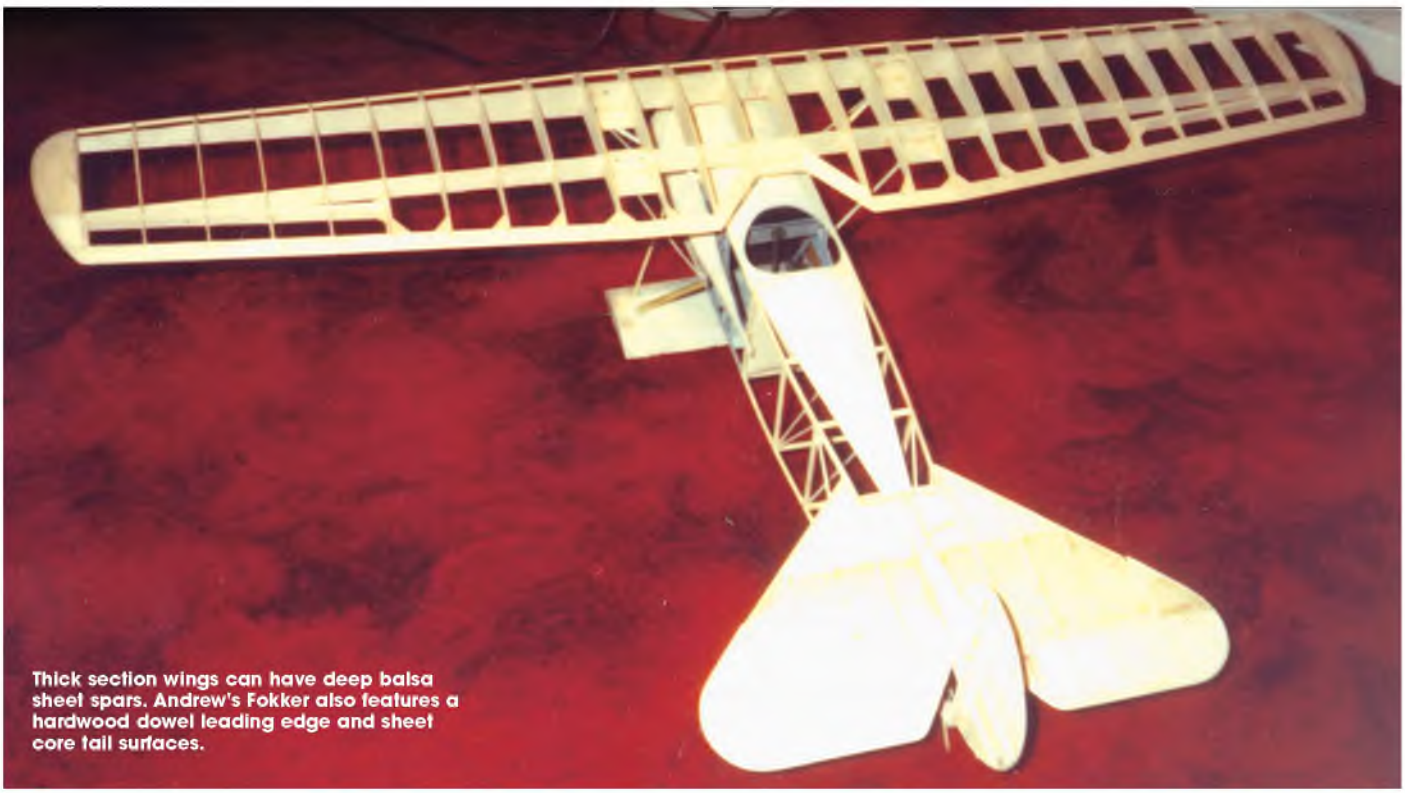
Strut clips should be bent from 20 swg wire and bound and epoxied to the spars. See sketch 2. Inter-plane, or bracing, struts are made via two different methods, one being to carve the strut out of balsa or spruce, then slit the ends and insert tin plate straps cut from a fuel can, before finally drilling the ends to accept the clip wires.

My preferred and stronger method, is to use 18 swg wire with brass tubes soldered at either end. The tubes are the flattened and drilled to length. The strut is then faired to profile with soft balsa (See Fig 3).

For attaching wings to the fuselage, I have always used brass tubes and piano wire wing dowels, bent to the correct dihedral angle. This method is almost unbreakable, yet flexible. Brass tubes (16 swg for smaller models, 14 swg for larger) are bound and expoxied to wing roots centre sections and the lower fuselage, with the wire wing dowels being free to float in the tubes; the rigging and struts prevent the wing cells from sagging. In an average arrival, on a touch of the hard stuff, the dowels are free to rotate and bend, absorbing the energy of the impact. For high, or low, wing strutted aircraft, wings should be located on stub dowels, to give incidence and the struts used to give the dihedral angle, as in

For the more adventurous modellers, who build the clean, fast-flying monoplanes, then knock-off wings using the tongue-and-box method should be employed, being made from plywood of stout proportions. Remember that the knocked-off wing, or cell, is bound to puncture that carefully-painted squadron marking on the fin or rear fuselage

Tail surfaces are built using the sheet core method. The core being 1/32" sheet balsa, with 1/16" ribs stuck either side to represent the full-size structure. The outline can be either ali tube, or balsa, to keep the weight down. This type of construction is both light and warp resistant and it can survive those dreaded cartwheels! Elevators are hinged with stiff tin plate tags cut from old fuel tins. ■



Thick section wings can have deep balsa sheet spars. Andrew's Fokker also features a hardwood dowel leading edge and sheet core tail surfaces.

THE QUIET ZONE

R/C SCALE ELECTRICS BY PETER RAKE

This month our columnist wrings the changes, to present his 18" wingspan

EASTBORNE MONOPLANE

with full size centre-spread pull-out plan

Yes, as a none too subtle reminder from our esteemed editor pointed out, it's time for another thrilling instalment of the world's favourite electric flight column. Well, it's MY favourite at any rate. The rest of you will just have to put up with it.

So, what have we lined up for you this time around? I had originally intended to continue with my look at what plans you could expect to see over the coming months, but I can do that any time. That being the case, and feeling in an exceptionally generous mood (quite unusual in itself) I began to think along the lines of summer being here, calm evenings and small, inexpensive models to take full advantage of them. Therefore I decided not just to talk about plans, but to actually turn this month's column into a brief construction article, complete with full-size plan. Two birds with one stone, so to speak. Not only does it make a potentially more interesting column, it also provides the publishers with a free plan to give away as a centre spread type feature. Actually, it's even better than that because this plan just happens to tie in nicely with what we were discussing a couple of months ago - it's perfectly suited to using equipment salvaged from a small RTF model. Being not too hard to build and reasonably easy to fly also makes it admirably suitable for those taking their first venture into building their own model to replace a foam RTF. Can things get any better than this? Probably not, but if you don't pipe down they could rapidly get a lot worse. I still have those other plans to talk about.

Orft we jolly well

Now if that doesn't date me, nothing will. The model we'll be looking at is my 18" span Eastbourne Monoplane. Just lately I've been getting more interested in what are termed 'micro' models, despite the fact that 18" is hardly micro in its truest sense. What it is, however, is the ideal size for utilising that salvaged gear I mentioned and for flying outdoors on nice, calm days or evenings. Since these models use up very little space to fly, virtually any area of open ground can instantly become a flying site. Sports grounds, local parks, even a very large garden all become fair game where these tiddlers are concerned.

When you also take into account how little storage space they take up, how cheap they are to build and how they so epitomise those rubber power models of our (my) youth they become a very attractive proposition indeed. And before anyone asks, yes, I can remember that far back. If I recall

CLIMBING AWAY FROM A HAND LAUNCH THE LITTLE EASTBOURNE HAS AMPLE POWER FOR SCALE-LIKE FLIGHT.

correctly it was some time between the extinction of the dinosaurs and the first Ice Age. Then again, maybe it just feels that long ago.

The Eastbourne is simply a reduced size version of my already very successful Speed-400 size design, so drawing the plans was a fairly painless exercise. The intention was to produce a smaller version, but retain the original's very pleasant flying qualities. Having thoroughly enjoyed building the model, and seen how nicely it flies, I think I may well have succeeded.

Let's get building

As a quick look at the plan will reveal, this is going to be a fairly cheap model to build. Even if you don't have a scrap box to raid, a little carbon rod, some small pieces of ply, a sheet of 1/16" balsa, another of 1/32" balsa and a few pieces of strip are all that's required for the airframe. Add in a sheet or two of tissue and you are looking at all the ingredients of a nice little model.

Since they are probably the easiest part of the model to build, let's make a start with the wings. Try to make sure that the spars, trailing edges and wingtip pieces are fairly hard balsa while the rest is 'medium' grade. Don't be tempted to use very soft balsa for the ribs because it's surprising just how much force-shrinking tissue can apply to structures. One of my ribs was on the soft side and has buckled quite badly as the tissue shrank.

Pin down the leading edges, trailing edge, tips and spars over the plan. Notch the spars to fit over the tips and glue as required. If you can avoid actually pinning through the wood, so much the better. Glue the ribs in place, ensuring that you use DH to set the angle of the root rib. All other ribs are upright. If in any doubt about how hard your root ribs are, add a narrow strip of 1/32" balsa to prevent them bowing as the tissue shrinks. I did this on my model by simply trimming the root ribs by 1/32" and gluing the sheet to them after the wings were set and removed from the board.

Trim and sand overall and you have a pair of wings awaiting the addition of rigging tubes (I used aluminium tubes), covering and locating dowels gluing in place. That was pretty painless, wasn't it?

Getting back to it

Okay, so it's a pathetic section heading. I couldn't think of anything better to say about the tail surfaces.

Absolutely the hardest part here is laminating the outlines. Cut yourself some 1/32"x1/16" strips of balsa and put them in water to soak. While they're soaking cut some templates to laminate around (I used Depron) and wax the edges to prevent the laminations sticking. Pin down the templates and mop off any excess moisture from your soaked strips. Glue the strips together using white glue (woodworking glue) and carefully pull the still wet strips around your formers. You could just use pins to hold them, but I prefer to pack them in place using scraps of balsa - it avoids risking grooves in the wood where the pins have cut in. Allow the glue to dry completely before removing the laminations from the formers.

Pin down the outlines over the plan (again avoiding pinning through them) and build the tail surfaces from strip balsa. Although the plan shows sewn hinges, I actually make 1/8" wide strip hinges from an old floppy disc with the magnetic coating roughened. Good if you have a floppy disc but sewn hinges work just as well if you don't have the disc. Either way, hinge the surfaces after they are covered and doped.

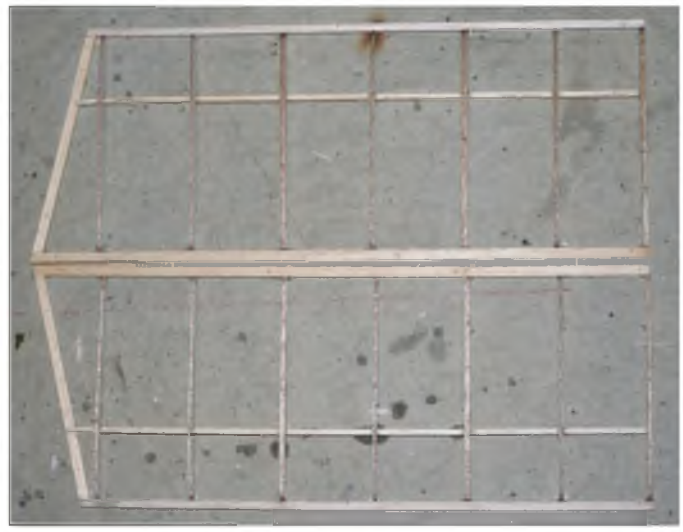
Sand overall and your tail surfaces are complete and ready to cover. Control horns will be fitted during the installation stage.

It's a body

No, nothing dead and smelly, just time to build the fuselage. Begin in the time honoured tradition of building two side frames - one atop the other, suitably separated by some cling film. Be sure to use the hardest balsa you can find for the longerons.

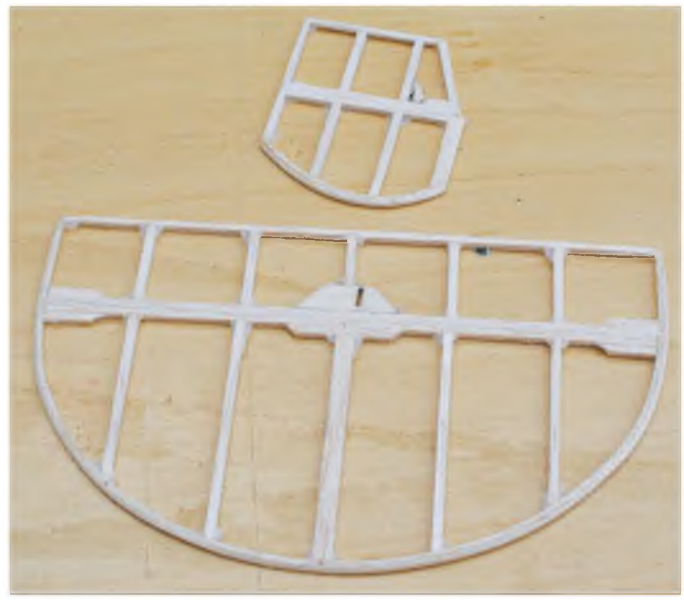
While these dry, be making up the carbon rod assemblies, particularly the upper pylon attached to F2A. The others could be made later, but you'll need F2A, complete with pylon in order to add the top decking. Once the binding (ordinary cotton thread) and CA reinforced joints are dry, put them somewhere safe until you need them.

Mark the inside of each side frame with the positions of M and F2 and score a shallow groove where the nose and tail break inwards. Crack



Honestly, wings don't get any easier than this. Just some sanding and fitting rigging tubes to go.

Laminated outlines pinned to the boars and drying. Once set they are surprisingly strong.



The completed tai surfaces sanded and ready to cover.

UC F2 and some cross braces added to one side. Note the score mark where the sides crack in to the nose.

Peter Rake's
Eastbourne Monoplane

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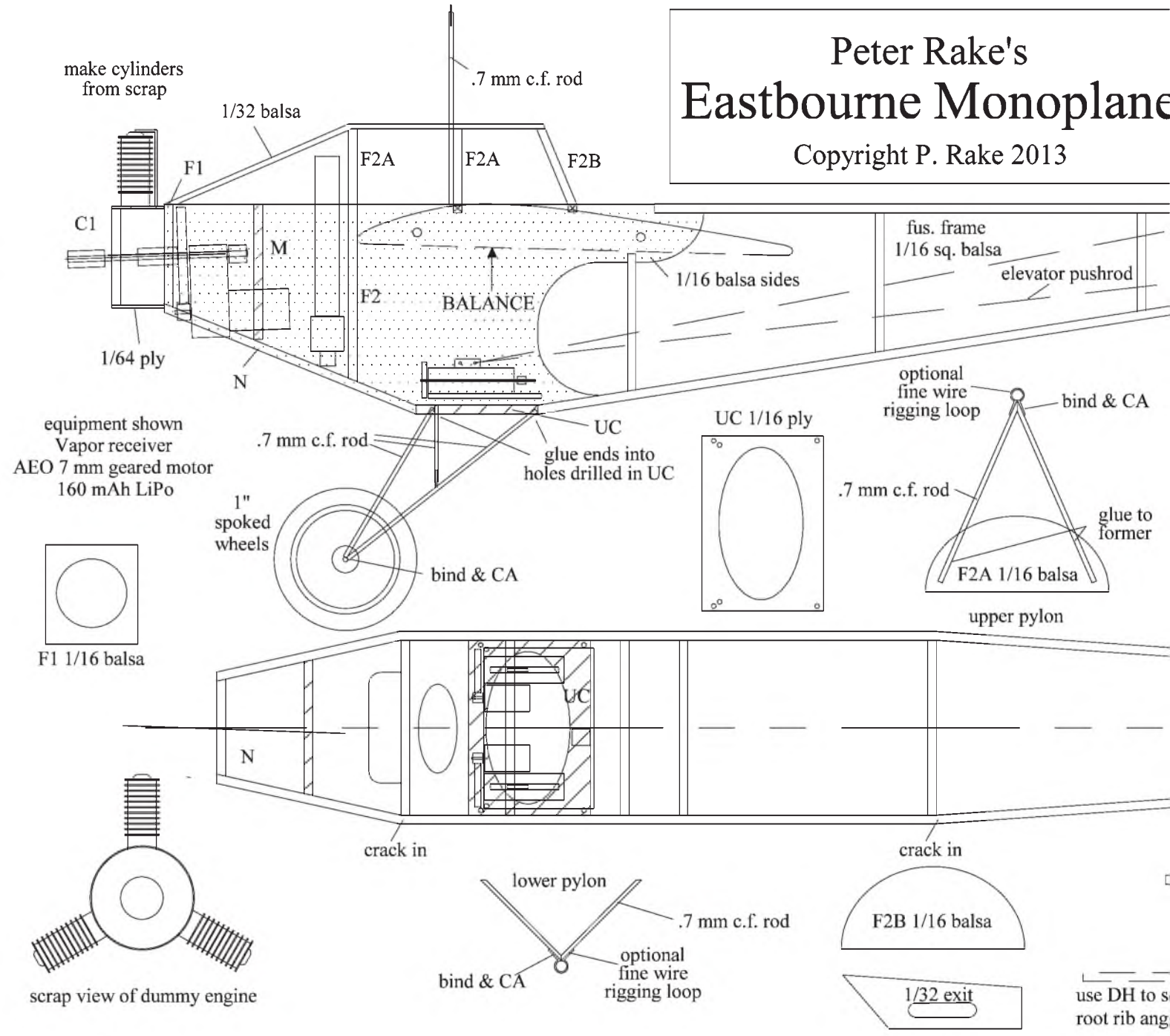
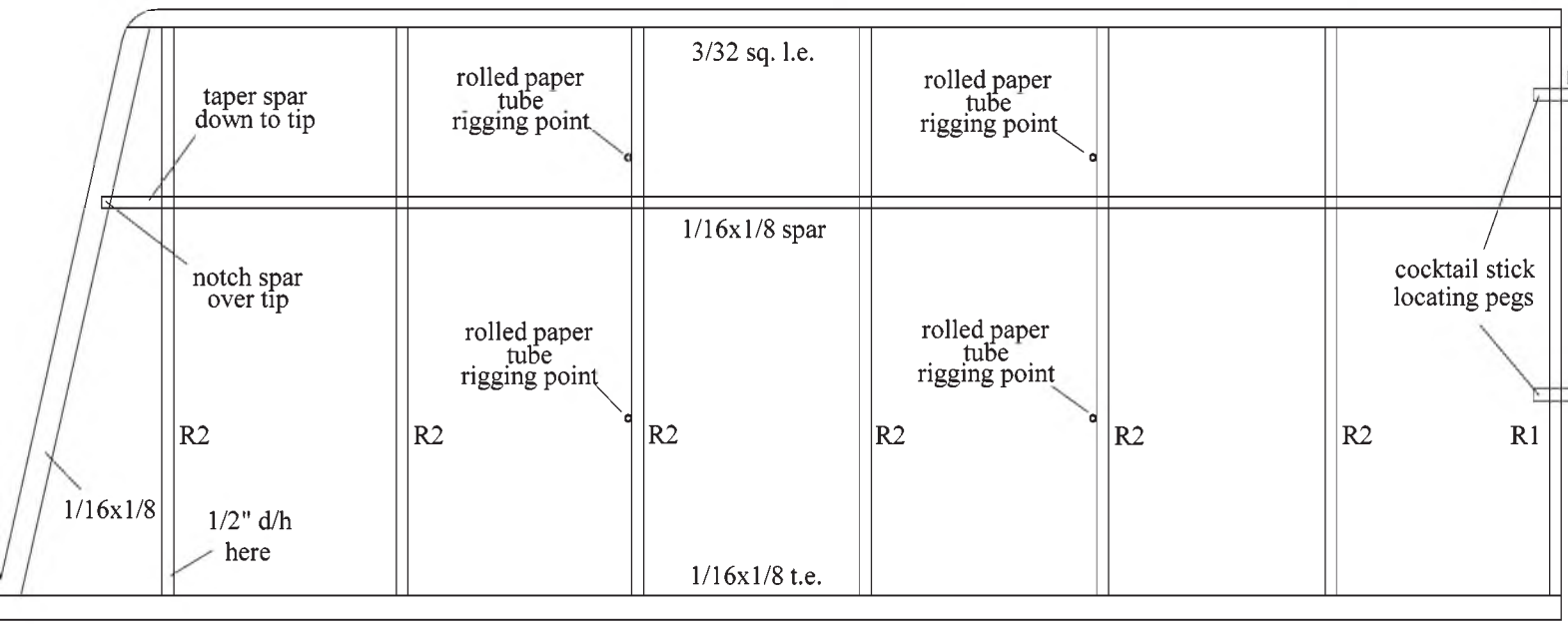
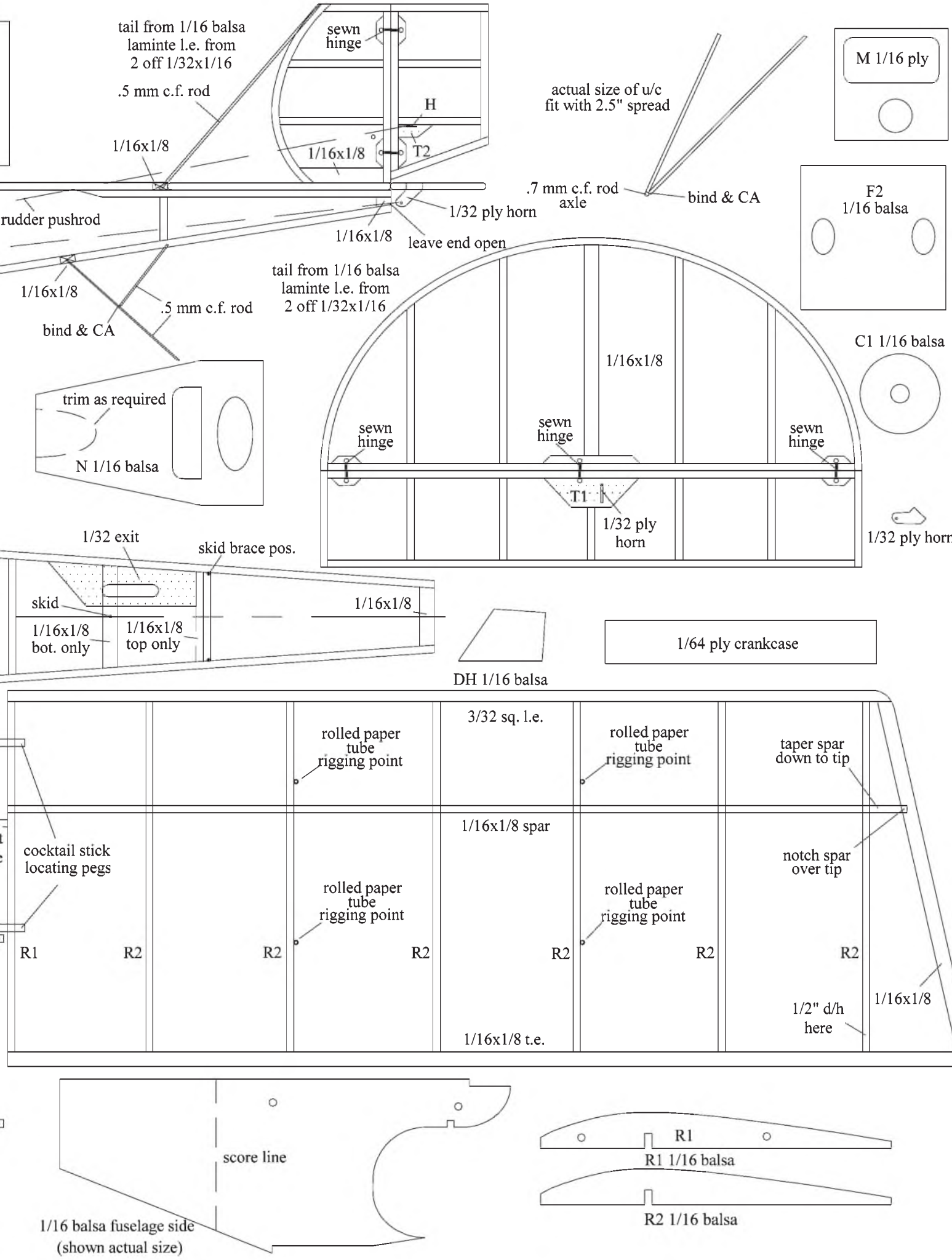
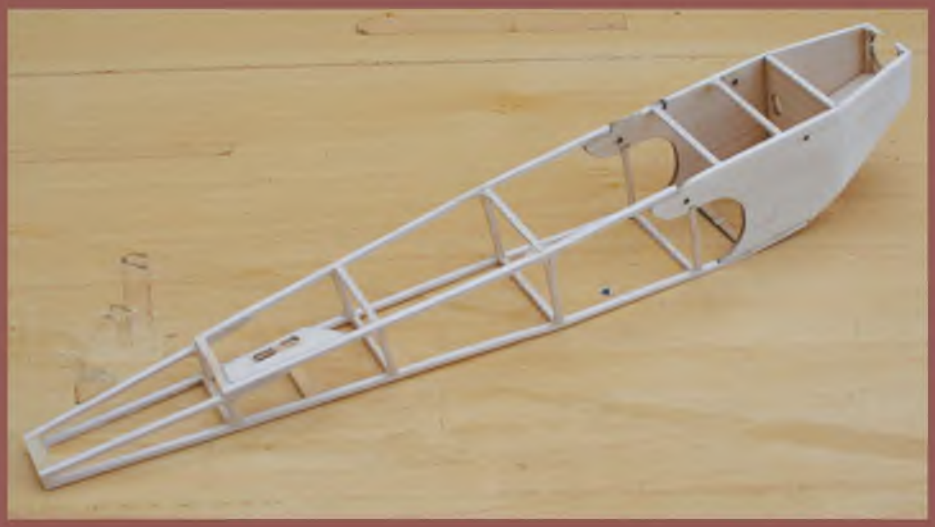





tail from 1/16 balsa laminte l.e. from 2 off 1/32x1/16
.5 mm c.f. rod
1/16x1/8
sewn hinge
H
T2
1/16x1/8
rudder pushrod
1/16x1/8
1/32 ply horn
leave end open
1/16x1/8
.5 mm c.f. rod
bind & CA
actual size of u/c fit with 2.5" spread
.7 mm c.f. rod axle
bind & CA
M 1/16 ply
F2 1/16 balsa
tail from 1/16 balsa laminte l.e. from 2 off 1/32x1/16
1/16x1/8
C1 1/16 balsa
trim as required
N 1/16 balsa
sewn hinge
sewn hinge
sewn hinge
T1
1/32 ply horn
1/32 ply horn
1/32 exit
skid brace pos.
skid
1/16x1/8
1/16x1/8 bot. only
1/16x1/8 top only
DH 1/16 balsa
1/64 ply crankcase
3/32 sq. l.e.
rolled paper tube rigging point
rolled paper tube rigging point
taper spar down to tip
1/16x1/8 spar
cocktail stick locating pegs
notch spar over tip
rolled paper tube rigging point
rolled paper tube rigging point
R1
R2
R2
R2
R2
R2
R2
R2
1/16x1/8
1/2" d/h here
1/16x1/8 t.e.
score line
1/16 balsa fuselage side (shown actual size)
R1
R1 1/16 balsa
R2 1/16 balsa



The basic fuselage just needs the motor and decking fitted before finish sanding takes place.

these positions as indicated and join the sides using F1, F2 and the cross braces. Don't fit M at this stage. Reinforce the cracked areas with a small fillet of glue. Add formers F2A and F2B and carefully sheet the deckings, working around the pylon.

Glue your motor unit into M and work it into the fuselage so you end up with 2 degrees of down and right thrust on the motor. Once satisfied with the angles, glue M securely into the fuselage. Trim part N to fit around the gearbox and glue that in place.. Sand the fuselage overall and that too is ready to cover.

Covering and installation

My model is covered using lightweight Esaki (Jap tissue), printed on my computer and applied to the model using a common glue stick (Pritt). The tissue is applied as wrinkle free as possible and the glue left overnight to completely dry. Then the tissue is water shrunk until there are no wrinkles remaining. The wings need to be pinned down flat during the shrinking stage. Once happy with the covering I applied 3 coats of heavily thinned dope - about 30/70 dope to thinners.

At this stage, only the top and sides of the fuselage are covered so that I still have access for installing the radio gear.

Over-length pieces of carbon rod have a wire Z-bend fitted to one end and these are fitted to the 'brick' servos. One piece of carbon was made much longer than the other, so that it could easily be fed through the exit plate before the other piece came anywhere near to poking holes in the covering. Only having one pushrod at a time to worry about simplifies this task no end. Feed them into place until the receiver brick can be slipped into the fuselage, then glue the brick to UC using Uhu Por. Be VERY careful not to get glue anywhere near the servos. Those exposed gears don't take much to prevent a servo serving. Don't forget to plug the motor into the receiver the right way round.

Now you can trim the pushrods to close their intended length and slip on the remaining Z-bends - but don't glue them yet. Cover and dope the fuselage underside.

Assembly

Fit the wings using a small amount of five-minute epoxy, and pack them to ensure equal dihedral. Use this assembly to ensure accurate alignment of the tail surfaces. Slip the control horn onto the pushrod ends and glue them into the control surfaces. Now centre your servos and adjust the pushrods until the control surfaces are also centred. Add a spot of CA to lock the wire ends in position on the carbon rods and trim off any excess rod.

Fit then undercarriage and lower pylon and add the rigging to your model. Although not absolutely essential, it does add a great deal of rigidity to the wing/fuselage join.

The wheels on my model are just some I had lying around, but any approximately correct size, lightweight wheels will do - mine weigh 2.5 grams for the pair. The dummy engine is nothing more than the end of a lip-gloss tube (the wife's, not mine) and some Peck cylinders. Not quite correct, but it looks the part at a distance.

Balance the model as indicated (just a hint nose low) and you are ready to commit aviation. I used an ex helicopter battery in my model so that I could use the correct weight battery to achieve balance, rather than adding dead weight. Finished weight is just a touch over 30 grams.

Flying

Just like the bigger model, the micro Eastbourne has proved to be a smooth, stable flier. Small and light enough to be flown at large indoor venues, mine has only been used outdoors. Our hall is quite small and I like the model too much to risk it in such restricted surroundings.

Posing in the great outdoors (actually it's on top of our bins) the little Eastbourne shows of its' simple but attractive lines.

Drifting gently by overhead the little model really is quite easy to fly. I use elevator only to adjust trim, and motor controls ascent/descent.

Because of the angles involved elevator throw is quite limited. However, it was only ever really intended to be a 'trim' function. A longer horn and making the pushrod exit from the fuselage bottom should remedy that for those who want a looping Eastbourne.

Power is adequate for normal flight and there is a small reserve for those less than totally calm days. Indoors there will be ample power from the AEO 7 mm unit and GWS 4.5x3 prop.

Next time I promise we'll be back to a more 'normal' column. In the meantime, if you want to contact me, you'll find me at PETERRAKE@aol.com

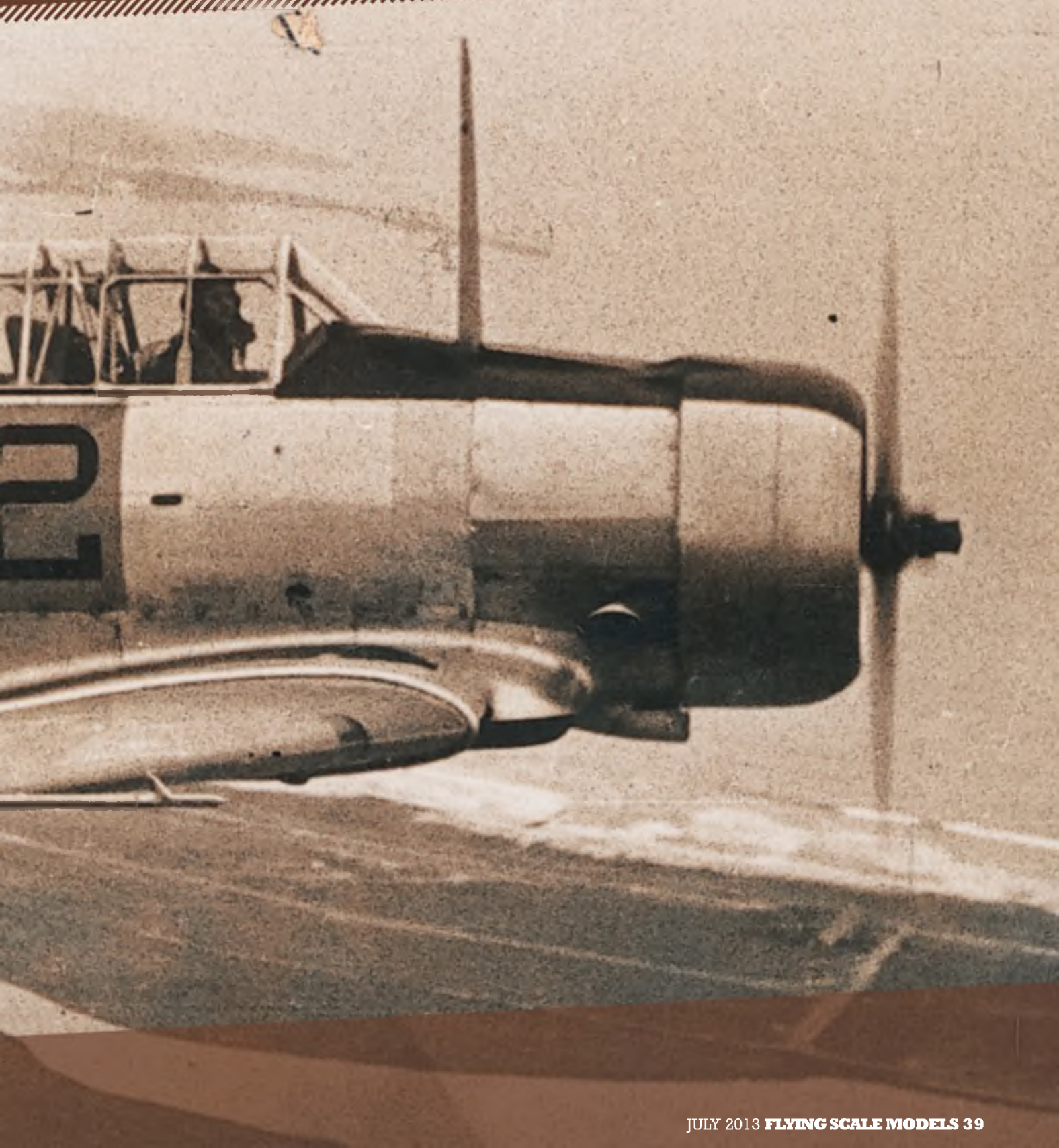
The concrete lends scale to the model. This shot clearly shows the reinforcing at the wing root and the buckled rib on the far wing.

North American AT-6 TEXAN/HA

VARD

Take any group of, say, one hundred reasonably informed aviation enthusiasts and ask them to list a hundred of the most significant aircraft types of all time. Chances are, the North American AT-6/SJN/Texan/Harvard series would be among them, not least because so many pilots of the generations spanning from 1935 right through to the early 1960s and even beyond, had firsthand experience of this aircraft, largely as an advanced trainer but also in a wide range of other uses to which the type was employed in its later years.

The type has its origins in a 1934 US Army Air Corps specification for a basic trainer aircraft, At the time, the newly created *General Aviation Corporation* division of North American Aviation had only one previous production design under its belt, their GA-15, which went into service with the USAAC as the O-47 Observation aircraft.



Carrying post-WW2 insignia, these two T-6Cs Texans are USAF Air-Reserve aircraft. Cowlings are black and white. The red centre bat to the national insignia dates this picture to 1947 after formation of the independent US Air Force.

Encouraged by this success, the team made their pitch for the Trainer aircraft contract with their NA-16. Powered by a nine-cylinder Wright Whirlwind radial engine, the prototype NA-16 featured dual open cockpits and fixed undercarriage, but had the basic swept leading edge/straight trailing edge wing planform that carried right through the design series and it also featured flaps.

However, the prospective customer demanded changes including fully enclosed tandem-style cockpit with sliding canopy and streamlined fairings around the undercarriage, plus a few additional revisions. Thus revised, the type was redesignated NA-18 and ordered into production as the BT-9 (Basic Trainer type 9) during late 1938.

Interest also came from the US Navy, then in need of a high performance instrument trainer. Re-engined with 500 hp Pratt & Whitney R-1340 Wasp engine, and designated NJ-1, 40 of the type were initially ordered, also during 1938 and North American Aviation were on their way to a bright future.

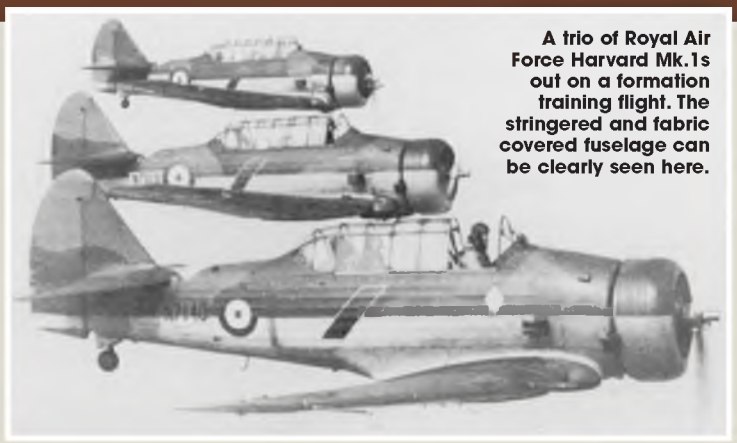
The design series progressed further toward the definitive shape of the AT-6 with the BT-14, in which the rounded rudder shape was replaced with a fully angular shape, squared off wing tips, but still retaining the fixed undercarriage.

Among the first overseas customers for the aircraft was the Royal Air Force, then in urgent need of advanced trainer aircraft to meet the needs of the RAF's rapidly expanding Empire Air Training Scheme, placing an initial order for 200 examples designated Harvard Mk.1. These were originally produced by the North American

SPECIFICATIONS

Wing span:	40 ft. 01 in.
Length:	28 ft. 117 in.
Height:	11 ft. 8 in.
Wing area:	253.7 sq. ft.
Weight Empty:	4,158 lb.
Weight loaded:	5,300 lb.
Wing loading:	20. 9lb.,sq. ft.
Engine:	Pratt & Whitney R 1340-AN1,550 h.p.
Propeller:	Two-blade Hamilton Standard Constant Speed.
Max. speed/5,000 ft:	205 m.p.h.
Cruising/5,000 ft.:	170 rn.p.h.
Landing speed:	63 rn.p.h.
Service ceiling:	21,500 ft.
Normal range:	750 miles.

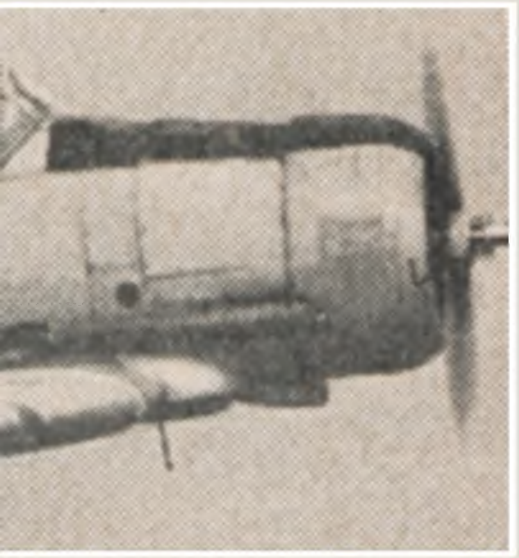
LEFT: THE ONLY WAY IS UP! The fine flying characteristics of the AT-6 made it a natural for formation aerobatics. This is a three-man formation of the Royal New Zealand Air Force, making smoke as they pull vertcially during a loop.



A trio of Royal Air Force Harvard Mk.1s out on a formation training flight. The stringered and fabric covered fuselage can be clearly seen here.

Company in California as the NA-16-1E with steel tube stringered fuselage and fabric covering and the rasp of the direct-drive Pratt & Whitney' Wasp R-1340 was soon to be heard in Britain. Deliveries continued from January 1939, to mid 1940 when Minister for Aircraft Production Lord Beaverbrook became head of Aircraft Production and diverted supplies to the Empire Air Training Schools, leaving shipping free for more vital fighting aircraft.

In Canada, Rhodesia (now Zimbabwe) and South Africa, the revised version with re-designed tail assembly, wing tips and all-metal rear fuselage and known as the Harvard II, began to appear. Noorduyn Aircraft of Canada manufactured a variant, called the AT -6A, or Harvard IIB, which differed only in that the light alloy centre section tanks were detachable. This version suffered from manufacturing and equipment difficulties and was subsequently called the AT-16 or SNJ-3 in the U.S. Navy,



where the aircraft's training role included simulated carrier deck landing using arrester hook and even employed as a hack utility aircraft for carrier on-board deliver.

Perhaps the most significant change in structural design was in the Harvard IIA (AT-6C and SNJ-4) which was intended to forestall impending shortages of high alloy steels and aluminium. The rear monocoque fuselage and flooring was made in bonded plywood, while wing surface structure and fuselage side panels made in spot-welded low alloy steel. Some 1,246 lb. of aluminium alloy was saved by each aircraft; but fears of shortages proved to be groundless and the standard structure reverted to after 1943.

In the U.S. Army Air Force the AT-6C took on the name of Texan, and this has been maintained through to the AT-6D (Harvard III or SNJ-5), which had a 24-volt electrical system to bring it in line with British aircraft.

From Trainer to Warbird

Whist the major utilization of the AT-6/Harvard type was in its initially designed training role, the eventual worldwide use of the type led to a wide range of more combative roles. In Korea for example (1950-53) and later in Vietnam, the USAF employed the type in the Forward Air Controller role, the 'Mosquitoes' being used to call in air strikes.

Counter Insurgency, with fixed-mounted machine guns, air-to-ground rockets and bombs became another task to which many air arms employed the type.

