FREE PRO-PLAN!

NEW STYLE 2 CHANNEL GLIDER

VOL. 68 NO. 2 FEBRUARY 2025 www.modelflying.co.uk

RCM&E

RADIO CONTROL MODELS AND ELECTRONICS

SCOUT EXPERIMENTAL

FROM UNBUILT R/C KIT TO FINE SCALE FIGHTER

SCALE OVER GLOS

PRESTBURY PARK HELI MEET

MAGISTERIAL

BOWMAN MILES GETS AIRBORNE

CLOSED LOOP LIGHTWEIGHT RUDDER CONTROL **DJI NEO** PALM QUAD FLIGHT TESTED

Futaba

Another great brand from **J Perkins**

In longevity there is trust

In radio control there's **Futaba**

3 FOR FREE! *T16IZ Super 18-Channel Multi-Mode Air Radio – Now With 3 FREE Receivers*

NEW YEAR – NEW RADIO

We make no apology for tempting you to invest in Futaba's highly acclaimed T16IZ Super because we, of all people, know how much your models mean to you. Buy this powerful upper mid-range air radio and, for a limited period only, you'll get three FREE R3008SB receivers.

Join the growing ranks of pilots who are selecting (and re-selecting) the brand that built its world-beating reputation on technology, innovation and total reliability.

PACKAGE INCLUDES

1x T16IZS 18-Channel Tx
3x FREE R3008SB 8-ch T-FHSS Rx
1x 2000mAh Li-Ion Tx battery
1x USB charge cable
1x Neck strap
1x Short manual

GET THE T16IZS For £599.99 SRP WITH 3 FREE RECEIVERS!

Telemetry & S.Bus enabled

J Perkins | RADIENT | SEAGULL | HSDJETS

Following discussions with leading aerobatic and F3A pilots there was a clear first choice and that was Futaba

Kevin Crozier – Editor RCM&E – T16IZS Review

News, tips, videos & more

/WeAreJPerkins

/WeAreJPerkins

There's more to explore at your local model shop

JPerkins.com/local

ZAP HOBBY Arrows ZENOAH®

Find more great brands at JPerkins.com

Welcome

Welcome to the February 2025 issue of RCM&E.

In his 'Kick The Tyres' column in the last issue, Graham Ashby discussed airmanship when flying R/C model aircraft. One of the examples he gave was turning up at the club field on a perfect day and just not 'feeling it' and so not flying. I have seen this myself on many occasions, with my clubmates being happy to simply watch proceedings and not even assemble a model.

I must admit to having let out a small 'harrumph' when reading that as preparing for a flying session, charging batteries and then transporting at least two models to a flying field takes quite a bit of effort. So, I'm blowed if I'd miss out on the opportunity to fly having done all that!

However, I must admit that a reluctance to fly does sometimes afflict me too. But when it does, I don't even get as far as the front door! Even worse, when it does happen my break from stick stirring will invariably last for weeks. The trigger is often a forecast of strong gusts of wind on an otherwise fine flying day. In the past I would have flown in practically all-weather conditions, bar rain, but these days I don't enjoy getting my models being bounced around whilst I am flying. Such a day dawned in early November but otherwise it was a cracker, with clear blue skies. But instead of flying I opted for tidying up the garden. A week later the same thing happened and once again the forecast was for a breezy day. From past experience I knew that such absences from the flying field could multiply so I really should have dragged myself to the car with a gyro equipped model and done battle with Boreas.

To cut a long story short, here I am, following two storms, a bad cold, plus a weekend visit to see family before Christmas and my transmitters haven't seen the light of day for over five weeks! To top it all my local flying fields are now flooded after the aforementioned storms so there's little prospect of me going flying anytime soon.

Maybe next time I'm feeling a tiny bit jaded with the weather I'll learn my lesson and just go for it as you never know what's coming round the corner. But, sad to say, I know I'll bunk off again – I always do...