The Royal Hellenic Air Force employed the type for ground attack missions during the post-WW2 Greek Civil War, while France, Spain and Portugal used the type for Counter Insurgency tasks and the RAF likewise in Malaya and in Kenya against the Mau Mau.

AT-6s ware also in ground attack action during the later 1960s and early 1970s, in the newly emerging independent nations in Africa. In all, the military air arms of no less than 60 countries used the type.

GENTLEMEN, YOU HAVE A RACE! Among the aviation preservation movement, the AT-6 Texan, has become the subject of its own single-type air racing class at the annual US National Air Races at Reno, Nevada. Closeness of performance makes for VERY tight racing!

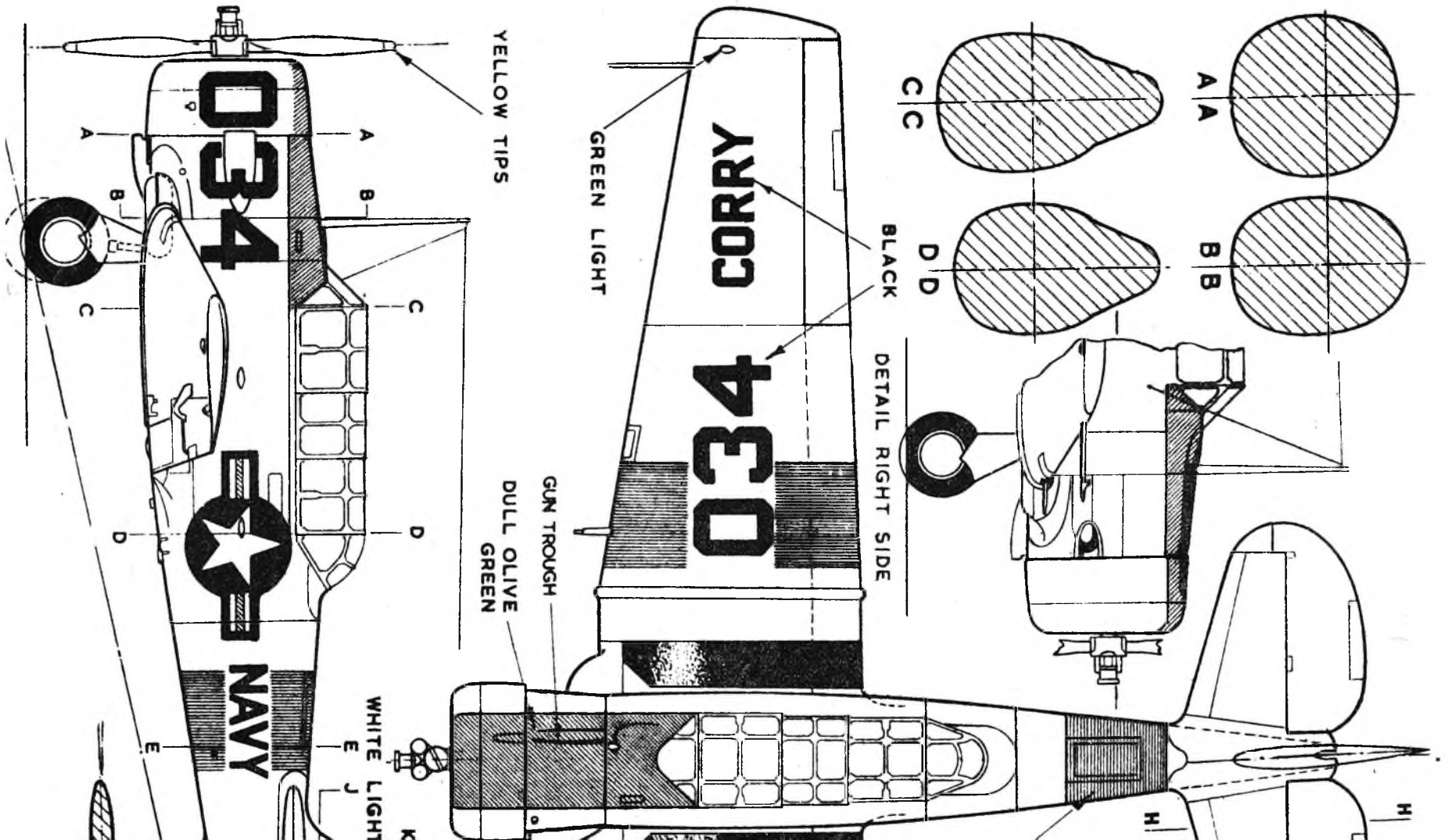
Still with us after all those years!

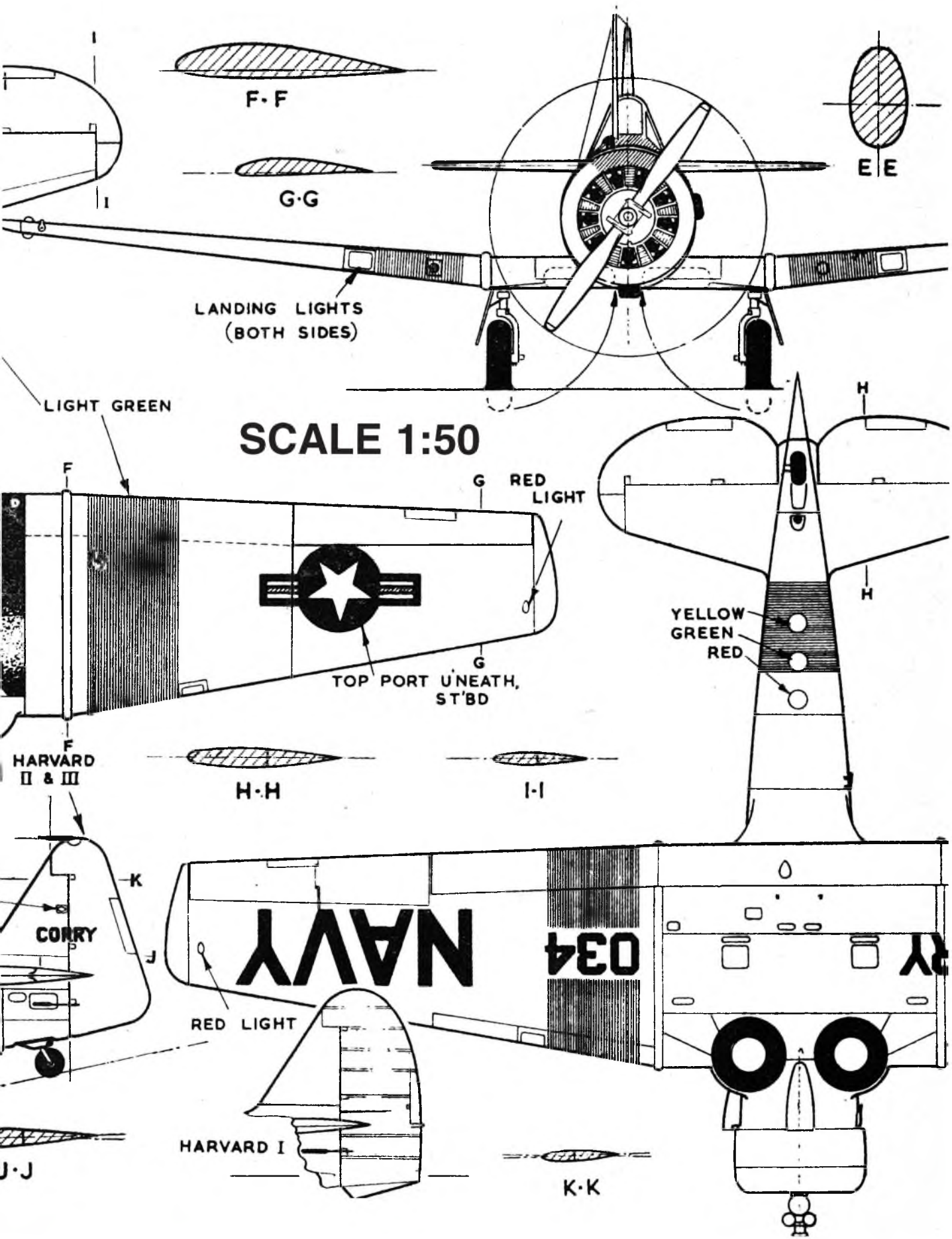
Today, the North American AT-6 Texan/Harvard remains a regular air show 'regular' and there are many, many survivors, lovingly restored and maintained by their owners. Since the early 1960s, it has enjoyed its own air racing class at the annual National Air Races at Reno, Nevada, where the use of a single type ensures some very close racing - and in at least one instance, a particularly heart stopping multiple mid-air.

So it looks as though this iconic shape, with its unmistakable ear-splitting 'signiture tune', will be with us for a long time yet! ■

North American

AT-6 Texan/Harvard




I
I
F·F
G·G
E E
LANDING LIGHTS
(BOTH SIDES)
LIGHT GREEN
SCALE 1:50
F
G RED
LIGHT
G
TOP PORT UNEATH,
ST'BD
F
H
H
YELLOW
GREEN
RED
HARVARD
II & III
H·H
I·I
K
CORRY
J
NAVY
034
RED LIGHT
HARVARD I
J·J
K·K

North American AT-6 Texan/Harvard

1: Engine cowl and constant-speed propeller hub.
2: Foward fuselage surface and access panels.
3: Close-up of the propeller hub.
4: Underside air scoop at rear of cowl ring.
5: The other air scoop, left fuselage side behind the cowl ring.
6: Exhaust stub detail.

7 - 10: Major feature of the AT-6 is its long multiple-fame sliding cockpit canopy which demands much attention in a scale model replica. 11 & 12: Offset fuselage blister on the right of the fuselage ahead of the front winscreen. 13: Complete tailcone. 14, 15 & 16: Fin and rudder, showing aerodynamic balance. 16: Rudder control horn and cable. 17: Navigation tail light.

18 & 19: Main undercarriage leg and cover.

20: Castering tailwheel.

21: Main undercarriage well.

22: Elevator/tailplane hinge line.

23: Tailplane-to-fuselage cuff.

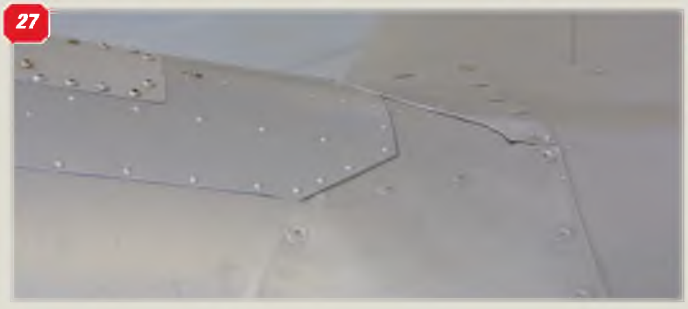
24: Elevator trim tab.

25: Fuselage panel detail at rear end of cockpit canopy.

26: Panel-line detail at the wing training edge, showing wing-to-fuselage fairing shape.

27: Upper rear fuselage surface panel detail just ahead of the fin leading edge.

28: Panel and annotation detail on upper fuselage, just ahead of the cockpit windscreen



29: More surface panel detail on the upper rear fuselage.

30: a further view of the offset blister on teh upper right fuselage, just ahead of the front windscreen.

31: engine exhaust stub.

32: tailplane-to-fuselage surface panelling.

33: More panel-line detail at the cockpit rear.

33: More panel-line detail at the cockpit rear.

34: Pitot head, right hand wing leading edge.

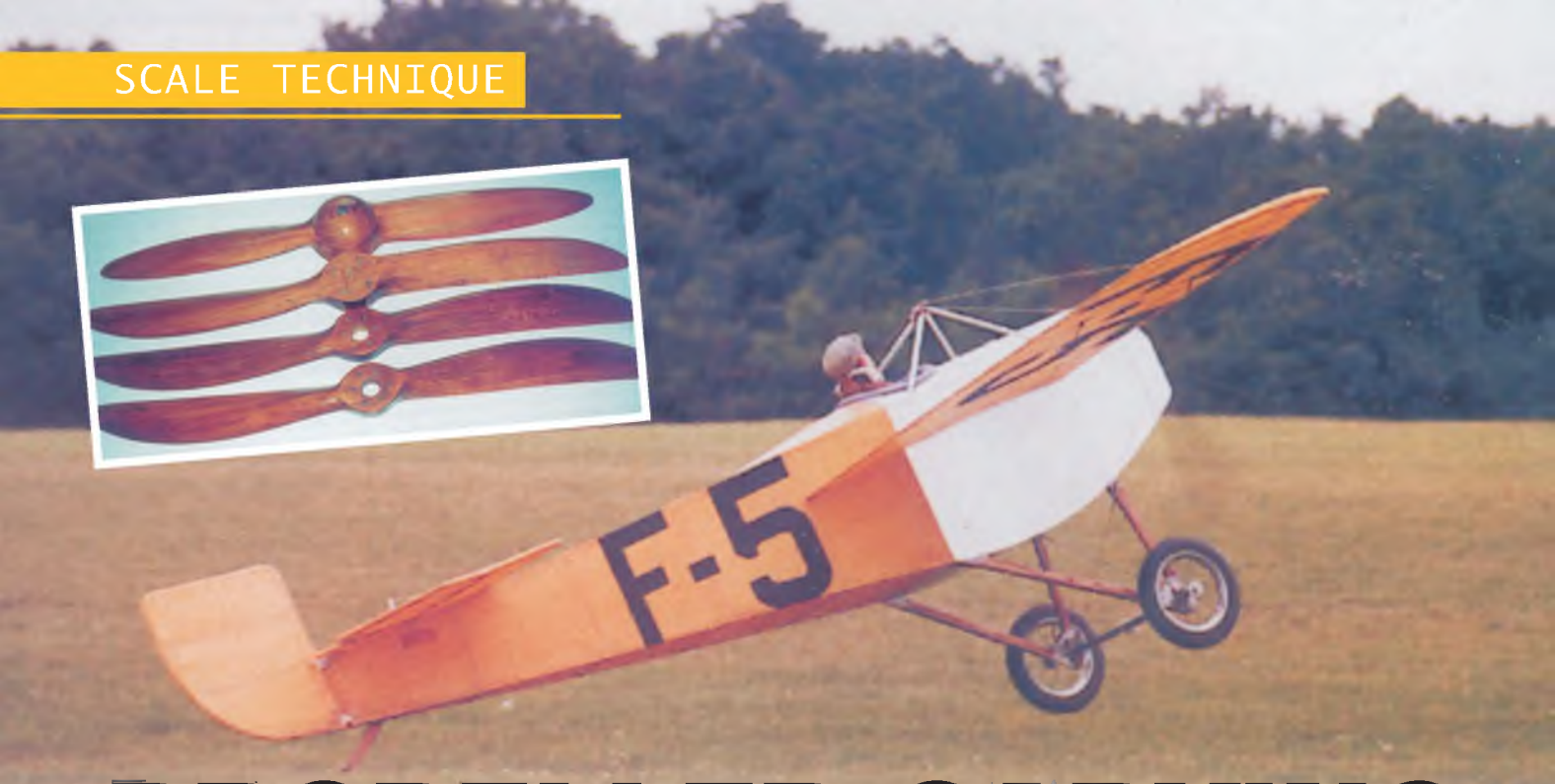
35: Landing light, right hand wing. 36: Wing tip light.

37: Left wing at the dihedral break, showing the narrow metal cover over the panel join, together with the cockpit access walk-way panel.

38: Aileron hinge, wing lower surface.

39: Outer wing panel showing aileron hinge line.

40: wing root upper surface, showing the pressed metal shroud that semi-covers the main undercarriage leg when in the retracted position.



PROPELLER CARVING FOR LARGE SCALE MODELS

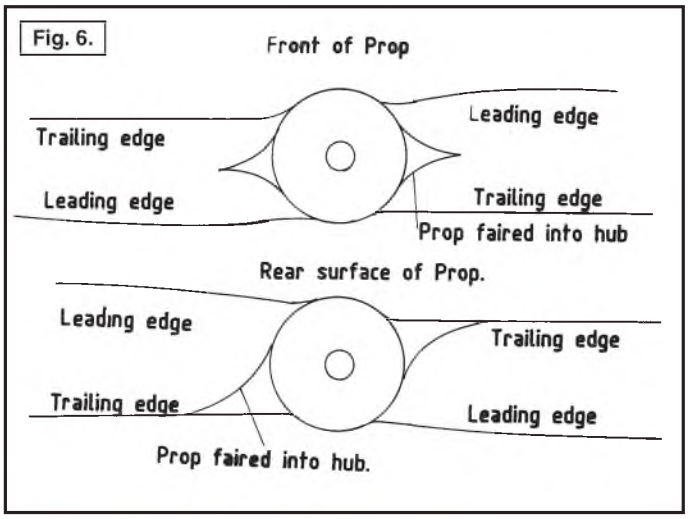
PART 2: Ian Turney-White concludes his how-to feature by revealing his techniques for the stages for fashioning the finished propeller and the carving and gluing techniques required

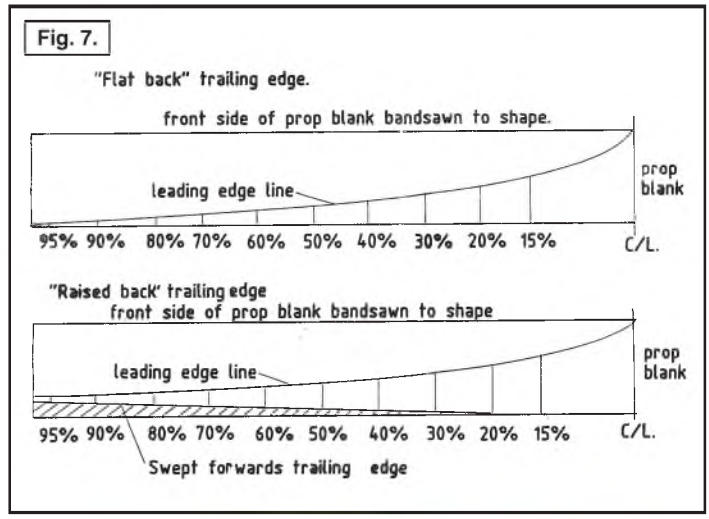
The next phase was to glue the prepared planks together. Some time ago I bought a piece of steel 7 x 5 ins. channel about 42 ins. long which was drilled and tapped with twenty two (22) - 3/8in. dia.holes. This was used in conjunction with some long bolts and clamping bars to hold the laminations under pressure whilst the glue dried (24 hours somewhere reasonably warm). **(See photo H)**. Cascamite is a powder resin glue that is mixed with water to a creamy consistency and brushed onto all surfaces (except the outers). Once removed from the clamp **(Photo I)**, the shape was marked with the ply template and the prop outline cut out 1/32in. oversize all round. **(Photo J)**.

The percentage positions are marked from the template and the height points carefully marked on the leading edge. These points are then joined to produce a curved 'leading edge line'. I also marked the excess wood which can be cut away on the Bandsaw. **(Photo K)**

The centre was drilled 10 mm and the blank then bolted, inverted, to a support piece of timber (with 10mm bolt, nut and washers) 2.25 x 1.5in. ash gripped in my bench vice. The rear of the prop was then cut away. I aimed to have a convex shape from the root tapering away to a flat bottom, 33% out and a flat bottom from there section out to the prop tip. The convex shape is to give more strength at the root.

To give an accurate pitch, the leading edge line must not be over or under cut and the trailing edge height must not be reduced. I used a straight edge to check for the flat bottom. When you look at the bottom surface, it will have a 'twist', with





Proof of the pudding; one of Ian's props on the test bench.

less angle of attack towards the tip. A circle is marked with a compass at the hub and the blade is faired into the hub. **(See Fig.6)**.

It is physically hard work, beech is tough going and quite a lot of effort is required. (Not recommended on a hot day!). Both blades are compared for symmetry and the glue lines can be measured on both blades and provide a useful guide. The back surface is the harder side to carve, but once completed, I think that the prop is nearly 75% complete. I cut away on my bandsaw the excess front surface and planed the front surface down to the marking lines. **(Photos L & M)**. Mount the prop front face up on the support and mark a line approximately 30° back from the leading edge and cut away the trailing edge. I used mainly the drawknife, but also used the spokeshave and chisels. depending on the 'cut' and the grain direction. **(Photos NÍ & P)**.

Next, the leading edge was shaped and the thickness of the blade adjusted. The prop blade does not want to be too thick especially outboard. but needs to be thicker at the root for strength. **(Fig.8)**

Approximate blade sections

Note the extra thickness towards the hub for strength and the reduction in the angle of attack towards the tip. Shaded areas can be cut away to reduce carving effort. The other side was then shaped the same. The thickness of each blade is compared, with callipers and a check on the balance is made, reducing the thickness of the heavier blade. When I was happy with the shape and balance, I gave the prop a light sanding, done outdoors, with small wood blocks and a good quality cloth-backed abrasive.

It is important that the trailing edge is not too sharp, or you will cut yourself when starting the engine. My priorities when making a prop are more towards the strength, section, pitch and symmetry, rather than a perfect scratch-free surface. (That's my excuse!) I rechecked the balance and drilled the hub using the prop. driver washer as a template for the prop fixing bolts. The prop was then stained and finished with three coats of polyurethane gloss finish.

The prop produced with the above methods will have a flat back and swept back top surface which looks attractive. You can also produce props with the blade taper either shared between the front and back of the blade or all on the back of the blade. The leading edge height is calculated the same, but marked from the upswept trailing edge. The shaded area on **Fig. 7** would be planed off before carving the underside of the prop.

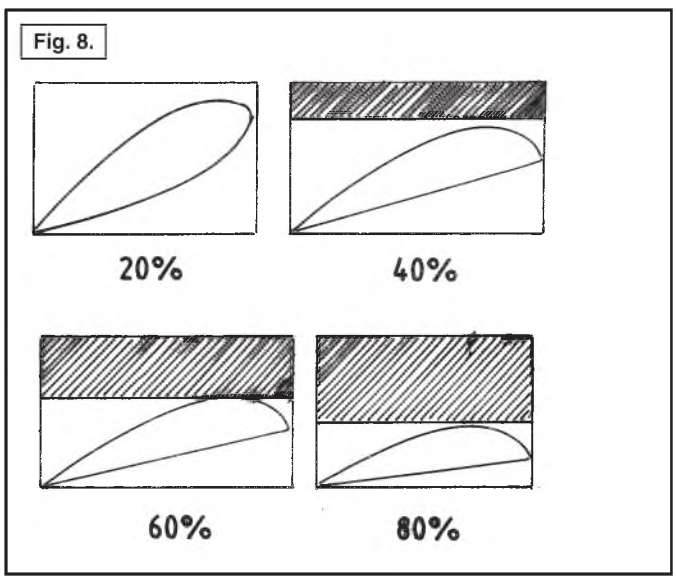
When you mount the prop on the engine, it is essential that the prop bolts are tight. Re-check, especially after the first few flights.

Out of interest, the rough piece of timber weighted 148 ounces and the finished prop 28 ounces - quite a difference! The total time to make the prop, including a partial allowance for obtaining the wood and clearing up the shavings, was about 10 hours, with a material cost of about £10 for the wood and glue.

To make a prop without all the equipment listed is possible. You may be able to get a friend or local joinery shop to cut and machine the blanks, the wood can be held together with G clamps, vices etc for gluing.

An alternative is to carve the prop from a single piece of wood, but this will not be as strong or as stable and it is essential that a good, mature and seasoned piece of wood is used. To fashion the profile of the prop, it may be possible to cut out the shape on a jigsaw, especially on smaller props, but it will be more difficult and the cut will possibly not be at right angles to the top surface. For carving, you can use chisels, but the draw-knife is better. I have heard of modellers who have used an electric 'power file', but it is not the way I would carve a prop, and the copious amount of dust is a serious hazard.

I hope this feature will encourage modellers to have a go. It is satisfying to produce your own props and is often the only way, without long delays, of obtaining props which can be specifically made to give the best flying performance for your model.



Miles Ahead of the Rest 2

MILES M.5 SPARROWHAWK

Ken Burke concludes his description of his 84" wingspan, quarter-scale Sparrowhawk with the how-to, on adding the detailed realism

The Cowling

The hinge that allows the side panels to be raised for engine access on the prototype is replicated in the model by lengths of *Scale Aviation* hinge (or similar). A piece of 1/2in 1/8in ply in into which a recess 1/4in wide and .020in deep has been cut along one edge is glued recess down, to the outer edge of the top fuselage member between the front and rear of the cowling. The hinge can then be slid into this recess and cyano glued just prior to painting the fuselage.

Only one side of the hinge is used and the gaps filled with short pieces of nylon tube, held in place with the normal wire hinge-pin. The piece of ply that holds the hinge also acts as the attachment for the edge of 0.6mm ply that forms the fixed top section of the cowling. The plan shows the built-up wooden cowling.

A moulded glass nosebowl and oil pan were used on my model. The whole cowling could be moulded using the lost-foam method and this would probably be quicker. I have moulded the nosebowl and oil pan using a balsa plug, from which a vac-formed styrene mould was made. In case of damage replacements are easily produced.

It is advantageous to have the spinner on hand before you commence the cowling, so that the nosebowl can be faired to the spinner. The only tricky bit on the cowl is the method of securing it: a 4-40 screw through pine blocks on each side, accessed through the curved rear edge of the cowling. The reason for the angled blocks is to pull the cowling back and up, thus putting a little tension on the locating dowel and reducing the chance of vibration loosening the cowl. Ensure the blocks are positioned so that a ball driver can be used with the wing attached. The holes for the exhaust stubs are drilled and the stubs trial fitted. They are not glued into place until after the model is painted.

Spinner and scale propeller

The spinner is a non-standard type, and it will have to be specially machined. You will need to make two spinners if you intend to enter the model in competition. This can be turned or spun. The propeller on the prototype was a Fairey Reed alloy type. A piece of clear pine is a suitable starting point and a Linisher really speeds up the shaping. Remember, the Gipsy Major rotates in the opposite direction to our model engines and both blades should reflect this. (I made the first prop with each blade going in the opposite direction). Spray-can silver, left for a few

Kens wife, Liz gives scale to the Sparrowhawk, with Watson's Bay, Sydney in the background

days before applying the clear finish coat is a very good approximation of the colour.

Cockpit interior

Though I am unable authenticate it, I have assumed that in keeping with Miles practice in the mid thirties for their deluxe models, the cockpit of the prototype was trimmed by *Rumbolds*. If this were the case, then the seat and trim would have been leather.

I tried to keep the cockpit as simple as possible while still conveying the impression of the prototype. The interior is reduced to two subassemblies - the instrument panel and the cockpit floor pan. Scale judges seem to be attracted to the instrument panel, and they seem to place disproportionate emphasis on it in their assessment. Extra time spent on the panel to ensure it looks as accurate as possible is probably time well spent.

The panel is Mahogany veneered 1/8in liteply. Once the holes for the instruments and their holding screws are drilled the panel can be French polished.

The instrument cases are machined from aluminium tube or rod and painted matt black inside and out. The case bodies are recessed to take the glass (.040in Lexan) in the front and the dial/pointer assembly in the rear. Cutting the Lexan glasses on a mandrel in the lathe ensures they remain scratch free and are a perfect snap-in fit. 1/8in birch ply is better than balsa for the disks on which the dials and pointers are mounted and should be cut in the same way as the glasses. I find that computer generated dials, laser printed on clear film, and mounted on white glossy paper, look clean and crisp. Different areas of the backing paper can also be coloured to simulate the luminous paint that was used on the cardinal numbers. The pointers are cut from shim brass and soldered to pins. The dial assembly is pressed into the rear of the case. 12 or 14BA cheese head brass screws replicate the 2BA used on the prototype to mount the instruments.

The panel is secured with three small brass wood screws after the model is completed.

The other sub-assembly is built up on the floor pan and requires little comment. There are a number of items I have omitted, because these are mounted on the cockpit sides and when fitted, keep getting in the way when attaching the wing and strapping in the pilot. If the model is intended for F4C, then these should be included. The controls not shown are the triple-ganged brake, throttle and altitude control assembly, that are mounted on the upper port longeron about a foot back from the panel. The elevator bias is just behind this group, and on the starboard side mounted on the spar, is the flap lever, and a P4 compass is mounted on the top longeron just in front of the front edge of the seat. Details of the Hawk cockpit can be found in *The Aeroplane* in the August issue of 1935.

To simulate the *Rumbolds* leather trim I have used red kid glove leather. (This is not obtained by excoriating children. That would be execrable.) The completed floor pan is secured by two 2-56 screws into blind nuts.

Scale detail

There is not a lot of surface detail on the Sparrowhawk, so everything that is there needs to be reproduced on the model. The blisters and tail fairings are vac-formed from .030 styrene and the windscreen from .040 Lexan or acetate.

Cowling nose bowl

Vac-formed parts.

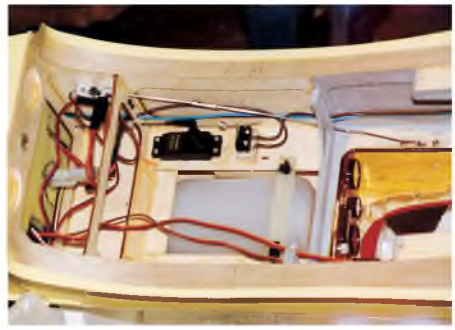
Checking the fitting of the windscreen mould on the fuselage mould

Windscreen moulding - rear curve is only for moulding purposes

Cockpit floor and furniture

Instruments ready for assembly

Plumbing in the nose



Wires and switches

Fuel gauge and filler

Fuselage/wing joint needs silicone filling

Making the moulds to vac form the scoops, fairings and cable guides is very time consuming. They could be made from balsa without compromising the appearance of the model. The windscreen I have fitted is the one used in the race and vac forming is about the only practical way of producing the shape. After the 1935 Race, a simpler windscreen, comprising three flat panels was fitted, so this is another option for those not into vac forming.

Miles used a number of standard windscreens and it seems that as these all used the same mounting holes in the fuselage, they could be changed at will to suit different customers or conditions. All the screens were attached with aluminium angle painted the fuselage colour, and 2BA brass screws.

Covering

The wing and ailerons are covered with *Oracover* (Profilm), ironed down with a sealing iron all over. The flaps are not covered, just primed and painted.

The fuselage, not including the cowling, is covered with *Sig Coverall* doped on and only lightly shrunk with a heat gun. The reason I don't use *Profilm* on the fuselage is that I find the *Coverall* easier to handle around the concave compound curves of the fillets. The tail assembly is covered with *Easy Cover*, which seems to be a slightly lighter version of *Oracover*. Once all the components are covered I apply a heavy coat of hi-build urethane primer. This is ready to sand in 24 hours. If there are any faults still showing they are filled with auto stop putty before rubbing almost all of the primer off. Repeat until the surface is to the standard you require. I find that a good finish is obtainable using paper as coarse as free cut 600.

At this stage, the most obvious surface feature of the Sparrowhawk is added. This is the ridge along the fuselage, just below the datum, caused by the overlapping top deck. I have tried a number of methods to reproduce this feature, including overlapping the decking, as in the prototype, but the most realistic result I have achieved has been to paint it on.

Commence this process by laying out a six-foot length of low tack vinyl masking tape on a sheet of glass and then stick two further layers of tape over the first. Using a long straightedge and a very sharp blade, cut the tape in half. Use the cut edge to form the line of the decking. Mask the bottom half of the fuselage and then spray urethane primer along the tape, gradually building up the thickness, until it is level with the tape. The primer will automatically fair into the curve of the deck. Carefully remove the tape and lightly sand the top deck to remove any overspray.

Now fit all the scale detail, which should be primed and ready to take colour. Finish the cockpit interior; clear gloss above the upper longeron and semi- flat mid grey below. I find a brush is the easiest way to do the cockpit interior.

The prototype, according to contemporary reports, was finished in standard Miles colours and polished to a dazzling gloss. Standard Miles colours were cream with red registration lettering. The racing number '9' on the rudder was black. Many coats of *Titanine* lacquer were applied and hand rubbed to achieve the mirror finish. All the wing tapes and rib stitching were filled and faired before the final coats of lacquer were applied, and were not visible.

For the model, I have used two-pack urethane primer and topcoat without the usual clear overcoat. Finishing with the colour coat gives a surface texture very similar to highly polished lacquer, but is proof against any glow fuel that I have used.

I can find no record as to which cream or red were used on Miles aircraft in the mid thirties. No records of the Titan Paint & Varnish Co can be located. Over the last thirty years or so, restorers seem to have settled on BS 352 for the cream and BS539 for the red and these are the colours I have used for the model.

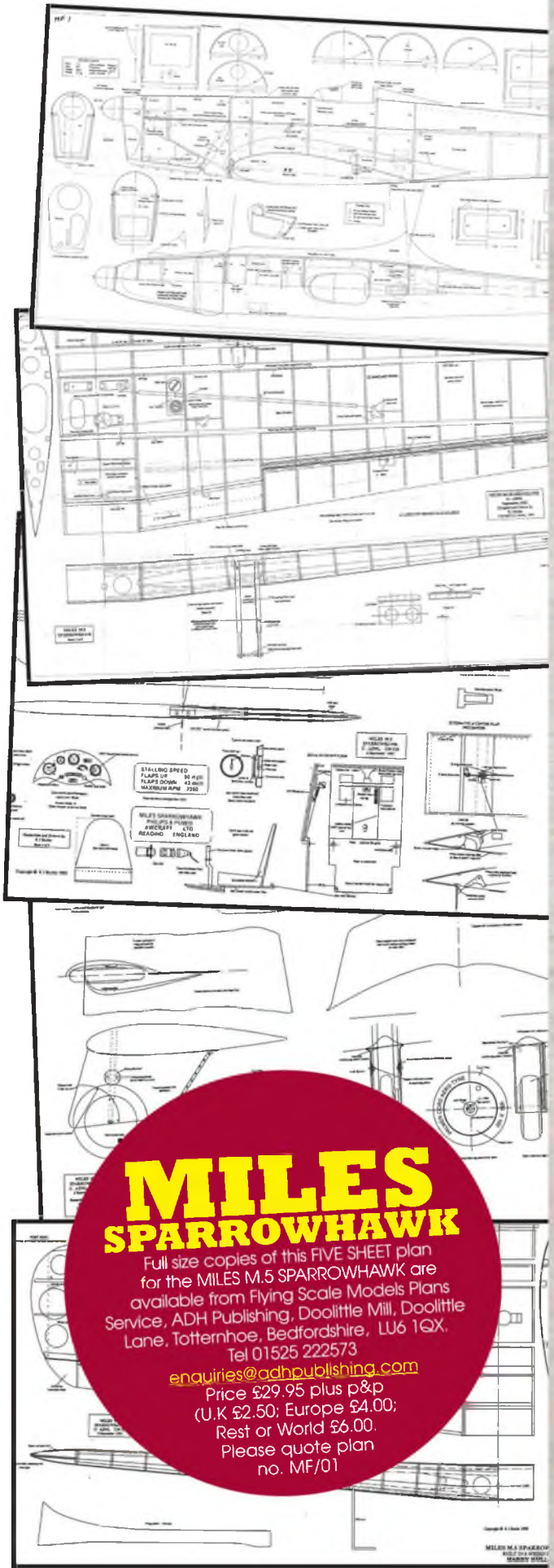
I have chosen to model the Sparrowhawk on the day of the race, and the entire Phillips & Powis staff were there to ensure that not even a speck of dust landed on any of the Miles aircraft, and you can be sure the bosses mount would have received special attention.

This means there is no weathering to consider, except perhaps for the exhaust pipes. Using *K&S* 5/16" brass tube for the stubs was probably a mistake; steel with a touch of rust would have been easier. I painted the brass gloss black then streaked it with a red / brown. It looks OK from three metres.

The exhaust system proved to be a little restrictive

Radio

I fit and check the operation of the servos as I build the model so that when the airframe is finished, the servos can be refitted with the knowledge that there will be no complications. All that remains to be done is to fit the switch, receiver and power pack. I like to keep the switch close to the RX and battery so that extension leads aren't needed, but I like to operate it from the cockpit. A length of 16swg piano wire is the answer. I also like to keep all the current carrying wires away from the aerial, so all the servo wires go down one side of the fuselage and the aerial down the other.



MILES
SPARROWHAWK

Full size copies of this FIVE SHEET plan for the MILES M.5 SPARROWHAWK are available from Flying Scale Models Plans Service, ADH Publishing, Doolittle Mill, Doolittle Lane, Totternhoe, Bedfordshire, LU6 1QX.
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CUT PARTS SET FOR THE

MILES SPARROWHAWK

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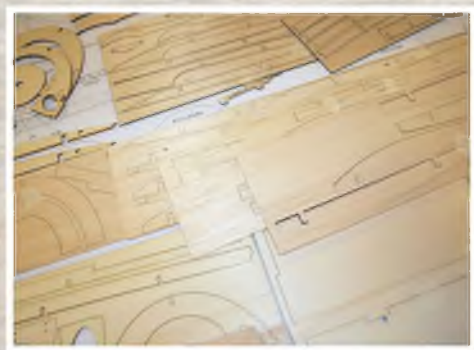

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That big hole in the front behind the engine mount is where receiver and battery are installed. A block of foam rubber is shaped to fit, and then cut out to suit the receiver and power pack.

Flying

The moment that was to prove the pudding was at hand. I had checked that surfaces moved in the correct direction and that the model balanced correctly. I coupled 10% down elevator to the flaps at full deflection, which is a whisker less than 90 degrees. As there was no further excuse to procrastinate, I was off to the field.

It wasn't a perfect day but close, the 10 knot breeze being about 30 degrees to the main (only) strip and it was sunny but a bit cool. The motor started easily on the starter at the first attempt; a short taxi to the strip followed, and then the Sparrowhawk was lined up as much into the breeze as possible before making a final check of the controls. With everyone looking on, there was nothing left to do but gently push the throttle stick forward, and observe what would happen.

The take off was an anticlimax. As I opened the throttle, the tail came up almost immediately and then the Sparrowhawk started to go left (into the breeze), but a big dab of rudder seemed to reduce this tendency. I was still sorting out where it was going when it came unstuck and began climbing out and gaining height just a little faster than I thought appropriate.

A little down elevator and I think I was holding some right aileron, but nothing alarming. My heart seemed to sense that no great drama was imminent, and I reduced its rate to about 200. Once I had achieved a safe height I adjusted the trims and found that level flight could be achieved within the trim range. I checked the trims when I landed and these were off centre by two clicks on the aileron and three on the elevator. My initial elevator setting was 1/16in down with the trim centred. I'd done this as my previous Hawks had all needed down elevator at full throttle. Sufficient downthrust to offset this tendency becomes obvious to even the most myopic static judges, with a resulting loss of points.

With the O.S. 108 at full throttle, the air speed was only a little too quick, and with the throttle stick in the centre: just perfect. It was also very quiet in the air. I didn't expect this as it seemed quite loud on the ground.

With the 108 throttled back to about scale speed I did a few circuits to just get the feel. It had the light feel that I like, so as nothing seemed to have fallen off I did a few basic manoeuvres - a loop, a roll or two and then flew around a bit more until I thought it was time to land. I hadn't pulled the throttle back much past half during the flight, as I wasn't all that sure of the idle, and I didn't want the motor to quit prematurely. I set up a normal rectangular approach, and turned onto final a fair way out and not too high as I wasn't using the flaps. I didn't expect a problem, as there was a reasonable head wind, so I kept the Sparrowhawk coming into the wind and in fact had to put power on, or the model would have set down quite a bit short. The touch down was pretty average, and my heart only missed a couple of beats.

Half an hour later it was almost back to normal (my heart rate), so I decided it was time for the second flight. This time the 108 refused to start. I put this down to a wet plug, which the starter battery didn't have enough grunt to burn off. Inverting the Sparrowhawk made no difference so off with the cowling and change the plug: instant cure. The engine fired up immediately and kept running even after I returned it to its wheels.

Once airborne again and at a safe height I checked out the stall, gentle and straight - and the flaps. At idle, the elevator bias was about right, but as I increased the throttle it needed more down. I'll need to check how to couple the elevator, flaps and throttle.

The Sparrowhawk is vice free and at full throttle quite aerobatic. Tight turns can be executed at idle without any tendency to snap, provided the fore/aft balance point is forward of 35% and the weight is around 12 lbs dry. With the flaps fully deployed, the descent on final can be steep without it picking up a lot of speed.

All of my previous Miles Hawk derivatives have flown well, but the Sparrowhawk is, without doubt, the best.

Afterthoughts

After quite a bit of flying with the Sparrowhawk, some problems emerged.

The exhaust system on the O.S.108 is quite restrictive, limiting the maximum rpm on a Master 16X8 to 7,800. A second outlet pipe would probably help if more power was desired, albeit at the expense of a little more noise. (probably desirable if your Hawk is a bit heavy)

The centre flap tended to bend the alloy bellcrank mounting bracket with use. This stops it closing correctly. I have fitted an identical bracket on the other side of the bellcrank, and applied a longer bolt. This has eliminated this problem.

Gunk from the exhaust is sucked into the joint between the leading edge of wing and the fuselage. Roofing silicon applied to the fuselage side of the joint and the front of the wing fillets cures this problem.

The rubber wheel-pants are successful in that they don't damage the wing when they encounter an obstacle or are torn off in a heavy landing. But because these don't move with the gear strut, they tend to be run over by the wheel, and pulled off. I am now mounting them on the wire leg. I have soft soldered a brass strap to the wire, like those shown on the plan for the full-scale undercarriage, and mounted the trousers with the scale type disc and two self-tapping screws.

At very low speed the elevator seemed a bit soft. Sealing the gap along the lower edge improves the elevator response markedly. I used *Graupner* tape. All of my previous Miles Hawk derivatives have flown well, but the Sparrowhawk is, without doubt, the best.

Remember! Keep it light and build it straight. ■

Control Throws

Elevator	
1in up and down	Exponential 20%
Rudder	
3in right and left	Exponential 70%
Aileron	
1in up inch down	Exponential 25%

MILES M.5 SPARROWHAWK

Exactly when Fred Miles realised that he could win both sections of the 1935 King's Cup is uncertain. What is known is that about two months before the race, Fred told his Chief Designer, Head Draftsman and Stress Analyst to extract the digit and build him an aircraft that could win the unhandicapped section of the great race. It just so happened that this design _team_ was embodied in just one person, Maxine, his new wife. And like a good wife she responded instantly, and went to work immediately.

Back in 1935, 1935 King's Cup was the most prestigious event on the British aviation calendar, and attracted the major British aircraft manufactures. Some, like Percival, De Havilland and Miles built special aircraft for the race, for winning the King's Cup was good as money in the bank.

The Nation was still in the grip of the Great Depression, but there seemed to be no shortage of funds for the aristocracy. The private owner aeroplane was in its heyday. Speed was the elixir of the era, and the whole nation embraced it. On land, water and in the air, speed fever swept the nation and people came in their thousands to savour the atmosphere and spectacle of the great races. Fred Miles realised that the future of Phillips & Powis, the manufacturers of Miles aircraft, would be greatly enhanced if one of his aircraft could win the race.

The Cup was to be run over two days, over the sixth and seventh of September. On day one, the unhandicapped elimination race of just under 1,000 miles was contested over a course around Britain. In order that competitors didn't have to compromise safety by having to cram in extra tankage into their aeroplanes, mandatory refuelling stops were scheduled. The next day, Saturday 7th, was the Handicapped Final. This was to be run over seven laps of a triangular fifty-mile course.

It seems reasonable to assume that Miles, as Fred was always known by his friends, had worked out, soon after the 1934 race, how to beat the handicappers in the final.

What had alluded him was how to win the first race, dubbed the Circuit of Britain by the contemporary press. He knew that the Mew Gull, of the expatriate Australian Edgar Percival, was faster than Phillips & Powis's fastest entry, the Miles Speed Six Mk II, to be flown by the comparatively inexperienced Ruth Fontes. He also knew that the aircraft that won the Circuit of Britain could not win the handicapped final, the handicappers would see to that.

Miles found the answer in the race rules. The rest is history. Miles won the Circuit of Britain in the 'Mystery Ship' as the aviation press dubbed the M5 Sparrowhawk due to Miles, the consummate publicist, refusing to divulge any information about the aircraft until the Wednesday before race day. Tommy Rose completed the double by taking out the final in a none-too-stock standard Miles Falcon. Miles Hawks filled second and third places giving P&P a clean sweep of the 1935 King's Cup.

The Sparrowhawk was not a new design, regardless of what the P&P publicity machine may have said at the time. Because of the time available to build it, the majority of the components had to come from aircraft in current production.

The fuselage was built on a standard Hawk Major lower section, shortened by six inches at the front. This was necessary so the motor could be moved back to offset the weight of the fuel to be carried in the front cockpit area, without upsetting the balance. The Hawk moulded ply top deck was used but lowered as much as possible. The wing centre section was reduced to the width of the fuselage, and standard Hawk outer wing panels fitted. The narrow centre section reduced the span to 28 feet. New wing fillets were fabricated to accommodate the dihedral. The main undercarriage was moved outboard to give a track 2 feet wider than the standard Hawk: supposedly to cause less interference to the slipstream. A modified Gipsy Major motor was fitted and an additional 3.1/2 gallon oil tank fitted in the leading edge of the port wing. There were numerous other minor changes, such as a fairing on the tailskid, but in reality, the changes were as much for promotional purposes as for enhancing performance. ■

SPECIFICATION

Wingspan:	28ft
Length:	23ft 6in
Height:	5ft 7in
Wing area:	147sq ft.
Powerplant:	140hp high-compression de Havilland Gipsy Major.
Weight empty:	1,080lb,
All up weight:	1,640-2,200lb
Wing loading:	11.1-15.0lb/sq ft.
Maximum speed:	178mph
Cruising speed:	160mph.

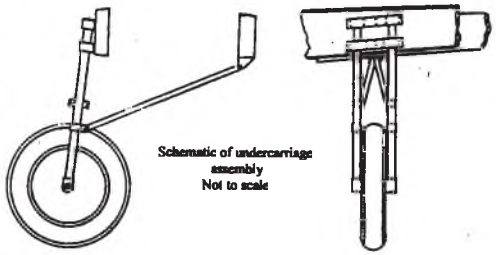
BELOW: Race numbers and peculiar overpainting at the rear of cockpit were added during G-ADNL's racing career. Can anyone remember the colours used? Photographs from MAP and Aviation Photo News. RIGHT: Photographs of the prototype are not easy to come by, but this one, courtesy of the Museum of Berkshire Aviation Trust, shows the original in at an early stage of its existence.

M rib

B rib

G - A D N L

PALMER tyre legend
Painted white at the time of the race



Schematic of undercarriage assembly
Not to scale

A/B rib Root and centre section rib

M rib

WING SECTION
P&P 1934

SCALE
1:36

COLOUR AND MARKING

AIRFRAME:

Wing, Fuselage,	
Tail, Pants	Titanine gloss cream dope (B.S. 532)
Registration	Titanine gloss red dope (B.S. 539)
Racing	
Number	Titanine gloss black dope
Wing walk	Flat black dope impregnated with ground cork
Spinner	Polished aluminium
Propeller	Dull aluminium with logo on each blade

Undercarriage

Struts	nickel plated
Wheel covers	gloss red dope
"Palmer"	white
Tail skid strut	gloss black

Cockpit

Trim, seat	
Headrest	Red leather
Floor	Flat medium grey lacquer
Interior	Copal varnish
Dash Board	Mahogany veneer

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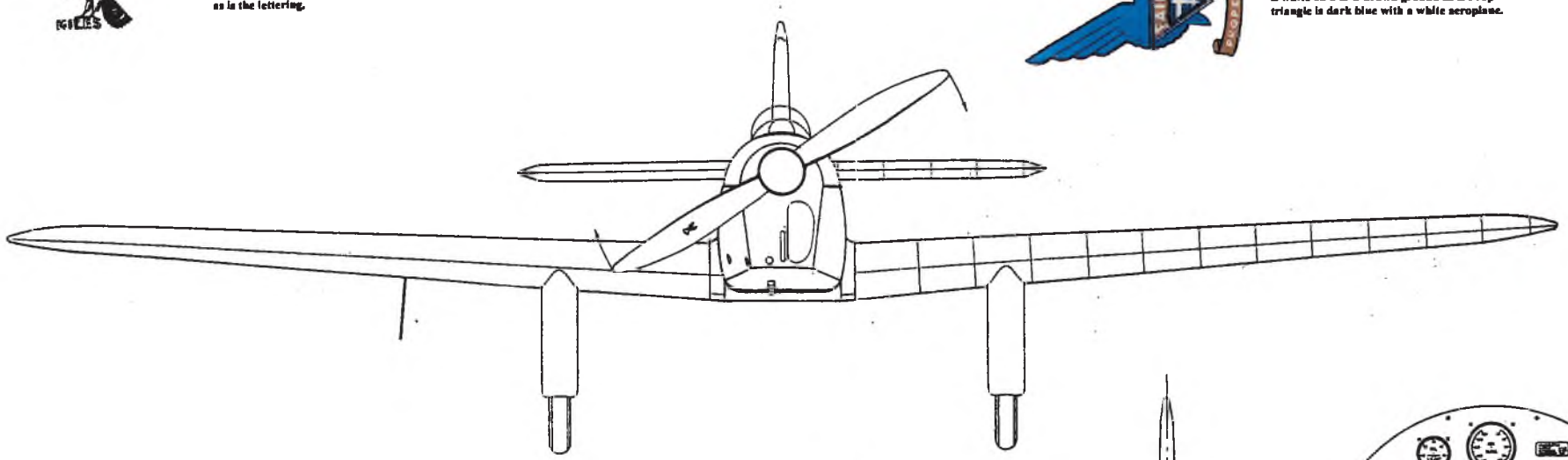
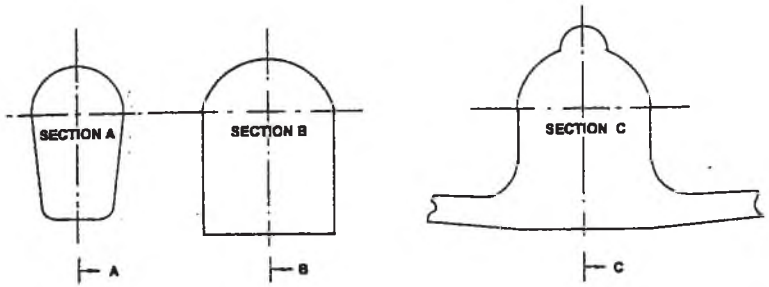
MILES M.5
SPARROWHAWK
G - ADNL C/N 239
6 September 1935

Researched and drawn by
K.J.Burke
31 January 1998
Sheet No 1

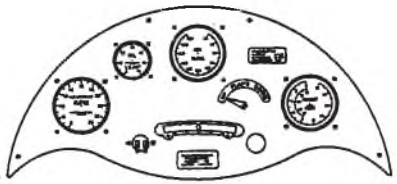
MILES LOGO
The bird is light blue with black outline and detail. The beak and claws are orange/yellow as is the lettering.

PROPELLER LOGO
The Fairey propeller logo is a water slide decal. The wings are Mid-blue outlined and detailed in dark blue. The triangle is white outlined in dark blue inside and out. Fairey is white on a mid-brown ground as is Propeller. The lower triangle is dark blue with a white aeroplane.





DASH BOARD
HONDURAS MAHOGANY
FRENCH POLISHED



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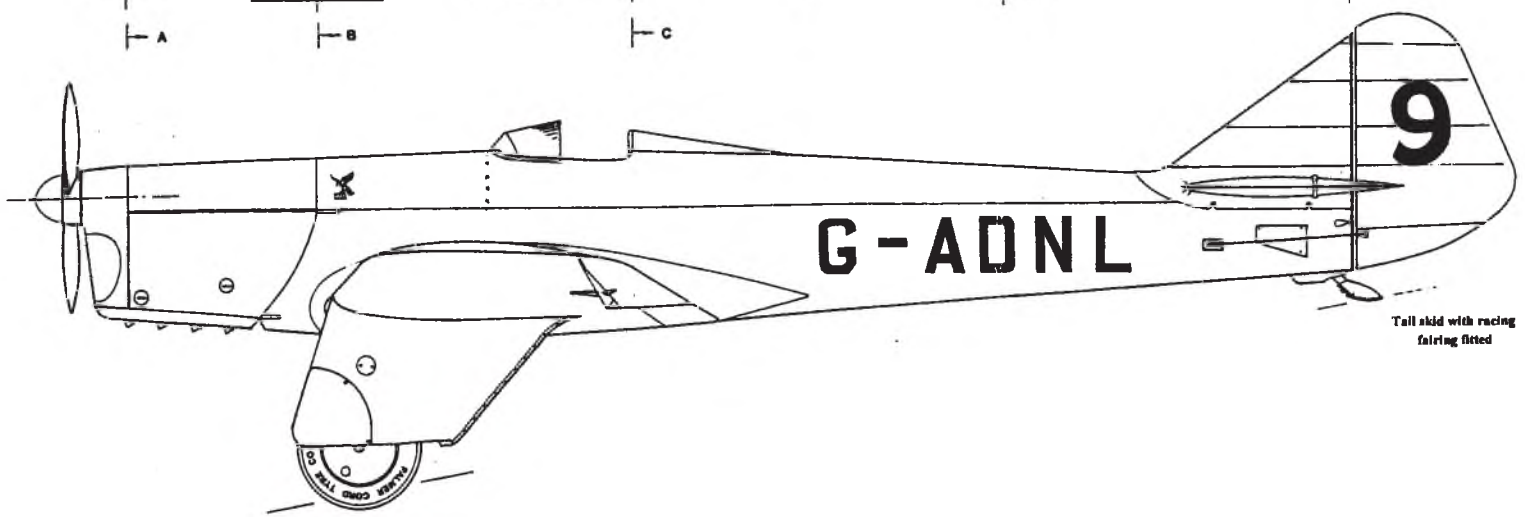
SCALE FEET

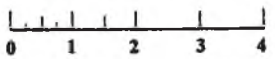


Tail skid with racing fairing fitted

FUEL GAUGE
ONE IN EACH WING TANK
WHITE DIAL
BLACK NUMERALS

The fuel gauge surround is 22swg aluminium, and was normally polished. At the time of the race it was painted cream.

SCALE FEET



MILES M.5
SPARROWHAWK
G - ADNL C/N 239
6 September 1935

Researched and drawn by
K.J.Burke
31 January 1998
Sheet No 2

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BMFA FREE FLIGHT SCALE INDOO

ALEX WHITTAKER RUBS SHOULDERS WITH THE INDOOR SCALE ELITE

As a harbinger of the outdoor Free Flight Scale season, the springtime Indoor F/F Scale Nats is a 'must' on any true scale fancier's calendar. Held at Nottingham University, 'The Notts Nats' is the supreme indoor scale meeting. Anyone who is anyone in Indoor Free Fliht Scale will be there, and most models will be effortlessly top drawer.

This year we saw a resurgence in the attendance of overseas competitors, whose models were of the highest standard. Spectatorship was up, as was the number of pilots competing in the majestically silly F/F Indoor Pylon Race. Kit Scale remains a great success, and entries were high. On such showing alone, Indoor

R NATIONALS NOTTINGHAM 2013

Free-Flight Scale looks to be on the up.

Necessity invents...

On a practical note, I got fed up with the abominably poor light in the Main Hall, and set up a makeshift portable studio upstairs. Here I endeavoured to ambush models as they came for up Judging. This meant that I shot more models than usual. However, some models were only static-judged downstairs, which meant that some slipped though the net. This is because they were flying or being judged when I was photographing. Ho-hum!

Another minor irritation in such a superb competition, is that models are seldom with their Pilots, so you are relying on the supplied documentation. You would be

The celebrated Notts Nats F/F Indoor Pylon Race. No, I don't quite believe it either.

Robert Pajas's lovely Avia Fokker F-1XD Trimotor built to 1/50th scale.

Chris Blanch's rubber powered Hellcat. First in Open Rubber.

Graham Banham's Open Rubber, 1/24th scale Focke Wulf Ta 152 H-D.

Well-respected French visitor Andre Petit's Southern Martlet. Placed Second in Open Rubber.

Paul Briggs' Sopwith Triplane Dixie II.

Deperdussin Monoplane 1912 from Paul Briggs.

Museum quality exhibit that flies! Greek visitor George Kandylakis' rubber powered Avro F 1912.

Mike Stuart's Curtiss P-6E Open Rubber model built to 1/20th scale.

Czech entrant Huk Martin's amazing Open Rubber 1/30th scale Siemens Schuckert E1.

Ken Bates' Kit Scale Veron Comper Swift.

Bill Dennis' Veron Kit Scale Nieuport 27.

Se5a in unusual Chilean markings from Dan Mellor. Placed first in Kit Scale.

amazed at how sparse such supplied information is. Generally they give no indication of their model's weight, span, or owners name. In fact, the fee-paying punter viewing the models on the upstairs judging tables would never have known the names and details of most of these fabulous models, or indeed, the names of their illustrious creators.

Of course, the downstairs judging tables are co-extensive with the busy Pits area in the Main Hall, so naturally, there is no viable public entry down there anyway. Overall, when it comes to viewing the models, I think the BMFA are missing a trick. It's like attending The Grand National with no means of knowing all the runners and riders. In my punter's view of the world, Judging is not an afterthought, it is a vital part of the competitive process. I reckon we should celebrate the significance of authoritative judging as much as competitive flying. Just a thought.

DH 9

Besides the snaps in this Photo Report, I felt that some models demanded a few words. Indeed, as I was setting up camp in the upstairs judging room, I immediately spotted a model of unusual quality. Greek Competitor George Kandylakis had brought his truly magnificent Airco DH 9. This was built to 1/20th scale, and is powered by a Gasparin brushless motor. The model had a Parkzone AR 6400 receiver to control ailerons, elevator, rudder and throttle. She was covered in tissue and finished in acrylics. The overall effect was stunning.

AVRO 'F' 1912

George Kandylakis also brought a delicate but hugely impressive Avro 'F' 1912. This Open Rubber model was scratch-built to 1/20th scale. It even had interior detail in the cabin, accessed by the top hatch. The quality of workmanship exceeded museum standards. The three cylinder engine alone was a work of art. It achieved the second highest score in Open Rubber.

Southern Martlet

As luck would have it, George was pipped to the post by another overseas entrant in Open Rubber, well-known and

Pretty Kit Scale (Micro-X) Pilatus PC6 from Ray Goodenough. 21" in span.

Open Rubber Farman F 45D, built to 1/5th scale by French visitor Jacques Martigny.

Less is more. Jonathan Whitmore's very attractive Chipmunk from the Frog Kit.

John Valiant's amazingly crafted foam Me 109. Note: all insignia hand painted onto tissue.

Gary Flack's nicely finished Peanut Scale Focke Wulf 190 D.

Tim Horne's pretty little Peanut Scale FRED.

Young Pilot Joe Robicano made the lists with his West Wings Widgeon.

Some entries needed a bit more work! Could be a Slingsby Cadet by Veron, entrant unknown.

Comet Curtiss Robin, from Bryan Lea. Note the scale prop transfer. 22" and weighs 32g.

One to watch. Joe Robicano with his West Wings Widgeon.

DH9, 1/20th, weighs 78g, from George Kandylakis. Exquisite quality. Placed Third in Co2 / Electric.

Brian Lever's Keil Kraft Stinson Station Wagon with its misplaced fuselage formers.

well-liked Frenchman, Andre Petit. His very crisply detailed red-and-silver Southern Martlet came Second in Open Rubber. Andre managed the highest Static Score.

Grumman Hellcat

Chris Blanch's very convincing Grumman Hellcat was the first WWII model I saw on the day. It took top place in Open Rubber, with a very good flying performance. Chris has managed to give a tiny Open Rubber scale model a feeling of gravity, a nice trick if you can manage it. I loved the dummy engine and the Invasion Stripes.

Avia Fokker F-IXD 1938

This model was built to 1/50th scale and was powered by a single rubber motor in the fuselage, with two windmilling dummy props outboard. As you can see from the photo the detail on the engines is exquisite and all the tiny legending is suitably neat. Placed 7th in Open Rubber.

Focke Wulf Ta 150 H-D

I love the Kurt Tank long-nosed variant of the Fw 190 Butcher-Bird. This Open Rubber model with Ikara prop was built by Graham Banham to 1/24th scale. I was impressed by the surface finish, since the model avoided that 'over-bright' look.

Lancaster (1)

Industrious Paul Briggs came with a whole air fleet of fine models, including a truly excellent scratch-built Lancaster, whose wheels and undercarriage alone were fantastic. One unkind critic pointed out that there should have been only two barrels in the nose turret, but I thought that was petty, even if it was true. Paul also had a lovely Veron Sopwith triplane, one of at least two on the day. However, it was his tiny Edwardian Deperdussin Monoplane 1912 which really intrigued. It appeared to be modelled on the Shuttleworth Collection example at Old Warden. I thought it was utterly splendid.

Lancaster (2)

First revealed in these pages in last month's BMFA Walsall Indoor Event, Pete Smart flew his astounding FF lancaster into second place in The Nats Co2 / Electric Class.

It was far too dark for flying shots in the gloomy hall, but I did get this fly-by in the melee of the FF Indoor Pylon Race.

West Wings Widgeon

Young F/F scale indoor man Joe Robicano impressed us all with his very smart Westland Widgeon in kit scale. It was great to see fresh talent amongst all these greybeards. Joe is learning fast, and will soon be a scale force to be reckoned with.

Siemens Schuckert E1

Martin Huk triumphed in Pistachio with his Fli-Bi-Baby. However, it was his amazingly smart Siemens Schuckert that caught my attention. This was an Open Rubber model, built to 1/30th scale. It had superb dummy engine, set-off with a fine laminated prop. It was in a lightly weathered high-key scheme which made a change from all those blood-red Fokkers. A very impressive model aircraft.

Curtiss P-6E Hawk

Mike Stuart's Open Rubber Class Curtiss Hawk was immaculately built to 1/20th scale. It had a very attractive and colourful scheme. I marvelled at the sheer opacity of the solid colours Mike had achieved, whilst maintaining a competitive flying weight. I will find out and get back to you.

Chipmunk

As we all know, with many commercial scale models, sometimes less is more. I feel this way about the classic Veron and Keil Kraft Flying Scale Rubber kits. Their apparently simple, but intensely clever, structures manage to convey the lines of the scale prototype faithfully, with no more than a few artfully chosen formers and longerons. Jonathan Whitmore's immaculate and very yellow Frog Chipmunk ably bore out my theseis. She was exquisite, but that underlying balsa structure was a masterpiece in economy of line.

SE5a

Dan Mellor's SE5a was a very convincing rubber model. This was in a most unusual silver scheme. Especially so, for those of us used to drab PC10! In fact it was a scheme in use in Chile between 1924-1930. The model was built from the well-known Aerographics kit. It came first in Kit scale.

Messerschmitt Bf 109E

For many of us happy punters in the gallery, anticipating this years's John Valiant model is like awaiting the next Bond film. John never disappoints. This year it was a stunning Me 109 in a desert (?) camouflage pattern. John has his own way with foam ,and this Peanut rubber model was immaculately put together. The foam model was scratch built of course, and finished with acrylics. John makes his own hand-painted insignia on tissue paper.

You have to see such models up close and personal to appreciate just how masterly they are.

Stinson Flying Station Wagon

Brian Lever enetere the famed, but in my day oddly rare. Keil Kraft Stinson Flying Station Wagon. The keen-eyed Judges spotted that Brian had inserted one fusleage former upside down. However, this intelligence bothered Lever The Elder not a bit. This was his first rubber scale model since 1954, so he wasn't fussed at all. Now its apoint of fact that, I was on the Farley's Rusks in 1954, so I said nowt...

The verdict ... on the up!

UK Entries up; overseas entries up; Indoor F/F Pylon entries up; crowd attendances up. The whole day was busy, bustling, an involving. The crowds in the gallery were three deep for some events. The specialist stalls had lots of goodies to buy. The cafe was reasonably priced. I would deduce form all these indications that the BMFA FF Indoor Scale Nats is in triumphant rude health. Would I change anything, or have the temerity to suggest improvements? Well, yes. This year a bold attempt had been made, upstairs, to allow we punters to view some of the models as they awaited Judging. Models were on tables, safely behind a protecting rope. This was an inspired idea. I would extend it. I would have all the models in all classes Judged upstairs, thus giving we punters the chance to view them between bouts. As it is - you may, or may not - get a glimpse of tiny model flying from the crowded gallery, but then you only have a fifty-fifty chance of enjoying the model close-up. This is a shame, given the joy of examining these midget gems at close range. Despite this small suggestion, it was a bumper day for scalistas!

Acknowledgements

Thanks to the whole BMFA F/F Scale Team, and in particular to Gordon Warburton FSMAE (yet again!) for his prompt overnight delivery of the Official Results. ■

Brave and ambitious. Peter Smart's FF Lancaster bomber flew astoundingly well. Placed Second in Co2 / Electric.

Andre Petit (left) has a natter with Mike Hadland about his Jungmann. Andre Placed First, Mike Second, in Peanut Scale.

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Techno Scale

Mike searches

The website at http://discovery-aeromodels.com has been created for those who like control-line Models. Yuriy and Andrey Yatsenko have been in the Ukrainian national team since 1992 as flyers of control-line aerobatic models (F2B FAI class). They design and build control-line models, and engines and accessories. Not only for F2B (control line aerobatic class), but also for Team Racing (F2C), speed model class (F2A), and Combat (F2D), also F4B (scale C/L models). Their C/L aerobatic version of the Yakovlev Yak-55 does look rather splendid.

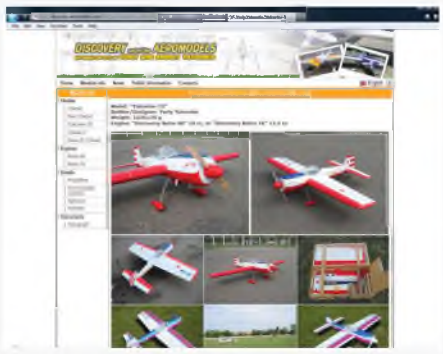
The **Leek & Moorland Model Gliding Association** was formed on the 7th August 1973 by twelve members who's flying sites were under threat. They each put £1.00 into a contingency fund for postage and phone calls etc. and the club was born. The LMMGA is situated near Leek in the Peak District of Staffordshire UK, and has over one hundred members of all age groups. They have four main flying sites which cover most wind directions and are available to fly all year round. They also maintain two websites! The one at www.lmmga.org is very comprehensive and demonstrates the diversity of their members' interests. Good scale content is shown in the excellent and extensive photo galleries.

If very large **model airliners** are your thing then you must visit an amazing Argentinian website at www.boeing727.com.ar These are the web pages for the civil aviation enthusiast. Yes, the Boeing 727 is there alongside five Airbus variants and a Concorde. All appear to be to 1/16 scale which means 3-4m span and length! Some very good video footage is available on this website.

Spotted on the **Red Rocket Hobbyshop** at www.redrockethobbies.com is the first-ever 4-channel twin-engine ultra-micro. The ParkZone Ultra Micro Series Mosquito MK VI brings this famous British WWII fighter to life in your own backyard. Scale details include the twin motors, authentic mossy camouflage paint scheme, moulded clear plastic canopy, landing gear with steerable tail wheel, and even dummy cannons. The 4-channel control with elevator, throttle, rudder, and aileron provide full control for precise flying and manoeuvrability.

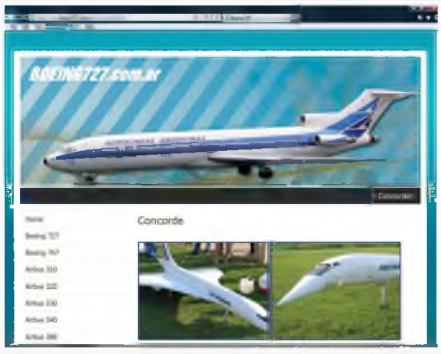
Tailored Pilots offer a new range of ultra-detailed, realistic scale pilot figures. Their aim was to create model pilots that had realistic proportions, built to the highest possible standards at an affordable price. Even sunglasses and wrist watches can be provided! Pilots are available in 1/7th, 1/6th, 1/5th, 1/4 and 1/3rd scales with 1/2 scale coming soon! Some of their customers require a pilot to suit a particular model, making it difficult to buy an off the shelf figure. No problem, they can tailor make their pilots to cater for your needs. Tailored Pilots are part of YT International. Just click the banner on the home page at www.ytinternational.co.uk

Nigel Tarvin, having purchased Reid's Model Products and Classic Airplans, decided to open **Tarvin Model Products** so that he could expand his product line to better serve model flyers. Browsing his website at http://tarvinmodelproducts.com he appears to have done just that as evidenced by his version of Ercoupe shown in the screen-shot. This was a very popular civilian aircraft that has been flown by



Yuriy and Andrey Yatsenko's C/L version of the Yakovlev Yak-55 does look rather splendid.

The LMMGA's website contains good scale content in the excellent photo galleries.



If very large model airliners are your thing then visit this amazing website.

ParkZone's Ultra-Micro Mosquito MK VI brings this famous British WWII fighter to life.

Tailored Pilots offer a new range of ultra-detailed, realistic scale pilot figures.

The Ercoupe was a very popular civilian aircraft that has been flown by thousands.

cyber space for more TechnoScale Topics...

thousands. Their plans were designed by noted giant scale modeller, Jim Messer, in the 1980's, so this design has definitely met the test of time. This Ercoupe is a sport scale all wood model that makes a good first or second giant scale plane.

I always enjoy visiting **Belair** who maintain a web presence at http://belairkits.com as there always seems that there is something new. Belair use the latest laser cutting technology to produce Parts Sets from some of the world's top model designers, including Nick Ziroli, Wendell Hostetler, Don Smith, Jerry Bates, Jim Pepino, Dave Platt, Dan Palmer, Vailly Aviation, Kerry Sterner and others. This month's find was the partial kit for the Jim Pepino designed Supermarine S6B Schneider Trophy winner and forerunner of the Spitfire.

Douglas Bullard's website at www.nur-flugel.com encompasses just about everything you wanted to know about flying wings. It covers Northrop, Horten, Lippisch, and much more! Just the place to look for that next scale project. The finished Horten Ho Va, the world's first composite aircraft is shown in the screenshot. But who were the Hortens, and why haven't we heard more about them? Reimar and Walter Horten were two brothers who were born and raised in the Germany of the early 20th century. This was an exciting time for aviation, as almost everything was new, and there was plenty of room for new designs. It's a fascinating story - stay too long and you will be hooked!

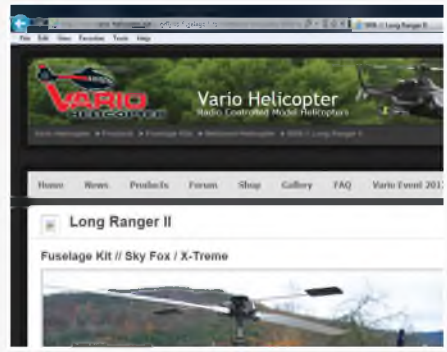
Vario Helicopter, based in Gräfendorf, Germany was established in 1974 and has now become one of the foremost players in the supply of scale helicopters. Logging onto their main website at www.vario-helicopter.net will reveal their extensive product range, including the Bell Long Ranger 11 shown in the screen-shot. The Bell 206L Long Ranger is a stretched variant of the Jet Ranger with seating for seven. Since their first delivery in 1975, Bell has produced more than 1,700 Ls across all variant types.

The **Volaré Products** Web Store may be found at the URL of www.teamwet-works.com/claymore/volare This website is always worth a visit for their extensive range of rubber powered 'Peanut' model plans. All plans are designed to conform with the Flying Aces Club Rules. All plans have been built, tested and flown to at least the FAC minimum of 20 seconds. Several of the plans have been FAC Contest winners! All plans are designed and drawn using CADD (Computer Aided Design and Drafting) technology. At the moment the delightful "Legal Eagle" Ultra-light plan is available as a free download.

Magnets do not immediately come to mind with regards to model aircraft but the relatively new Ultra High Performance Neodymium Magnets from **First4Magnets.com** might make you think again! These are small enough, light enough and most importantly, powerful enough to be used for hatch catches, securing rubber model nose blocks and as aids to building straight and true. They come in a range of diameters from 1mm up to 50 mm and in a variety of thickness. They are easily fixed to a structure using epoxy adhesive. Check them out at www.first4magnets.com they are quite inexpensive.

The Jim Pepino designed Supermarine S6B Schneider Trophy winner.

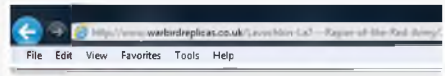
The finished Horten Ho Va, the world's first composite aircraft.



The Bell 206L Long Ranger is a stretched variant of the Jet Ranger.

The delightful "Legal Eagle" Ultra-light peanut plan is available as a free download.

Neodymium Magnets from First4Magnets.com have many modelling uses.



That's all there is time for from me this month so tap that rodent and if you find something out there of interest that might be good to share, email me at:

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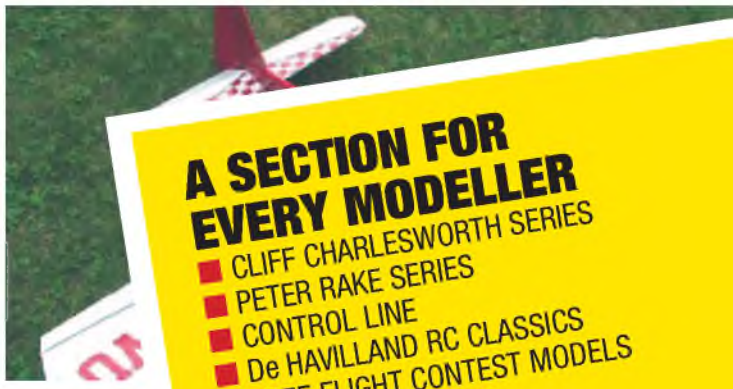

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SS25066 - KC-135 STRATOTANKER Walk Around (Soft cover)
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Many air forces can conduct missions such as air superiority and ground attack, but only the US Air Force has truly global reach. For more than five decades, the essential enabler of this global reach has been the KC-135 Stratotanker. Unarmed and unglamorous, the KC-135 has been one of the most successful and enduring aircraft in US Air Force history. Primarily based on the author's extensive access to operational KC-135 aircraft on the ground and in flight, this book contains the most detailed photographic documentation of the KC-135 inside and out that has ever been published, as well as color profiles of the KC-135R in the markings of every major USAF command that has operated that variant. Illustrated with 240 photographs, detailed line drawings and color profiles; 88 pages.

SS10230 - S-3 VIKING IN ACTION (Soft Cover)
SS50230 - S-3 VIKING IN ACTION (Hard Cover)

The Lockheed S-3 Viking was developed in the late 1960s to serve as a dedicated carrier-based anti-submarine aircraft. Over the years, it evolved into an outstanding surveillance and anti-surface platform, effective not only against submarines but also large and small surface ships. The Viking and its main variant, the highly-classified ES-3A Shadow electronic surveillance aircraft, played a key role in the Cold War and in the conflicts of the 1990s. The book is one of the few publications to tell the Viking story and is packed with photos and detailed line drawings, all depicting the aircraft's weapons, paint schemes, sensors and interior. It also provides an overview of some of the more significant variants that were studied, but never fully pursued, such as the Carrier On-Board Delivery (COD) and dedicated (KS) refueling variants. It also discusses the aircraft's role in Operation Desert Storm and how the lessons learned from that conflict impacted the Vikings' mission during the latter part of the 1990s and early 2000s. Illustrated with 186 photographs, line drawings, and numerous color profiles; 80 pages.

SS25070 - Heinkel He 111 Walk Around (Soft cover)
SS65070 - Heinkel He 111 Walk Around (Hard cover)

The Heinkel 111 saw service on all Germany's military fronts in the European Theater of World War II. The He 111 entered the war as a medium bomber, supporting Wehrmacht ground campaigns. After the tide in the conflict had turned against the Reich, and air superiority had been achieved by the Soviet Union and the Western Allies, the Heinkel 111 was largely relegated to transport functions. This iconic warplane had its origins as a cutting-edge civil airliner in the mid-1930s. But war was looming and before long it was adapted for use as a bomber. The first mass-produced versions, the He 111-E and He 111-F, served in the Condor Legion with Francisco Franco's Nationalist forces in the Spanish Civil War, paving the way to further military engagement once World War II broke out. Although produced in large numbers and exported to many countries before and during the war, few examples of the He 111 survive today. This walk around features detailed photographic images of the He 111-P1 restored and preserved in Norway, and the He 111-H20 on display in the RAF museum in Britain.
Illustrated with 228 photographs, detailed line drawings, and color profiles. 88 pages.

SS25041 - A-4 SKYHAWK WALK AROUND (Soft Cover)
SS65041 - A-4 SKYHAWK WALK AROUND (HardCover)

The carrier-capable Douglas A-4 Skyhawk is one of the most successful modern combat aircraft. During the 25 years in which the A-4 was on the production line, 2,960 Skyhawks were built. A relatively light aircraft, with a maximum takeoff weight of 24,500 pounds and with a top speed exceeding 600 mph, the Skyhawk was operated not only by the US Navy and Marines but also by the air forces of Australia, New Zealand, Israel, Malaysia, Argentina, Singapore, Brazil, Indonesia, and Kuwait. Introduced in 1956, Skyhawks played major roles in the Vietnam War, the 1973 Arab-Israeli October War, and the Falklands/Malvinas Conflict in 1982. With a reputation for toughness and agility, Skyhawks remained a part of the American arsenal for nearly half a century - the U.S. Navy retired the A-4 as recently as 2003. Meanwhile, the battle-tested warrior continues to serve today other militaries around the world. Illustrated with 205 photographs, color profiles, and detailed line drawings; 80 pages.

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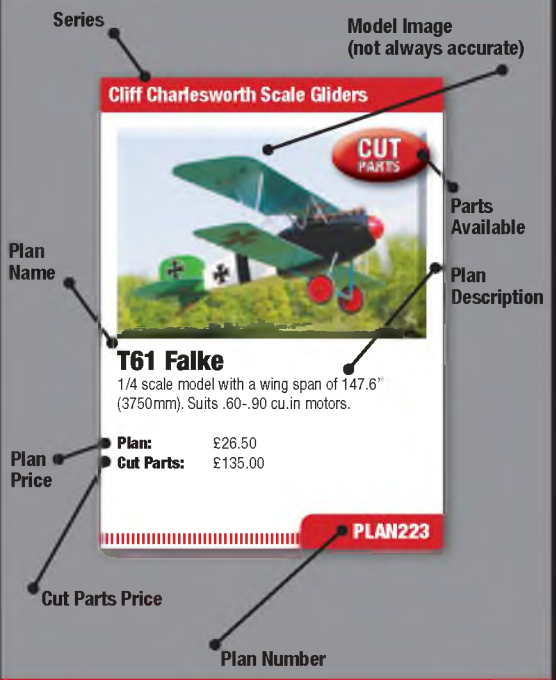

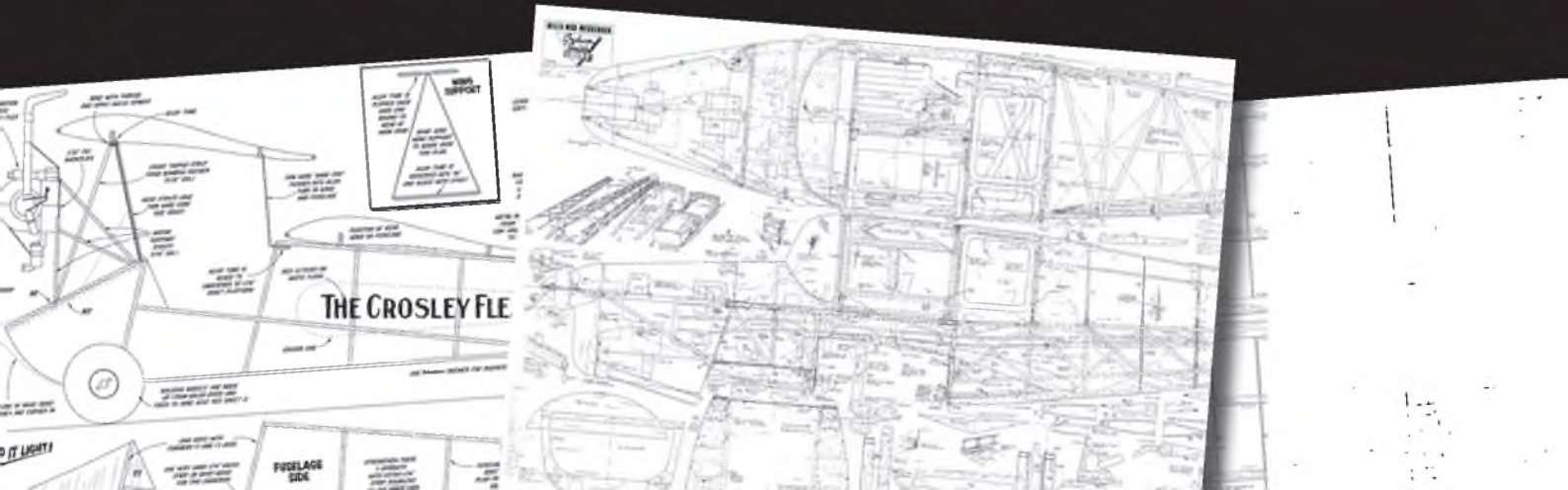

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PLAN268

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Plan: £24.50
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PLAN4

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1/4 scale replica of the famous pre-WW2 vintage gull-wing German sailplane. This is one for the enthusiast who loves building. Three large sheet plan.

Plan: £28.50
Cut Parts: £135.00

PLAN158

Cliff Charlesworth Scale Gliders

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1/4 scale 157.5" (4000mm) span replica of one of the best and most elegant pre-glass fibre era club single-seater sailplanes. A great flier. Two sheet plans.

Plan: £24.50
Cut Parts: £130.00

PLAN6

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Grunau Baby

1/4 scale superb example of the machine which is the epitome of pre-WW2 vintage open cockpit gliders. 133.5" (3390mm) wingspan. Two sheet plan.

Plan: £24.50
Cut Parts: £125.00

PLAN83

Cliff Charlesworth Scale Gliders

Hutter H-17

1/3 scale 129.9" (3300mm) span replica of a lovely vintage scale 'floater'. Light, yet tough. Two sheet plan.

Plan: £22.50
Cut Parts: £130.00

PLAN81

Cliff Charlesworth Scale Gliders

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1/4 scale 147.5" (3750mm) wingspan model of an elegant high performance sailplane. Two large sheet plan.

Plan: £24.50
Cut Parts: £125.00

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Kaiser Ka-7

1/4 scale 157.5" (4000mm) wingspan model of the famous German two-seater glider. Performance is superb and simulates the full size very nicely. Plans on two large sheets.

Plan: £24.50
Cut Parts: £125.00

PLAN101

Cliff Charlesworth Scale Gliders

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1/4 scale 147.6" (3750mm) wingspan Class 1 scale model of the most popular Club glider. Very docile and a joy to fly. Two large sheet plans.

Plan: £24.50
Cut Parts: £125.00

PLAN98

Cliff Charlesworth Scale Gliders

MU13-D3

1/4 scale 157.5" (4000mm) span, super lightweight model of the famous German Soarer. Three sheet plan.

Plan: £26.50
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PLAN125

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Lo 100

1/4 scale 98.4" (2500mm) span model of a famous aerobatic sailplane. Two sheet plan.

Plan: £22.50
Cut Parts: £125.00

PLAN217

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Olympia 2B (DFS Meiser)

1/4 scale 147.6" (3750mm) span of a really lovely soarer of the pre-glass fibre 'hotship' era. Two large sheet plans.

Plan: £22.50
Cut Parts: £145.00

PLAN139

Cliff Charlesworth Scale Gliders

SF28A Tandem Falke

1/4 scale two-seat version of the T61, with a wingspan of 157.5" (4000mm). For .60-.90 cu.in. motors.

Plan: £28.50 **Cut Parts:** £140.00

PLAN176

Cliff Charlesworth Scale Gliders

T61 Falke

1/4 scale model with a wing span of 147.6" (3750mm). Suits .60-.90 cu.in motors.

Plan: £26.50
Cut Parts: £135.00

PLAN223

Peter Rake Series

Sopwith 1.1/2 Strutter

Peter Rake's 36" model for electric power. Published in FSM February 2005 issue 63 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN395

Peter Rake Series

Ponnier 1913 Racer

Model designed by Peter Rake for electric power of the pioneer era racing plane 50" wingspan. Published in FSM December 2006 and January 2007 issues 85 and 86 4 sheet plan.