Now for a quick look at some of the main articles in this month's magazine. John Daniels starts the ball rolling with a review of two micro models from Volantex, the Sport Cub and the new brushless 400 mm P-51D Mustang. Danny Fenton (Make It Scale) prepares his models for the British Scale Nationals, including fettling his Brian Taylor Hurricane for the F4C comp, then it's over to Chris Williams (Scale Gliding) who maidens his latest ASK18, now at just over 1/4 scale. In the past two issues we've been following Roy Thompson as he restores a Bowman Miles Magister back to flying condition; this time we join Roy as his latest scale model takes to the air. Our pull-out Pro-Plan this month is courtesy of Ton van Munsteren who presents his delightful New Style glider; it'll be an ideal winter build without breaking the bank. Barry Stevens gets ready to top up his LiPo collection as he tests Overlander's new RC-S100neo charger, then Dave Goodenough (One Man & His Shed) joins us with more clubman topics, including extolling the virtues of lightweight closed loop control systems. John Stennard (Insider) looks back at the IFO series of indoor models, then we join Steve Tew at the Prestbury Park scale heli meet. Finally, yours truly signs things off with a look at DJI's Neo palm size drone.

I hope you enjoy reading it all.

Happy Flying!

Kevin Crozier

Editor: Kevin Crozier
Mortons Media Group, Media Centre,
Morton Way, Horncastle, Lincs LN9 6JR
kcrozier@mortons.co.uk

NEVER MISS AN ISSUE

Subscribe to get our best offer

Pre-order your next issue – delivered direct to your door

www.classicmagazines.co.uk/issue/RCM

SUBSCRIBE

Save over £2.00 per issue – delivered direct to your door

www.classicmagazines.co.uk/subscription/RCM

DIGITAL

Get your digital edition for just £3.99 per issue

www.classicmagazines.co.uk/subscription/RCM

PRINT AND DIGITAL

The whole package – just £5.50 per issue for a printed and digital version

www.classicmagazines.co.uk/subscription/RCM

'Tony Nijhuis Designs'

Buying direct from Tony Nijhuis Designs Ltd you can be assured of a quality service, backed-up by a knowledgeable team of passionate aero modellers.

www.TonyNijhuisDesigns.co.uk

Phone Orders- 07563 518159

What's NEW

35" Non–VTOL Harrier for 70mm 4S EDF. See web site for further details

Complete Pack– Plan, CNC Pack/Wood Pack and Vac Set	**£139.00**

Our 50-70mm EDF Mini Jet Range

26" Span Sabre

25" & 36" Hunter

23" Span Phantom

28" & 37" Provost

26" Span MiG 15

25" & 33" Gnat

25" Span Hawk

23" Span Lightning

20" Span TSR-2

25" Span Cougar

32" Span Vampire

27" Span Panther

Complete Pack –Plans, CNC/Wood Pack and Vac set Starting at £89.00 Each

Our EDF /Turbine Range

42" Span BAE Hawk 70mm EDF

Plans	£25.00
VAC Set	£44.00
CNC Pack	£62.00
Wood Pack	£59.00
Complete Pack	**£184.00**

50" Span BAE Hawk 90mm EDF

Plans	£40.00
VAC Set	£55.00
CNC Pack	£78.00
Wood Pack	£80.00
Complete Pack	**£243.00**

78" Span Vulcan 2x90mm EDF

Plans	£65.00
VAC Set	£35.00
CNC Pack	£132.00
Wood Pack	£245.00
Complete Pack	**£467.00**

32" Concorde 4 x 50mm EDF

Plans	£35.00
VAC Set	£17.00
CNC Pack	£75.00
Wood Pack	£72.00
Complete Pack	**£184.00**

98" Span Turbine Vulcan (80-120 size)

Plans	£69.00
VAC Set	£95.00
CNC Pack	£172.00
Wood Pack	£311.00
Complete Pack	**£627.00**

49" Span Vulcan 50mm EDF/pusher

Plans	£25.00
VAC Set	£28.00
CNC Pack	£83.00
Wood Pack	£91.00
Complete Pack	**£217.00**

78" Span Turbine Vampire (80 size)

Plans	£60.00
VAC Set	£35.00
CNC Pack	£198.00
Wood Pack	£171.00
Complete Pack	**£454.00**

42" Span A10 twin 50mm EDF

Plans	£20.00
VAC Set	£25.00
CNC Pack	£65.00
Wood Pack	£55.00
Complete Pack	**£160.00**

72" Span MK.5 Spitfire 1.20 IC or Electric

Plans	£35.00
VAC Set	£35.00
CNC Pack	£124.00
Wood Pack	£132.00
Complete Pack	**£316.00**