Plan: £24.95
Cut Parts: £50.00

PLAN384

Peter Rake Series

White Monoplane 1919

Peter Rake's simple to build sport scale model for 3 channel RC and geared 400 electric motor power wingspan 40.5". Published in FSM December 2002 issue 37 2 sheet plan.

Plan: £14.95
Cut Parts: £125.00

PLAN420

Peter Rake Series

Farman Sport Monoplane

24" model for electric power designed by Peter Rake for electric power of the 1926 French entry for the Coupe Zenith. Published in FSM August 2007 issue 93.

Plan: £19.95
Cut Parts: N/A

PLAN379

Peter Rake Series

Bristol Scout Model 'C'

A 26.1/2" wingspan, sport scale model designed by Peter Rake for IPS electric power, LiPo batteries and three-function control. Published in FSM September 2010 issue 130 2 sheet plan

Plan: £19.95
Cut Parts: £50.00

PLAN352

Peter Rake Series

Duigan Tractor Biplane

A 27" span, IPS-powered scale model designed by Peter Rake. Published in FSM May 2008 issue 102.

Plan: £19.95
Cut Parts: N/A

PLAN372

Peter Rake Series

Sopwith Camel

An IPS-size 27" model designed by Peter Rake for electric power. Published in FSM July 2008 issue 104.

Plan: £19.95
Cut Parts: N/A

PLAN370

Peter Rake Series

Fokker Eindecker 280

A 36" wingspan Peter Rake sport scale model for geared 280 motors and three function RC. Published in FSM May 2005 issue 66 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN393

Peter Rake Series

Sopwith Swallow/Scooter

A 29" span electric-powered model designed by Peter Rake. Published in FSM December 2007 issue 97.

Plan: £19.95
Cut Parts: N/A

PLAN376

Peter Rake Series

Castiabert IV

A 30" span model of an unusual Argentine aircraft designed by Peter Rake for electric power. Published in FSM April 2007 issue 89.

Plan: £19.95
Cut Parts: N/A

PLAN381

Peter Rake Series

Fokker F.II

Two sheet plan of the 30" wingspan RC electric model by Peter Rake published in November 2012 (issue 156).

Plan: £9.95
Cut Parts: £35.00

PLAN338

Peter Rake Series

Fokker D.VIII

A 30" wingspan model for experienced fliers using geared 150 motor and 3 function RC designed by Peter Rake. Published in FSM December 2003 issue 49.

Plan: £9.95
Cut Parts: N/A

PLAN410

Peter Rake Series

Pfalz EIII

A 30" scale model of the early WWI Scout aircraft. Designed for electric power by Peter Rake. Published in FSM October 2011 issue 143.

Plan: £9.95
Cut Parts: £35.00

PLAN347

Peter Rake Series

Sperry Messenger

A 30" span, 1/8th scale model designed by Peter Rake for electric power. Published in FSM December 2009 issue 121 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN359

Peter Rake Series

Rumpler Taube

Two sheet plan of the 30" Rumpler Taube by Peter Rake for electric power published in September 2012 (issue 154).

Plan: £9.95
Cut Parts: £39.00

PLAN336

Peter Rake Series

Sopwith Dolphin

Peter Rake's 33.5" scale model for electric power and 3 channel RC and 400 geared motor. Published in FSM September 2002 issue 34.

Plan: £9.95
Cut Parts: N/A

PLAN423

Peter Rake Series

Isaacs Fury

A 33" (838mm) span electric powered model designed by Peter Rake. Published in FSM June 2006 issue 79 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN388

Peter Rake Series

Bjorn Andreasson BA-4B

A 1/6th scale 34.5" electric-powered model, designed by Peter Rake. Published in FSM April 2010 issue 125 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN356

Peter Rake Series

Morane Saulnier Type G

A 34" wingspan scale model designed by Peter Rake for electric power using small brushless motors, LiPo batteries and three-function control. Published in FSM October 2009 issue 119 2 sheet plan

Plan: £14.95
Cut Parts: £50.00

PLAN360

Peter Rake Series

Morane Saulnier Racer

A 34" two sheet plan by Peter Rake for electric power. Published in FSM December 2012 issue 157.

Plan: £9.95
Cut Parts: £35.00

PLAN339

Peter Rake Series

Avro Arrowscout

A 36" scale model for electric power and three-or four-function control systems designed by Peter Rake. Published in FSM June 2009 issue 115.

Plan: £19.95
Cut Parts: N/A

PLAN364

Peter Rake Series

R.A.F BE2c

Peter Rake's 35.25" easy to build and fly model for 400 electric motor or IC and 3 channel RC. Published in FSM March 2002 issue 28.

Plan: £9.95
Cut Parts: N/A

PLAN429

Peter Rake Series

Samolot WZ-XI 'Kogutek'

A scale electric powered model designed by Peter Rake wingspan approx 35". Published in FSM September 2011 issue 142.

Plan: £9.95
Cut Parts: £35.00

PLAN346

Peter Rake Series

Avro 504K

A 36" wingspan electric model for 3 function RC designed by Peter Rake. Published in FSM July 2003 issue 44 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN415

Peter Rake Series

Moska MB bis

Peter Rake's 36.5" (927mm) span sport scale model, designed for an inexpensive 300 size brushless outrunner motor and three function radio control. Published in FSM June 2005 issue 67 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN392

Peter Rake Series

Bristol F2B Brisfit

Peter Rake's 36" wingspan model for electric power and three function RC. Published in FSM March 2006 issue 76 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN389

Peter Rake Series

Sopwith Camel

A 36" span, electric-powered scale model design by Peter Rake. Published in FSM December 2004 issue 61 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN397

Peter Rake Series

SE5a

A 36" wingspan, electric powered scale model for four function control by Peter Rake. Published in FSM July 2007 issue 92.

Plan: £19.95
Cut Parts: N/A

PLAN380

Peter Rake Series

SPAD XIII

A 36" wingspan, electric powered scale model designed by Peter Rake, 3 sheet plan. Published in FSM March and April 2007 issues 88 and 89 3 sheet plan.

Plan: £19.95
Cut Parts: £50.00

PLAN382

Peter Rake Series

Ansaldo A.1 Balilla

A 37" wingspan electric powered scale model designed by Peter Rake. Published in FSM May 2011 issue 138 and June 2011 issue 139.

Plan: £19.95
Cut Parts: £45.00

PLAN343

Peter Rake Series

Powell PH-2 Racer

A 1/5th scale 37" electric-powered model designed by Peter Rake. Published in FSM September 2009 issue 118 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN361

Peter Rake Series

Fokker D.VII Electric

Peter Rake's 38" RC electric model for 400 size motors of the WW1 German Fighter. Published in FSM February 2004 issue 51 2 sheet plan.

Plan: £14.95
Cut Parts: £55.00

PLAN406

Peter Rake Series

S.E.5

Peter Rake's 38" span for electric power and three or four-function control systems. Published in FSM August 2004 issue 57 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN400

Peter Rake Series

Waco SRE

A sport scale 38", electric powered model designed by Peter Rake. Published in FSM October 2004 issue 59 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN398

Peter Rake Series

De Havilland DH 82a Tiger Moth

Peter Rake's 39.5" simplified model for 400 size motors 3 channel RC. Published in FSM July 2002 issue 32 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN425

Peter Rake Series

Armstrong Whitworth FK 3

Peter Rake's electric powered scale model for small out runner motors and three channel control, operating rudder, elevator and throttle, wingspan 40". Published in FSM February 2011 issue 135.

Plan: £9.95
Cut Parts: £45.00

PLAN341

Peter Rake Series

Huntington H.12

Peter Rake's 40" simple scale model for 400 electric power and 3 channel RC. Published in FSM June 2002 issue 31 1 sheet plan.

Plan: £9.95
Cut Parts: N/A

PLAN426

Peter Rake Series

Sopwith Pup

A 1/8th scale 40" model designed by Peter Rake for electric power. Published in FSM July 2009 issue 116.

Plan: £19.95
Cut Parts: N/A

PLAN363

Peter Rake Series

Morane Saulnier A1

A 42.75" span electric-powered scale model designed by Peter Rake. Published in FSM August 2009 issue 117.

Plan: £19.95
Cut Parts: N/A

PLAN362

Peter Rake Series

AIR-1

A simple, but attractive, 42" scale model of a little known Alexandr Yakolev's Russian prototype. Designed by Peter Rake. Published in FSM April 2011 issue 137.

Plan: £9.95
Cut Parts: £35.00

PLAN342

Peter Rake Series

Albatros D.II

Albatros DII 42" plan by Peter Rake for electric power and four function RC. Published in FSM November and December 2008 issues 108 and 109.

Plan: £24.95
Cut Parts: £55.00

PLAN367

Peter Rake Series

B.A.T. FK-24 Baboon

A 42" span model, designed by Peter Rake for electric power. Published in FSM July and August 2006 issues 80 and 81 4 sheet plan.

Plan: £24.95
Cut Parts: £50.00

PLAN387

Peter Rake Series

Fokker D.VIII

A 1/8 scale electric powered model designed by Peter Rake wingspan 42". Published in FSM June 2012 issue 151 2 sheet plan.

Plan: £14.95
Cut Parts: £75.00

PLAN408

Peter Rake Series

DFW C.V

An electric powered, 1/12 scale model of the German WW1 reconnaissance designed by Peter Rake wingspan 43. Published in FSM December 2011 issue 145 and January 2012 issue 146.

Plan: £19.95
Cut Parts: £95.00

PLAN348

Peter Rake Series

FE8

A sport-scale model for electric power, designed by Peter Rake wingspan 43". Published in FSM November 2006 issue 84 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN385

Peter Rake Series

Lublin R-XII

A sport scale 43", electric-powered model, designed by Peter Rake. Published in FSM February 2010 issue 123 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN358

Peter Rake Series

Albatros D.III

1/8th scale model, designed by Peter Rake for electric power and four function RC wingspan 44". Published in FSM June and July 2010 issues 127 and 128.

Plan: £24.95
Cut Parts: £89.00

PLAN354

Peter Rake Series

Sperry Monoplane

Peter Rake's simple 44.75" semi-scale model for geared 400 electric power and 3 channel RC. Published in FSM August 2002 issue 33 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN424

Peter Rake Series

Wright WP-1

A simple scale model for electric power, designed by Peter Rake wingspan 45". Published in FSM November 2010 issue 132 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN350

Peter Rake Series

Sablier S-12

Peter Rake's 45" wingspan model for electric power and 3 channel RC. Published in FSM Jan/Feb 2002 issue 27.

Plan: £9.95
Cut Parts: N/A

PLAN430

Peter Rake Series

Sopwith Triplane

A 45" wingspan electric model designed by Peter Rake of the WW1 Triplane. Published in FSM November 2003 issue. 48 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN411

Peter Rake Series

Stahlwerk

A simple 45" wingspan sport scale model by Peter Rake for 400 size electric motors and 3 channel RC. Published in FSM July/Aug 2000 issue 17 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN439

Peter Rake Series

Bristol M1C

1/8th scale 46" electric-powered model, designed by Peter Rake. Published in FSM August 2008 issue 105.

Plan: £19.95
Cut Parts: N/A

PLAN369

Peter Rake Series

Eastbourne Monoplane

Peter Rake's 48" wingspan three function RC model for electric power. Published in FSM October 2007 issue 95.

Plan: £19.95
Cut Parts: N/A

PLAN378

Peter Rake Series

Westland Widgeon IIIA

An electric powered scale model designed by Peter Rake wingspan 48". Published in FSM February 2012 issue 147.

Plan: £9.95
Cut Parts: £65.00

PLAN349

Peter Rake Series

BE12a

A 49" (1245 mm) wingspan 1:10 scale electric-powered model designed by Peter Rake. Published in FSM March 2010 issue 124 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN357

Peter Rake Series

Martinsyde G100 Elephant

A 1/9th scale, 50" wingspan model of a WWI scout, designed by Peter Rake. Published in FSM October 2010 issue 131 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN351

Peter Rake Series

Culver Dart

Electric powered model designed by Peter Rake with a 53.5" wingspan. Published in FSM April and May 2012 issues 149 and 150 4 sheet plan.

Plan: £24.95
Cut Parts: £80.00

PLAN401

Peter Rake Series

Morane Saulnier Type N

An electric scale 55" model for three or four function control. Designed by Peter Rake Published in FSM July 2011 issue 140 and August 2011 issue 141.

Plan: £19.95
Cut Parts: £70.00

PLAN345

Peter Rake Series

Fokker E.III Eindecker

A 60" wingspan electric powered sport scale model designed by Peter Rake. Published in FSM September 2003 issue 46 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN413

Peter Rake Series

Fournier RF-4

A 60" span, sport scale model for electric power and four-channel control, designed by Peter Rake. Published in FSM August 2010 issue 129 2 sheet plan.

Plan: £14.95
Cut Parts: £50.00

PLAN353

Peter Rake Series

Albatros D.Va

Three sheet plan for the 1/6 59" Albatros D.Va by Peter Rake for electric power featured in July 2012 (issue 152)

Plan: £19.50
Cut Parts: £120.00

PLAN335

Peter Rake Series

Udet Flamingo

Two sheet plan of the 38" (965mm) wingspan electric powered scale model designed by Peter Rake published in October 2012 (issue 155)

Plan: £9.95
Cut Parts: £55.00

PLAN337

Peter Rake Series

Farman F450 'Moustique'

A 48" span, four function, electric scale model designed by Peter Rake. Published in FSM April 2008 issue 101.

Plan: £19.95
Cut Parts: N/A

PLAN373

Peter Rake Series

Nieuport 28

Peter Rake's 36" simplified scale model for geared electric 400 motors or IC and 3 channel RC. Published in FSM March/April 2001 issue 21.

Plan: £11.95
Cut Parts: N/A

PLAN434

Peter Rake Series

Ponnier L1

Peter Rake's 35.4" wingspan model for 3 channel RC and either electric 400 size motors or 1cc IC motors. Published in FSM Nov/Dec 2000 issue 19 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN437

Peter Rake Series

Marinsyde S.1

Peter Rake's 36" WW1 scout model for 3 channel RC and electric or small diesel power. Published in FSM July/Aug 2001 issue 24 2 sheet plan.

Plan: £14.95
Cut Parts: N/A

PLAN432

Peter Rake Series

Waco YMF-5

Designed by Peter Rake, this 60" (1524 mm) wingspan replica of the elegant 1930s American classic biplane can be built for either electric (using a 4120 size motor/4s or 5s 5000 battery) or 10 cc (.60 cu.in.) I.C. power. Three sheet plan.

Plan: £17.50
Cut Parts: £110.00

PLAN328

Peter Rake Series

Martin MO-1

Designed by Peter Rake this 60" wingspan replica of the US monoplane for electric power. Published in FSM May and June 2013

Plan: £24.95
Cut Parts: £49.00

PLAN464

Control Line

Douglas A-26 Invader

Mike Keville's classic WWII Attack Bomber Half-A Profile Scale Control Line Model with 35.7" wingspan published in AeroModeller issue 919 (ADH001) January 2013 1 sheet plan

Plan: £7.95
Cut Parts: N/A

PLAN445

Control Line

Baby Flight Streak

26" Control line sports stunt and combat model by George Aldrich for .049-.060 size motors. First Appeared in Aviation Modeller International - November 1996.

Plan: £10.00
Cut Parts: N/A

PLAN26

Control Line

Big Fry

A 19 size control line stunter by Ron Prentice designed in 1948, 42". Published in AMI December 1996.

Plan: £9.95
Cut Parts: N/A

PLAN456

Control Line

Cavalier

Out-of-the-rut control line biplane, with good looks and a fine aerobatic performance to match. 36" (914mm) span model suit .30-.36 cu.in. size motors. First Appeared in: Aviation Modeller International - January 1998.

Plan: £11.25
Cut Parts: N/A

PLAN35

Control Line

Liquidator Mk3

Frank Dowling's 36.5" combat model for 2.5cc engines. Published in AMI July 1997.

Plan: £9.95
Cut Parts: N/A

PLAN462

Control Line

Midget Mustang

Ian Peacock brings the classic 1948 Dave Long design up to date for the control line clubman sport stunt enthusiast, 38".

Plan: £9.95
Cut Parts: N/A

PLAN449

Control Line

Small Fry

The original 27.5" Ron Prentice control line model for 1.3-1.5cc engines that won various events in '48-'50. Published in AMI October 1996.

Plan: £9.95
Cut Parts: N/A

PLAN453

Control Line

DE Havilland 94 Moth Minor

A sport scale model of the light two seat De Havilland trainer. Construction method makes extensive use of cardboard. Model spans 73".

Plan: £15.50
Cut Parts: N/A

PLAN289

Control Line

F.A.R.R.T

A Fast Aerobatic 27.5" Roundy Roundy Thing for control line fun. A really tough all-wing machine for .19 power. First Appeared in: Aviation Modeller International - July 1997.

Plan: £20.00
Cut Parts: N/A

PLAN61

Control Line

Fifty Four

An attractive vintage style control line stunter for 2.5-3.5cc diesels or glow motors. Wing span 37.5" (953mm). First Appeared in: Aviation Modeller International - October 1998.

Plan: £11.25
Cut Parts: N/A

PLAN64

Control Line

Frog Hawker Hurricane

The Frog profile scale model plans. 24" (610mm) span model suits 1-2cc motors. First Appeared in: Aviation Modeller International - February 1996.

Plan: £10.00
Cut Parts: N/A

PLAN69

Control Line

Frog Profile Mosquito

The kit for Frog's once popular control line profile scale D.H. Mosquito has long since ceased to be available, but control line fliers can still get the plan. 36" (914mm) span model suits two 1-1.5cc motors. First Appeared in: AMI - December 1995.

Plan: £11.50
Cut Parts: N/A

PLAN66

Control Line

Kismet

A classic style control line aerobatic model from Australia featuring coupled flaps and elevator controls. Graceful semi-elliptical wing shape enhances elegant appearance. 50" (1278mm) span model requires .46-.50 size motor. First Appeared in: AMI - March 1996.

Plan: £11.50
Cut Parts: £65.00

PLAN99

Control Line

Legacy 40

A fully-up-to-date, 58" contest quality, control line aerobatic design from one of USA's leading experts. The design incorporates all the experience gained by the designer over many years of contest flying. For .40 size engines. First Appeared in: AMI- October 2003.

Plan: £12.50
Cut Parts: N/A

PLAN231

Control Line

Line Dancer

Profile fuselage control line sports model with a sparkling performance on a .049 size motor. Wing span 27" (686mm). First Appeared in: Aviation Modeller International - June 1998.

Plan: £10.00
Cut Parts: N/A

PLAN104

Control Line

Mr. Brickhaus Opus'

A proven contest winning control line aerobatic design, by respected US aerobatics expert Allen Brickhaus. 690sq.in. wing area model utilises foam wing construction and is designed for .61 size motors. First Appeared in: Aviation Modeller International - June 2002.

Plan: £12.50
Cut Parts: N/A

PLAN141

Control Line

Oliver Twist Mk.7

Martin Cowley's ultra-successful 2.5cc control line combat model revived for Combat fans. First Appeared in: Aviation Modeller International - May 1998.

Plan: £11.50
Cut Parts: N/A

PLAN138

Control Line

Peacemaker Stunt

George Aldrich's classic control line stunt model for 2.5cc motors. Wing span 47" (1194mm). First Appeared in: Aviation Modeller International - January 1997.

Plan: £12.50
Cut Parts: N/A

PLAN149

Control Line

Profile Tucano

A profile-scale 43" control line model with a good aerobatic performance. Features all-sheet fuselage and built-up wing structure. Suits .20 size motor. Prototype used PAW 19 diesel. First Appeared in: Aviation Modeller International - April 1996.

Plan: £11.50
Cut Parts: N/A

PLAN154

Control Line

Stuntfire

Semi-scale control line aerobatic model based on the Supermarine Spitfire. 59" (1500mm) wingspan model suits .40-.60 motors. First Appeared in: Aviation Modeller International - June 2001.

Plan: £13.50
Cut Parts: N/A

PLAN191

Control Line

Wild Boy

Control line aerobatic 36" model with attractive radial style cowl for .09 (1.5cc) motors. First Appeared in: Aviation Modeller International - September 1997.

Plan: £11.25
Cut Parts: N/A

PLAN212

Control Line

Grumman Guardian

C/L Carrier Deck, Class 1 for .40 size 2-strokes .44" wingspan. Originally appeared in Model Flyer Magazine Issue: Aug-01 Designer: J Marsh Power: .40 Class 1

Plan: £9.95
Cut Parts: N/A

PLANMF59

Control Line

Pirroette

32" wingspan RC fun-fly for .07 glow power. Originally appeared in Model Flyer Magazine Issue: Oct-04 Designer: B Millard

Plan: £9.95
Cut Parts: N/A

PLANMF143

Control Line

Frisky Pete

40" wing span old time stunt model for .15-.32 engines Originally appeared in Model Flyer Magazine Issue: May-09 Designer: P Miller Power: .15-.32 stunt

Plan: £9.95
Cut Parts: N/A

PLANMF229

Control Line

Déjà vu

53" wing span control line for .35 glow power Originally appeared in Model Flyer Magazine Issue: Feb-07 Designer: P Miller Power: .35 stunt

Plan: £7.50
Cut Parts: N/A

PLANMF188

Control Line

Tiger Rag

60" wingspan RC 3D flier for .40/.52 power. Originally appeared in Model Flyer Magazine Issue: Jul-04 Designer: G Smith Power: 0.4

Plan: £9.95
Cut Parts: N/A

PLANMF139

Control Line

L'il Nell

54inch span RC Aerobatic for .52 IC power. Originally appeared in Model Flyer Magazine Issue: Nov-05 Designer: G Smith Power: 0.52

Plan: £4.95
Cut Parts: N/A

PLANMF166

Control Line

Yak 54

Electric power control line model double cd motor 4-6 channel RC Originally appeared in Model Flyer Magazine Issue: Jun-11 Designer: J J Rutter Power: EP Depron

Plan: £4.95
Cut Parts: N/A

PLANMF254

Control Line

Trojan XL

27.75" wing span for 0.6cc diesels Originally appeared in Model Flyer Magazine Issue: Jun-11 Designer: R Evans Power: .6cc diesel

Plan: £4.95
Cut Parts: N/A

PLANMF255

Control Line

Revolver

Free plan with purchase of Model Flyer Magazine Issue: Mar-02 Designer: M Lewis Power: 1.5cc Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF80

Control Line

Noglu

Free plan with purchase of Model Flyer Magazine Issue: Oct-01 Designer: M Lewis Power: 1cc Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF66

Control Line

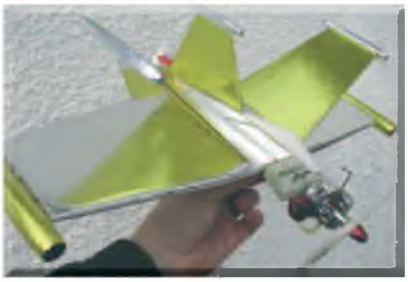
Billy Bunter

Free plan with purchase of Model Flyer Magazine
Issue: Oct-00 Designer: C Monk Power: 2.5cc

Plan: £4.35
Cut Parts: N/A

PLANMF32

Control Line



Starfighter

Free plan with purchase of Model Flyer Magazine
Issue: Mar-06 Designer: M Lewis Power: 0.5cc

Plan: £4.35
Cut Parts: N/A

PLANMF173

Control Line

Tiger Rat

Free plan with purchase of Model Flyer Magazine
Issue: Oct-05 Designer: C Coote Type: Oliver Tiger

Plan: £4.35
Cut Parts: N/A

PLANMF163

Control Line

Scallywag

Free plan with purchase of Model Flyer Magazine
Issue: Jul-03 Designer: M Lewis Power: 1/2A

Plan: £4.35
Cut Parts: N/A

PLANMF116

Control Line

Super Nova

Free plan with purchase of Model Flyer Magazine
Issue: Apr-06 Designer: M & S Waller Type: S400 EP

Plan: £4.35
Cut Parts: N/A

PLANMF176

Control Line

Simple Simon

Free plan with purchase of Model Flyer Magazine
Issue: Jul-08 Designer: M Lewis Type: EP Stunt

Plan: £4.35
Cut Parts: N/A

PLANMF215

Control Line

Live Wires

Free plan with purchase of Model Flyer Magazine
Issue: Dec-07 Designer: M Lewis Type: EP trainer Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF204

Control Line

Wispa

Free plan with purchase of Model Flyer Magazine
Issue: Aug-11 Designer: M Lewis Type: EP Combat

Plan: £4.35
Cut Parts: N/A

PLANMF258

Control Line

Liquidator

Frank Dowling's 34.75" model from 1969 updated by Richard Evans for today's vintage combat published in AeroModeller 921 (ADH003)

Plan: £9.95
Cut Parts: N/A

PLAN465

De Havilland RC Scale Classics

DH 4

Gary Sunderland's scale replica of the WW1 reconnaisance biplane has a span of 84.75" (2152mm). Plan features accurate rib-for-rib duplication of full-size airframe structure and suits .80-.90 motors. 4-function radio required. First Appeared in: AMI - July 1997.

Plan: £16.50
Cut Parts: N/A

PLAN42

De Havilland RC Scale Classics

DH 51

A 66" (1676mm) wingspan scale model for 4-function R/C systems and .40-.50 size motors. Two sheet plan. First Appeared in: Aviation Modeller International - September 1998.

Plan: £16.50
Cut Parts: £115.00

PLAN50

De Havilland RC Scale Classics

DH 60 Moth

An 80" (2032mm) wingspan, 1:4.33 scale replica for .90-1.20 cu.in. motors and 4-function radio control systems. Two sheet plan. First Appeared in: Flying Scale Models - September 1997

Plan: £19.50
Cut Parts: £115.00

PLAN54

De Havilland RC Scale Classics

DH 6

A 64" (1626mm) wingspan, 1:6.6 scale model of the Airco DH 6 1917 Royal Flying Corps elementary trainer. Model is designed for 4-function R/C systems and suits .45-.61 size motors. Simple, boxy construction. Two sheet plan. First Appeared in: FSM - Nov 1998.

Plan: £14.50
Cut Parts: N/A

PLAN43

De Havilland RC Scale Classics

DH 82a Tiger Moth

An 80" (2032mm) wingspan, 1:4.33 scale model for 1.20 cu.in. motors and 4-function radio control systems. No moulded cowl required due to all-wood construction. Three sheet plan. First Appeared in: Aviation Modeller International - October 1997.

Plan: £26.50
Cut Parts: £115.00

PLAN51

De Havilland RC Scale Classics

DH89a Dragon Rapide

A 60" replica of the famous biplane light airliner for two 400-size electric motors. Three-sheet plan comes complete with detailed step-by-step written building instructions. First Appeared in: FSM - Nov 2003.

Plan: £24.00
Cut Parts: £135.00

PLAN236

Free Flight Contest Models

Anec II

Free flight model in 1/6 scale for 0.49 engines by Roy Slater. First published in AMI June 1996.

Plan: £9.95
Cut Parts: N/A

PLAN452

Free Flight Contest Models

Blue Note

Andy Crisp's highly successful F1A (A/1) Class free flight contest glider that offers first class performance, but simplicity of airframe construction. Wingspan 90.5" (2300mm). First Appeared in: AMI - September 1997.

Plan: £11.50
Cut Parts: £45.00

PLAN22

Free Flight Contest Models

F1 Havana

An FA1 F1H (A/1) Class free flight towline glider from an acknowledged expert in the field. Andy Crisp's model embodies all his practical experience gained in years of F/F contest flying. First Appeared in: AMI - November 1999.

Plan: £10.00
Cut Parts: N/A

PLAN282

Free Flight Contest Models

Fifi La Coupe

Winter Cup (Cup d'Hiver) Class contest rubber-powered free flight model with a first class performance. First Appeared in: Aviation Modeller International - April 1999.

Plan: £10.00
Cut Parts: N/A

PLAN57

Free Flight Contest Models

Sixpence

A 48.9" (1242mm) span 1/2A Class free flight power or contest model for 0.049 size motors. First Appeared in: Aviation Modeller International - August 1999.

Plan: £10.00
Cut Parts: N/A

PLAN168

Free Flight Contest Models

The Trainer

As the name suggests. An introduction-level Open Class free flight power competition model for .21-.35 size motors. 525sq.in. wing area. First Appeared in: Aviation Modeller International - January 1999.

Plan: £10.00
Cut Parts: N/A

PLAN199

Free Flight Contest Models

Thirty Something

P30 Class contest rubber-powered model that also offers fine performance for sport free flight. Has a novel dethermaliser system. First Appeared in: Aviation Modeller International - May 1998.

Plan: £10.00
Cut Parts: N/A

PLAN201

Free Flight Contest Models

Woodbury Gorse Basher

A high performance Open Rubber free flight contest model with a string of competition successes. Features geodetic wing structure and diamond section fuselage. 52.5" (1334mm) wing span. First Appeared in: Aviation Modeller International - July 1998

Plan: £11.25
Cut Parts: £35.00

PLAN214

Free Flight Contest Models

Rossignol

FAI class A1 and FIH contest sailplane 50 1/4" wingspan Originally appeared in Model Flyer Magazine Issue: Mar-00 Designer: R Twomey Power: A1 glider

Plan: £6.95
Cut Parts: N/A

PLANMF10

Free Flight Contest Models

Dixielander

Power F/F duration for sports or SLOP competition. 50" wingspan Originally appeared in Model Flyer Magazine Issue: Nov-00 Designer: G Fuller Power: SLOP

Plan: £7.95
Cut Parts: N/A

PLANMF34

Free Flight Contest Models

Senator

16" free plan in AeroModeller 919 download free for AeroModeller website!

Plan: FREE
Cut Parts: £15.00

PLAN446

Free Flight Contest Models

Catipulticus

Free plan with purchase of Model Flyer Magazine Issue: May-02 Designer: P Ball Power: HLG Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF85

Free Flight Contest Models

Drax

Free plan with purchase of Model Flyer Magazine Issue: Mar-05 Designer: T Grey Power: E30

Plan: £4.35
Cut Parts: N/A

PLANMF152

Free Flight Contest Models

Ibis 6

Free plan with purchase of Model Flyer Magazine Issue: Jan-05 Designer: A Hewitt Power: HLG25" wingspan EP pusher scale pseudo-jet for 480 motors.

Plan: £4.35
Cut Parts: N/A

PLANMF146

Free Flight Contest Models

Maximus

Free plan with purchase of Model Flyer Magazine Issue: May-04 Designer: P Ball Power: Catapult glider

Plan: £4.35
Cut Parts: N/A

PLANMF134

Free Flight Contest Models

Swampy

Free plan with purchase of Model Flyer Magazine Issue: Jun-02 Designer: N Elphick Power: 1/2A IC

Plan: £4.35
Cut Parts: N/A

PLANMF89

Free Flight Contest Models

Slippery Sam

Free plan with purchase of Model Flyer Magazine Issue: Nov-05 Designer: A Hewitt Power: HLG

Plan: £4.35
Cut Parts: N/A

PLANMF165

Free Flight Sport

Boeing Nearman

Free flight fun sport model loosely based on the Boeing Stearman biplane, this 40" (1016mm) span model is tailored to 1cc diesel motors. First Appeared in: Aviation Modeller International - March 1998.

Plan: £11.50
Cut Parts: N/A

PLAN10

Free Flight Sport

Can Do

Free flight scale replica for KP01 power. Wing span 24.5" (622mm). First Appeared in: Aviation Modeller International - March 1997.

Plan: £11.25
Cut Parts: N/A

PLAN30

Free Flight Sport

Cumuless

Half-size free flight replica of the original Ben Shereshaw vintage era Cumulus. 48" (1219mm) span model needs a motor in the 0.5-1cc range. First Appeared in: AMI - February 1997.

Plan: £10.00
Cut Parts: N/A

PLAN36

Free Flight Sport

Glorious Gladys

A free flight sports biplane, loosely styled on the famous Gloster Gladiator biplane fighter. Spans 32.5" (826mm), for 0.75cc (.049) motors. First Appeared in: Aviation Modeller International - February 1996.

Plan: £10.00
Cut Parts: £135.00

PLAN76

Free Flight Sport

Lago

A reduced size replica of the original 1943 era Jaques Bluzot free flight design. Stylish 36" (914mm) span model suits KP01 electric power or Cox TD 010. First Appeared in: Aviation Modeller International - February 1997.

Plan: £10.00
Cut Parts: N/A

PLAN93

Free Flight Sport

Leprechaun 2

A true vintage 1949 design eligible for SAM events, this 67" (1702mm) wingspan design is the middle size of three versions created by Dick Twomey. For free flight fun. First Appeared in: AMI- June 1999.

Plan: £12.50
Cut Parts: N/A

PLAN105

Free Flight Sport

Little Owl

Something really out of the ordinary in free flight sport, this 26" (655mm) span canard model uses Union electric ducted fan power. First Appeared in: Aviation Modeller International - January 1997.

Plan: £10.00
Cut Parts: N/A

PLAN102

Free Flight Sport

Mercury 3

96" (2438mm) of sheer elegance for free flight or R/C assist and engines of .60-.90 cu.in. Rudder and elevator control surfaces shown. A real beauty! First Appeared in: Aviation Modeller International - October 1996.

Plan: £20.00
Cut Parts: N/A

PLAN116

Free Flight Sport

Oddie 94

A 39.5" (1003mm) span sports free flight model in the style of dawn-of-aviation craft, for engines like the Mills .75 diesel. Simple open frame construction. First Appeared in: Aviation Modeller International - January 1997.

Plan: £12.50
Cut Parts: N/A

PLAN137

Free Flight Sport

Petrel

Semi-scale free flight flying boat for .020 size motors. 26" (660mm) span model features super simple Jedelsky all-sheet wing construction. First Appeared in: Aviation Modeller International - March 1997.

Plan: £11.25
Cut Parts: N/A

PLAN148

Free Flight Sport

Salaam

A 50" (1270mm) span scale-like free flight biplane with all the air of a pre-WW2 RAF patrol flying boat. Designed for two .75cc (.049 cu.in.) engines or similar. First Appeared in: Aviation Modeller International - February 1997.

Plan: £12.50
Cut Parts: N/A

PLAN165

Free Flight Sport

String Bagette

A semi-scale free flighter based on the famous Fairey Swordfish, which this practical model closely resembles. 34" (864mm) span models suits 0.75cc (.049) motors. First Appeared in: Aviation Modeller International - September 1997.

Plan: £13.50
Cut Parts: N/A

PLAN163

Free Flight Sport

Tinsydes

Shaped in the style of a WW1 fighting scout biplane, this 36" (914mm) span free flighter suits a 1-1.5cc diesel or .06-.10 glow motor. First Appeared in: Aviation Modeller International - August 1998.

Plan: £10.00
Cut Parts: N/A

PLAN198

Free Flight Sport

Tipo

A 36" (914mm) span all-sheet free flight sportster, featuring Jedelsky wing structure. Suits 0.5-0.8cc diesel or glow motors. First Appeared in: Aviation Modeller International - May 1996.

Plan: £10.00
Cut Parts: N/A

PLAN194

Free Flight Sport

Twelf

A 38.5" (978mm) span vintage style biplane for free flight, using engines in the 0.5-1cc range. Attractive lines and stable performance. First Appeared in: Aviation Modeller International - November 1998.

Plan: £10.00
Cut Parts: N/A

PLAN202

Free Flight Sport

Vannus & Vannus Minor

A tailless free flight sports model for .049 i.c. motors or equivalent electric power spanning 42" (1067mm). Smaller version spans 28" (711mm) and uses Cox .020 or KP01 electric power. First Appeared in: Aviation Modeller International - December 1995.

Plan: £12.50
Cut Parts: N/A

PLAN208

Free Flight Sport

Tweedledum/Dee

40" wing span free flight bipe 1-1.5cc engines Originally appeared in Model Flyer Magazine Issue: Aug-00 Designer: Boddo Power: 0.9 - .15

Plan: £9.95
Cut Parts: N/A

PLANMF24

Free Flight Sport

Carovan

42" FF flying wing for .020cu.in. glow motors. Originally appeared in Model Flyer Magazine Issue: Feb-03 Designer: E Marsden Power: .020 wing

Plan: £5.00
Cut Parts: N/A

PLANMF104

Free Flight Sport

Thermalider II

29" span free flight rubber power Originally appeared in Model Flyer Magazine Issue: Jun-06 Designer: J Wingate Power: Rubber vintage

Plan: £4.95
Cut Parts: N/A

PLANMF179

Free Flight Sport

Cucumber 2

FF twin canard bipe for 0.5cc. Originally appeared in Model Flyer Magazine Issue: May-03 Designer: D McHard Power: .5cc (2)

Plan: £6.95
Cut Parts: N/A

PLANMF110

Free Flight Sport

Sweet Bee

Free plan with purchase of Model Flyer Magazine Issue: Aug-00 Designer: M Bees Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF27

Free Flight Sport

Puffin

Free plan with purchase of Model Flyer Magazine
Issue: Aug-00 Designer: C Reid Power: 0.5cc

Plan: £4.35
Cut Parts: N/A

PLANMF26

Free Flight Sport

Commodore

Free plan with purchase of Model Flyer Magazine
Issue: Sep-00 Designer: E Marsden Power: 0.02

Plan: £4.35
Cut Parts: N/A

PLANMF30

Free Flight Sport

Classic Trim Trainer

Free plan with purchase of Model Flyer Magazine
Issue: Jun-01 Designer: Boddo Power: 0.75cc Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF56

Free Flight Sport

Jasmyn

Free plan with purchase of Model Flyer Magazine
Issue: Oct-00 Designer: D Banks Power: 0.5cc

Plan: £4.35
Cut Parts: N/A

PLANMF33

Free Flight Sport

Fandango

Free plan with purchase of Model Flyer Magazine Issue: Sep-01 Designer: G Dunmore Power: KP EDF unit

Plan: £4.35
Cut Parts: N/A

PLANMF63

Free Flight Sport

Perky

Free plan with purchase of Model Flyer Magazine
Issue: Nov-03 Designer: T Draper Power: 0.01

Plan: £4.35
Cut Parts: N/A

PLANMF122

Free Flight Sport

Courtesan

Free plan with purchase of Model Flyer Magazine
Issue: Jun-03 Designer: V Smeed Power: CO2

Plan: £4.35
Cut Parts: N/A

PLANMF113

Free Flight Sport

Jack O

Free plan with purchase of Model Flyer Magazine
Issue: Dec-02 Designer: J Reid Power: 130 EP

Plan: £4.35
Cut Parts: N/A

PLANMF100

How to...

Building from plans

By Mick Broughton

BUILDING FROM PLANS

STAGE 1

Unlike kits or ARTF models, plans rarely carry any instructions or assembly order. The first step then, is to study the plan and get a clear idea of the order and method of build. It's also the time to plan any modifications, for example electric conversion, and to compile a shopping list.

STAGE 2

Amongst the information conveyed by the plan is the direction of wood grain. Here a diagonal grain is indicated for this vertical stabiliser. Whilst on the subject of wood, take care with wood selection to ensure maximum strength is put into the appropriate places without adding unnecessary weight. Generally speaking the darker and more pronounced the grain the harder and stiffer the wood; best used where maximum strength is required. Lighter coloured grain is softer; ideal for sheeting, block work or ribs.

STAGE 3

Many plans will carry indicators to aid interpretation. Here arrows are used to mark the outlines of doublers which reinforce the fuselage sides. Other signs to look out for are the centre of gravity (a circle with black quarters, or large arrow marked 'CG') and dotted lines indicating parts concealed behind others.

STAGE 4

Construction begins by producing a kit of parts, and to do this we need to transfer the shapes from plan to wood. There are many methods for doing this; some make photocopies and, using a hot iron, transfer the dye to the wood. An alternative is to cut out the copies and 'tack glue' them onto the wood. Others simply prick the shapes through with a pin, or trace through the plan onto the wood, leaving an indentation. Here I use good old fashioned tracing paper.

STAGE 5

It isn't always necessary to mark out whole parts. This tailplane is largely straight lines, which will be cut with a rule, so it is only necessary to mark out the corners, and the centre line for future reference. Needless to say any curves which need to be cut freehand need to be drawn out in full.

STAGE 6

Plan on using three or four scalpel blades for a typical 'sport' size model; changing the blade as soon as it starts to drag. When cutting, try to keep the blade at 90 degrees to the wood, especially important with thicker pieces, and make several modest strokes. If having difficulty freehand cutting around curves, then cut them slightly oversize and sand down to the final shape.

STAGE 7

Note the markings on the plan for these formers. The wavy line on F1 denotes that this is to be made of plywood, and the straight lines on F3 denote the grain direction for the balsa. For simple geometric shapes like these it is better to simply measure them and draw them into the wood using a rule and square rather than tracing.

STAGE 8

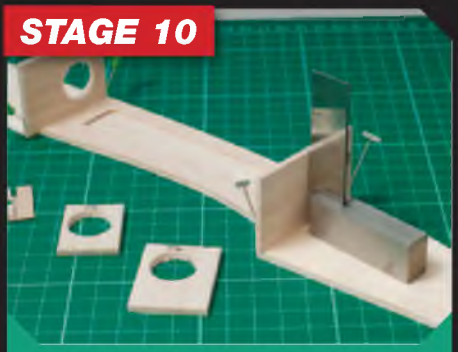
Any parts which are required to be the same, such as wing ribs or sheet fuselage sides, should be sandwiched together and lightly sanded to ensure that all the pieces are exactly the same size and shape. The more accurate we can make our parts the easier assembly will be, and the better the fit of parts, the stronger our airframe will be. It is better to have parts which are a tight fit, and relieve them with emery board, that to have gaps which will weaken our structure considerably.

"Building is Fun - Winter Aeromodelling Starts here!"

STAGE 9

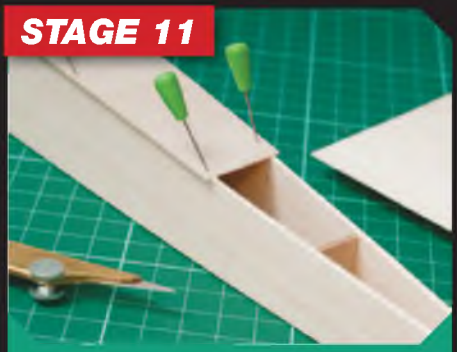
On this build I started with the fuselage, and this starts by attaching the doublers to the fuselage sides. Use a slow setting glue for this such as epoxy, aliphatic or PVA, as these give more time to accurately position parts. After positioning the pieces, use heavy weights or clamps to ensure good adhesion. Be sure to prepare one left and one right hand panel !!