60" Span FW-190A Electric or 0.75 IC

Plans	£30.00
VAC Set	£47.00
CNC Pack	£82.00
Wood Pack	£105.00
Complete Pack	**£254.00**

67" A6M2 Zero Electric or 0.75 IC

Plans	£35.00
VAC Set	£45.00
CNC Pack	£72.00
Wood Pack	£94.00
Complete Pack	**£236.00**

62" Span Hurricane Electric or 0.65 IC

Plans	£25.00
VAC Set	£16.00
CNC Pack	£80.00
Wood Pack	£140.00
Complete Pack	**£251.00**

61" Span P-51B & D 900w Electric

Plans	£30.00
VAC Set	£35.00
CNC Pack	£82.00
Wood Pack	£108.00
Complete Pack	**£245.00**

62" Span Typhoon Electric or 0.65 IC

Plans	£25.00
VAC Set	£41.00
CNC Pack	£80.00
Wood Pack	£135.00
Complete Pack	**£271.00**

66" Span Lysander 0.52 IC or Electric

Plans	£25.00
VAC Set	£70.00
CNC Pack	£86.00
Wood Pack	£69.00
Complete Pack	**£240.00**

66" Span Harvard 0.65 IC or Electric

Plans	£25.00
VAC Set	£40.00
CNC Pack	£81.00
Wood Pack	£103.00
Complete Pack	**£239.00**

63" Span MK9 Spitfire 0.65 IC or Electric

Plans	£25.00
VAC Set	£16.00
CNC Pack	£96.00
Wood Pack	£98.00
Complete Pack	**£228.00**

72" Span Mosquito 2xElectric

Plans	£40.00
VAC Set	£32.00
CNC Pack	£142.00
Wood Pack	£135.00
Complete Pack	**£339.00**

72" SpanDakota 2x 600w Electric

Plans	£25.00
VAC Set	£40.00
CNC Pack	£82.00
Wood Pack	£99.00
Complete Pack	**£236.00**

72" Span Lancaster 4x 200w Electric

Plans	£25.00
VAC Set	£35.00
CNC Pack	£80.00
Wood Pack	£125.00
Complete Pack	**£255.00**

72" Span Avro York 4x 200w Electric

Plans	£30.00
VAC Set	£31.00
CNC Pack	£135.00
Wood Pack	£107.00
Complete Pack	**£293.00**

103" Span Hurricane 62cc Petrol

Plans	£60.00
VAC Set	£90.00
CNC Pack	£173.00
Wood Pack	£296.00
Complete Pack	**£609.00**

72" Span Sunderland 4x 200w Electric

Plans	£30.00
VAC Set	£32.00
CNC Pack	£85.00
Wood Pack	£160.00
Complete Pack	**£297.00**

72" Span B-17 4x 200w Electric

Plans	£25.00
VAC Set	£35.00
CNC Pack	£86.00
Wood Pack	£107.00
Complete Pack	**£243.00**

134" Span Lancaster Electric or 4x0.52IC

Plans	£70.00
VAC Set	£85.00
CNC Pack	£162.00
Wood Pack	£349.00
Complete Pack	**£646.00**

Check our Web Site for a selective range of Pilots, Decals and Retracts

Building your very own model from plan is one of the most satisfying achievement any modeller can experience..... so go on, give it a try and don't miss out on this wonderfully therapeutic side to this great hobby... *Tony Nijhuis*

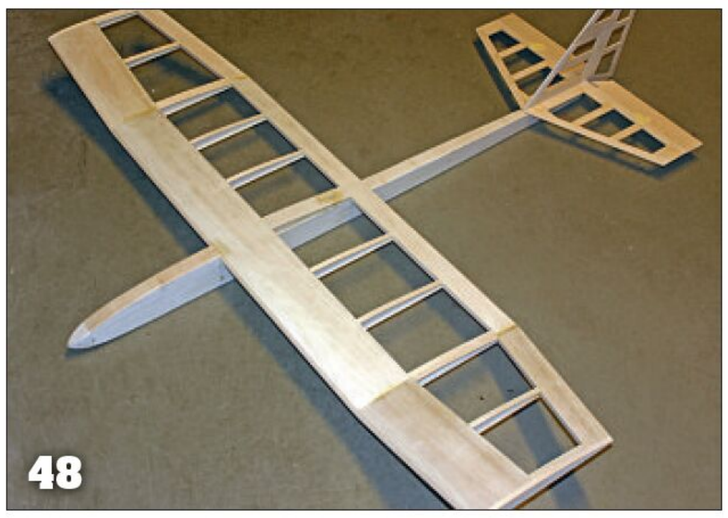
For more information on all our products, including free down-loads of build articles and construction photos, please visit our web site- www.tonynijhuisdesigns.co.uk