STAGE 10



Fuselage assembly is sometimes done over the plan or, as is the case here, by attaching the two main formers in the parallel area of the fuselage. Care needs to be taken that these are square to the fuselage side and in the correct position as denoted by the plan. When these are dry the second side is placed on top, using squares all around to ensure that it is exactly atop the first.

STAGE 11



Top and bottom sheeting completes the fuselage box. Note how the grain runs across the width; although it takes longer to sheet this way the grain at ninety degrees to the fuselage sides adds greatly to the strength. Note also how the parts have been only roughly cut to size; they will be sanded down later.

STAGE 12

The wings are built over the plan, after first covering with cling film. Semi symmetrical sections can be built flat, but symmetrical sections such as this one require a support piece to be placed at the rear. It is important that whatever you use as your building board is completely flat, and able to accept pins. I usually use a piece of plasterboard fixed onto a kitchen worktop. After every couple of projects or so the board is removed and replaced.

STAGE 13

Most wings employ sheeting forward of the main spar to form a 'D' box. It is important that plenty of pins are used to ensure that the wood adheres well to the curve of the rib profile. For sharper bends it may be necessary to soak the wood in water to easier obtain a curve. As with the fuselage sheeting, note how the wood has been cut oversize, to be sanded to an accurate profile later.

STAGE 14

Many parts are made to measure; here I am marking the length of a cap strip by lightly scoring the wood with a scalpel, and then removing to my cutting board to cut to size. Don't attempt to cut the piece in situ, and if in any doubt about your ability to cut accurately to size then cut oversize and sand the part down; an emery board is ideal for this.

STAGE 15

Thorough and accurate sanding is a vital part of any build. Always use some form of sanding block; I use Perma-Grit tools for the rougher grades, and glue sandpaper to MDF blocks for the smoother stages. Start off rough and then work down to smoother grades (Remember to do this in a well-ventilated area and wear a mask). Run your finger along any joints to ensure that they are smooth.

STAGE 16

Although there is still a lot of work to do to this airframe; covering, hinging control surfaces, fitting radio and linkages, each of these is an article in itself, but hopefully if you have reached this stage the sense of satisfaction will provide enough motivation to develop the necessary skills to reach completion, and remember that building is like most other disciplines, and improves with practice!

Free Flight Sport

Miss Barnstormer

Free plan with purchase of Model Flyer Magazine
Issue: Oct-01 Designer: Boddo Power: 0.75cc Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF64

Free Flight Sport

Matchstick Man

Free plan with purchase of Model Flyer Magazine
Issue: Jan-08 Designer: J Wingate Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF205

Free Flight Sport

Pylonite

Free plan with purchase of Model Flyer Magazine
Issue: Jul-07 Designer: A Reid Type: vintage style

Plan: £4.35
Cut Parts: N/A

PLANMF198

Free Flight Sport

Wyvern Junior

Free plan with purchase of Model Flyer Magazine
Issue: Jun-07 Designer: G Dunmore Power: KP02

Plan: £4.35
Cut Parts: N/A

PLANMF196

Free Flight Sport

Mooncopter

Free plan with purchase of Model Flyer Magazine
Issue: Dec-08 Designer: G Evans Power: rubber heli

Plan: £4.35
Cut Parts: N/A

PLANMF220

Free Flight Sport

Twinkle

Free plan with purchase of Model Flyer Magazine
Issue: Nov-08 Designer: Boddo Power: 0.75cc

Plan: £4.35
Cut Parts: N/A

PLANMF219

Free Flight Sport

Envoy

Free plan with purchase of Model Flyer Magazine
Issue: Feb-12 Designer: I Peacock - C Shaw update

Plan: £4.35
Cut Parts: N/A

PLANMF226

Free Flight Sport

Rotamatic 2

Free plan with purchase of Model Flyer Magazine
Issue: Oct-11 Designer: G Evans Power: unorthodox

Plan: £4.35
Cut Parts: N/A

PLANMF260

Free Flight Sport

Rotamatic

Free plan with purchase of Model Flyer Magazine
Issue: Oct-09 Designer: G Evans Power: unorthodox

Plan: £4.35
Cut Parts: N/A

PLANMF234

RC Gliders and Sailplanes

Algebra Ee Ve 205

An 80.75" high performance electric powered R/C soarer, which uses 4-function controls on elevons, throttle and wing spoilers. Conventional construction. Suits motors such as Graupner Speed Gear 500/600 or Astro 05. First Appeared in: AMI - March 1999.

Plan: £14.00
Cut Parts: N/A

PLAN13

RC Gliders and Sailplanes

Attacker PSS

A PSS glider replica of the early Royal Navy jet fighter for slope soaring. 1/10th scale replica spans 42.75" (1086mm). Two-sheet plan. First Appeared in: Aviation Modeller International - April 2001.

Plan: £13.50
Cut Parts: N/A

PLAN5

RC Gliders and Sailplanes

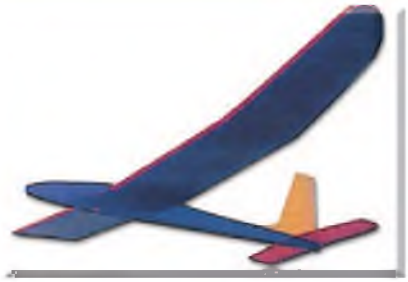
Cadet

A 63" (1600mm) span multi-purpose sailplane for towline launch, slope soaring or power pod operation. Simple box fuselage and uncomplicated rib-and-sheet wing. Power pod requires .049 motor. 2-function R/C. First Appeared in: AMI - May 1996.

Plan: £10.00
Cut Parts: N/A

PLAN29

RC Gliders and Sailplanes



Chorus

A 2-metre class R/C soarer with 78.75" wingspan. Model features simple box fuselage construction and Eppler E176 flat bottom wing airfoil for easy construction. 2-function R/C required. First Appeared in: AMI - January 2000

Plan: £11.50
Cut Parts: N/A

PLAN31

RC Gliders and Sailplanes

HLG-2

High performance R/C hand launching sailplane, featuring pod and boom fuselage, slightly swept wing and butterfly type tailplane. 59" (1500mm) span model uses 2-function radio. First Appeared in: Aviation Modeller International - October 1997

Plan: £11.25
Cut Parts: N/A

PLAN82

RC Gliders and Sailplanes

Mini Drake

A 63" (1600mm) span power-assisted sailplane for free flight or 2-function R/C using a 0.75 -1.5cc motor or electric equivalent. First Appeared in: Aviation Modeller International - August 1997

Plan: £10.00
Cut Parts: N/A

PLAN126

RC Gliders and Sailplanes

Minikin

A compact, 48.5" (1232mm) slope soarer for 2-function R/C operation on ailerons and elevator. First Appeared in: Aviation Modeller International - May 1997

Plan: £11.25
Cut Parts: N/A

PLAN127

RC Gliders and Sailplanes

Patrician

Here's a fine sailplane for slope soaring, flat field or cross country work. This 112" (2845mm) wingspan model features flaps and requires a minimum of 4-function radio control. First Appeared in: Aviation Modeller International - February 1998

Plan: £12.50
Cut Parts: N/A

PLAN147

RC Gliders and Sailplanes

Piglet

Handy sized 36" (914mm) span slope soarer with a fast and furious performance using 2-function R/C driving aileron and elevator controls. First Appeared in: Aviation Modeller International - August 1999

Plan: £11.25
Cut Parts: N/A

PLAN143

RC Gliders and Sailplanes

Red Kite

A bird-like glider for slope or flat field flying. Plan includes drop-off stabiliser unit for flat field winch launching. 64" (1524mm) wingspan. Can be flown with ailerons, or simply using v-tail rudder/elevator controls. First Appeared in: AMI - Aug 1997

Plan: £14.00
Cut Parts: N/A

PLAN159

RC Gliders and Sailplanes

Scimitar

A 57" (1448mm) wingspan aerobatic slope soarer with a fine performance using rudder, elevator and aileron controls. Plan offers both foam core and conventional balsa structure wing options. First Appeared in: AMI - March 2001

Plan: £11.25
Cut Parts: N/A

PLAN164

RC Gliders and Sailplanes

Timberleena

A 60" (1524mm), high performance slope soarer, featuring tough balsa and plywood construction. Can easily handle strong wind conditions but is also quite a 'floater' in light winds. Highly aerobatic. First Appeared in: AMI - Nov 1998

Plan: £11.25
Cut Parts: N/A

PLAN200

RC Scale Electric

Messerschmitt Me 109E

Graham Smith's 43" span sport-scale Messerschmitt Me 109E for .25-size engines. Published in FSM June 2008 issue 103

Plan: £19.95
Cut Parts: N/A

PLAN371

RC Scale Electric

Max Holst 152

John Ralph updates and enlarges George Wools' 1954 Aeromodeller plan for min RC scale soaring. 36.5". Published in FSM March 2004 issue 52

Plan: £9.95
Cut Parts: N/A

PLAN405

RC Scale Electric

Cessna 170B

Adrian Britton's 43" span classic for 3 or 4 four function R/C and electric power. Published in FSM October 2008 issue 107

Plan: £19.95
Cut Parts: N/A

PLAN368

RC Scale Electric

Indoor Velie Monocoupe

An Indoor scale project that can be quickly built. David Deadman's 1/22nd scale, 17.5" span little gem for Co2, rubber, or micro-electric power... and the latest micro R/C systems. Published in FSM January 2011 issue 134

Plan: £9.95
Cut Parts: £32.00

PLAN340

RC Scale Electric

Polikarpov Po2

David Deadman's 18.5" little Soviet 'blood wagon' for Co2 power. Published in FSM January 2004 issue 50

Plan: £9.95
Cut Parts: N/A

PLAN407

RC Scale Electric

Hawker Hunter Mk FGA9

Chris Gold's 24" ducted fan model for 300 size motors with foam/balsa construction. Published in FSM Nov/Dec 2001 issue 26 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN431

RC Scale Electric

Sopwith Tabloid

Delightful little 80 gram (3 oz.) World War I scout for micro R/C and electric-power, designed by Mike Roach with a 24" wings. Published in FSM January 2005 issue 62

Plan: £9.95
Cut Parts: N/A

PLAN396

RC Scale Electric

Brewster's Buffalo Mk1

1/18th scale rubber driven free flight model designed by Richard Crossley. Published in FSM May and June 2012 issues 150 and 151

Plan: £9.95
Cut Parts: £35.00

PLAN402

RC Scale Electric

Sopwith Bee

27" wingspan model of this WW1 aircraft designed by Mike Roach for 400 size electric motors. Published in FSM October 2003 issue 47

Plan: £9.95
Cut Parts: N/A

PLAN412

RC Scale Electric

Curtis Hawk P-6E

Chris Gold's 28" wingspan model for brushless 400 electric motors. Published in FSM June 2003 issue 43 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN416

RC Scale Electric

Bristol Scout Type C

Indoor R/C scale 29" Depron foam scale model from the building board of Mike Roach. Published in FSM September 2004 issue 58

Plan: £9.95
Cut Parts: N/A

PLAN399

RC Scale Electric

Hawker Demon

Chris Gold's 32" wingspan model scale replica for 400 size electric motors and 4 channel RC. Published in FSM April 2003 issue 41 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN418

RC Scale Electric

Sopwith Gordon Bennett Racer

Mike Roach's 35.35" electric powered model for geared 300 motors and 4 channel RC. Published in FSM April 2002 issue 29 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN428

RC Scale Electric

Percival Mew Gull

Adrian Britton's 1/8 scale model for electric power and mini RC systems. Published in FSM November 2007 issue 96

Plan: £19.95
Cut Parts: N/A

PLAN377

RC Scale Electric

Hawker Fury Mk.1

Electric powered 36" wingspan model designed by Chris Golds. Published in FSM August 2003 issue 45 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN414

RC Scale Electric

De Havilland Venom F.B. Mk 4

Chris Gold's electric powered replica from 1957 wingspan 36" and 3 channel RC. Published in FSM October 2002 issue 35 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN422

RC Scale Electric

Luscombe Silvaire

Adrian Britton's 42", wing span 1/10th size sport-scale model of a very swish-looking American light aircraft for R/C electric power. Published in FSM January 2008 issue 98

Plan: £19.95
Cut Parts: N/A

PLAN375

RC Scale Electric

Bernard 74

Dr. Mike Hawkins FRAeS 45" little-known 1930s French aircraft industry Bernard for 45-60 four-stroke engines. Published in FSM February and March 2008 issues 99 and 100

Plan: £24.95
Cut Parts: N/A

PLAN374

RC Scale Electric

Piper Super Cruiser

Adrian Britton's 45" (1143mm) span R/C model of the classic Piper three-seater for electric power. Published in FSM May 2009 issue 114

Plan: £19.95
Cut Parts: N/A

PLAN365

RC Scale Electric

Nicholas Beazley NB-8G

A 45" span 1/10th scale 1930's sport parasol for speed 400 electric power. Published in FSM June 2004 issue 55 2 sheet plan

Plan: £14.95
Cut Parts: £45.00

PLAN403

RC Scale Electric

Canadair CL-215 'Scooper'

Mike Roach presents his 49.2" span, twin-electric, Depron rendition of the Canadian CL-215 fire-bomber. Published in FSM May 2010 issue 126

Plan: £19.95
Cut Parts: N/A

PLAN355

RC Scale Electric

Auster J-5 Adventurer

A 57" wingspan replica for four channel RC designed by Warren Owen. Published in FSM May 2004 issue 54 2 sheet plan

Plan: £14.95
Cut Parts: £60.00

PLAN404

RC Scale Electric

Cessna C-37 Airmaster

Peter Miller's 57" (1448 mm) wingspan model of an American pre-WW2 classic, for .30 cu.in. engines. Published in FSM February and March 2009 issues 111 and 112

Plan: £24.95
Cut Parts: N/A

PLAN366

RC Scale Electric

Albatros D.XI

A 1/6th scale 52" electric powered model by Peter Rake. 4 sheet plan

Plan: £24.95
Cut Parts: £65.00

PLAN447

RC Scale Electric

Pietenpol Air Camper

A simple to build electric powered scale model by Peter Rake with a 58" wingspan. 4 sheet plan

Plan: £24.95
Cut Parts: £75.00

PLAN383

RC Scale Electric

Airco DH2

Sport-scale model of the early British WW1 fighting scout aircraft. 1/9th scale model spans 37.5" (953mm) and is electric powered using 400 size motor and 3-function controls on rudder, elevator and speed control. One-piece airframe. First Appeared in: FSM - Feb 2001

Plan: £11.75
Cut Parts: N/A

PLAN3

RC Scale Electric

ASK-14

A big 140.5" (3569mm) replica of Schleicher's all-wing motor glider, created specifically for electric power using motors in a range of which the LRK 350 motor. First Appeared in: FSM- Jan 2006

Plan: £19.50
Cut Parts: N/A

PLAN283

RC Scale Electric

Avro Vulcan

Profile-scale, four motor ducted fan R/C electric model. 52.5" (1334mm) span model offers tremendous performance with four Speed 400 motors and Wemotec 480 fans. 4-function R/C. First Appeared in: AMI - April 1998

Plan: £16.50
Cut Parts: N/A

PLAN14

RC Scale Electric

B.A.M Swallow II

Superbly accurate 1/4 scale 128" contest-quality model of the British 1930s light/sporting aircraft.

Plan: £29.50
Cut Parts: £130.00

PLAN323

RC Scale Electric

B.A.M Swallow II

Superbly accurate 1/5th scale revision of Jeremy Collins version

Plan: £29.50
Cut Parts: £110.00

PLAN324

RC Scale Electric

Baby Stahlwerk

Peter Rake's model for 3 channel RC and 150 type electric motors with 29.5" wingspan

Plan: £9.95
Cut Parts: N/A

PLAN451

RC Scale Electric

BAE Nimrod

Modelled by reknowed electric scale expert Chris Golds. 86" (2185mm) span model flies on four Speed 400 electric motors, driving pusher props. Full step-by-step written building instructions. First Appeared in: FSM - Sep 2004

Plan: £19.50
Cut Parts: £140.00

PLAN258

RC Scale Electric

Bell P-39Q Airacobra

The early WW2 American fighter aircraft, one of the first to feature a tricycle undercarriage. 65" wing-span designed by Dick Edmonds for electric power

Plan: £19.50
Cut Parts: £115.00

PLAN318

RC Scale Electric

Boeing PT-13 Stearman

A 58" (1473mm) wingspan replica of the famous biplane radial engined trainer aircraft of the WW2 era. Designed for 700 size electric motors, but with the option of i.c.engine power using a .52-.60 four-stroke engine, with modifications shown on a separate plan sheet. I real builder's model. Three-sheet plan. First Appeared in: Flying Scale Models - January 2004

Plan: £19.50 **Cut Parts:** £99.00

PLAN243

RC Scale Electric

Caudron 1912 Monoplane

66" (1676mm) span scale model of an attractive French light biplane, for .60-80 motors and 4-function R/C. First Appeared in: Aviation Modeller International - November 1997

Plan: £12.50
Cut Parts: N/A

PLAN33

RC Scale Electric

Comper Swift

An enlarged version of Chris Golds' 1/6th scale R/C electric scale model for i.c. power, using a .60-.90 cu.in. four-stroke engine or equivalent two-stroke engine. Wing span 72" (2835mm). First Appeared in: FSM - April 2004

Plan: £17.50
Cut Parts: N/A

PLAN246

RC Scale Electric

Comper Swift

The delightful 1930s British light-sport and racing aircraft. 1/6th scale by electric R/C expert Chris Golds. Just 48" (1219mm) and model is designed for 400 brushless or 480 brushed type motors running from 10 x 1850 NiMH cells. First Appeared in: FSM - April 2004

Plan: £14.50
Cut Parts: £65.00

PLAN244

RC Scale Electric

De Havilland Vampire

Electric powered ducted fan replica for 930-6 size motors and fans (such as Wemotec, RK720, Turbo 1000, etc.). Wing span of 59" (1500mm) for 4- or 5-function R/C. Two sheet plan. First Appeared in: Flying Scale Models - April 1998

Plan: £17.50
Cut Parts: £90.00

PLAN41

RC Scale Electric

Vickers Supermarine Walrus

Impressive electric scale model for indoors or outdoors operation designed by Trevor Hewson for Depron with a 30" wingspan. Published in FSM March 2005 issue 64 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN394

RC Scale Electric

DH106 Comet 4c

Capture the elegant grace of the world's first jet airliner with this 86" (2185mm) span, all electric replica. Suits 4x Speed 400 pusher motors and 6-channel R/C. Two-sheet plan and instruction guide. First Appeared in: FSM, - January 2003

Plan: £19.50
Cut Parts: £135.00

PLAN39

RC Scale Electric

Eastbourne 1912 Monoplane

Simple, sport scale replica for 400 size electric power and 3-function R/C gear. Simple box fuselage construction - wings just as easy. Wing span 51.75" (1300mm). First Appeared in: Aviation Modeller International - June 1998

Plan: £12.50
Cut Parts: N/A

PLAN62

RC Scale Electric

Electrolite

Dave Ridgway's indoor electric RC design with KP01 power. 2 sheet plan Published in AMI May 1997

Plan: £14.95
Cut Parts: N/A

PLAN459

RC Scale Electric

English Electric Canberra B(I)8

From the building board of electric ducted fan scale expert, Chris Golds

Plan: £29.50
Cut Parts: £175.00

PLAN262

RC Scale Electric

Fokker D8

A 39.5" (1000mm) span electric powered sport-scale model for geared 400 size motors and 3-function R/C on rudder, elevator and speed controls. First Appeared in: Flying Scale Models - April 2000

Plan: £11.75
Cut Parts: N/A

PLAN70

RC Scale Electric

Gloster Meteor Mk.4

Twin ducted fan electric powered model of the RAF's first jet fighter aircraft. Uses Speed 400 or 480 size motors and 4-function R/C. Wing span of 42.5" (1080mm). First Appeared in: Flying Scale Models - May 1998

Plan: £14.50
Cut Parts: N/A

PLAN79

RC Scale Electric

Handley Page HP75 Manx

A 49.5" (1275mm) span scale replica of the WW2 experimental tailless aircraft. Requires twin electric motor power and 3-function R/C. First Appeared in: Aviation Modeller International - October 1996

Plan: £12.50
Cut Parts: N/A

PLAN222

RC Scale Electric

Kirby T-31M Motor Tutor

An elegant 72" (1830mm) span motor-glider for Speed 600 electric motors and 4-channel R/C. First Appeared in: Flying Scale Models - February 2003

Plan: £13.50
Cut Parts: £95.00

PLAN219

RC Scale Electric

Morane Saulnier Type L

72" (1828 mm) wing span Sport-Scale model of the early WW1 French two-seater aircraft, designed for 600 size motor power. Three function radio required. First Appeared in: Flying Scale Models - July 2004

Plan: £13.00
Cut Parts: £50.00

PLAN259

RC Scale Electric

Morane Saulnier Type N

A 42" (1067mm) wingspan sport scale model of an early WW1 fighting scout, designed for geared 400 size electric motors and 3-function R/C gear on rudder, elevator and speed controls. First Appeared in: Flying Scale Models - September 1999

Plan: £11.75
Cut Parts: N/A

PLAN114

RC Scale Electric

Nieuport 11 (Electric)

A 33" (838mm) wingspan sport-scale model of the French WW1 fighting scout, designed for geared 400 size electric motor power and 3-function radio operating rudder, elevator and speed controls. First Appeared in: Flying Scale Models - May 1999

Plan: £11.75
Cut Parts: N/A

PLAN130

RC Scale Electric

Pfalz E.1 Eindecker

This 67" (1702mm) wing span model is designed for 600 size motors - the prototype used a Robbe Planeta geared 3.75:1, driven from an 8.4v. power pack .First Appeared in: FSM - May 2003

Plan: £12.50
Cut Parts: N/A

PLAN229

RC Scale Electric

Pfalz E1

Scale model of the early WW1 German scout monoplane for electric power using the popular 400 size motor and 3-function R/C on rudder, elevator and throttle. Wing span 45" (1143mm). First Appeared in: Aviation Modeller International - November 1998

Plan: £11.25
Cut Parts: N/A

PLAN144

RC Scale Electric

Rearwin Speedster

46" (1168mm) span sport scale replica of the highly attractive American 1930s light aircraft. Designed for geared 400 size electric power and 3-function R/C gear - rudder, elevator and throttle controls. First Appeared in: AMI - April 1999

Plan: £11.50
Cut Parts: N/A

PLAN155

RC Scale Electric

Scheibe SF-33

A sport-scale replica to 1/6, 98" (2489mm) wing span, requires four function radio systems operating rudder, elevator, ailerons the motor speed control, plus optional air brakes on 5th channel. First Appeared in: AMI - March 2006

Plan: £14.50
Cut Parts: N/A

PLAN279

RC Scale Electric

Sopwith Pup (Electric)

Geared 400 size motor powered sport scale model of the ever popular British WW1 Scout aircraft. 3-function R/C and 36" (914mm) wing span. First Appeared in :Flying Scale Models - November 1999

Plan: £11.75
Cut Parts: N/A

PLAN173

RC Scale Electric

SPAD XIII

This 54" (1372mm) wingspan model is to 1/6th scale and is designed for 600 size electric motors. The four-sheet plan features rib-for-rib representation of the full size's wing and uses rudder, elevator, ailerons and throttle controls. First Appeared in: FSM - Dec 2005

Plan: £19.50
Cut Parts: £65.00

PLAN280

RC Scale Electric

Supermarine Attacker

Electric ducted fan model of the Royal Navy's first squadron service jet fighter. 480 size motor powered model spans 37.4" (950mm). Aileron and elevator primary controls. First Appeared in :Flying Scale Models - November 1998

Plan: £12.50
Cut Parts: N/A

PLAN162

RC Scale Electric

Velie Monocoupe

A super simple sport scale model of the later-1920s American lightplane with a wingspan of 46.5"

Plan: £13.50
Cut Parts: £85.00

PLAN312

RC Scale Electric

Maybee

John Kay's five-in-one simple plan for electric power to 0.8cc engines. Published in AMI May 1997

Plan: £9.95
Cut Parts: N/A

PLAN460

RC Scale Electric

Bristol Type 188

700mm span Depron profile scale EP model Originally appeared in Model Flyer Magazine Issue: Feb-13 Designer: Terry Flower Power: EP semi scale

Plan: £19.95
Cut Parts: N/A

PLANMF280

RC Scale Electric

Viggen

28" span Depron profile EP slot wing jet Originally appeared in Model Flyer Magazine Issue: Nov-12 Designer: Peter Iliffe Power: EP.

Plan: £10.95
8 sheet paint guide plans £11.95 available on request. Tel: 01525 222573

PLANMF277

RC Scale Electric

Horten/Gotha 229

Depron EDF twin Flying Wing Originally appeared in Model Flyer Magazine Issue: Sept-12 Designer: JJ Rutter Power: EP

Plan: £7.95
Cut Parts: N/A

PLANMF275

RC Scale Electric

Buccaneer

Classic jet for pusher 480 electric power Originally appeared in Model Flyer Magazine Issue: Jan-05 Designer: M Halton Power: 480 brushless

Plan: £9.95
Cut Parts: N/A

PLANMF147

RC Scale Electric

Eurofighter

23" span EDF for 3 channel RC and mini ducted electric fan Originally appeared in Model Flyer Magazine Issue: Aug-06 Designer: P Lewis

Plan: £9.95
Cut Parts: N/A

PLANMF182

RC Scale Electric

F4D Skyray

Original Skyleada model, used for John Ralph's EDF conversion Originally appeared in Model Flyer Magazine Issue: Mar-01 Designer: J Ralph

Plan: £5.00
Cut Parts: N/A

PLANMF43

RC Scale Electric

Messerschmitt P-111

Depron foam profile model for small EDF and 3 channel RC Originally appeared in Model Flyer Magazine Issue: Apr-10 Designer: J Rutter Power: 21.5

Plan: £4.95
Cut Parts: N/A

PLANMF242

RC Scale Electric

JetTitch

36" wing span EDF flying wing 500mm minifan Originally appeared in Model Flyer Magazine Issue: Apr-09 Designer: J Rutter Power: 480 brushless

Plan: £9.95
Cut Parts: N/A

PLANMF227

RC Scale Electric

Dornier Do335

Depron electric power twin for 3 channel RC 24" wing span Originally appeared in Model Flyer Magazine Issue: Mar 12 Designer: J Rutter Power: twin 2500kv

Plan: £7.95
Cut Parts: N/A

PLANMF267

RC Scale Electric

Super Park Hornet

2 1/2D electric ducted fan F/A-1 E/F Originally appeared in Model Flyer Magazine Issue: Jan-12 Designer: J Simpson Power: twin edf

Plan: £6.95
Cut Parts: N/A

PLANMF263

RC Scale Electric

Park Draken

39" span for 3 channel RC for 6 blade fan 400mAh 20C LiPo Originally appeared in Model Flyer Magazine Issue: Jun-10 Designer: J Simpson

Plan: £4.95
Cut Parts: N/A

PLANMF245a

RC Scale Electric

Tigershark

27" wingspan Speed 400 EP for 3-channels. Originally appeared in Model Flyer Magazine Issue: Oct-03 Designer: P Lewis Power: S400

Plan: £5.00
Cut Parts: N/A

PLANMF121

RC Scale Electric

Jodel D17

50" wingspan lightweight R/C for EP. Originally appeared in Model Flyer Magazine Issue: Jun-02 Designer: P Holland Power: 600

Plan: £9.95
Cut Parts: N/A

PLANMF88

RC Scale Electric

Sopwith Sparrow

32" wingspan RC scale foam park flier. Originally appeared in Model Flyer Magazine Issue: May-04 Designer: M Roach Power: geared 400

Plan: £6.00
Cut Parts: N/A

PLANMF135

RC Scale Electric

Yak 55

34inch Depron foam EP 3D machine. Originally appeared in Model Flyer Magazine Issue: Oct-05 Designer: J Rutter Power: 400 brushless

Plan: £4.95
Cut Parts: N/A

PLANMF164

RC Scale Electric

DH Dragon

48" span EP twin for speed 400 motors. Originally appeared in Model Flyer Magazine Issue: Sep-04 Designer: P Lewis Power: S400 (2)

Plan: £9.95
Cut Parts: N/A

PLANMF142

RC Scale Electric

Su 27 Flanker

16" span scale 1.53 Originally appeared in Model Flyer Magazine Issue: Jul-09 Designer: J J Rutter Power: outrunner 2Kkv

Plan: £5.95
Cut Parts: N/A

PLANMF231

RC Scale Electric

Bird Dog

40" span EP scale EPS 400C Originally appeared in Model Flyer Magazine Issue: Feb-09 Designer: J Watters Power: geared S400

Plan: £9.95
Cut Parts: N/A

PLANMF224

RC Scale Electric

Spaceship One

33.5" span for electric power 3 channel RC Originally appeared in Model Flyer Magazine Issue: Jun-07 Designer: J Given Power: 480 outrunner

Plan: £7.95
Cut Parts: N/A

PLANMF197

RC Scale Electric

SM79 Trimotor

53.5" span for electric power scal trimotor Originally appeared in Model Flyer Magazine Issue: Jan-07 Designer: K Sheppard Power: 400 brushless (3)

Plan: £7.50
Cut Parts: N/A

PLANMF187

RC Scale Electric

TRS2

400 Brushless all-sheet, 3 channel, 21" span. Originally appeared in Model Flyer Magazine Issue: Apr-06 Designer: P Disney Power: 400 brushless

Plan: £4.95
Cut Parts: N/A

PLANMF175

RC Scale Electric

DH Vampire (pusher)

28" wing span EP for 3 channel RC 3 x 1500-2000mAh Lipo Originally appeared in Model Flyer Magazine Issue: Jan-10 Designer: G Iredale Power: 480 brushless

Plan: £9.95
Cut Parts: N/A

PLANMF238

RC Scale Electric

Be2c

40" wing span bipe for IC, EP RC of FF Originally appeared in Model Flyer Magazine Issue: Sep-09 Designer: J Watters Power: 480 brushless

Plan: £6.95
Cut Parts: N/A

PLANMF233

RC Scale Electric

Gee Bee profile

30" wing span for 4 channel RC Originally appeared in Model Flyer Magazine Issue: Aug-09 Designer: S Green Power: 400 brushless

Plan: £4.95
Cut Parts: N/A

PLANMF232

RC Scale Electric

Projed Fighter

36" wing span (6 types on plan) 2/3 micro servos Originally appeared in Model Flyer Magazine Issue: Aug-10 Designer: I Peacock/Boddo Power: 480 brushless

Plan: £14.95
Cut Parts: N/A

PLANMF245

RC Scale Electric

SE5a

18" wingspan EP WWI Bipe First published in Model Flyer March-13 Designer: Peter Rake Indoor electric

Plan: £9.95
Cut Parts: £29.00

PLANMF282

RC Scale Electric

Me 163 Komet

30.5" Me 163 by Ken Osborne and Peter Graeber published in Model Flyer May-13

Plan: £19.95
Cut Parts: N/A

PLANMF285

RC Scale Gliders

Bergfalke Mu-13e

Quarter-scale 165" (4191mm) wingspan replica of the classic German sailplane from the pre-glass fibre glider era. An accurate-outline design by Chris Williams, for rudder, elevator and aileron controls, plus spoilers. First Appeared in: FSM - September 2001

Plan: £17.50
Cut Parts: £125.00

PLAN25

RC Scale Gliders

DFS-230 A-1

A 98" (2490mm) replica of the German WW2 troop-carrying glider. Requires rudder, elevator and aileron controls. Two sheet plan. First Appeared in: Aviation Modeller International - December 1997

Plan: £16.50
Cut Parts: N/A

PLAN49

RC Scale Gliders

Kaiser Ka-2b

A 147" (3734mm) wingspan 1/4 scale replica of an elegant German sailplane. Model features all-wood construction without recourse to glass fibre. Cockpit canopy available from the designer. First Appeared in: Flying Scale Models - May 2000

Plan: £20.00
Cut Parts: N/A

PLAN100

RC Scale Gliders

Messerschmitt Me 163b Komet

A 44.5" (1130mm) wingspan scale slope soarer (PSS design) for 2-function radio control systems. First Appeared in: Aviation Modeller International - September 1997

Plan: £12.50
Cut Parts: N/A

PLAN123

RC Scale Gliders

PWS 101

A 1/5th scale 149.5" (3797mm) R/C replica of a Polish sailplane, featuring elegant, long gull-type wing style. Requires rudder, elevator, aileron and wing spoiler controls. Can be used for slope soaring, flat field soaring or aero-towing. First Appeared in: AMI - Apr 1999

Plan: £19.50
Cut Parts: N/A

PLAN153

RC Scale Gliders

Schliecher Ka-3

A 1/4 scale, 98.4" (2500mm) wingspan radio controlled sailplane, using aileron and dual axis V-Tail controls. First Appeared in: Aviation Modeller International - October 1997

Plan: £16.00
Cut Parts: £135.00

PLAN167

RC Scale Gliders

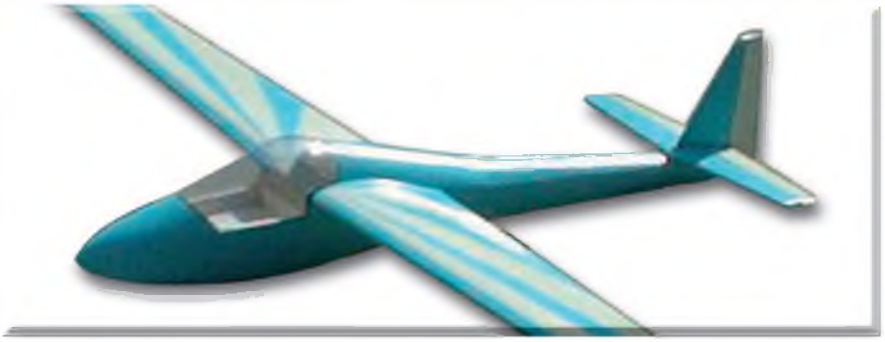
Vought F4U Corsair

A 48.5" (1232mm) wingspan PSS Glider model for aileron and elevator radio control. First Appeared in: Aviation Modeller International - September 1996

Plan: £12.50
Cut Parts: N/A

PLAN210

RC Scale Gliders



Woodstock

A 1/4 replica of a distinctive Australian high performance sailplane. 116"(2960mm). Moulded cockpit canopy available. First Appeared in: AMI - Mar 2004

Plan: £12.50
Cut Parts: N/A

PLAN239

RC Scale Gliders

DH88 Comet

66" wingspan, Scale R/C for Power Scale soaring. Originally appeared in Model Flyer Magazine Issue: Mar-02 Designer: A Hulme

Plan: £14.95
Cut Parts: N/A

PLANMF78

RC Scale Gliders

Slingsby Cadet

Scale glider 1/5th R/C model. Suitable for three channel radio. 102" wingspan Originally appeared in Model Flyer Magazine Issue: Apr-01 Designer: Boddo

Plan: £29.95
Cut Parts: N/A

PLANMF48

RC Scale Gliders

Do335

1.23m span scale slope soarer Originally appeared in Model Flyer Magazine Issue: May-05 Designer: P Janssens

Plan: £9.95
Cut Parts: N/A

PLANMF155

RC Scale Gliders

Egret

40" wingspan FF Canard glider. Originally appeared in Model Flyer Magazine Issue: Jun-04 Designer: D Twomey

Plan: £7.50
Cut Parts: N/A

PLANMF136

RC Scale Gliders

El Tazar

R/C flying wing for two mixed channels. 60" wingspan. Originally appeared in Model Flyer Magazine Issue: Dec-02 Designer: M White

Plan: £6.95
Cut Parts: N/A

PLANMF99

RC Scale Gliders

Mig 19

38inch wingspan RC PSS. Originally appeared in Model Flyer Magazine Issue: Sep-05 Designer: A Blackburn

Plan: £14.95
Cut Parts: N/A

PLANMF162

RC Scale IC Power

Dornier D.1

Dr Mike Hawkins 38" span 1:6 .86 sport-scale model of a little known German WW1 fighter, for .40-.60 cu.in engines and four-function RC. Published in FSM October and September 2006 issues 82 and 83 4 sheet plan

Plan: £24.95
Cut Parts: £50.00

PLAN386

RC Scale IC Power

Sopwith Dove

An easy to build 49" wingspan for .25 to .29 cu. Engines and three function RC by Norman Holme. Published in FSM January and February 2006 issues 74 and 75 3 sheet plan

Plan: £19.95
Cut Parts: £50.00

PLAN390

RC Scale IC Power

Bowers Fly Baby Bipe

A 54" (1372 mm) wingspan sport-scale RC version of the Pete Bowers home build biplane for .61-.91 cu.in engines. Published in FSM November 2012 issue 156.

Plan: £29.95
Cut Parts: £135.00

PLANMF51

RC Scale IC Power

Bristol Beaufighter

For .75 to .80 size four stroke engines, four sheet plan. Featured in Flying Scale Models August 2012 (issue 153) 86 ins wingspan

Plan: £34.95
Cut Parts: £180.00

PLANMF14

RC Scale IC Power

Aichi A6M-1 Nanzan

Dr Mike Hawkins 34.75" model of the Japanese strike aircraft of WW2 for .15 cu.in motors and 5 channel RC. Published in FSM May 2002 issue 30 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN427

RC Scale IC Power

Aerial Target

Original 1917 pilotless aircraft - the first attempt to produce a 'flying bomb'. Two versions: 31" (787mm) span F/F for 0.5cc diesel and 44" (1118mm) span for .15-.19 motors with or without R/C. First Appeared in: AMI - September 1996

Plan: £11.25
Cut Parts: N/A

PLAN2

RC Scale IC Power

Aeronca C-3

A quarter-scale 108" (2743MM) model of the famous 1930s American single seat light aircraft, designed by Philip S. Kent to competition standard. Suits four function R/C and 1.00 - 1.20cu.in four stroke engines. 2 sheet plan set. First Appeared in: FSM - Jan 2007

Plan: £19.50
Cut Parts: £95.00

PLAN293

RC Scale IC Power

Albatros C.III

1/5 scale replica of the German WW1 reconnaisance aircraft. from the design board of Australian Gary Sunderland. 91.85" wingspan

Plan: £28.50
Cut Parts: N/A

PLAN322

RC Scale IC Power

Albatros C.III

1/4 scale replica of the German WW1 reconnaisance aircraft. from the design board of Australian Gary Sunderland. 114.8" (2916mm) wingspan model suits 45cc engines. First Appeared in Flying Scale Models January 2010

Plan: £28.50
Cut Parts: £175.00

PLAN321

RC Scale IC Power

Albatros D.III

A 1/4 replica of the German WW1 fighter aircraft from Australian designer Gary Sunderland. 88.6" (2250mm) model suits engines 23 to 35cc. Four function R/C required for rudder, elevator, ailerons throttle commands. Three sheet plan set. First Appeared in: FSM - Feb 2007

Plan: £25.50
Cut Parts: £135.00

PLAN297

RC Scale IC Power

Albatros DII

Designed by Australian R/C scale expert Gary Sunderland, plans for this classic German WW1 fighter available in 1/4 scale. Spans 83.7" (2125mm) and suits 25cc motors. First Appeared in: Flying Scale Models - February 2007

Plan: £22.50
Cut Parts: £135.00

PLAN7

RC Scale IC Power

Albatros DII

Designed by Australian R/C scale expert Gary Sunderland, plans for this classic German WW1 fighter available 1/5 scale. Larger model spans 66.9" (1700mm) for .90-1.08 cu.in motors. First Appeared in: Flying Scale Models - April 2007

Plan: £22.50
Cut Parts: £135.00

PLAN9

RC Scale IC Power

Albatros J.1

This 1/8th scale model by Dr.Mike Hawkins span 69.5" (1765mm) and suits .60 cu.in four stroke engines or two-stroke equivalent. Two sheet plan. First Appeared in: FSM - Aug 2007

Plan: £19.50
Cut Parts: £135.00

PLAN302

RC Scale IC Power

Antonov AN-2

Approximately 1/14th scale replica of the Russian civil workhorse, now often seen in western skies. 50.5" (1283mm) span R/C design uses 3 or 4-function systems and .19-.25 size motors. First Appeared in: Flying Scale Models - April 1997

Plan: £12.50
Cut Parts: N/A

PLAN12

RC Scale IC Power

Avro Avian Monoplane

Designed by respected R/C scale expert Philip S.Kent, 1/4 replica of the radial engined version of the 1930s air racer spans 96" (2438mm). First Appeared in: FSM - Nov 2005

Plan: £19.50
Cut Parts: N/A

PLAN278

RC Scale IC Power

BAC TSR-2

Design by Reg Smith. 42.5" (1080mm) span, 81" (2507mm) long model suits .90-.100 two-stroke motors and 4-5 function radio gear. Prototype model used Ramtec fan unit. First Appeared in: AMI - Dec 1995

Plan: £18.50
Cut Parts: N/A

PLAN11

RC Scale IC Power

Bristol F2B Fighter

Accurate 1/4 scale, 117.75" (2991mm) span. Model construction closely follows the structure of the full size. A challenging scale project that will reward with an impressive final model. 3 sheet plan set. First Appeared in: FSM - Feb 2002

Plan: £24.50
Cut Parts: £125.00

PLAN21

RC Scale IC Power

Bristol F2B Fighter

Accurate, 1/5 scale replica of the famous WW2 British two-seat fighter. 94.2" (2393mm) span model requires 17-23cc two-stroke power. Model construction closely follows the structure of the full size. 3 sheet plan set. First Appeared in: FSM - Feb 2002

Plan: £24.50
Cut Parts: £125.00

PLAN23

RC Scale IC Power

Bristol Scout Type C

A 1/4-scale 73.75" (1873mm) replica of the early WW1 Royal Flying Corps fighter biplane from the building board of Australian R/C scale expert Gary Sunderland. First Appeared in: FSM - Apr 2006

Plan: £19.50
Cut Parts: N/A

PLAN285

RC Scale IC Power

Bristol Scout Type C

A 1/5th scale 58.8" (1494mm) wing span replica of the early WW1 Royal Flying Corps fighter biplane from the building board of Australian R/C scale expert Gary Sunderland. 1/5th scale version suits .60-.80 size engines. First Appeared in: FSM - April 2006

Plan: £19.50
Cut Parts: N/A

PLAN288

RC Scale IC Power

Bristol Scout Type D

A 49" (1245mm) span sport scale replica of the early WW1 British Scout biplane, designed for .52 size motors and 3-function R/C driving rudder, elevator and throttle. First Appeared in: Flying Scale Models - January/February 2000

Plan: £12.50
Cut Parts: N/A

PLAN20

RC Scale IC Power

Bucker Bu180 Student

A big, but manageable, scale model of the German pre-WW2 trainer, designed for .90-.120 four-stroke motors and 4-function radio systems. Four sheet plan 100" (2540mm). First Appeared in: AMI - Jan 1996

Plan: £26.50
Cut Parts: £120.00

PLAN15

RC Scale IC Power

Caudron 270 Lucoile

66" (1676mm) span scale model of an attractive French light biplane, for .60-80 motors and 4-function R/C. First Appeared in: Flying Scale Models July 2010

Plan: £14.50
Cut Parts: N/A

PLAN28

RC Scale IC Power

Piper Cherokee

A 39" (991mm) span scale model of the famous Piper light aircraft for 4-function R/C and .15 size motors. First Appeared in: Flying Scale Models - November 1997

Plan: £12.50
Cut Parts: N/A

PLAN145

RC Scale IC Power

Chilton DW 1a

This 1/3rd scale version comes from the expert design board of Phil S.Kent and has been built in several sizes. This 96" (2438mm) version features flaps as per the fullsize, suits 1.5 to 1.8 cu.in. four stroke engines, and five function R/C systems. 2 sheet plan

Plan: £22.50
Cut Parts: £125.00

PLAN303

RC Scale IC Power

Corben Super Ace

A 50" (1270mm) sport-scale model of the delightful American homebuilt aircraft, 1/6th scale replica suits .26-.30 four stroke engines, or .20-.25 cu.in. two strokes. Four function radio systems required

Plan: £19.50
Cut Parts: £65.00

PLAN275

RC Scale IC Power

Curtiss Hawk P-6E

A replica of the flamboyant 1930s American biplane fighter aircraft with a very elegant shape. 1:6.4 scale model spans 57" (1450mm) and suits .50-.60 size engines. Conventional wood construction throughout and requires four function radio control. Two-sheet plan

Plan: £19.50
Cut Parts: £90.00

PLAN226

RC Scale IC Power

Curtiss JN4 Jenny

81" (2057mm) wingspan 1:6.4 scale replica of the classic American biplane. Easy to fly with all the character of the full size. Suits .52-.75 motors and 4-function radio .First Appeared in: Aviation Modeller International - December 1996

Plan: £19.50
Cut Parts: £145.00

PLAN38

RC Scale IC Power

Curtiss P-40 Kittyhawk

54" (1370mm) span sport-scale replica of the American WW2 warbird, designed for .52 size four-stroke motors or .40 two-strokes. Model designed to take off from simple wire drop-off dolly, shown on plan. First Appeared in: FSM - Mar 2002

Plan: £11.75
Cut Parts: N/A

PLAN37

RC Scale IC Power

Davis DA-9

A 38.5" (978mm) wingspan scale model of an unusual U.S. homebuilt aircraft, with butterfly tail configuration. Suits 4-function radio control systems and .35-.40 cu.in. motors. Two sheet plan. First Appeared in: FSM - Sep/Oct 1997

Plan: £15.50
Cut Parts: N/A

PLAN48

RC Scale IC Power

De Havilland 103 Hornet

An 80" (2032mm) replica of the fastest, most powerful fighter aircraft ever to reach production status. Model suits motors of .45 -.58 (the prototype used two Enya 53 four-stroke engines). 2 sheet plan. First Appeared in: FSM - Mar/Apr 2001

Plan: £22.50
Cut Parts: £130.00

PLAN52

RC Scale IC Power

DHC-1 Chipmunk

Superbly accurate 1/4 scale replica of the classic RAF primary trainer aircraft designed by leading British scale contestant Dave Womersely. 103" (2616mm). Cockpit canopy available from Vortex Vac-Forms. Engines – 1.8 cu. in. (30cc) four strokes.