Tony Nijhuis Designs Ltd
47 Baldslow Down, St Leonards, TN37 7NJ

10

16

38


48

On the cover

Photo: Danny Fenton

Six years ago, Nick Fellah purchased a DB Sport & Scale 1/4 scale SE5a from a modeller who was not going to build the kit. Nick's main interest is WW1 models and this kit suited his needs perfectly. He visited Old Warden and spent some time admiring the SE5a in the Shuttleworth Collection. He decided to set himself a challenge to see if he could build a near scale replica of the aeroplane at Old Walden.

Contents

RCM&E
Volume 68 | Issue 02

Regulars

8 SWITCH ON
Our latest round up of model flying news.

44 PILOTS' PICTORIAL
Send us a picture of a new or favourite model and it could appear in our readers' models gallery

59 COUNTERPOINT
A selection of new kits, bits and gadgets for you to buy

72 ALL WRITE
Have your say in RCM&E's monthly chat room

92 GOING PLACES
Our updated list of model events and competitions for you to visit over the next few months

94 MARKETPLACE
Sell off your unwanted airframes and engines or maybe buy a few new ones

95 NEXT ISSUE
Take a look at what's coming in the March '25 issue of RCM&E

98 PARTING SHOT
Chris Williams captures Trevor Hewson's Douglas DC-3 in the RAe's 'Portpatrick Princess' livery

Features

22 MODEL MAGIC
Nick Fellah tells the story of building his DB SES5a, with additional static pictures supplied by Danny Fenton

38 MILES MAGISTER
Roy Thompson finishes and flies his newly restored Bowmans semi-scale kit

82 PRESTBURY HELI DAY
Last summer the Prestbury Park club hosted their first scale helicopter event. Steve Tew reports on the wide variety of models present

Columns

16 MAKE IT SCALE
Danny Fenton had a few jobs to do in order to ready his F4C Hurricane and F4H Auster for the BMFA Scale Nationals

32 SCALE GLIDING
Chris Williams and friends enjoy another scale get together atop White Sheet Hill, plus CW maidens yet another soarer

60 ONE MAN & HIS SHED
Dave Goodenough begins this month's selection of shed and flying field topics with a dodgy test flight

74 INSIDER
This time John Stennard covers a bit of 'retro' indoor flying, plus some up-to-date models and further No-Cal adventures

Reviews

10 VOLANTEX P-51D MUSTANG & SPORT CUB
John Daniels tests a couple of mini models ideal for small field flying

46 ARISM MINI KIT
James Andrew sees in the New Year with Sparmax's 'Christmas Edition' airbrush and compressor gift set

66 OVERLANDER RC-S100neo
Barry Stevens upgrades to a new balance charger

86 DJI NEO
The Editor flight tests a palm sized photo drone

Free Pro-Plan

48 NEW STYLE
Build this simple to build small glider and go back to basics when launching it. Ton van Munsteren shows how

SUBSCRIBE...