Plan: £27.50
Cut Parts: £175.00

PLAN314

RC Scale IC Power

DHC-1 Chipmunk

Dave Womersely's 1/5, 82.5" (2096mm) offered on the understanding that no prototype model has been build to this size. Suits engines – 1.2 – 1.5 cu. in. (20-25cc) four strokes.

Plan: £27.50
Cut Parts: £175.00

PLAN315

RC Scale IC Power

DH 53 'Humming Bird'

A 1/3rd scale 120" (3048mm) authentic scale model of the 1920s era ultra light private sports aircraft, designed for 1.80 cu.in. four-stroke engines and four-function radio control. 4 sheet plan. First Appeared in: FSM - Dec 2007

Plan: £27.50
Cut Parts: £125.00

PLAN307

RC Scale IC Power

Dornier Do27

1/4 scale relica of the German 1950s-60s light commercial aircraft. 84" (2134mm), Prototype model used Laser 120 four stroke engine. Minimum four function radio control, or five functions with working flaps. First Appeared in: FSM - Oct 2004

Plan: £19.50
Cut Parts: £75.00

PLAN261

RC Scale IC Power

Druine Turbulent

50" (1270mm) span sport scale model of the famous French-designed homebuilt aircraft for 3/4-function R/C systems and .20-.35 cu.in. motors. All conventional construction. First Appeared in: Aviation Modeller International - May 1999

Plan: £12.50
Cut Parts: N/A

PLAN46

RC Scale IC Power

EFA Euro Fighter

Two channel (aileron & elevator) R/C ducted fan powered model of the European Fighter aircraft using an .049 engine. 24.5" (550mm) wing span. First Appeared in: Flying Scale Models September/ October 1998

Plan: £11.75
Cut Parts: N/A

PLAN55

RC Scale IC Power

Miles Messenger

Class 1 R/C scale design, '60' - '100' engines and 5/6 channel, 100" wingspan. Plan Number: MF 21 originally appeared in Model Flyer Magazine Issue: Jul-00 Designer: G Smith

Plan: £29.95
Cut Parts: £250.00

PLANMF21

RC Scale IC Power

Extra 300S & L

56" span sport scale replica of the spectacular full-size competition and display aerobatic machine for .60-.75 engines and 4-function radio. Cockpit canopy, wheel covers and glass fibre cowl available call 01525 222573. First Appeared in: AMI - May 1997

Plan: £14.00
Cut Parts: £95.00

PLAN56

RC Scale IC Power

F.E.8

Accurate 1/5th scale 75.6" (1920mm) replica of the `British early WW1 pusher fighter. Requires .78-.91 four stroke engines and four function radio control system. First Appeared in: FSM - Mar 2005

Plan: £19.50
Cut Parts: £88.00

PLAN267

RC Scale IC Power

Fairchild F24 Ranger

Accurate 1:4.9 scale replica of the elegant classic American civil light aircraft. 88.9" (2286mm) span model. For 1.00 to 1.20 cu.in four stroke power and minimum four function radio. First Appeared in: FSM - Jun 2004

Plan: £19.50
Cut Parts: N/A

PLAN253

RC Scale IC Power

Fairey Gannet A.S.1

A 1/8th scale 81" (2057mm) span model of the Naval search aircraft. Flaps and retracts shown, plus bomb doors, extending radome and tail hook. Optional folding wings. Minimum 4-function R/C. Two sheet plan. First Appeared in: FSM - Jun 1998

Plan: £19.50
Cut Parts: £135.00

PLAN65

RC Scale IC Power

Felixstowe F2A

An amazing 1/6th scale fully flyable replica of the British WW1 maritime patrol flying boat. Model spans 100.5" (2553mm) and suits two .25-.30 cu.in. two stroke engines. Prototype model won "Best of Show" at the prestigious Toledo R/C Expo in USA.

Plan: £19.50
Cut Parts: £110.00

PLAN276

RC Scale IC Power

Fieseler Fi 156 Storch

Paolo Severin's 1/4 scale replica built in a manner that faithfully replicas the full size airframe including tubular metal fuselage structure and rib-for-rib flying surfaces. 140.25" (3562mm) wingspan. Original used 50cc four-stroke engine.

Plan: £35.00
Cut Parts: £160.00

PLAN320

RC Scale IC Power

Fletcher FD-25B Defender

A 54.5" (1384mm) span model of a 1950s counter-insurgence ground attack aircraft. Features simple constant-chord wing and requires a .30-.40 size two-stroke motor and minimum 4-function radio. First Appeared in: FSM - Apr 2002

Plan: £11.75
Cut Parts: £55.00

PLAN59

RC Scale IC Power

Fokker DVII

Germany's most famous WW1 fighter aircraft modelled in 1/4 scale by Australian R/C WW1 scale expert Gary Sunderland. 1/4 scale version spans 82.5" (2095mm) and is designed for 30cc (1.8 cu.in.) two-stroke engines. 3 sheet plans. First Appeared in: FSM - Feb 2004

Plan: £26.50
Cut Parts: £135.00

PLAN241

RC Scale IC Power

Fokker DVII

Germany's most famous WW1 fighter aircraft modelled in 1/5 scale by Australian R/C WW1 scale expert Gary Sunderland. 1/5th scale model spans 65.7/8" (1673mm) and suits 15.cc (.90 cu.in.) four stroke engines. 3 sheet plans. First Appeared in: FSM - Feb 2004

Plan: £26.50
Cut Parts: £135.00

PLAN242

RC Scale IC Power

Fokker DVII

Small, sport-scale model of the famous German WWI fighter for 4-function R/C equipment and .15 cu.in. motors. 38" (965mm) wingspan. First Appeared in: Flying Scale Models - July/August 1999

Plan: £11.75
Cut Parts: N/A

PLAN71

RC Scale IC Power

Gloster Gladiator

The RAF's last fighter biplane, a classic of its era, modelled to 1/7th scale with a wingspan of 54.5" (1384mm). Suits .46-.60 motors. First Appeared in: Flying Scale Models - November 2000

Plan: £17.50
Cut Parts: N/A

PLAN78

RC Scale IC Power

Grumman F6F-3 & 5 Hellcat

A 1/6th scale 86" (2184mm) wingspan scale replica. Construction method makes use of carved foam for fuselage and features core wing construction. Flaps and retracts features. For 30-45cc motors. Three sheet plan. First Appeared in: FSM - Nov/Dec 1997

Plan: £19.50
Cut Parts: £120.00

PLAN85

RC Scale IC Power

Halberstadt D.V

1/4 scale replica of this magnificent WW1 warbird spanning 87" (2210mm). Prototype used O.S. 120 four-stroke engine. Two-sheet plan. First Appeared in: Flying Scale Models - December 2002

Plan: £17.50
Cut Parts: N/A

PLAN89

RC Scale IC Power

Hawker Fury

A 1/6th scale replica of the RAF's most elegant 1930s biplane fighter. 60" (1524mm) wingspan model requires 4-function R/C gear and .60 cu.in. motor. First Appeared in: FSM - Sep/Oct 1999

Plan: £17.50
Cut Parts: £125.00

PLAN91

RC Scale IC Power

Hawker Hurricane Mk1

53.5" (1360mm) wingspan sport-scale model of the early Battle of Britain era WW2 fighter. Model suits .40 two-stroke motors or .52 four-strokes. Plan shows both foam-core and built-up balsa wing construction alternatives. First Appeared in: FSM - Nov 2002

Plan: £14.50
Cut Parts: N/A

PLAN90

RC Scale IC Power

Heath Super Parasol

A 1/4, 75" (1905mm) model of the original American homebuilt aircraft. Requires rudder, elevator, aileron and throttle controls and a .60 size four-stroke motor. 3 sheet plan shows both wheel u/c and floats. First Appeared in: FSM - Jan 2001

Plan: £17.50
Cut Parts: N/A

PLAN86

RC Scale IC Power

Heinkel He 51

A 68" (1727mm) 1:6.4 scale model of the pre-WW2 German biplane fighter for 4-function radio control and .70-.90 cu.in. four-stroke motors. Two sheet plan. First Appeared in: FSM - Sep/Oct 1998

Plan: £17.50
Cut Parts: £125.00

PLAN80

RC Scale IC Power

Heinkel He70

1:10 scale version of the elegant 'Silver Lightning', results in a 57" (1448mm) span model. Suits .40 cu.in. two-stroke or .52 cu.in. four-stroke power and 5/6-channel R/C. First Appeared in: Aviation Modeller International - September 2000

Plan: £15.00
Cut Parts: N/A

PLAN88

RC Scale IC Power

Howard DGA-6

A 1/8th scale, 46.5" (1180mm) span model of the 1930s American racing aircraft. Suits .20-.25 cu.in. two-stroke motors, or .25-.30 four-strokes and 4-function R/C. Two sheet plan. First Appeared in: AMI - Dec 1998

Plan: £14.00
Cut Parts: N/A

PLAN119

AeroDetail series

Making a scale model?

Finding the detail needed to finish a scale model can be difficult and getting full size images is not always practical. Our range of detail photo collections provides extensive close ups of a wide range of popular air-craft all on CD in J-peg format

Whitman Tailwind CD106
Two examples shown of this U.S. homebuilt lightplane, with boxey shape ideal for modellers. Complete close-up detail. (62 images)

Westland Lysander CD105
The Shuttleworth Museum's airworthy example shown in both camouflage and Special Operations black finishes. Full close-up detail. (62 images)

Waco Ymf-5 CD104
Beautiful and graceful spatted undercarriage biplane of the 1930s 'golden aviation era'. Example photographed is an accurate-in-every-detail modern replica. (130 images)

Vickers Supermarine Walrus CD103
The famous 'Shagbag' biplane seaplane, used during WW2 as an air-sea rescue craft and fleet gunnery spotter. (80 images)

Tipsy Belfair CD102
Highly attractive Belgian low wing light aircraft from the era of simple, open cockpit private flying. Machine offers scale modellers pleasant lines and simple shape. (35 images)

Thulin Tummelisa CD101
Swedish 1919-era fighter trainer that served the Swedish air arm for many years. Example depicted is a faithful reproduction. (55 images)

Supermarine Spitfire MK.XVI CD100
Last of the Merlin-engined Spifires. This collection depicts the cut-down fuselage, bubble cockpit canopy later version. (116 images)

Supermarine Spitfire MK.IX CD99
The most numerous version of the classic Spitfire that turned the tables on the Luftwaffe's Focke Wulf Fw 190. (90 images)

Supermarine Spitfire MK XIV CD98
2nd of the Griffon-engined Spits (Mk.XII was first), the bigger engine forced a change of the classic Spifire shape. (58 images)

Supermarine Spitfire MK Vc CD97
Shuttleworth Museum's airworthy example presented in it's latest form with classic rounded wingtip planform. (160 plus images)

Supermarine Seafire Mk17 CD96
The Seafire 17 was no navalised Spit. A true ground-up naval fighter. (64 images)

Stinson 105 CD95
Light, private aircraft of the 1940-50s era, with lots of character. (75 images)

Steen Skybolt CD94
Attractive U.S. aerobatic biplane, presented in full detail. (89 images)

Sopwith Triplane CD93
The last example of the 'Tripehound' is the one built (in 1980!) from original Sopwith drawings by Northern Aero Works and given sequential manufacturer's number by Sir Thomas Sopwith himself in recognition of the outstanding workmanship. Extensive detail. (120 images)

Sopwith Pup CD92
The charismatic Sopwith Scout (to give its correct designation) is a great scale modellers' favourite. Example depicted is the one preserved and regularly flown at the Shuttleworth Collection, Old Warden. (50 images)

S.E.5A CD91
Shuttleworth Museum's airworthy example presented in full detail. (100 plus images)

Ryan Pt-22 CD90
US military primary trainer aircraft that served with both US Army and Navy, thus providing ab-initio flight training for the majority of US airmen of the WW2 period. A highly attractive aircraft. 90 images of the preserved, airworthy aircraft, hangared at the Shutleworth Collection, Old Warden.

Republic P-47D CD89
Bubble-canopy version of the much loved 'Jug', photographed in fine detail. (105 images)

Polikarpov Po-2 CD88
The world's most numerously produced aircraft of all time, the P0-2 was a great maid-of-all-work used by both military and civil groups in the old Soviet Union and its satellite states. Example depicted is pristine, and now in storage at Old Warden. (170 images)

Polikarpov I-15 CD87
The ultra agile Russian biplane fighter aircraft that saw widespread service prior to and in the early years of WW2 and during the Spanish civil war. Example illustrated is a superbly restored machine. (100 images)

Pitts S.1 CD86
Homebuilt example by Bob Millinchip, as seen at 2002 PFA Rally. Complete detail study. (36 images)

Piper Tomahawk CD85
Cranfield Flying School example of this civil ab-initio trainer aircraft. (54 images)

Piper Super Cub CD84
The later, 'cleaned-up' version of the famous Piper J-3, with more elegant engine cowl. Two examples shown. (80 images)

Piper L-4 Grasshopper CD83
Military version of the famous Piper J-3 Cub used during WW2 and close reconnaissance and spotter aircraft and for many other tasks. (80 images)

Percival Provost CD82
Airworthy, preserved example of the RAF piston engined basic trainer used in the 1950s. Full detail. (30 images)

Percival Mew Gull CD81
Famous 1930s racing and record setting aircraft that will forever linked with the achievements of British aviator Alex Henshaw. (35 images)

North American T28 CD80
The advanced trainer aircraft that served in many air arms worldwide and also became a counter-insurgency ground attack aircraft. Examples illustrated are from France, where the type served for many years as the 'Fenec'. (100 plus images)

North American P51D Mustang CD79
The definitive bubble canopy Merlin Mustang. In detail, showing several restored examples. This is the Fantasy of Flight Museum's overpolished example, but the close-up detail is all there. (102 images)

North American P51B/C CD78
First of the Rolls Royce Merlin engined Mustangs, this collection depicts the Fantasy of Flight Museum's restored example, with overly polished plain metal surfaces. Much detail. (102 images) Also, 41 images of The Fighter Collection's P-51C in bare metal restoration, showing much surface and internal airframe detail. A real bumper bundle! (over 140 images)

North American B25 Mitchell CD77
Fantasy of Flight Museum's example. Photographed soon after superb restoration. Full nose to tail detail. (74 images)

North American AT6 Harvard CD76
AT-6, SNJ, Texan, Harvard – call it what you will. 55,000 were built – this example is in U.S. Army colours, with comprehensive close-up detail, nose to tail. (76 images)

North American A36 Invader CD75
The ground attack variant of the Alison engined P-51A. Photos, in detail, of the world's only airworthy example. (69 images)

Morane Saulnier MS406 CD74
French WW2 fighter that fought in the Battle of France, 1940. Swiss restored example (92 images)

Monocoupe CD108
The Monocoupes were side-by-side two-seat lightplanes of mixed wood and steel-tube basic construction with fabric covering. A braced high-wing monoplane with fixed tailskid landing gear, and the reverse curve rear fuselage lines that were to become one of the signature identifier features of the Monocoupes. 55 photos

Miles Magister CD73
A firm favourite with scale modellers, this extensive collection of images depicts two examples in different Royal Air Force training colour schemes. (100 images)

Messerschmitt ME109G CD72
The 'Gustav' saw Luftwaffe service from late 1942 onwards. Subject version of this collection is a tropicalised G-6. (110 images)

Messerschmitt Bf109E CD71
The 'Emil' was the version of this WW2 fighter that was the mainstay of the Luftwaffe fighter force during the Battle of Britain in 1940. (150 images)

Me 410A – 1/U2 CD107
For those who fancy a twin, but something outside the 'normal' favourites, consider the Luftwaffe's final 'destroyer' heavy fighter that packed a powerful punch 79 photos

Martin B-26 Marauder CD70
The Fantasy of Flight Museum's example, photographed pre-restoration, soon after it was flown into the Museum site, thus in original, unrestores condition. (100 images)

LVG C.VI CD69
The sole survivor of its type from the WW1 era, photographed in extensive detail. This is the machine house at and flown from the Shuttleworth Collection airfield, Old Warden and now in storage, awaiting display at the RAF Museum. (110 images)

Luton Minor CD68
Just one example of this light aircraft, to which the owner has added many mods and variations. (32 images)

Luscombe Silvaire CD67
The elegant late 1940s U.S. light aircraft. Several examples provided, with much close-up detail for modellers. (74 images)

Kawasaki Ki100 CD66
A study of the late WW2 radial engined 'emergency' development of the Japanese Ki 61 Hien (Tony) that provided an unexpectedly superior performance for the squadrons of the Imperial Japanese Air Force during the closing stages of the Pacific war. (60 images)

Junkers Ju87G-2 Stuka CD65
The aircraft that defined the term

Hawker Typhoon CD109
The Hawker Typhoon was a British single-seat fighter bomber, produced by Hawker Aircraft. While the Typhoon was designed to be a medium-high altitude interceptor. 117 images

Hawker Tomtit CD64
Mid 1930s RAF biplane trainer aircraft, from the era open cockpits of silver dope and polished metal. (140 images)

Hawker Tempest Mk 2 CD63
The final development of Hawker

Hawker Sea Fury FB XI CD62
Hottest of all the piston-engine fighter aircraft, the carrier-bourne Sea Fury is also admired for its elegant profile. (140 images)

Hawker Hurricane MK1 & MKIV CD61
Two versions of the famous 'Hurri' – one a true Battle of Britain survivor painstakingly restored to perfect authenticity, plus the cannon-armed, Mk.IV 'tank buster'. (170 images)

Hawker Hart & Hind CD60
A combo collection featuring the RAF Museam's Hart bomber and Hart Trainer, plus Shuttleworth's Hind . (115 images)

Hawker Fury CD59
No authentic example now exists, but the accurate replica photographed in extensive detail in this collection is as good a guide as can be found of this elegant 1930s RAF fighter. Includes some general arrangement pictures authentic to the period. (55 Images)

Grumman FM-2 Wildcat CD58
First of Grumman's highly successful line of prop-driven 'Cats', the Wildcat, in guises from F4F-3 to FM-2 held the line after the Pearl Harbour attack and served from then until the end of WW2. It was idea for operations from the small escort carriers. (90 images)

Grumman F8F Bearcat CD57
Hottest of Grumman's prop-drive fighters – it arrived too late for action in WW2 but was standard ship-borne fighter equipment in the immediate post-WW2 era. (90 images)

Grumman F7F Tigercat CD56
The awesome twin engine long range fighter of the late WW2 era operated by US Navy and US Marines. (60 Images)

Grumman F6F Hellcat CD55
The US Navy's most important, and most successful fighter of WW2, photographed, close-up, from nose to tail and wing tip to wing tip. Example shown is part of The Fighter Collection, based at Duxford. (90 images)

Grumman F3F CD54
A study of the faithfully replicated example of the 1930s U.S. Navy biplane as seen at the 2001 Flying Legends Show. (34 images)

Gloster Gladiator CD53
The Royal Air Force's last biplane fighter, star of late 1930s air shows and flown in combat during early WW2, including Battle of France, Battle of Britain, Mediterranean operations and North Africa. (50 images)

Fokker D.VIII CD52
The Fantasy of Flight Museum's example of the late WW1 Imperial German Air Service monoplane fighter, in full detail. (69 images)

Fokker D.VII CD51
The most famous of all the German fighter aircraft of WW1. The collection depicts the RAF Museum, Hendon's authentic, restored example. (44 images)

Focke Wulf FW 190A CD50
Germany's 'butcher bird' fighter of WW2, active on all combat fronts from 1941 onwards.

Fieseler Storch CD49
Arguably the first military STOL aircraft, this storky looking aircraft has long been a modellers' favourite. Two examples are represented, the machine at the Fantasy of Flight Museum in Florida and the RAF Museum Cosford's example. (images)

Fairey Gannet ASW1 & T.2 CD48
The Royal Navy's post-WW2 anti-submarine workhorse, that also served with a number of other air-arms. Most images are of Mk.T.2, that was more-or-less the same as the ASW.1. (110 images)

Fairchild Ranger CD47
Elegant U.S. high wing light aircraft in full detail. Two examples shown. (60 images)

Erco Ercoupe 415 & Avalon Ercoupe CD46
The elegant twin finned light/sport aircraft. Both original Type 415 and later Alon resurection examples. (115 images)

DHC Chipmunk CD45
A bumper bundle of images that provides a vast array of detail pictures, plus photos of examples in both RAF trainer and civil colours. (70 images)

DH Tiger Moth CD44
Much close-up detail of civil register example, plus further detail of the IWM Duxford's example in Royal Navy trainer colours, showing the blind flying hood. (110 images)

De Havilland DH89 Dragon Rapide CD43
Graceful twin engine biplane airliner that saw service from pre-WW2 through to the mid 1950s. Several are still flying and three are shown in this picture collection. (100 images)

De Havilland DH84 Dragon CD42
Forerunner of the more famous DH 89 Dragon Rapide, this collection depicts a superbly restored example. (40 images)

DE Havilland DH 60 CD41
The aircraft that set the British 'club' flying movement on the road to success during the 1930s. (140 images)

De Havilland DH 53 CD40
1920s lightweight low wing sports aircraft designed to a low-power specification. Machine illustrated is the sole remaining example. (60 images)

Curtiss P-40M CD39
One of the later versions of the famous Curtiss Warhawk, the WW2 fighter aircraft that saw service in just about every combat theatre of operations. (100 images)

Curtiss P-40B Tomahawk CD38
Rare, full restored example of the early version of the Curtiss fighter aircrfaft that was at Pearl Harbour on Dec. 7th 1941 – and survived the attack! (130 images)

Curtiss Jn-4 'Jenny' CD37
An authentic, restored example in full detail. (130 images)

Curtiss Hawk 75 CD36
The 'export' version of the Curtiss P-36 that saw service in durng WW2 with Finland and during the 'Battle of France' in May/June 1940. Example shown is a combat veteran. (130 images)

Comper Swift CD35
1930s racing aircraft. Example depicted is the radial engined example at Shuttleworth Mussel (91 images)

Cierva C.30 Autogiro CD34
A study of the example hung in the Fantasy of Flight Museum, finished in RAF WW2 colours. (35 images)

Christen Eagle CD33
The spectacular, stylish aerobatic biplane revealed in close-up. Example shown is the two-seat version. (90 images)

Chrislea Super Ace CD32
Late 1940s civil light aircraft with distinctive twin fins and nosewheel type undercarriage. A fully restored example. (123 images)

Chilton DW1 CD31
Original upright engined version of this diminutive British low wing sports/racer. (90 images)

Chance Vought F4U-1D Corsair CD30
The famous 'bent wing bird' in super detail. (132 images)

Bucker Jungmeister CD29
Radial engine version. Example from Fantasy of Flight Museum. (79 images)

Bucker Bestmann CD28
Authentic example as exhibited at the Fantasy of Flight Museum, in WW2 Luftwaffe colour scheme. (43 images)

Bristol M.1C CD27
Early WW1 fighter monoplane. Example depicted is the faithfully authentic replica built by the Northern Aero Works and operated by the Shuttleworth Trust museum. (100 images)

Bristol F2B Brisfit CD26
Full close-up detail, including photos of engine cowls for both Rolls Royce Falcon and Hispano-Suiza engines. (28 images)

Bristol Bulldog CD25
This collection depicts the example assembled from two donor airframes and restored to superb standard by Skysport Engineering. It can now be seen at the Royal Air Force museum, Hendon. (60 images)

Boeing Pt-13/17 Stearman CD24
Subject aircraft is a current British civil register example used for air-show displays. (54 images)

Bleriot Monoplane CD23
The Shuttleworth Museum's machine, the oldest original example still flying. Much close-up detail showing all the exposed rigging, structure and the "bedstead" main undercarriage, plus Anzani engine. (74 images)

Bell P-39Q Airacobra CD22
Superbly restored example of this much-maligned WW2 fighter aircraft that was used with great success by Russian forces in the ground attack role and with saw much action in the south Pacific, from where this restored example was recovered. (130 images)

Beech D18 Staggerwing CD21
The distinctive back-staggered 1930s biplane with retracting undercarriage. (45 images)

Avro 504k CD20
The Shuttleworth Museum's superbly maintained machine, in full detail. (140 images)

Arrow Active II CD19
Sole remaining example of this 1930s racing and aerobatic biplane restored to pristine condition. (50 images)

Aeronca Sedan CD18
The last and most graceful of the Aeronca line of light/sports aircraft in fine detail. (80 images)

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RC Scale IC Power

Junkers J.2

1/6th scale 72" model of the radical German WW1 monoplane fighter that pioneered all-metal airframe construction. Designed by Australian R/C scale expert Gary Sunderland. Two sheet plan. First Appeared in: FSM - Mar 2008

Plan: £22.50
Cut Parts: £115.00

PLAN310

RC Scale IC Power

Kawasaki Ki-100

A 60" (1524mm) wingspan, approximately 1/8th scale replica of this classy WW2 fighter. Suits .52 to .60 cu.in. engines and 5-channel R/C. First Appeared in: Flying Scale Models - March 2003

Plan: £12.50
Cut Parts: N/A

PLAN225

RC Scale IC Power

Kawasaki KI.61 'Hien'

Arguably the most elegant Japanese WW2 fighter aircraft, this is the fighter the Allies code named 'Tony'. Our 60" (1524mm) span, near 1/8th scale model suits .45-.60 size two stroke engines or .52-.72 four strokes.

Plan: £12.50
Cut Parts: N/A

PLAN240

RC Scale IC Power

L.V.G C.VI

1/6th scale model of the German WW1 two seat reconnaissance aircraft. Prototype model won "Best of Show" at the 2000 Toledo Weak Signal Expo in USA. 85.3" span (2166mm), for .51-.65 cu. Five sheets of plans

Plan: £25.00
Cut Parts: £120.00

PLAN263

RC Scale IC Power

Luscombe Silvaire

80" (2031mm) wingspan sport scale model for 4/5-function R/C. Flaps shown. Suits .40-.53 cu.in. motors. First Appeared in: Aviation Modeller International - March 1998

Plan: £14.50
Cut Parts: N/A

PLAN110

RC Scale IC Power

Messerschmitt Me 109E

A 43" (1092mm) sport-scale model of the early Battle of Britain version of the famous German fighter. Designed for .25 cu.in. size two-stroke engines and up to four function radio control. Minimum controls are aileron and elevators. First Appeared in: AMI - Sep 2003

Plan: £11.50
Cut Parts: N/A

PLAN294

RC Scale IC Power

Meyer Little Toot

Philip S. Kent designed the 65" (1651mm) wingspan, 1:3.4 scale fully aerobatic replica for 1.80 cu.in. four strokes or similar power two strokes. First published in Flying Scale Models in January 2011.

Plan: £19.50
Cut Parts: £135.00

PLAN327

RC Scale IC Power

Miles Hawk Speed Six

Magnificent 1/4 scale model of the 1930 Kings Cup air racer. Spans 99" (2515mm), for 4-function R/C and .90-1.20 cu.in. motors. First Appeared in :Flying Scale Models - March/April 1998

Plan: £19.50
Cut Parts: N/A

PLAN115

RC Scale IC Power

Miles M28 Mercury

1/6th scale radio-controlled model of the machine that preceded the Miles Messenger. 57" (1448mm) span model suits .35-.42 size motors and features detachable wing panels. 4-function R/C minimum. Two sheet plan. First Appeared in: FSM - July 2002

Plan: £14.50
Cut Parts: £95.00

PLAN129

RC Scale IC Power

Miles Magister

1/7th scale model of the R.A.F. WW2 training aircraft. Both foam core and conventional balsa structure wing constructions shown. This 58" (1473mm) span model suits .40 size motors. First Appeared in: Flying Scale Models - September 2000

Plan: £13.50
Cut Parts: N/A

PLAN250

RC Scale IC Power

Mitsubishi A6M-5 Zero

A 63.4" (1610mm) span scale model of the famous Japanese WW2 fighter aircraft. Plan shows flaps and retracting undercarriage, including tailwheel. Suits .45-.60 cu.in. motors. First Appeared in: Flying Scale Models - March/April 2000

Plan: £17.50
Cut Parts: N/A

PLAN113

RC Scale IC Power

Monocoupe C90

Pretty 48" (1219mm) span replica of the American 1930s light aircraft, designed for 2/3-function R/C and .10 (1.5cc) motors. Prototype was Mills 1.3 powered. First Appeared in: Aviation Modeller International - August 1996

Plan: £11.50
Cut Parts: N/A

PLAN121

RC Scale IC Power

Morane Saulnier Type N

A sport scale, 1/3rd full-size model of the French WW1 monoplane fighting scout. A big 108" (2743mm) wingspan is designed for 28-38cc size motors. Easy to fly and very realistic in the air. Three sheet plans. First Appeared in: FSM - May 2001

Plan: £22.50
Cut Parts: £135.00

PLAN124

RC Scale IC Power

Nakajima B6N1 Tenzan

1/16th scale replica of the Japanese WW2 dive bomber. 36.5" (927mm) span model requires a .12-.15 size motor and 4-function R/C gear. First Appeared in: Flying Scale Models - July 1998

Plan: £11.75
Cut Parts: N/A

PLAN135

RC Scale IC Power

Nieuport 11 Bebe

Scale model of the famous French early WW1 scout biplane for 4-function radio control systems. Available in 1/4 scale with 74.3" (1887mm) span for motors like O.S. 91FS. First Appeared in: FSM - May/Jun 1999

Plan: £19.50
Cut Parts: £135.00

PLAN131

RC Scale IC Power

Nieuport 11 Bebe

Scale model of the famous French early WW1 scout biplane for 4-function radio control systems. Plans are available in 1/5 scale with 59.5" (1511mm) span for .80 size motors. First Appeared in: Flying Scale Models - May/June 1999

Plan: £19.50
Cut Parts: £125.00

PLAN132

RC Scale IC Power

Nieuport TYPE VI

A 1/6th scale replica of an early floatplane for three function radio control and .90 to 1.20 cu.in. engines. Wing span 82" (2083mm). First Appeared in: Flying Scale Models - May 2006

Plan: £20.50
Cut Parts: N/A

PLAN287

RC Scale IC Power

N.American P-51B Mustang

An accurate-outline, sport scale model of the famous WW2 fighter, in its early and highly attractive dorsal cockpit form. 49.5" (1257mm) span model is designed for .40 size engines and 4-function R/C. A great performer. First Appeared in: AMI - Feb 1996

Plan: £11.25
Cut Parts: N/A

PLAN134

RC Scale IC Power

North American P-51D Mustang

A 54" (1372mm) wing span (1:8,2 scale) model of the bubble cockpit version of this famous WW2 fighter aircraft. Plan shows main undercarriage retract positions and both conventional wing rib construction and foam core wing. First Appeared in: AMI - Feb 1996

Plan: £12.50
Cut Parts: N/A

PLAN266

RC Scale IC Power

Percival Proctor Mk.4

A 1/5.5 scale. This version has a 83.25" (2144mm) wingspan and is suitable for 1.240 cu.in. motors. First Appeared in: Flying Scale Models - July/August 2000

Plan: £24.50
Cut Parts: £115.00

PLAN151

RC Scale IC Power

Percival Proctor Mk.4

A 1/7th scale model which spans 65.4" (1661mm). Design suits .50-.60 size engines and scale flaps are shown on the two sheet plans. Simple wood construction engine cowl requires no moulding. First Appeared in: FSM - July/August 2000

Plan: £16.50
Cut Parts: £115.00

PLAN152

RC Scale IC Power

Pfalz D.XII

Australia's Gary Sunderland designed this ?-scale model of the late-WW1 German fighter aircraft. Accurate rib-for rib wing airframe structure . 89.75" (2280mm) wing span, for 1.8 – 2.00 cu.in (30-35cc) engines and four function R/C systems.

Plan: £27.50
Cut Parts: £175.00

PLAN313

RC Scale IC Power

Piper Super Cruiser

David Boddington's 1/5th true scale 84" (2134mm) wingspan replica of the Piper PA-12 light aircraft, designed for 4-function radio control systems and .90 cu.in. size motors. First Appeared in: Flying Scale Models - January/February 1999

Plan: £16.50
Cut Parts: £95.00

PLAN150

RC Scale IC Power

Piper Super Cub

A great first-time scale model for novices and sport fliers who want real scale accuracy. 79" (2007mm) span 1:5.33 scale model suits .40-.60 range of engines. Two sheet plan. Glass fibre cowl available. First Appeared in: Aviation Modeller International - August 1996

Plan: £16.50
Cut Parts: £95.00

PLAN146

RC Scale IC Power

Polikarpov I-152

A 1/6th scale, 67" (1702mm) span model of this distinctive 1930s Russian biplane. Designed for 120 and larger four-stroke engines and 4-channel R/C. Five-sheet plan. First Appeared in :Flying Scale Models - April 2003

Plan: £24.50
Cut Parts: N/A

PLAN227

RC Scale IC Power

PZL 104 Wilga C

An 84" (2132mm) wing span 1:5.2 scale model of the Polish light STOL aircraft extensively used for glider towing and general purpose short-field operations.

Plan: £19.50
Cut Parts: £115.00

PLAN272

RC Scale IC Power

Royal Aircraft Factory B.E.2e

A 1/6th scale master model of the early WW1 reconnaissance biplane. 79.75" (2025mm) wing span model suits .60 cu.in. (10cc) engines and four function R/C equipment

Plan: £19.50
Cut Parts: £130.00

PLAN325

RC Scale IC Power

Rumpler C.IV Taube

A 1/7th scale 80" (2032mm) wing span sport-scale model of the early German WW1 aircraft designed for .60 cu.in. size four stroke engines and four function radio control operating rudder, elevators, ailerons and throttle. First Appeared in: FSM - Apr 2005

Plan: £19.50
Cut Parts: £110.00

PLAN269

RC Scale IC Power

SE5a

Practical 1/5th scale 64" (1626mm) span replica featuring accurate rib-for-rib airframe structure. A good size model, without being too big for transport. 4-function R/C required. Three sheet plan. First Appeared in: Flying Scale Models - May/June 1998

Plan: £24.00
Cut Parts: N/A

PLAN183

RC Scale IC Power

Sopwith Camel

1/6th scale replica of the famous RFC WW1 fighter biplane, for .24-.40 size motors and 4-function R/C. 56" (1422mm) wing span. First Appeared in: Flying Scale Models - January/February 1998

Plan: £14.50
Cut Parts: £79.50

PLAN188

RC Scale IC Power

Sopwith Pup

David Boddington's superb, true-to-scale 1/5th scale replica, featuring accurate outlines and rib-for-rib reproduction of the full-size wing structure. 63" (1600mm) span. First Appeared in: Aviation Modeller International - January 1996

Plan: £16.50
Cut Parts: £135.00

PLAN177

RC Scale IC Power

Southern Martlet

1/5th scale replica of an attractive 1930s sports racing biplane. Aviation Modeller International - June 1996

Plan: £19.50
Cut Parts: £80.00

PLAN311

RC Scale IC Power

Southern Martlet

1/7th scale replica of an attractive 1930s sports racing biplane. 44" (118mm) span model suits .20 cu.in. size motors and 3-function R/C. First Appeared in :Aviation Modeller International - June 1996

Plan: £12.50
Cut Parts: £65.00

PLAN171

RC Scale IC Power

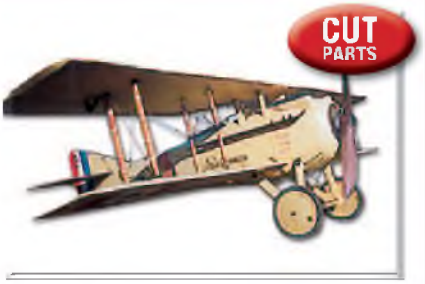
Spad 7

Accurately detailed replica of the French WW1 fighting scout available in 1/4 scale with 85.8" (2180mm) span. .90. 4-function R/C gear required

Plan: £24.00
Cut Parts: £175.00

PLAN181

RC Scale IC Power



Spad 7

Accurately detailed replica of the French WW1 fighting scout available in 1/5 scale with 68.6" (1743mm) span. Model is designed for 20-25cc (1.2-1.5 cu.in.) motors.

Plan: £24.00
Cut Parts: £165.00

PLAN180

RC Scale IC Power

Spitfire Mk. XVI

The Mk.16 Spitfire was the last of the Merlin engined Spits and later versions featured the bubble type cockpit canopy. This sport-scale modeless to 1/8th scale model spans 54" (1372mm).

Plan: £14.50
Cut Parts: N/A

PLAN270

RC Scale IC Power

Staaken Z-1 Flitzer

Scale model of a full-size homebuilt biplane designed to capture the air of the WW1 era. This 43.5" (1105mm) span replica suits .35-.48 size motors and 4-function R/C. First Appeared in: AMI - Feb 1997

Plan: £12.50
Cut Parts: N/A

PLAN190

RC Scale IC Power

Stits Playboy

Build this classic and cute little homebuilt aircraft from the 1950s era. 47.5" (1207mm) span sport-scale model can be flown on .20-.30 cu.in. two stroke engines or .30-.40 four strokes. First Appeared in: FSM - Aug 2004

Plan: £14.50
Cut Parts: N/A

PLAN260

RC Scale IC Power

Sukhoi SU-26

Small size, 39.5" (1000mm) scale model of the Russian Aerobatic aircraft, offers a lively aerobatic performance with 4-function radio and .20-.30 cu.in. motors. First Appeared in: AMI - Jan 1998

Plan: £12.50
Cut Parts: N/A

PLAN182

RC Scale IC Power

Taylorcraft BC-12

An accurate 1/4 scale model of a classic American high-wing lightplane, designed by Philip S.Kent for 1.20-1.50 cu.in. four-stroke engines. Wing span 106.5" (2705mm)

Plan: £19.50
Cut Parts: £120.00

PLAN291

RC Scale IC Power

Tipsy Junior

Down the years, since its first appearance in 1948, this cute little machine has been a scale modellers favourite. The 79" (2006mm) span 1:3.44 scale replica designed by Philip S.Kent makes a great introduction to R/C scale.