... and receive D-Day RAF & D-Day Overlord FREE! See page 80 for details

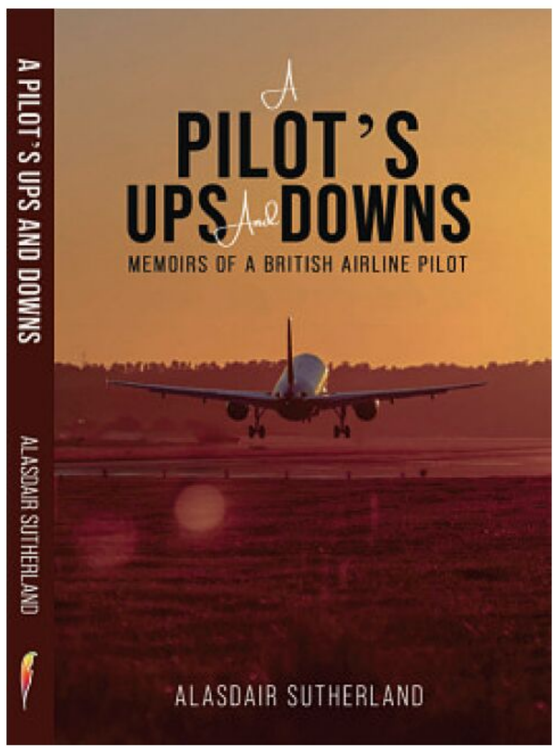
BOOK REVIEW: A PILOT'S UPS AND DOWNS

Each year at Christmas I am lucky enough to receive several books as gifts and I usually manage to polish off at least one in between December 25th and the New Year. But not this year! You see, I had finished my final book of 2024 a few days early so I was left without my usual reading fix. I almost dipped into the unread novels in my Kindle library, but my eye was drawn to the review copy of Alasdair Sutherland's new book 'A Pilot's Ups and Downs' which was sitting on my desk, awaiting attention upon my return to work in January. So, I picked it up as a stop gap measure but started enjoying it so much that I decided that my new presents could wait until after I had finished it!

Subtitled 'Memoirs of a British airline pilot' this book fully fulfils its brief. It begins with Alasdair's schooldays in Glasgow, where a burgeoning interest in aviation was encouraged by his father, who brought back Airfix kits on his return from work trips to the Paris and Farnborough Airshows. Even in his younger years we are soon made aware of Alasdair's attraction to the opposite sex, a theme that is returned to many times in later pages. But it's all handled very tastefully and with due respect to his wife of many decades, Anne. And, of course, you would probably be disappointed if a book covering working for an airline didn't include a few tales of the fun and games enjoyed by cabin crews when off duty.

You would also rightly expect such a book to be part travelogue and in that respect 'A Pilot's Ups and Downs' scores highly as Alasdair regales the reader with his ventures to and around cities all over the world. Many people these days are well travelled, although maybe not so much as an airline pilot, so I found myself nodding sagely when he covered his stopovers at some of the places I too have been lucky enough to visit.

But, of course, as a lifelong aviation enthusiast and fellow pilot (albeit at PPL level) it's the flying parts of this book that were of most interest to me. Alasdair's journey to sit in the Captain's seat in large British Airways airliners started with Glasgow University's Air Squadron, where he was taught to fly in RAF Chipmunks. Academically, the university is where he studied Aeronautics, a subject for which he is well known to many readers, having written a previous book and



many articles for R/C magazines on model aircraft aerodynamics. After university Alasdair continued his flight training at the BEA/BOAC College of Air Training at Hamble flying Piper Cherokees and Beechcraft Baron twins.

The next chapter is about how civil aviation works and is most interesting, covering topics like instrument flying, navigation aids and weather radar but in an easy-to-read manner, plus a wealth of information on flying airliners. For instance, you may have wondered why pilots turn onto a runway, then spool up a twin aircraft's engines at low power but the jet just sits there. A few seconds later the pilots give it full power, release the brakes and you get that big push in the back of your seat. This is because jet engines vary in the time they take to reach full power, with most difference being at the bottom end. So, sitting stationary on the brakes at 25% power gives them the best chance to stabilise before full power is applied.

Such anecdotes come thick and fast throughout this book, liberally sprinkled with the aforementioned stories about cabin crews and travel, ending with his final trip as Captain on a British Airways 767 to Entebbe in Uganda. For anyone with a smattering of interest in full size aviation, which I hazard to guess covers most aeromodellers, it's a must do read. I thoroughly enjoyed it, right to the end, which includes a final chapter on Alasdair's activities as a model aircraft designer, builder and airshow pilot.

Kevin Crozier

Publisher: Austin Macauley Publishers
www.austimmacauley.com
Pages: 194
ISBN: 9781035819782
RRP: £9.99

GOING PLACES

Our regular Going Places section at the back of the magazine is sure to start filling up quickly as soon as the New Year gets up and rolling. So, if you are planning an aeromodelling event over the next few months then please send details, up to 100 words maximum, to Beth Ashby at: **Beth.Ashby@artichokehq.com**

Please be aware that Beth's address changed a few issues back so please bee sure to use this new one or, if in doubt, simply send her a repeat of the information to make sure that your event gets into the list at the appropriate point in the year.

Our brownie points for the earliest submissions for 2025 go to two slope soaring communities, the Power Scale Soaring Association and the White Sheet Radio Flying Club. The former is famous for organising well attended get togethers of PSSA members who enjoy flying glider adaptations of a wide variety of scale powered aircraft, from WW2 warbirds to wide bodied modern jet airliners. White Sheet Hill will be widely recognised by regular readers of Chris Williams' 'Scale Soaring' column as the venue for regular gatherings of classic and modern scale sailplanes which WSRFC members and visitors enjoy when flying together at the club's numerous Scale Events covering (weather permitting!) nine months of the year. Besides scale events White Sheet RFC also host a series of 'Open Slope' days and F3F timed speed competitions. They will also be hosting the F3F English Open on August 23rd and 24th.

If you intend to visit any events listed, either here or in Going Places, then please check with the organisers before travelling in case of any last-minute changes.

PSSA CALENDAR 2025

12th / 13th April
PSSA 'Fly for Fun' event – The Great Orme, Llandudno, North Wales

Meet at the 'Tank Track' car park for pilots' briefing at 10am each day.

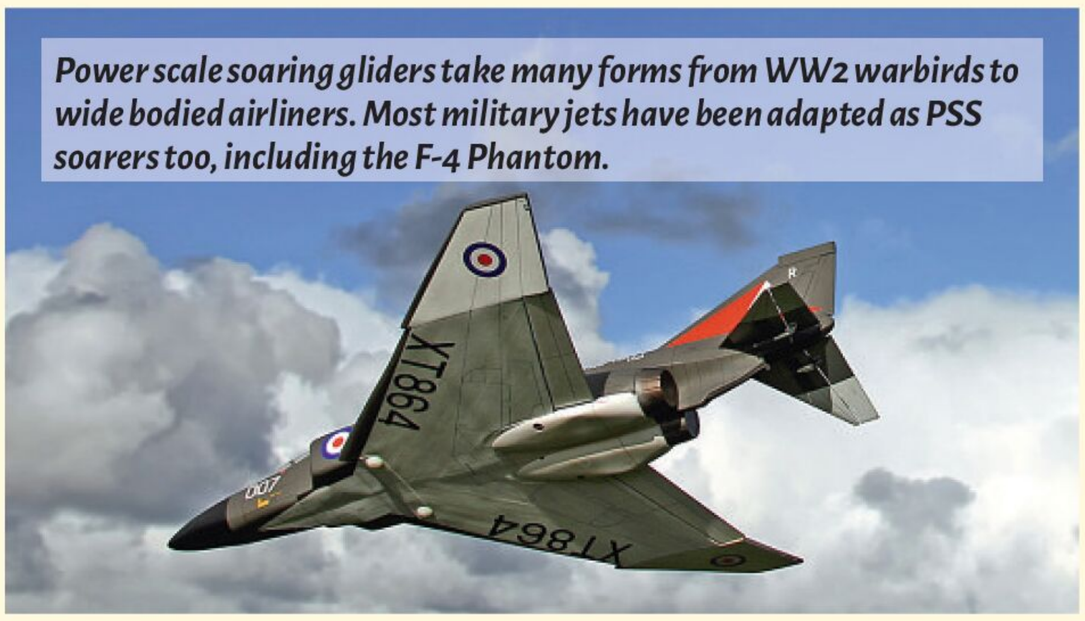
17th / 18th May
PSSA 'Fly for Fun' event – The Great Orme, Llandudno, North Wales

Meet at the 'Tank Track' car park for pilots' briefing at 10am each day.

(Please note that due to slope access restrictions in place during Spring the April and May events will not run as listed if the prevailing winds are Easterly and models would need to fly over the pier. In this case a decision will be taken in the week running up to the event and the PSSA will look to defer the date as best they can.)

28th June to 6th July
PSSA 'Fly for Fun' event with the Lleyn MAC, Nr. Abersoch, North Wales. Meet at the Londis car park in Llanbedrog for 09:30 am each day. A slope map will be left in the shop window for late arrivals (weekends only).