Plan: £19.50
Cut Parts: £95.00

PLAN286

RC Scale IC Power

Tupolev Tu-95 Bear

Spectacular 84" (2134mm) span sport scale model of the Russian "cold-war" era ultra-long-range recce aircraft, for two .40 size motors and minimum 4-function R/C. Engine nacelles ideally suited to electric power conversion. First Appeared in: AMI - Dec 1997

Plan: £15.00
Cut Parts: N/A

PLAN203

RC Scale IC Power

Ultimate 10-300

Fully aerobatic scale replica of the full-size competition machine. 55" (1400mm) span model suits .90-1.20 cu.in. motors and 4-function R/C. Two sheet plan. Cockpit and cowl available

Plan: £16.50
Cut Parts: N/A

PLAN204

RC Scale IC Power

V-1 Doodle Bug

The V-1 "Buzz-Bomb" of WW2 replicated to a 40" (1016mm) span, for Estes rocket power or PSS with aileron, elevator and rocket fire function controls. First Appeared in: FSM - January/February 1999

Plan: £11.75
Cut Parts: N/A

PLAN206

RC Scale IC Power

Vought OS2U-3 Kingfisher

Sport scale replica of the WW2 seaplane scout aircraft for 4/5-function R/C and .60-.90 motors. Wingspan of 60" (1524mm). First Appeared in: Aviation Modeller International - May 1998

Plan: £15.00
Cut Parts: N/A

PLAN211

RC Scale IC Power

Westland Lysander Mk3

Superb true scale construction replica of the WW2 Army Co-op and Special Operations aircraft in 1.75":1' scale. 87.5" (2223mm) span model suits .50-.60 size two-stroke motors and requires minimum 4-function radio control. Two sheet plan. Wooden cowl - no glass fibre moulding

Plan: £19.50 **Cut Parts:** £135.00

PLAN109

RC Scale IC Power

Winter LF-1 Zaunkonig

Jeremy Collins' 3/10th scale, 94" (2388mm) wing span model faithfully replicates the full size and offers the prospect of a unique flying challenge.

Plan: £24.50
Cut Parts: £140.00

PLAN298

RC Scale IC Power

Yakovlev Yak 3

Sport-Scale model of Russia's hottest WW2 fighter aircraft. 50" machine suits .52 cu.in four stroke engines, plans show both foam-core and built-up wing rib & spar wing construction. Retract positions also shown. First Appeared in: FSM - May 2006

Plan: £12.50
Cut Parts: N/A

PLAN248

RC Scale IC Power

Yokosuka MZY-7 Ohka

Something completely different - the Japanese WW2 rocket Kamikaze, designed to be aerotowed to height before firing Estes rocket motors. Aileron, elevator and rocket fire control functions, plus tow release. First Appeared in: FSM - Mar/Apr 1998

Plan: £11.75
Cut Parts: N/A

PLAN216

RC Scale IC Power

Zlin 50L/M

Graham Smith's 54" (1372mm) span sport scale aerobat suits .40-.46 two-stroke or .52 four-stroke engines. 4-channel R/C operates this 1/6th scale model. First Appeared in: Aviation Modeller International - June 2003

Plan: £12.50
Cut Parts: N/A

PLAN251

RC Scale IC Power

Comper Swift CLA7

The delightful 1930s British light-sport and racing aircraft built to 1/3rd scale

Plan: £19.50
Cut Parts: £135.00

PLAN333

RC Scale IC Power

Gloster Gauntlett

1:5 Scale 78.7" (1999mm) wingspan model for 2-2.4 cu.in. engines and four function RC designed by Jeff Hartnoll. Published in FSM August and September 2001 issues.

Plan: £24.50
Cut Parts: N/A

PLAN331

RC Scale IC Power

Nieuport 28

60 size R/C Scale model 4 channels. 65" span. Cowls £18. Plan Number: MF31, Designer: P Smith, Power: 0.6 Published in FSM December 2012 (issue 157)

Plan: £34.95
Cut Parts: £75.00

PLANMF31

RC Scale IC Power

Nieuport 27

Gary Sunderland's quarter scale WWI fighter with 80.5" wingspan for 2.00 cu.in four stroke engines. First published in FSM 143 and 144 Oct 2011 and Nov 2011.

Plan: £24.50 **Cut Parts:** N/A

PLAN332

RC Scale IC Power

Rhapsody

Elegant 58.5" span elliptical wing RC model for 4 function systems and .25-.32 cu.

Plan: £15.00
Cut Parts: £59.00

PLAN326

RC Scale IC Power

Miles Sparrowhawk

1/4 scale R/C 5 channel radio, '108' to '120' engines. 84" wingspan Originally appeared in Model Flyer Magazine Issue: Dec 99 Designer: Ken Burke Power: 0.12

Plan: £29.95
Cut Parts: N/A

PLANMF1

RC Scale IC Power

Miles Sparrowhawk 3-View

3-view scale drawings to 1/24 scale Originally appeared in Model Flyer Magazine Issue: to go with MF 1 - Dec 99 Designer: Ken Burke

Plan: £4.00
Cut Parts: N/A

PLANMF1a

RC Scale IC Power

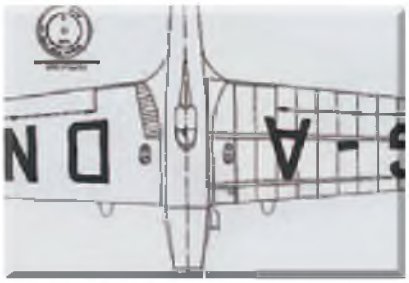
Grumman Skyrocket

Profile scale fun-fly R/C Grumman Skyrocket for 2 x '18' and 2 x '28' engines and 4/5 channel radio Originally appeared in Model Flyer Magazine Issue: Apr 00 Designer: Boddo Power: Profile multi .18/.28(4)

Plan: £14.95
Cut Parts: N/A

PLANMF12

RC Scale IC Power



Miles Messenger

1/24 Scale drawing to compliment MF21 Originally appeared in Model Flyer Magazine Issue: Jul-00 Designer: G Smith

Plan: £4.00
Cut Parts: N/A

PLANMF25

RC Scale IC Power

Projed P-51

R/C profile funscale, for 2-function radio, 1.0 to 1.5cc motors Originally appeared in Model Flyer Magazine Issue: May-01 Designer: Boddo Power: 0.1

Plan: £5.00
Cut Parts: N/A

PLANMF50

RC Scale IC Power

Hummingbird

1/4 scale DH monoplane .90 to 120 4 strokes, 4 channel.90" wingspan Originally appeared in Model Flyer Magazine Issue: Jan-01 Designer: M Hawkins Power: 0.12

Plan: £34.95
Cut Parts: N/A

PLANMF37

RC Scale IC Power

Blackburn mono

53" span, RC for .20 power Originally appeared in Model Flyer Magazine Issue: Dec-03 Designer: Boddo Power: 0.2

Plan: £9.95
Cut Parts: N/A

PLANMF123

RC Scale IC Power

Miles Hawk

R/C scale '30s racer, 72" wingspan for .60 IC Originally appeared in Model Flyer Magazine Issue: May-02 Designer: K Burke Power: 0.6

Plan: £16.95
Cut Parts: N/A

PLANMF84

RC Scale IC Power

Me 109/Spitfire

.15 powered - 3 channel R/C, all built-up structure. Originally appeared in Model Flyer Magazine Issue: Jul-01 Designer: Boddo Power: 0.15

Plan: £5.00
Cut Parts: N/A

PLANMF57

RC Scale IC Power

P-38 Lightning

60inch span RC profile twin for 2 x .25 IC Originally appeared in Model Flyer Magazine Issue: Jan-06 Designer: K Sheppard Power: .25

Plan: £7.50
Cut Parts: N/A

PLANMF170

RC Scale IC Power

Mini Skyrocket

39" wingspan RC profile scale funfly for 2 x .15 power Originally appeared in Model Flyer Magazine Issue: Aug-04 Designer: Boddo Power: .15 (2)

Plan: £9.95
Cut Parts: N/A

PLANMF140

RC Scale IC Power

Stinson HW75

34" free flight scale model for .5-.75cc motors Originally appeared in Model Flyer Magazine Issue: May-07 Designer: J Watters Power: 0.03

Plan: £7.50
Cut Parts: N/A

PLANMF194

RC Scale IC Power

Macchi 202

54" wingspan for .60 power, 4/5 channel RC retracts optional Originally appeared in Model Flyer Magazine Issue: Mar-07 Designer: G Smith Power: 0.52

Plan: £7.95
Cut Parts: N/A

PLANMF189

RC Scale IC Power

Fw 190D

.52 IC powered warbird with foam or built up wing. 5 channel (incl retracts) Originally appeared in Model Flyer Magazine Issue: May-06 Designer: G Smith Power: 0.52

Plan: £6.95
Cut Parts: N/A

PLANMF177

RC Scale IC Power

Bleriot XI

60" wing span model for 30 power Originally appeared in Model Flyer Magazine Issue: Aug-11 Designer: D Boddington Power: 0.3

Plan: £19.95
Cut Parts: N/A

PLANMF257

RC Scale IC Power

Vultee Sentinel

36" span scale model for FF or RC IC or EP
Originally appeared in Model Flyer Magazine Issue: Apr-08 Designer: J Watters Power: 0.03

Plan: £9.95
Cut Parts: N/A

PLANMF210

RC Scale IC Power

Vacuplane

Unorthodox semi scale model for .40 power RC
Originally appeared in Model Flyer Magazine Issue: Dec-08 Designer: J Stengele Power: 0.4

Plan: £14.95
Cut Parts: N/A

PLANMF221

RC Scale IC Power

ABC Robin

56" wing span scale model for RC for 25-40 power
Originally appeared in Model Flyer Magazine Issue: Jan-11 Designer: D Boddington Power: 0.26

Plan: £14.95
Cut Parts: N/A

PLANMF250

RC Sport Electric

Fly Baby

62" (1575mm) span conversion to electric power of Peter Bowers' 1940s free-flight plan. Suits 500/600 size motors and 3-channel R/C. First Appeared in: Aviation Modeller International - February 2003

Plan: £12.50
Cut Parts: N/A

PLAN221

RC Sport Electric

Dalotel 3D

Hang on tight for some extreme aerobatics for electric power with John Rutter's 48" (1219mm) wing span design. Requires a geared 600 size motor or Mega 22/30/3 brushless and ten cell 2400 mAh power pack. First Appeared in: AMI - Sep 2003

Plan: £12.50
Cut Parts: N/A

PLAN232

RC Sport Electric

Femto Fun 300 and 400

Two versions of the same design for 300 and 400 size electric motors. This 'minimum airframe' ultra-aerobatic model uses 4-function lightweight R/C gear. Wing spans are 29" (730mm) and 33.5" (850mm) respectively. First Appeared in: AMI - Dec 1999

Plan: £11.25
Cut Parts: N/A

PLAN67

RC Sport Electric

Flectrun 400

A 30" (762mm) span R/C electric design for 400 size electric motors. Primary controls are aileron and elevator (no rudder), plus motor speed control. First Appeared in: Aviation Modeller International - November 1999

Plan: £10.00
Cut Parts: N/A

PLAN68

RC Sport Electric

Pixel

Styled on the Keil Kraft rubber powered "Pixie", the delightfully shaped Pixel is an R/C sports flier for geared 400 size electric motors and three function radio on rudder, elevator and throttle. Wing span 50.2" (1275mm). First Appeared in: AMI - Aug 2004

Plan: £12.50
Cut Parts: N/A

PLAN254

RC Sport Electric

Prowler

Simple, constant-chord high-wing sports R/C model for 400 size electric power. R/C on rudder, elevator and speed control. 36" (914mm) wingspan. First Appeared in: Aviation Modeller International - January 2000

Plan: £10.00
Cut Parts: N/A

PLAN156

RC Sport Electric

Skyranger 500

Docile, high performance electro-soarer for 3-function R/C. Elegant and practical model. Wing span 57.5" (1460mm). First Appeared in: Aviation Modeller International - April 1998

Plan: £12.50
Cut Parts: N/A

PLAN175

RC Sport Electric

Sou-wester

Electric powered duration style R/C model for 3-function R/C gear on rudder, elevator and speed controls. 58.5" (1485mm) span for Speed 400 type motors. First Appeared in: Aviation Modeller International - June 1997

Plan: £10.00
Cut Parts: N/A

PLAN179

RC Sport Electric

Trooper

A 48" (1220mm) wing span parasol wing sports model with the air of a 1930s military trainer aircraft, designed for the popular 400 size electric motors. And three function radio. First Appeared in: AMI - Feb 2001

Plan: £11.50
Cut Parts: N/A

PLAN197

RC Sport Electric

eZe Eagle

54.5 inch approx wingspan EP fun-fly sports Originally appeared in Model Flyer Magazine Issue: April-13 Designer: Andy Reid Power: EP

Plan: £23.95
Cut Parts: N/A

PLANMF283

RC Sport Electric

Gulliver

77inch approx wingspan 8 channel computer RC EP Originally appeared in Model Flyer Magazine Issue: Aug-12 Designer: JJ Rutter Power: EP

Plan: £14.95
Cut Parts: N/A

PLANMF274

RC Sport Electric

Woodbine

22inch approx wingspan 3 channel RC tailless EP Originally appeared in Model Flyer Magazine Issue: July-12 Designer: Mike White Power: EP2600Kv outrunner

Plan: £9.95
Cut Parts: N/A

PLANMF273

RC Sport Electric

Versatility

52inch approx wingspan RC for 20 size EP aerobatic trainer Originally appeared in Model Flyer Magazine Issue: May-12 and June-12 Designer: Ian Stockdale Power: 20 Size EP

Plan: £14.95
Cut Parts: N/A

PLANMF271

RC Sport Electric

RUDP

32inch wingspan RC all-sheet SP400 Originally appeared in Model Flyer Magazine Issue: Jul-01 Designer: P Lewis Power: S400

Plan: £6.95
Cut Parts: N/A

PLANMF160

RC Sport Electric

Field Rat

F/F or R/C sports parasol, for 0.8cc motors. Originally appeared in Model Flyer Magazine Issue: Jul-97 Designer: K Sheppard Power: GWS 39.5" wingspan.

Plan: £5.00
Cut Parts: N/A

PLANMF61

RC Scale IC Power

Twin Spin

45" span fun fly sports model for .25-.35 power Originally appeared in Model Flyer Magazine Issue: Feb-06 Designer: A Clark Power: 500W brushless

Plan: £9.95
Cut Parts: N/A

PLANMF240

RC Scale IC Power

Barracuda

40" wing span aerobatic RC flying wing Originally appeared in Model Flyer Magazine Issue: Nov-05 Designer: M White Power: 200W brushless

Plan: £10.00
Cut Parts: N/A

PLANMF236

RC Scale IC Power

Stroller

20" span EP sports model Originally appeared in Model Flyer Magazine Issue: Aug-04 Designer: A Reid Power: GWS

Plan: £6.95
Cut Parts: N/A

PLANMF217

RC Sport Electric

Little Ern

26" span for electric power sports model Originally appeared in Model Flyer Magazine Issue: Jul-04 Designer: I Stockdale Power: 400 brushless

Plan: £6.95
Cut Parts: N/A

PLANMF216

RC Sport Electric

Cava

46 1/2" span EP flying boat Originally appeared in Model Flyer Magazine Issue: Jan-04 Designer: D Eustace Power: 2 x 400 brushless

Plan: £7.95
Cut Parts: N/A

PLANMF206

RC Sport Electric

What If?

Electric power flying teardrop Originally appeared in Model Flyer Magazine Issue: Sep-03 Designer: L Cotton Power: 400 brushless

Plan: £5.95
Cut Parts: N/A

PLANMF201

RC Sport Electric

Honkers

36" span 400 size EP 3D model Originally appeared in Model Flyer Magazine Issue: Jun-02 Designer: N Young Power: S400

Plan: £6.95
Cut Parts: N/A

PLANMF181

RC Sport Electric

Insanity

All sheet EP Delta 2300kv brushless motor 15 ducted fan motor 3600kv Originally appeared in Model Flyer Magazine Issue: Nov-07 Designer: I Stockdale Power: 400 brushless

Plan: £6.95
Cut Parts: N/A

PLANMF262

RC Sport Electric

Breezer

37.5" electric power sports aerobat 50-120W brushless out runner Originally appeared in Model Flyer Magazine Issue: Jul-10 Designer: A Reid Power: 400 brushless

Plan: £6.95
Cut Parts: £75.00

PLANMF246

RC Sport Electric

Fun Fly

42" span fun fly for 500W electric power 5 channel flaperon mixing Originally appeared in Model Flyer Magazine Issue: Apr-06 Designer: J J Rutter Power: 400W brushless

Plan: £9.95
Cut Parts: N/A

PLANMF244

RC Sport Electric

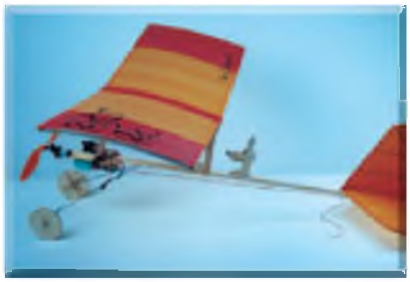
Night Rider

Dunne type Depron tailless bipe Originally appeared in Model Flyer Magazine Issue: Mar-08 Designer: G Iredale Power: 200 brushless

Plan: £9.95
Cut Parts: N/A

PLANMF269

RC Sport Electric



Rafter Rat

Indoor R/C electric slow fly, based on H Barrs Hangar Rat. GWS unit / 7 cells. Originally appeared in Model Flyer Magazine Issue: Jul-01 Designer: K Sheppard Power: GWS

Plan: £5.00
Cut Parts: N/A

PLANMF58

RC Sport IC Power

Aeromite

36" (914mm) span R/C stunter featuring all-sheet fuselage and constant-chord, fully-symmetrical section wing. Can be flown with 2- to 4-function R/C and suits .15 size motors. First Appeared in: AMI - Jan 1997

Plan: £11.25
Cut Parts: N/A

PLAN1

RC Sport IC Power

AMI Tutor

A proven basic R/C trainer, with follow-on alternative symmetrical wing section option for an introduction to aerobatic flying. 52.5" (1334mm) span machine suits .25-.40 size motors and 4-function R/C gear. First Appeared in: AMI - Dec 1998

Plan: £13.50
Cut Parts: N/A

PLAN218

RC Sport IC Power

Bandit

A medium size, 60" (1524mm) span sports aerobatic model featuring attractive open cockpit appearance. Designed for .40-.60 cu.in. motors and 4-function R/C. Fixed, tail-dragger undercarriage. First Appeared in: AMI - Sep 1999

Plan: £12.50
Cut Parts: N/A

PLAN18

RC Sport IC Power

Mills Bomb

David Boddington's 35" sport RC for 2 channel for the Irvine 1.3cc engine Published in AMI March 1997

Plan: £9.95
Cut Parts: N/A

PLAN458

RC Sport IC Power

Broomstick

Free flight scale replica of the radial-cowled version of this classic biplane aerobatic aircraft. 23.5" (600mm) span model suits Cox .020 motor or similar. First Appeared in: AMI - April 2004

Plan: £11.50
Cut Parts: N/A

PLAN245

RC Sport IC Power

Dancing Girl

Semi-scale R/C model based on the on the diminutive American 'Cosmic Wind' racers, this 53" (1346mm) span fully aerobatic machine suits .46 cu.in. two stroke engines, or .52 four strokes. Four function radio required. First Appeared in: AMI - July 2004

Plan: £12.50
Cut Parts: N/A

PLAN255

RC Sport IC Power

Diamond 4

Fly your own Red Arrows aerobatic team with this 83" (2108mm) span four-plane formation group, designed for .50-.60 size two-stroke motors by the late Peter Hales. Ailerons on outer models and elevator on the rear one. First Appeared in: AMI - Dec 1995

Plan: £12.50
Cut Parts: N/A

PLAN40

RC Sport IC Power

Die Hard

A hot-dogging sports aerobatic biplane for .36 cu.in. sized engines with variable engine thrustline control for extreme stunt performance. 38.5" (978mm) span, for 4-function R/C. First Appeared in: AMI - Feb 2000

Plan: £11.25
Cut Parts: N/A

PLAN249

RC Sport IC Power

Duck Soup

Something very different for those in search of a real break with convention! A 62" (1575mm) span pusher canard model for .45 two-stroke engines and 4-function radio. First Appeared in: AMI - Jan 1997

Plan: £13.50
Cut Parts: N/A

PLAN44

RC Sport IC Power

El Forte

46" (1168mm) span fighter style delta-wing for .35-.45 motors and 3-function radio. One piece airframe employs completely conventional balsa/ply construction. Pusher engine installation. First Appeared in: AMI - Sep 1996

Plan: £12.50
Cut Parts: N/A

PLAN58

RC Sport IC Power

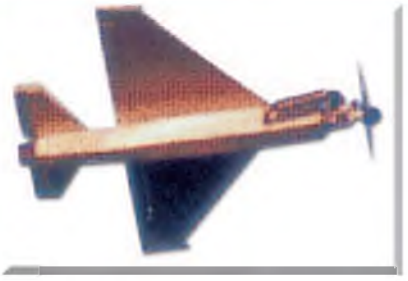
Elation

An F.A.I class F3A competition R/C aerobatic aircraft, specifically designed for those who wish to make a start in competition aerobatics. 69.3

Plan: £13.50
Cut Parts: N/A

PLAN271

RC Sport IC Power



F-16 Fun Fighter

All-sheet construction jet fighter style sports R/C model, with tight dimensions that allow it to fit into the back of the car in one piece! Suits .10-.20 motors. Wing span 32.25" (819mm). First Appeared in: AMI - April 1998

Plan: £11.25
Cut Parts: N/A

PLAN63

RC Sport IC Power

Fan Phantom

Semi-scale replica of the McDonnell Douglas F-4 Phantom, designed for ducted fan operation with .21-.25 cu.in. power. Requires 4-function R/C. 28" (711mm) span. First Appeared in: AMI 1996

Plan: £11.25
Cut Parts: N/A

PLAN60

RC Sport IC Power

Fantasy 2

A 50" (1270mm) span low-wing sports model with taildragger undercarriage and open style cockpit for .25 cu.in. motors and 4-function radio control systems. First Appeared in: AMI - October 1999

Plan: £11.50
Cut Parts: N/A

PLAN281

RC Sport IC Power

Ghouly

All-sheet construction tailless canard twin, for twin Cox Black Widow .049 power, with Jedelsky wing construction. For 2/3-function R/C, with 'elevon' main controls. Wing span 45.5" (1156mm). First Appeared in: AMI - October 1998

Plan: £11.25
Cut Parts: N/A

PLAN74

RC Sport IC Power

Great Tit

Twice-size enlargement of the original Frog kit free flighter for .049 cu.in power. May be flown either free flight or radio controlled with rudder and elevator controls. 36" (914mm) wing span. First Appeared in: AMI - July 1997

Plan: £11.50
Cut Parts: N/A

PLAN72

RC Sport IC Power

Groin Strain

An ultra-simple, ultra-aerobatic fun-fly model for .20-.36 motors. 47" (1194mm) wingspan requires four-function radio control systems. First Appeared in: AMI - September 1997

Plan: £11.25
Cut Parts: N/A

PLAN84

RC Sport IC Power

Grosswing

A modern rendition of the original Richard Gross tailless design. 92" (2337mm) span model suits .35-.40 size i.c. motors or electric power (both installations are shown). 3/4-function radio control. First Appeared in: AMI - Jan 1997

Plan: £15.50
Cut Parts: £65.00

PLAN73

RC Sport IC Power

Grumman Skyrocket

Semi-scale profile twin, designed for two .20-.30 cu.in. motors and 4-function R/C equipment. 52" (1321mm) wing span. A fun-flier with a different and spectacular performance. First Appeared in: AMI - March 1999

Plan: £12.50
Cut Parts: N/A

PLAN77

RC Sport IC Power

Grumman Tigercat

Profile scale twin for two .10 cu.in. (1.5cc) motors and 3/4-function radio. All sheet Jedelsky construction wing spans 34" (864mm). First Appeared in: Aviation Modeller International - December 1996

Plan: £11.25
Cut Parts: N/A

PLAN75

RC Sport IC Power

Hazy Daze

Vintage style fun flyer, ideal for sultry summer afternoons and clear, calm Autumn evenings. Uses 2/3-function R/C, or can be flown as free flight. 64" (1626mm) span model suits .10-.15 cu.in. motors. First Appeared in: AMI - Jan 1999

Plan: £13.50
Cut Parts: N/A

PLAN87

RC Sport IC Power

Herr Flick

Boxy, sports aerobatic model with trike undercarriage. All-sheet fuselage and zero dihedral wing (with fully symmetrical wing section) make for a fast build. 49" span model suits .40 size motors and requires 4-function R/C. First Appeared in: AMI - Mar 1996

Plan: £12.50
Cut Parts: N/A

PLAN92

RC Sport IC Power

Interceptor

A 72" (1829mm) span sports parasol with the air of a 1930s 'fighter'. Suits 4-function R/C systems and engines around the .40 size. First Appeared in: Aviation Modeller International - November 1997

Plan: £15.00
Cut Parts: N/A

PLAN94

RC Sport IC Power

Jetfire 2

A simple-to-build low wing R/C aerobatic sportster, design to give the air of an early jet fighter. 72" (1322mm) span model suits .19-.25cu.in motors and requires four-function radio. First Appeared in: AMI - August 2000

Plan: £12.50
Cut Parts: N/A

PLAN95

RC Sport IC Power

Jolene

Low-wing sports aerobatic design for 4-function radio systems, featuring simple fuselage structure and constant-chord wing. 60" (1524mm) wingspan design suits .25-.30 size motors. First Appeared in: AMI - August 2001

Plan: £12.50
Cut Parts: N/A

PLAN96

RC Sport IC Power

Kiwi

Handy size 25" (635mm) span low-wing sport aerobatic R/C model with attractive, racy lines, for .10 size motors and up to 4-function lightweight R/C gear. First Appeared in: AMI - January 1999

Plan: £10.00
Cut Parts: N/A

PLAN97

RC Sport IC Power

Lil Amigo and Amigo Baby

Two versions of a high-wing R/C model spanning either 45" (1143mm) or 33" (838mm), for 3- or 2-function R/C respectively. Open structure fuselage. First Appeared in: AMI - May 1996

Plan: £12.50
Cut Parts: N/A

PLAN107

RC Sport IC Power

Little Ship

Vintage style sportster for 2- or 3-function R/C and either .09 (1.5cc) i.c. motor or 400 size electric. Wing span 44" (1118mm). First Appeared in: Aviation Modeller International - February 1998

Plan: £11.50
Cut Parts: N/A

PLAN103

RC Sport IC Power

Mean Machine

This is a compact, 49" (1245mm) span aerobatic model for .32-.46 two-strokes and 4/5-function radio. A lot of fun for those who want more out of their model flying than straight and level stuff! First Appeared in: AMI - April 1997

Plan: £12.50
Cut Parts: N/A

PLAN133

RC Sport IC Power

Merlin

Attractive high-wing sports model with the option of two versions, one with long wing and extra dihedral for training, or shorter, minimal dihedral for aerobatics. 54" (1372mm) or 58" (1473mm) span models suit .25-.38 cu.in. motors and 3/4-function R/C. First Appeared in: AMI - Dec 1999

Plan: £12.50
Cut Parts: N/A

PLAN117

RC Sport IC Power

Military Combat Pair

Why not try streamer-chasing aerial combat with these profile fuselage R/C stunters. Quick-built and expendable. Plan shows two different fuselages and common wing. First Appeared in: Aviation Modeller International - April 1996

Plan: £12.50
Cut Parts: N/A

PLAN122

RC Sport IC Power

Millenia

An ultra-aerobatic sports R/C model for 3D flying with a .40-.46 size motor and 4-function R/C. Fully configured for extreme aerobatic work. 48" (1219mm) wingspan. First Appeared in: Aviation Modeller International - May 1999

Plan: £11.25
Cut Parts: N/A

PLAN118

RC Sport IC Power

Mini Super

A 45" (1143mm) wingspan miniature of the famous Keil Kraft Super Sixty for free flight or 3-function R/C, using 1.3-2.5cc (.08-.15 cu.in.) motors. First Appeared in: Aviation Modeller International - November 1996

Plan: £11.50
Cut Parts: N/A

PLAN128

RC Sport IC Power

Ol' Sam

Vintage style 66" (1676mm) wingspan sports R/C model for rudder/elevator/throttle controls. Easy-to-build and great for those calm summer evenings. Recommended power range, .30-.40. Two sheet plan. First Appeared in: AMI - September 2002

Plan: £13.50
Cut Parts: N/A

PLAN140

RC Sport IC Power

Peggy Sue

Elegant, high-wing sportster with a fine sport aerobatic performance. This 50" (1270mm) span model suits .25-.30 cu.in. four-stroke or .20-.25 two-stroke motors and requires 4-function R/C. First Appeared in: AMI - July 2000

Plan: £12.50
Cut Parts: N/A

PLAN142

RC Sport IC Power

Profile Me 109

Simple profile fuselage R/C sports model, with all-sheet, super simple Jedelsky wing structure for a really fast build. 30" (762mm) span model can be flown on just aileron and elevator controls only. First Appeared in: AMI - March 1996

Plan: £10.00
Cut Parts: N/A

PLAN112

RC Sport IC Power

Rays Bird

A big, stately 72" (1829mm) span high-wing sports R/C model for rudder, elevator and throttle controls and .40-.60 cu.in. motors. Ideal for those who appreciate a steady, no-drama flight pattern. Two sheet plan. First Appeared in: AMI - August 1998

Plan: £14.50
Cut Parts: N/A

PLAN157

RC Sport IC Power

Red-5

Jet style, sleek R/C sports aerobatic model for .25-.40 size motors and 4-function R/C gear. Wingspan 40" (1016mm). First Appeared in: Aviation Modeller International - January 1999

Plan: £11.25
Cut Parts: N/A

PLAN160

RC Sport IC Power

Rotack

Twin rotor autogyro for engines of about .25 cu.in. and 3-function radio controlling rudder, elevator and throttle. It's great fun! First Appeared in: Aviation Modeller International - November 1996

Plan: £11.50
Cut Parts: N/A

PLAN161

RC Sport IC Power

Sky Eye

Purpose-designed model for aerial photography using a simple practical layout. Plan shows camera installation in nose pod. Wingspan 72" (1829mm), suitable for .45-.50cc motors. First Appeared in: AMI - June 1998

Plan: £12.50
Cut Parts: N/A

PLAN170

RC Sport IC Power

Sky Spy

A multi-role 68" (1727mm) wingspan R/C model for aerial photography, toffee bombing, glider towing or plain sports flying. Uses 4/5-function R/C systems and .30-.48 cu.in. motors. First Appeared in: AMI - July 1999

Plan: £12.50
Cut Parts: N/A

PLAN186

RC Sport IC Power

Skybird 40

Snappy sportster, which is simple to build with constant-chord wing form. Offers sparkling performance on any engine in the .35-.40 range. 4-function radio normal. Wingspan 53" (1346mm). First Appeared in: AMI - Mar 1996

Plan: £12.50
Cut Parts: N/A

PLAN174

RC Sport IC Power

Socatash

Neat parasol-wing R/C sportster for club field fun with a .40-.50 size motor. 60" (1530mm) span requires 3/4-function radio control. First Appeared in: Aviation Modeller International - February 1999

Plan: £12.50
Cut Parts: N/A

PLAN187

RC Sport IC Power

Spooky

All-sheet tailless pusher design for 2-function R/C gear and .049 size motors. Span of 31" (787mm). First Appeared in: Aviation Modeller International - February 1997

Plan: £10.00
Cut Parts: N/A

PLAN178

RC Sport IC Power

Stubble Jumper

A rough-field easy to fly, parasol wing R/C sports model for .15 cu.in. motors and 3-function R/C gear. 49.75" (1264mm) wingspan. First Appeared in: Aviation Modeller International - March 2000

Plan: £11.25
Cut Parts: N/A

PLAN189

RC Sport IC Power

Super Bee

Stylish and simple all-sheet sport biplane for 2/3-function R/C and 0.5-0.75cc power units. 27.5" (699mm) span model features simple Jedelsky style sheet wing. First Appeared in: AMI - October 1996

Plan: £10.00
Cut Parts: N/A

PLAN172

RC Sport IC Power

Ted 2

Low-wing R/C sportster for 2- to 4-function gear and .20 size motors. A very nice shape in the air. Wingspan 45" (1334mm). First Appeared in: Aviation Modeller International - August 1998

Plan: £11.25
Cut Parts: N/A

PLAN192

RC Sport IC Power

Temptress

A 54" (1372mm) wing span (1:8.2 scale) model of the bubble cockpit version of this famous WW2 fighter aircraft. Prototype model used O.S.52 Surpass four-stroke engine, but two stokes of similar power may also be used.

Plan: £12.50
Cut Parts: N/A

PLAN265

RC Sport IC Power

Tinkerbell

A 23" (584mm) span mini biplane for .020 motors and 2-function micro R/C equipment. First Appeared in: Aviation Modeller International - November 1996

Plan: £10.00
Cut Parts: N/A

PLAN193

RC Sport IC Power

Tipo Too

Simple all-sheet sport biplane for 2/3-function R/C and 0.5-0.7cc power. 27.5" (699mm) span model features simple Jedelsky style sheet wing. First Appeared in: Aviation Modeller International - January 1998

Plan: £10.00
Cut Parts: N/A

PLAN195

RC Sport IC Power

Tri-Tipo

Three wings, lots of character and 30" (762mm) of R/C or free flight fun with a 1-1.5cc diesel or .06-.10 glow. All-sheet construction with Jedelsky wing structure. First Appeared in: Aviation Modeller International - July 1998

Plan: £10.00
Cut Parts: N/A

PLAN196

RC Sport IC Power

Trisha

An easy-to-build and friendly-to-fly 60" (1524mm) span sport/trainer for .15 to .25 two-strokes or .20 to .30 four-strokes and 3/4-channel R/C. Can also be flown as electric option using Speed 600 motor. First Appeared in: AMI - March 2003

Plan: £12.50
Cut Parts: N/A

PLAN224

RC Sport IC Power

Umaguli

A 50" (1270mm) wingspan low-wing R/C sportster for rudder, elevator, aileron & throttle controls. Features a scale-like oleo shock-absorbing undercarriage, built around model car type suspension dampers. First Appeared in: AMI - May 2001

Plan: £12.50
Cut Parts: N/A

PLAN205

RC Sport IC Power

Voltsjager

Parasol-wing sports R/C model for low cost electric power systems with 400 size motor. 56" (1422mm) span model uses 4-function R/C. First Appeared in: AMI - July 1999

Plan: £11.50
Cut Parts: N/A

PLAN209

RC Sport IC Power

Voodoo

A 50" (1270mm) wingspan, low-wing sports model with a fine aerobatic performance. Plan shows both fixed and retracting undercarriage, for two-stroke motors and 4/5-function R/C. First Appeared in: AMI - May 2000

Plan: £12.50
Cut Parts: N/A

PLAN207

RC Sport IC Power

Warrior

A 52" (1321mm) wingspan profile sport scale model of the Italian SIAI Marchetti SF260. Uses veneer/foam construction and builds into a one-piece model. For 4-function R/C systems and .32-.40 cu.in. motors. First Appeared in: AMI - February 1999

Plan: £11.25
Cut Parts: N/A

PLAN213

RC Sport IC Power

X-S

A great example of the new extreme aerobatic, minimal airframe model for R/C Fun-Fly. 48" (1220mm) wingspan model suits .36-.46 cu.in. motors and 4-function R/C. Thick symetrical wing airfoil and flat plate tailplane. First Appeared in: AMI - Mar 2000

Plan: £13.50
Cut Parts: N/A

PLAN215

RC Sport IC Power

Double Dozer

200% enlarged Bulldozer for 75 power. Originally appeared in Model Flyer Magazine Issue: Apr-02 Designer: K Swailes Power: 0.7

Plan: £24.95
Cut Parts: N/A

PLANMF81

RC Sport IC Power

Bulldozer

Vintage cabin model 45: wingspan, 1-1.5cc motors, F/F or R/C Originally appeared in Model Flyer Magazine Issue: Dec-00 Designer: J Stoloff Power: 1.5cc

Plan: £10.95
Cut Parts: N/A

PLANMF36

RC Sport IC Power

Cometa

Vintage cabin model F/F or R/C, 30-40 engines.66 1/2" wingspan Originally appeared in Model Flyer Magazine Issue: Dec-00 Designer: A Castellani Power: 0.35

Plan: £12.95
Cut Parts: N/A

PLANMF35

RC Sport IC Power

Airmaster original

1938 F/F for 1/5th hp spark ignition engines, 84" wingspan Originally appeared in Model Flyer Magazine Issue: Feb-00

Plan: £14.95
Cut Parts: N/A

PLANMF11a

RC Sport IC Power

Airmaster

Vintage model updated for R/C, two channel 40 4-stroke engine 84" wingspan Originally appeared in Model Flyer Magazine Issue: Feb-00 Designer: R ONeil/Boddo Power: 0.4

Plan: £14.95
Cut Parts: N/A

PLANMF11

RC Sport IC Power

Rewind

RC Sports IC 36" span Originally appeared in Model Flyer Magazine Issue: March-13 Designer: John Rutter Power: .15 size IC

Plan: £15.95
Cut Parts: £45.00

PLANMF281

RC Sport IC Power

Sky Rover

57" Rugged 40 size IC sports Originally appeared in Model Flyer Magazine Issue: Dec-12 Designer: Peter Miller Power: .40

Plan: £17.95
Cut Parts: N/A

PLANMF278

RC Scale IC Power

Wee Mad Arthur

43" 15-20 power aerobatic sports Originally appeared in Model Flyer Magazine Issue: Oct-12 Designer: Paul Jubb Power: .15-.20

Plan: £10.95
Cut Parts: N/A

PLANMF276

RC Sport IC Power

Three Zero

R/C sports/trainer for land/floatplane, 20 to 30 engine.45" wingspan Originally appeared in Model Flyer Magazine Issue: Feb-01Designer: Boddo Power: 0.25

Plan: £6.95
Cut Parts: N/A

PLANMF38

RC Sport IC Power

Four Zero

R/C sports/trainer/floatplane, 30 to 40 sized engines.57" wingspan Originally appeared in Model Flyer Magazine Issue: Feb-01 Designer: Boddo Power: 0.35

Plan: £7.95
Cut Parts: N/A

PLANMF39

RC Sport IC Power

Sea Prince

Single engine (45-60) and twin engines (2 x 28 to 38), 4 channel R/C Originally appeared in Model Flyer Magazine Issue: Sep-00 Designer: Boddo Power: .60 (1) .30

Plan: £14.95
Cut Parts: N/A

PLANMF28

RC Sport IC Power

Tweedledum/Dee

F/F or R/C all sheet, Jedelsky wing monoplane & biplane.0.9 to 15 engines Originally appeared in Model Flyer Magazine Issue: Aug-00 Designer: Boddo Power: 0.9 - .15

Plan: £9.95
Cut Parts: N/A

PLANMF24

RC Sport IC Power

Miss Devon

Semi scale sports trainer R/C, 52 to 68 engines, 4/5 channel. Originally appeared in Model Flyer Magazine Issue: Jan-00 Designer: Boddo Power: 0.6

Plan: £14.95
Cut Parts: N/A

PLANMF6

RC Sport IC Power

Super Touper

70" wingspan twin trainer for 2 x 0.25 power. Originally appeared in Model Flyer Magazine Issue: Jun-01 Designer: Boddo Power: .25 (2)

Plan: £12.95
Cut Parts: N/A

PLANMF54

RC Sport IC Power

Likely Lass

26.5" wingspan F/F sports low winger, for 0.25 - 0.5cc power Originally appeared in Model Flyer Magazine Issue: Jun-01 Designer: V Smeed Power: 0.5cc

Plan: £5.00
Cut Parts: N/A

PLANMF53

RC Sport IC Power

Super Rookie

Powered glider 0.8cc to 1.5cc engines. Ideal intro to R/C.76" wingspan. Originally appeared in Model Flyer Magazine Issue: Apr-01 Designer: Boddo Power: 1cc

Plan: £9.95
Cut Parts: N/A

PLANMF49

RC Sport IC Power

Floats only

Float construction, veneered foam floats. Originally appeared in Model Flyer Magazine Issue: Feb-00 Designer: J Barringe Power: .30 - 40 size

Plan: £5.00
Cut Parts: N/A

PLANMF42

RC Sport IC Power

Bitts

26" wingspan, 0.75cc power R/C sports bipe. Originally appeared in Model Flyer Magazine Issue: Feb-02 Designer: A Boddington Power: 0.049

Plan: £6.95
Cut Parts: N/A

PLANMF76

RC Sport IC Power

Upshot

Chris Olsen tribute model. 36" wingspan .049 RC. Originally appeared in Model Flyer Magazine Issue: Jan-02 Designer: Boddo Power: 0.049

Plan: £6.95
Cut Parts: N/A

PLANMF74

RC Sport IC Power

Pico Gyro

R/C Autogyro for .049 power, 18" diameter twin rotors. Originally appeared in Model Flyer Magazine Issue: Dec-01 Designer: R Brown Power: 0.049

Plan: £7.95
Cut Parts: N/A

PLANMF70

"IT'S BEEN MY DREAM TO CREATE A PLANE THAT ALLOWS SPORT PILOTS TO EXPERIENCE THE THRILL OF 3D FLIGHT. THE PARKZONE VISIONAIRE IS THE REALIZATION OF THAT DREAM."
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At Last! Sport Pilots Can Fly 3D!

The NEW ParkZone® VisionAire™ 3D Bind-N-Fly™ Park Flyer with AS3X™ Technology

Now sport pilots can realize the dream of flying 3D aerobatics without having to spend a lot of hours flying a lot of different airplanes to develop their skills. The new ParkZone® Visionaire™ park flyer, designed by the Father of 3D, Quique Somenzini, uses a unique combination of aerodynamic features and AS3X® (Artificial Stabilization – 3-aXis) technology to bridge the gap between sport plane stability and 3D agility.

Lightweight Construction and Brushless Power

The wings are constructed of hollow Z-Foam™ material that has been reinforced with carbon fibre. This not only makes them lighter than solid foam, but stiffer as well. Quique has paired this lightweight airframe with a potent, 10-size brushless power system that delivers the awesome vertical performance necessary for extreme 3D.

Ingenious Aerodynamics

The combination of leading-edge vortex generators, extended-chord ailerons and a dual-thickness airfoil provides extra stability at slow speeds and high angles of attack. Side force generators integrated into the wing also aid stability and give you extra rudder authority in knife-edge flight.

Spektrum™ AR635 6-Channel AS3X Receiver

The advanced AS3X System built into the Spektrum™ AR635 receiver uses a 3-axis MEMS gyro and exclusive software developed in cooperation with Quique to counter the effects of things like wind, P-factor, turbulence and torque. It does not limit the airplane's agility or the pilot's control. It simply makes the model track beautifully and feel incredibly stable at every speed. As their skills progress, pilots can reduce the amount of stability the AS3X System provides or turn it off completely. But even 3D pros will find flying with it on is a lot more fun.

Go to **horizonhobby.co.uk** right now to see the VisionAire park flyer in action and to find the ParkZone retailer near you.

Wingspan:	1140mm (45.0 in)
Length:	1090mm (42.5 in)
Weight:	1240 g (43.7 oz)
Motor:	10-size, 1250Kv brushless outrunner
Receiver:	Spektrum AR635 6-channel AS3X sport receiver
ESC:	E-flite® 40A Lite Pro Switch-Mode BEC (V2)
Servos:	E-flite 13 g digital micro servos
Battery:	3S 11.1V 2200mAh 25C LiPo (included)
Charger:	2- to 3-cell DC LiPo balancing (included)
Transmitter:	Full-range 4+ channel DSM2™/DSMX® required (sold separately)

AS3X

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RC Sport IC Power

Superior 60

94" wingspan for 80-100 size 4 strokes. Sports power. Originally appeared in Model Flyer Magazine Issue: Nov-01 Designer: Boddo Power: 0.9

Plan: £19.95
Cut Parts: N/A

PLANMF68

RC Sport IC Power

Aquabat

55" wingspan waterplane for 40 50 engines. Originally appeared in Model Flyer Magazine Issue: Jul-02 Designer: Boddo Power: 0.5

Plan: £9.95
Cut Parts: N/A

PLANMF90

RC Sport IC Power

Gromit

33" FF flying wing for 049 motors. Originally appeared in Model Flyer Magazine Issue: Sep-03 Designer: P Antram Power: 0.049

Plan: £5.00
Cut Parts: N/A

PLANMF118

RC Sport IC Power

Aquababy

.20 sized waterplane, 47" wingspan. Originally appeared in Model Flyer Magazine Issue: Aug-03 Designer: Boddo Power: 0.2

Plan: £7.95
Cut Parts: N/A

PLANMF117

RC Sport IC Power

Bin 39

.40 size aerobatic. 46" wingspan. Originally appeared in Model Flyer Magazine Issue: Jul-03 Designer: Boddo Power: 0.4

Plan: £7.95
Cut Parts: N/A

PLANMF114

RC Sport IC Power

Bonny Lass

32" wingspan F/F sports models, for EP or 0.5cc IC. Originally appeared in Model Flyer Magazine Issue: Nov-02 Designer: V Smeed Power: 0.5cc

Plan: £5.00
Cut Parts: N/A

PLANMF98

RC Sport IC Power

Sneaky Pete

45" wingspan RC sports for .30 IC power. Originally appeared in Model Flyer Magazine Issue: Jun-04 Designer: Boddo

Plan: £9.95
Cut Parts: N/A

PLANMF137

RC Sport IC Power

Memories

Vintage style RC sports, 48" span, for 1.5cc power. Originally appeared in Model Flyer Magazine Issue: Mar-04 Designer: Boddo Power: 1.5cc

Plan: £9.95
Cut Parts: N/A

PLANMF129

RC Sport IC Power

Volant

64" spans sport RC for 50 4-stroke power Originally appeared in Model Flyer Magazine Issue: Oct-08 Designer: D Bell

Plan: £10.95
Cut Parts: N/A

PLANMF218

RC Sport IC Power

Tomboy Senior

48" wingspan sport model for engines 1.3-2.0 2 or 3 channel RC Originally appeared in Model Flyer Magazine Issue: May-08 Designer: Boddo Power: 1.3cc

Plan: £9.95
Cut Parts: N/A

PLANMF213

RC Sport IC Power

Miss Bee

30" wing span for .5-1.0 diesel or glow with 2 channel RC Originally appeared in Model Flyer Magazine Issue: Nov-07 Designer: A Reid Power: 0.049

Plan: £6.95
Cut Parts: N/A

PLANMF202

RC Sport IC Power

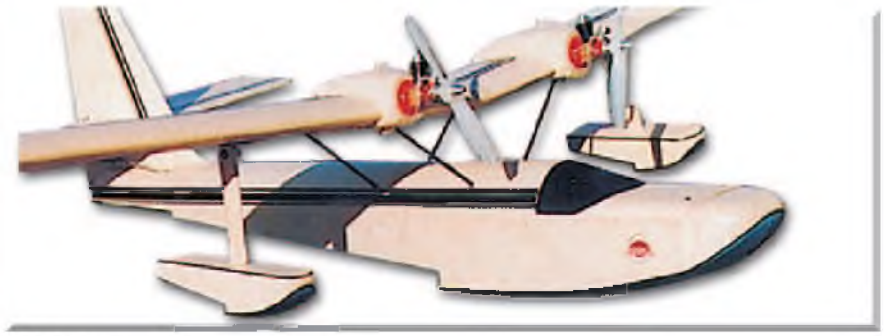
Samurai

45" wing span fun fly sports for .25-.35 power >Originally appeared in Model Flyer Magazine Issue: Feb-10 Designer: G Newborn Power:.25/.35

Plan: £9.95
Cut Parts: N/A

PLANMF239

RC Waterplanes



Delilah

Semi-scale R/C flying boat, for two Cox .020 motors and rudder and elevator controls. 38" (965mm) span model has a hull which will withstand landing on firm ground. First Appeared in: Aviation Modeller International - August 1996

Plan: £10.00 **Cut Parts:** N/A

PLAN45

RC Waterplanes

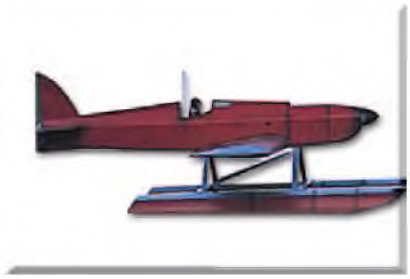
Lochmaster

A practical 58" (1473mm) span flying boat quite capable of handling rough water conditions. Suits .40-.60 two-stroke engines and 4-function radio. First Appeared in: Aviation Modeller International - March 1997

Plan: £13.50
Cut Parts: N/A

PLAN108

RC Waterplanes



Sea Hawk

A 60" (1524mm) span semi-scale Schneider Trophy racer-style floatplane for .60-.80 cu.in. size motors and 4-function R/C. Plan includes floats, made from foam cores with veneer covering. First Appeared in: AMI - July 1996

Plan: £14.00
Cut Parts: N/A

PLAN184

RC Waterplanes

Sea Stormer

Flying off water is a thrill that every R/C flyer should experience sometime and there's no better model to try it with than this 69" (1753mm) span design for .60-.90 size motors. Features conventional airframe construction and foam core floats. Can also be flown with conventional undercarriage. Two sheet plan. First Appeared in: AMI - July 1996

Plan: £14.50 **Cut Parts:** N/A

PLAN166

Free Flight Vintage

Handley Page HP42

John McStea's 28" wingspan all foam free flight model for KP 00 electrics. Published in FSM Jan/ Feb 2000 issue 15

Plan: £9.95
Cut Parts: N/A

PLAN440

Free Flight Vintage

Gordou-Leseurre 482

Eric Marsden's 34 3/8" sport scale replica for KP 01 electric free flight Published in FSM Jan/Feb 2000 issue 15

Plan: £9.95
Cut Parts: N/A

PLAN441

Free Flight Vintage

Wasp

Elegant 36" (915mm) span rubber-powered, free-flight model recreating Fred Rogerson's 1935 Canadian Wakefield Winner. First Appeared in: Aviation Modeller International - May 2008

Plan: £12.50
Cut Parts: £59.00

PLAN228

Free Flight Vintage

Astro Oink

Robin Woodhead's 25", 1/3rd scale model of the original Astro and Hog for electric KP01 power. Published in AMI November 1996

Plan: £9.95
Cut Parts: N/A

PLAN454

Free Flight Vintage

Little Pemby

Free plan with purchase of Model Flyer Magazine Issue: Sep 01 Designer: W Brown Power: 0.75cc

Plan: £4.35
Cut Parts: N/A

PLANMF62

Free Flight Vintage

Elfette

Free plan with purchase of Model Flyer Magazine Issue: Jul-97 Designer: D Banks Power: .25 parasol

Plan: £4.35
Cut Parts: N/A

PLANMF60

Free Flight Vintage

Warden Flyer

Free plan with purchase of Model Flyer Magazine Issue: Mar-99 Designer: Tony draper Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF109

Free Flight Vintage

Bantam

Free plan with purchase of Model Flyer Magazine Issue: Jan-99 Designer: D Deadman Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF103

Free Flight Vintage

Oscar

Free plan with purchase of Model Flyer Magazine Issue: Feb-98 Designer: A Hatfull Power: rubber Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF79

Free Flight Scale Models

Scottish Aviation Bulldog

A rubber powered scale model with 20" wingspan by Albert Hatful Published in FSM Nov/Dec 1998

Plan: £9.95
Cut Parts: N/A

PLAN444

Free Flight Scale Models

English Electric Lightening

Frank Bishop's 24.25" free flight model for electric powered ducted fans. Published in FSM Jan/Feb 1999 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN443

Free Flight Scale Models

Fokker Dr1 Triplane

An indoor 25" RC scale model in tail foam construction by Mark Denham. Published in FSM March/Apr 1999 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN442

Free Flight Scale Models

Puff n Pesseta

Colin Read's 26" free flight fighters for lightweight electric power Published in AMI June 1997

Plan: £9.95
Cut Parts: N/A

PLAN461

Free Flight Scale Models

IAGO

A 36" inch Free Flight model for KP01 C02 or Cox 01/02 motors by Eric Marsden. Published in AMI February 1997

Plan: £9.95
Cut Parts: N/A

PLAN457

Free Flight Scale Models

Hep Cat

First published in 1946 John Barker's 30" rubber powered model. Published in AMI December 1996

Plan: £9.95
Cut Parts: N/A

PLAN455

Free Flight Scale Models

B.A.T. Monoplane

Al Backsrom's rubber powered model with 16" wingspan. Published in FSM Jan/Feb 2001 issue 20

Plan: £4.95
Cut Parts: N/A

PLAN435

Free Flight Scale Models

1913 Bleriot XI Monoplane

A 1/8th scale, 47" (1194mm) wingspan scale model of the 1913 military version of Louis Bleriot's famous machine. Two-sheet plan includes scale three-view and features accurate replication of the full-size structure. Designed for free flight with 0.75-1cc motors. First Appeared in: Flying Scale Models - August 2002

Plan: £14.50 **Cut Parts:** £75.00

PLAN16

Free Flight Scale Models

Cranwell CLA-3

Rubber powered 21" free flight scale model in 1:12th scale by Malcom Leach. Published in FSM Sept/Oct 2000 issue 18

Plan: £9.95
Cut Parts: N/A

PLAN438

Free Flight Scale Models

Latecoere 28

A free flight scale model for C02 power by Ken McDonough wingspan 24.75" Published in FSM May 2003 issue 42

Plan: £9.95
Cut Parts: N/A

PLAN417

Free Flight Scale Models

S.E.5a

Doug McHard's 1:12th scale free flight scale model with a wingspan of 27" Published in FSM November 2002 issue 36 2 sheet plan

Plan: £14.95
Cut Parts: N/A

PLAN421

Free Flight Scale Models

Reggiane 2005

1:20th scale 21" wingspan model for rubber power. Published in FSM March/April 2001 issue 21

Plan: £4.95
Cut Parts: N/A

PLAN433

Free Flight Scale Models

Blackburn 1912 Monoplane

A 26.5" (674mm) span free flight scale model for KP01 electric power. First Appeared in: Flying Scale Models - April 1998

Plan: £10.00
Cut Parts: N/A

PLAN24

Free Flight Scale Models

Bristol M1C Monoplane Scout

A 46.5" (1181mm) span free flight, scale model of the British WW1 scout aircraft for 1.5cc motors. Can be converted to R/C. First Appeared in: Flying Scale Models - September 1998

Plan: £11.75
Cut Parts: N/A

PLAN19

Free Flight Scale Models

Bucker 133 Jungmeister

Free flight scale replica of the radial-cowled version of this classic biplane aerobatic aircraft. 23.5" (600mm) span model suits Cox .020 motor or similar. First Appeared in: Flying Scale Models - January 1998

Plan: £11.75
Cut Parts: N/A

PLAN17

Free Flight Scale Models

Carly C12

Free flight scale replica for KP01 power. Wing span 24.5" (622mm). First Appeared in: Aviation Modeller International - November 1997

Plan: £10.00
Cut Parts: N/A

PLAN32

Free Flight Scale Models

Fokker E.III (Rubber power)

A British National Championships winner, this 1/8th true-scale replica of the famous German WW.1 fighter aircraft features authentic airframe structure. It flies with scale dihedral and has a wingspan of 44.5" (1131mm). First Appeared in: FSM - Sep 2003

Plan: £12.50
Cut Parts: N/A

PLAN230

Free Flight Scale Models

Fokker Spin (Spider)

A 1/8th scale free-flight version of Anthony Fokker's 1913 'Spider'. 54" (1375mm) span model suits 1.5cc diesel engine. First Appeared in: Flying Scale Models - March 2003

Plan: £11.75
Cut Parts: N/A

PLAN136

Free Flight Scale Models

Wright Flyer & Whitehead 21

Dave Prochnow offers 2 plans for the Wright Flyer and Whitehead 21 at approx 13" wingspan

Plan: £9.95
Cut Parts: N/A

PLAN450

Free Flight Scale Models

Lockheed C-130 Hercules

Four-engined free flight ... and it works! A 54" (1393mm) span electric powered model for four KP01 motors. Basic fuselage is foam block. First Appeared in: Aviation Modeller International - January 1998

Plan: £13.50
Cut Parts: N/A

PLAN111

Free Flight Scale Models

Shavrov Sh-2

34" (864mm) span free flight scale model of a Russian (USSR) utility flying boat, for .020 size motors. First Appeared in: Aviation Modeller International - February 1998

Plan: £10.00
Cut Parts: N/A

PLAN185

Free Flight Scale Models

Short Type 184 Floatplane

1/12 th scale free flight model of the early WW1 torpedo bomber/fleet spotter aircraft. Prototype model has excellent contest record.

Plan: £17.50
Cut Parts: £115.00

PLAN319

Free Flight Scale Models

Brewster Bermuda

Open Rubber Winner, UK Indoor Nationals 2009 1/24th scale indoor scale flier for electric or rubber power designed by Richard Crossley wingspan approx 25" Published in FSM May 2011 issue 138

Plan: £9.95
Cut Parts: £35.00

PLAN344

Free Flight Scale Models

Buhl Air Sedan

A 34.5" wingspan originally designed for free flight or conversion for modern lightweight RC gear designed by Hurst Bowers. Published in FSM August 2005 issue 69 2 sheet plan

Plan: £9.95
Cut Parts: £50.00

PLAN391

Free Flight Scale Models

Morane

56" wingspan /F superscale for 1.5cc power. Originally appeared in Model Flyer Magazine Issue: Oct-02 Designer: A Hewitt Power: 1.5cc

Plan: £7.95
Cut Parts: N/A

PLANMF95

Free Flight Scale Models

Avia BH-3

37.7" wingspan FF scale, for 0.5cc - 1.0cc IC. Originally appeared in Model Flyer Magazine Issue: Jan-01 Designer: A Hewitt Power: .75cc

Plan: £7.95
Cut Parts: N/A

PLANMF75

Free Flight Scale Models

F-86 Sabre

F/F EDF jet for Gaskin 400 fan/Kyosho AP 29 or similar.39 1/2" wingspan Originally appeared in Model Flyer Magazine Issue: Mar-01 Designer: S Glass Power: 400 EDF

Plan: £9.95
Cut Parts: N/A

PLANMF45

Free Flight Scale Models

Mig 15

JetX 100 power scale F/F jet based on original Jetex 50 model. 23" wingspan. Originally appeared in Model Flyer Magazine Issue: Mar-01 Designer: KK/Boddo Power: Jetex 100

Plan: £9.99
Cut Parts: N/A

PLANMF44

Free Flight Scale Models

Italx

F/F spoof-scale flying boat (or R/C), .75 to 1cc engines.49 1/2" wingspan Originally appeared in Model Flyer Magazine Issue: May-00 Designer: P Antram Power: 1cc

Plan: £7.95
Cut Parts: N/A

PLANMF15

Free Flight Scale Models

Newbury Eon

37" wingspan F/F sports scale model, for air, CO2 or electric motor power. Originally appeared in Model Flyer Magazine Issue: Jan-03 Designer: M Adams Power: KP02

Plan: £5.00
Cut Parts: N/A

PLANMF101

Free Flight Scale Models

Sopwith Dove

48" wingspan IC superscale power. For 1.5cc motors. Originally appeared in Model Flyer Magazine Issue: Jun-03 Designer: M Smith Power: 1.5cc

Plan: £10.95
Cut Parts: N/A

PLANMF112

Free Flight Scale Models

Spit & Hurri

FF or micro RC Spitfire and Hurricane model Originally appeared in Model Flyer Magazine Issue: Nov-10 Designer: D Vaughan Power: CO2

Plan: £14.95
Cut Parts: N/A

PLANMF247

RC Scale IC and Electric

Albatros CIII

Free 27" plan with purchase of Model Flyer Magazine Issue: Jan-13 Designer: Ken Sheppard Power: EP 4 channel RC

Plan: £4.35 **Cut Parts:** N/A

PLANMF279

RC Scale IC and Electric

Little Rocket

Free plan with purchase of Model Flyer Magazine Issue: Oct-09 Designer: G Rathband Power: IC engine Reduced

Plan: £4.35
Cut Parts: N/A

PLAN235

RC Scale IC and Electric

Cozylite EP

Free plan with purchase of Model Flyer Magazine Issue: Oct-06 Designer: M Macintosh Power: Foam canard pusher

Plan: £4.35
Cut Parts: N/A

PLANMF184

RC Scale IC and Electric

Albatros/Be2

Free plan with purchase of Model Flyer Magazine Issue: Mar-05 Designer: M Watters Power: micro EP

Plan: £4.35
Cut Parts: N/A

PLANMF151

RC Scale IC and Electric

Sukhoi Su26

Free plan with purchase of Model Flyer Magazine Issue: Jul-04 Designer: D Ridgway Power: GWS

Plan: £4.35
Cut Parts: N/A

PLANMF138

RC Scale IC and Electric

Bristol M1C

Free plan with purchase of Model Flyer Magazine Issue: Oct-02 Designer: J Tolhurst Power: geared 280 Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF96

RC Scale IC and Electric

Tiger Moth

Free plan with purchase of Model Flyer Magazine Issue: Sep-02 Designer: M Halton Power: geared 280 Reduced

Plan: £4.35 **Cut Parts:** N/A

PLANMF94

RC Scale IC and Electric

AW FK3

Free plan with purchase of Model Flyer Magazine Issue: May-02 Designer: K Sheppard Power: micro EP

Plan: £4.35
Cut Parts: N/A

PLANMF86

RC Scale IC and Electric

Indoor Vampire

Free plan with purchase of Model Flyer Magazine Issue: Apr-02 Designer: R Chant Power: KP EDF unit Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF83

RC Scale IC and Electric

G Cub

Free plan with purchase of Model Flyer Magazine Issue: Oct-01 Designer: D Ridgway Power: micro EP Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF65

RC Scale IC and Electric

Park Hornet

Free plan with purchase of Model Flyer Magazine
Issue: Mar-11 Designer: J Simpson Power: Micro EDF Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF251

RC Scale IC and Electric

Piper Super Cruiser

Free plan with purchase of Model Flyer Magazine
Issue: Apr-10 Designer: R Preston Power: Micro EP

Plan: £4.35
Cut Parts: N/A

PLANMF241

RC Scale IC and Electric

Nibbio

Free plan with purchase of Model Flyer Magazine
Issue: Jun-00 Designer: A Allen Power: KP02

Plan: £4.35
Cut Parts: N/A

PLANMF19

RC Sports

Flyer 2000

Free plan with purchase of Model Flyer Magazine
Issue: Mar-00 Designer: Boddo Power: .15-.25

Plan: £4.35
Cut Parts: N/A

PLANMF9

RC Sports

Carina

Free plan with purchase of Model Flyer Magazine
Issue: Feb-00 Designer: Boddo Power: 1cc

Plan: £4.35
Cut Parts: N/A

PLANMF7

RC Sports

SE6A

Free plan with purchase of Model Flyer Magazine
Issue: Jan-00 Designer: J Allen Power: 1.5cc

Plan: £4.35
Cut Parts: N/A

PLANMF4

RC Sports

Micro Hawk

Free plan with purchase of Model Flyer Magazine
Issue: Jan-00 Designer: D Ridgway Power: 0.049

Plan: £4.35
Cut Parts: N/A

PLANMF3

RC Sports

Zero Seven

Free plan with purchase of Model Flyer Magazine
Issue: May-00 Designer: Boddo Power: 1cc

Plan: £4.35
Cut Parts: N/A

PLANMF17

RC Sports

Millenium bug

Free plan with purchase of Model Flyer Magazine
Issue: Apr-00 Designer: Boddo Power: 0.1

Plan: £4.35
Cut Parts: N/A

PLANMF13

RC Sports

Speedy 300

Free plan with purchase of Model Flyer Magazine Issue: Nov-01 Designer: D Ridgway Power: S300 Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF67

RC Sports

Voodoo

Free plan with purchase of Model Flyer Magazine Issue: Dec-01 Designer: D Ridgway Power: S400 Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF72

RC Sports

Waggler

Free plan with purchase of Model Flyer Magazine Issue: Aug-02 Designer: J Reid Power: 0.4cc

Plan: £4.35
Cut Parts: N/A

PLANMF92

RC Sports

Cheeky

Free plan with purchase of Model Flyer Magazine Issue: Nov-04 Designer: Boddo Power: 0.5cc

Plan: £4.35
Cut Parts: N/A

PLANMF144

RC Sports

Rex Racer

Free plan with purchase of Model Flyer Magazine Issue: Jan-04 Designer: J Watters Power: CO2

Plan: £4.35
Cut Parts: N/A

PLANMF125

RC Sports

Hawker Headbutt

Free plan with purchase of Model Flyer Magazine Issue: Dec-04 Designer: Gray Power: mini glider

Plan: £4.35
Cut Parts: N/A

PLANMF145

RC Sports

Hawker Hurricane

Free plan with purchase of Model Flyer Magazine Issue: Dec-05 Designer: G Iredale Power: S400

Plan: £4.35
Cut Parts: N/A

PLANMF168

RC Sports

Miss Cassy

Free plan with purchase of Model Flyer Magazine Issue: Dec-05 Designer: Peter Miller Power: 0.25

Plan: £4.35
Cut Parts: N/A

PLANMF167

RC Sports

Delta Cat

Free plan with purchase of Model Flyer Magazine Issue: Sep-05 Designer: A Francey Power: Delta glider

Plan: £4.35
Cut Parts: N/A

PLANMF161

RC Sports

Banzai

Free plan with purchase of Model Flyer Magazine Issue: May-05 Designer: J Rutter Power: 400 brushless

Plan: £4.35
Cut Parts: N/A

PLANMF156

RC Sports

Foamenezer

Free plan with purchase of Model Flyer Magazine Issue: Aug-07 Designer: B Striegler Power: EP Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF199

RC Sports

EP Coupe

Free plan with purchase of Model Flyer Magazine Issue: Jun-09 Designer: A J Reid Power: EP Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF230

RC Sports

Parkviggen

Free plan with purchase of Model Flyer Magazine Issue: Sep-11 Designer: J Simpson Power: EDF Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF259

RC Sports

Vampire

Free plan with purchase of Model Flyer Magazine Issue: Nov-06 Designer: J & M Watters Power: EDF Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF185

Free Flight Scale

Chrislea Super Ace

Free plan with purchase of Model Flyer Magazine Issue: May-00 Designer: D Reace Power: C02/ KP02MF 20

Plan: £4.35
Cut Parts: N/A

PLANMF16

Free Flight Scale

Brandenburg C1

Free plan with purchase of Model Flyer Magazine Issue: Mar-00 Designer: W Dennis Power: .75cc

Plan: £4.35
Cut Parts: N/A

PLANMF8

Free Flight Scale

Gee Bee

Free plan with purchase of Model Flyer Magazine Issue: Dec-99 Designer: D Ridgway Power: 0.01

Plan: £4.35
Cut Parts: N/A

PLANMF2

Free Flight Scale

Mig 15

Free plan with purchase of Model Flyer Magazine
Issue: Mar-01 Designer: D Deadman Power: Rapier L2/L3

Plan: £4.35
Cut Parts: N/A

PLANMF46

Free Flight Scale

Breuget 530

Free plan with purchase of Model Flyer Magazine
Issue: Sep-00 Designer: J McShea Power: KP00

Plan: £4.35
Cut Parts: N/A

PLANMF29

Free Flight Scale

Hurricane

Free plan with purchase of Model Flyer Magazine
Issue: Jul-00 Designer: D Vaughan Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF23

Free Flight Scale

Spitfire

Free plan with purchase of Model Flyer Magazine
Issue: Jul-00 Designer: D Vaughan Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF22

Free Flight Scale

REP Hydroplane

Free plan with purchase of Model Flyer Magazine
Issue: Nov-01 Designer: L Koutny Power: rubber Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF69

Free Flight Scale

Miles M52

Free plan with purchase of Model Flyer Magazine
Issue: Jun-01 Designer: R Crossley Power: Rapier L2

Plan: £4.35
Cut Parts: N/A

PLANMF55

Free Flight Scale

PSW 4

Free plan with purchase of Model Flyer Magazine Issue: Jun-02 Designer: T Hayward-Brown Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF87

Free Flight Scale

Doodlebug

Free plan with purchase of Model Flyer Magazine
Issue: Feb-02 Designer: R Crossley Power: Rapier L2

Plan: £4.35
Cut Parts: N/A

PLANMF77

Free Flight Scale

Hollandair Libel

Free plan with purchase of Model Flyer Magazine
Issue: Jan-02 Designer: R Malmstr

Plan: £4.35
Cut Parts: N/A

PLANMF73

Free Flight Scale

Arsenal VG39

Free plan with purchase of Model Flyer Magazine
Issue: Aug-02 Designer: L Koutny Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF93

Free Flight Scale

Miss Ashley 2

Free plan with purchase of Model Flyer Magazine
Issue: Jul-02 Designer: J Norfolk Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF91

Free Flight Scale

Me1106

Free plan with purchase of Model Flyer Magazine
Issue: Nov-02 Designer: R Crossley Power: Rapier L2

Plan: £4.35
Cut Parts: N/A

PLANMF97

Free Flight Scale

Thunderstreak

Free plan with purchase of Model Flyer Magazine
Issue: Mar-03 Designer: D Deadman Power: Rapier L2

Plan: £4.35
Cut Parts: N/A

PLANMF106

Free Flight Scale

Avro Avian

Free plan with purchase of Model Flyer Magazine
Issue: Apr-03 Designer: D Deadman Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF107

Free Flight Scale

MIF 1-270

Free plan with purchase of Model Flyer Magazine
Issue: Sep-03 Designer: R Crossley Power: Rapier 2

Plan: £4.35
Cut Parts: N/A

PLANMF119

Free Flight Scale

Nieuport 11

Free plan with purchase of Model Flyer Magazine
Issue: Aug-03 Designer: D Deadman Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF117a

Free Flight Scale

YAK 3

Free plan with purchase of Model Flyer Magazine
Issue: Jul-03 Designer: L Koutny Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF115

Free Flight Scale

Saraband

Free plan with purchase of Model Flyer Magazine
Issue: Mar-05 Designer: E Marsden Power: .049 (x2)

Plan: £4.35
Cut Parts: N/A

PLANMF150

Free Flight Scale

Strosser

Free plan with purchase of Model Flyer Magazine
Issue: Feb-05 Designer: I Garrett Power: rubber

Plan: £4.35
Cut Parts: N/A

PLANMF149

Free Flight Scale

Zlin Raven

Free plan with purchase of Model Flyer Magazine
Issue: Dec-03 Designer: L Koutny Power: rubber twin

Plan: £4.35
Cut Parts: N/A

PLANMF124

Free Flight Scale

Schleicher Ka8

Free plan with purchase of Model Flyer Magazine
Issue: Jun-05 Designer: D Ridgway Power: glider Reduced

Plan: £4.35
Cut Parts: N/A

PLANMF157

Free Flight Scale

Ohka Kamikaze

Free plan with purchase of Model Flyer Magazine
Issue: Jun-06 Designer: S Bage Power: Rapier L2

Plan: £4.35
Cut Parts: N/A

PLANMF180

Free Flight Scale

Mig 25

Free plan with purchase of Model Flyer Magazine
Issue: Feb-06 Designer: C Richards Power: mini EDF

Plan: £4.35
Cut Parts: N/A

PLANMF172

Free Flight Scale

Beech Skipper

Free plan with purchase of Model Flyer Magazine
Issue: Aug-05 Designer: D Ridgway Power: C02

Plan: £4.35
Cut Parts: N/A

PLANMF159

Free Flight Ebenezer

Pipernezer

Free plan with purchase of Model Flyer Magazine Issue: May-12 Designer: David Boddington

Plan: £4.35
Cut Parts: N/A

PLANMF270

Free Flight Ebenezer

Polikarpov

Free plan with purchase of Model Flyer Magazine
Issue: Dec-01 Designer: C Richards Type: Gull wing bipe

Plan: £4.35
Cut Parts: N/A

PLANMF71

Free Flight Ebenezer

PZL P24

Free plan with purchase of Model Flyer Magazine
Issue: Feb-01 Designer: P Sanger Type: Gull wing fighter

Plan: £4.35
Cut Parts: N/A

PLANMF40

Free Flight Ebenezer

PZL

Free plan with purchase of Model Flyer Magazine
Issue: Apr-03 Designer: Boddo Type: Gull wing fighter

Plan: £4.35
Cut Parts: N/A

PLANMF108

Free Flight Ebenezer

Stearmanezer

Free plan with purchase of Model Flyer Magazine
Issue: Feb-04 Designer: K Osborne Type: Bipe

Plan: £4.35
Cut Parts: N/A

PLANMF127

Free Flight Ebenezer

Stukanezer

Free plan with purchase of Model Flyer Magazine
Issue: Oct-03 Designer: S White Type: Ju87

Plan: £4.35
Cut Parts: N/A

PLANMF120

Free Flight Ebenezer

Catanezer

Free plan with purchase of Model Flyer Magazine
Issue: Apr-04 Designer: E Holland Type: Catalina twin

Plan: £4.35
Cut Parts: N/A

PLANMF133

Free Flight Ebenezer

Stampenezer

Free plan with purchase of Model Flyer Magazine
Issue: Feb-05 Designer: Boddo Type: Bipe

Plan: £4.35
Cut Parts: N/A

PLANMF148

Free Flight Ebenezer

The Champ

Free plan with purchase of Model Flyer Magazine
Issue: Aug-04 Designer: Gray Type: CL trainer

Plan: £4.35
Cut Parts: N/A

PLANMF141

Free Flight Ebenezer

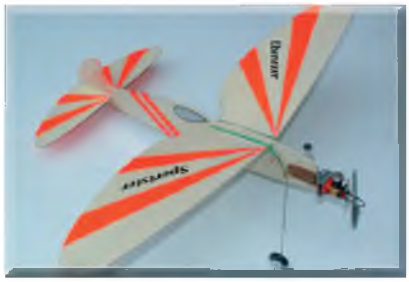
Ebearnezer

Free plan with purchase of Model Flyer Magazine
Issue: Mar-05 Designer: H Purser Type: Grumman Bearcat

Plan: £4.35
Cut Parts: N/A

PLANMF153

Free Flight Ebenezer



Sports

Free plan with purchase of Model Flyer Magazine
Issue: Jan-06 Designer: D Ridgway Type: Monoplane

Plan: £4.35
Cut Parts: N/A

PLANMF171

Free Flight Ebenezer

Vampenezer

Free plan with purchase of Model Flyer Magazine
Issue: Apr-05 Designer: Boddo Type: DH Vampire

Plan: £4.35
Cut Parts: N/A

PLANMF154

Free Flight Ebenezer

Furynezer

Free plan with purchase of Model Flyer Magazine Issue: Mar-06 Designer: C Coote Type: Hawker Fury bipe

Plan: £4.35
Cut Parts: N/A

PLANMF174

Free Flight Ebenezer

Pawnezer

Free plan with purchase of Model Flyer Magazine Issue: May-06 Designer: F Taylor Type: Crop Duster

Plan: £4.35
Cut Parts: N/A

PLANMF178

Free Flight Ebenezer

Rutanezer

Free plan with purchase of Model Flyer Magazine Issue: Apr-07 Designer: J Kay Type: Spaceship One

Plan: £4.35
Cut Parts: N/A

PLANMF192

Free Flight Ebenezer

Sputnik

Free plan with purchase of Model Flyer Magazine Issue: Sep-06 Designer: G Evans Type: Satellite

Plan: £4.35
Cut Parts: N/A

PLANMF183

Free Flight Ebenezer

Opticanezer

Free plan with purchase of Model Flyer Magazine Issue: Dec-07 Designer: G Evans Type: pod and twin boom

Plan: £4.35
Cut Parts: N/A

PLANMF203

Free Flight Ebenezer

Doranezer

Free plan with purchase of Model Flyer Magazine Issue: May-07 Designer: R Smith Type: Focke Wulf 190D

Plan: £4.35
Cut Parts: N/A

PLANMF193

Free Flight Ebenezer

Easynezer

Free plan with purchase of Model Flyer Magazine Issue: Mar-08 Designer: Boddo Type: Parasol original

Plan: £4.35
Cut Parts: N/A

PLANMF209

Free Flight Ebenezer

Spitzenezer

Free plan with purchase of Model Flyer Magazine Issue: Jun-08 Designer: P Burroughs Type: Spitfire

Plan: £4.35
Cut Parts: N/A

PLANMF214

Free Flight Ebenezer

Fiatnezer

Free plan with purchase of Model Flyer Magazine Issue: Apr-08 Designer: R Smith Type: Fiat G202

Plan: £4.35
Cut Parts: N/A

PLANMF221

Free Flight Ebenezer

Tonezer

Free plan with purchase of Model Flyer Magazine Issue: Apr-09 Designer: R Smith Type: Kawasaki

Plan: £4.35
Cut Parts: N/A

PLANMF226

Free Flight Ebenezer

Dewoitinezer

Free plan with purchase of Model Flyer Magazine Issue: Sep-10 Designer: R Smith Type: Dewoitine 520 EP

Plan: £4.35
Cut Parts: N/A

PLANMF246

Free Flight Ebenezer

Colibrinezer

Free plan with purchase of Model Flyer Magazine Issue: May-10 Designer: Boddo Type: Leopoldoff bipe

Plan: £4.35
Cut Parts: N/A

PLANMF243

Free Flight Ebenezer

LN 40nezer

Free plan with purchase of Model Flyer Magazine Issue: Jan-10 Designer: R Smith Type: Loire Nieuport LN40

Plan: £4.35
Cut Parts: N/A

PLANMF237

Free Flight Ebenezer

Spitzenezer

Free plan with purchase of Model Flyer Magazine Issue: May-11 Designer: R Smith Type: Spit Mk. XIV

Plan: £4.35
Cut Parts: N/A

PLANMF252

Free Flight Ebenezer

WeeSniftenezer

Free plan with purchase of Model Flyer Magazine Issue: Dec-10 Designer: R Smith Type: Nostalgianezer

Plan: £4.35
Cut Parts: N/A

PLANMF248

Free Flight Ebenezer

Mercurian Mite

Free plan with purchase of Model Flyer Magazine Issue: Jan-12 Designer: R Malmstrom Type: CL spaceship

Plan: £4.35
Cut Parts: N/A

PLANMF264

Free Flight Ebenezer

Vulcanezer

Free plan with purchase of Model Flyer Magazine Issue: Nov-11 Designer: R Smith Type: Avro Vulcan

Plan: £4.35
Cut Parts: N/A

PLANMF261

Free Flight Ebenezer

Rascalnezer

Free plan with purchase of Model Flyer Magazine Issue: Jan-12 Designer: R Smith Type: CL Rascal Stunter

Plan: £4.35
Cut Parts: N/A

PLANMF265

Free Flight Ebenezer

Hurricatnezer

Free plan with purchase of Model Flyer Magazine Issue: Mar-12 Designer: R Smith Type: Hawker Hurricane

Plan: £4.35
Cut Parts: N/A

PLANMF268

Indoor RC and Free Flight

Flying Flea

Free 22" plan with purchase of Model Flyer Magazine Issues: April-13 and May-13 Designer: Richard Crossley Power: EP

Plan: £4.35 **Cut Parts:** £22.00

PLANMF284

Indoor RC and Free Flight

Space Invader

Free plan with purchase of Model Flyer Magazine Issue: June-12 Designer: Gareth Evans Power: EP Flider

Plan: £4.35
Cut Parts: N/A

PLANMF272

Indoor RC and Free Flight

Swift

Free plan with purchase of Model Flyer Magazine Issue: Jan-00 Designer: D Ridgway Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF5

Indoor RC and Free Flight

Bleriot

Free plan with purchase of Model Flyer Magazine Issue: Apr-02 Designer: J Ralph Power: KP01 FF

Plan: £4.35
Cut Parts: N/A

PLANMF82

Indoor RC and Free Flight

Avro Avis

Free plan with purchase of Model Flyer Magazine Issue: May-01 Designer: D Deadman Power: C02 FF

Plan: £4.35
Cut Parts: N/A

PLANMF52

RC Scale IC and Electric

Bruce Tailless

Free plan with purchase of Model Flyer Magazine
Issue: Mar-01 Designer: B Lindsey Power: Rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF47

RC Scale IC and Electric

Mini Watt

Free plan with purchase of Model Flyer Magazine
Issue: Feb-01 Designer: J Ralph Power: KP01 FF

Plan: £4.35
Cut Parts: N/A

PLANMF41

RC Scale IC and Electric

BirdDog

Free plan with purchase of Model Flyer Magazine
Issue: Mar-03 Designer: M Watters Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF105

RC Scale IC and Electric

Albatros CIII

Free plan with purchase of Model Flyer Magazine
Issue: Jan-03 Designer: K Sheppard Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF102

RC Scale IC and Electric

Sopwith Baby

Free plan with purchase of Model Flyer Magazine
Issue: Jan-04 Designer: K Sheppard Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF126

RC Scale IC and Electric

Shoestring

Free plan with purchase of Model Flyer Magazine
Issue: Apr-04 Designer: D Ridgway Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF132

RC Scale IC and Electric

Small Fly

Free plan with purchase of Model Flyer Magazine
Issue: Mar-04 Designer: T Draper Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF131

RC Scale IC and Electric

Micro Pitts

Free plan with purchase of Model Flyer Magazine
Issue: Mar-04 Designer: D Ridgway Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF130

RC Scale IC and Electric

Dragon

Free plan with purchase of Model Flyer Magazine
Issue: Feb-04 Designer: R Halleron Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF128

RC Scale IC and Electric

Serene

Free plan with purchase of Model Flyer Magazine
Issue: Dec-05 Designer: R Preston Power: rubber Ff

Plan: £4.35
Cut Parts: N/A

PLANMF169

RC Scale IC and Electric

Flight of the Phoenix

Free plan with purchase of Model Flyer Magazine
Issue: Jul-05 Designer: R Crossley Power: C02 FF

Plan: £4.35
Cut Parts: N/A

PLANMF158

RC Scale IC and Electric

Teenie Tiggie

Free plan with purchase of Model Flyer Magazine
Issue: May-07 Designer: O Trethewey Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF195

RC Scale IC and Electric

Dreamliner

Free plan with purchase of Model Flyer Magazine
Issue: Mar-07 Designer: R Preston Power: twin rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF190

RC Scale IC and Electric

USS Enterprise

Free plan with purchase of Model Flyer Magazine
Issue: Jan-07 Designer: R Blackburn Power: micro EP RC

Plan: £4.35
Cut Parts: N/A

PLANMF186

Indoor RC and Free Flight

Twirly Flyer

Free plan with purchase of Model Flyer Magazine
Issue: Feb-08 Designer: A Clark Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF207

Indoor RC and Free Flight

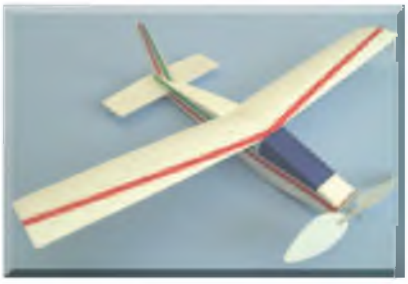
Carden-Baynes Bee

Free plan with purchase of Model Flyer Magazine Issue: Sep-07 Designer: J Stengele Power: micro EP twin RC

Plan: £4.35
Cut Parts: N/A

PLANMF200

Indoor RC and Free Flight



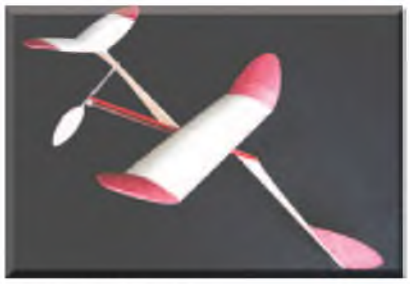
Speck

Free plan with purchase of Model Flyer Magazine
Issue: Mar-08 Designer: R Preston Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF208

Indoor RC and Free Flight



The Seahorse

Free plan with purchase of Model Flyer Magazine
Issue: May-09 Designer: A Burch Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF228

RC Scale IC and Electric

Rascal

Free plan with purchase of Model Flyer Magazine
Issue: Mar-09 Designer: R Preston Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF225

RC Scale IC and Electric

Senator

Free plan with purchase of Model Flyer Magazine
Issue: Feb-09 Designer: R Preston Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF223

RC Scale IC and Electric

Agro

Free plan with purchase of Model Flyer Magazine
Issue: Apr-08 Designer: R Preston Power: rubber FF

Plan: £4.35
Cut Parts: N/A

PLANMF212

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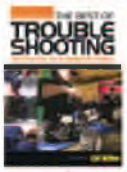

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