2nd / 3rd August
PSSA 'Fly for Fun' event at The White Horse, Westbury, Wiltshire



Power scale soaring gliders take many forms from WW2 warbirds to wide bodied airliners. Most military jets have been adapted as PSS soarers too, including the F-4 Phantom.

Meet at the White Horse car park. Pilots' briefing at slope location at 10:30am each day. Note this meeting will only run with locally forecast winds from West through to North.

16th / 17th August
PSSA Fly-In, The Bwlch, Nant-y-Moel, Bridgend, South Wales
Kindly supported by the SWSA: http://a470soaring.blogspot.co.uk/
Meet at the 'Ice-Cream' car park for 10am each day.

20th / 21st September
PSSA 'Fly for Fun' event at The Great Orme, Llandudno, North Wales
Meet at the 'Tank Track' car park for a pilots' briefing 10am each day.

18th / 19th October
PSSA 'Fly for Fun' event at The Great Orme, Llandudno, North Wales
Meet at the 'Tank Track' car park for a pilots' briefing 10am each day.

Proof of BMFA (or equivalent) insurance and Pilot Competency certificate is required for all PSSA events. All models must be labelled with a compliant CAA Operator ID number.
For more information on these PSSA events please contact Phil Cooke on 07772 224719, email **webmaster@pssaonline.co.uk** or go to **// www.pssaonline.co.uk/about-us/events/**

JUST ASK

For peace of mind and to ensure the regular delivery of the latest copy of RCM&E straight to their front door many of our readers opt to purchase a subscription. There are several options besides the usual Annual subscription so to see what might be best for you please click on the 'Subscribe' tab, top left of the RCM&E Home Page at **https://www.modelflying.co.uk**
What's more, if you opt for either a digital subscription or a combined digital/print package the unique subscriber allocated to you will also provide website access to our digital archive of back issues, along with bonus content.
However, RCM&E is also available to buy from all good newsagents. Most newsagents will allow you to reserve a copy, a long-time favourite way of securing each issue of your favourite model magazine. Some stores may even be able to arrange for it to be delivered to your home. It's easy - Just Ask!

Don't miss out! Just ask your local newsagent to order **RCM&E** for you today. Simply fill in the form and hand it over to your local newsagent. (A copy of your details will be fine if you don't want to cut the coupon out.) Once set up your copy of **RCM&E** will be held for you to collect every month. **It's easy – Just Ask!**

First name..... **Surname**.....

Address .....

Postcode.....

Telephone number.....

WHITE SHEET RFC CALENDAR 2025

Scale Days could be either Saturday or Sunday, with the preferred day always being a Sunday. After analysing the forecasted conditions, the Scale Secretary will make the final on/off call on. Please note the reserve dates in brackets.
Open Slope days are for Vintage Scale, Modern Scale soarers, F3f and F5j competition models or 'Anything In Between', such as PSS gliders. The scheduled Sundays are preferred but as always Saturdays are an option. The Open Slopes Secretary will analyse the forecast and attempt to choose the most suitable day. The decision is usually made on the Friday before the event, occasionally earlier if conditions are more settled.
Please check with the WSRFC before travelling: **https://whitesheet.bmfa.club/scale-calendar/**

Scale Events

1	March	16th	(30th)
2	April	6th	(27th)
3	May	11th	(25th)
4	June	1st	(22nd)
5	July	6th	(27th)
6	August	3rd	(31st)
7	September	7th	(28th)
8	October	5th	(12th)
9	November	9th	(30th)

F3F Events

1	January	26th	(25th)	WSRFC F3f Winter League
2	May	8th	(Jun 8th)	BMFA F3f League
3	August	23rd & 24th	English Open	
4	October	26th		
5	November	23rd		

Open Slopes

1.	March	23rd
2	April	13th
3	May	18th
4	June	15th
5	July	20th
6	August	17th
7	September	21st
8	October	19th
9	November	2nd
10	December	7th

A fifth scale Skylark 4 by Chris Williams is seen turning high over White Sheet during one of the WSRFC's regular scale meetings. Look out for a double issue free Pro-Plan for this model, coming soon in RCM&E.

VOLANTEX P-51D MUSTANG & SPORT CUB

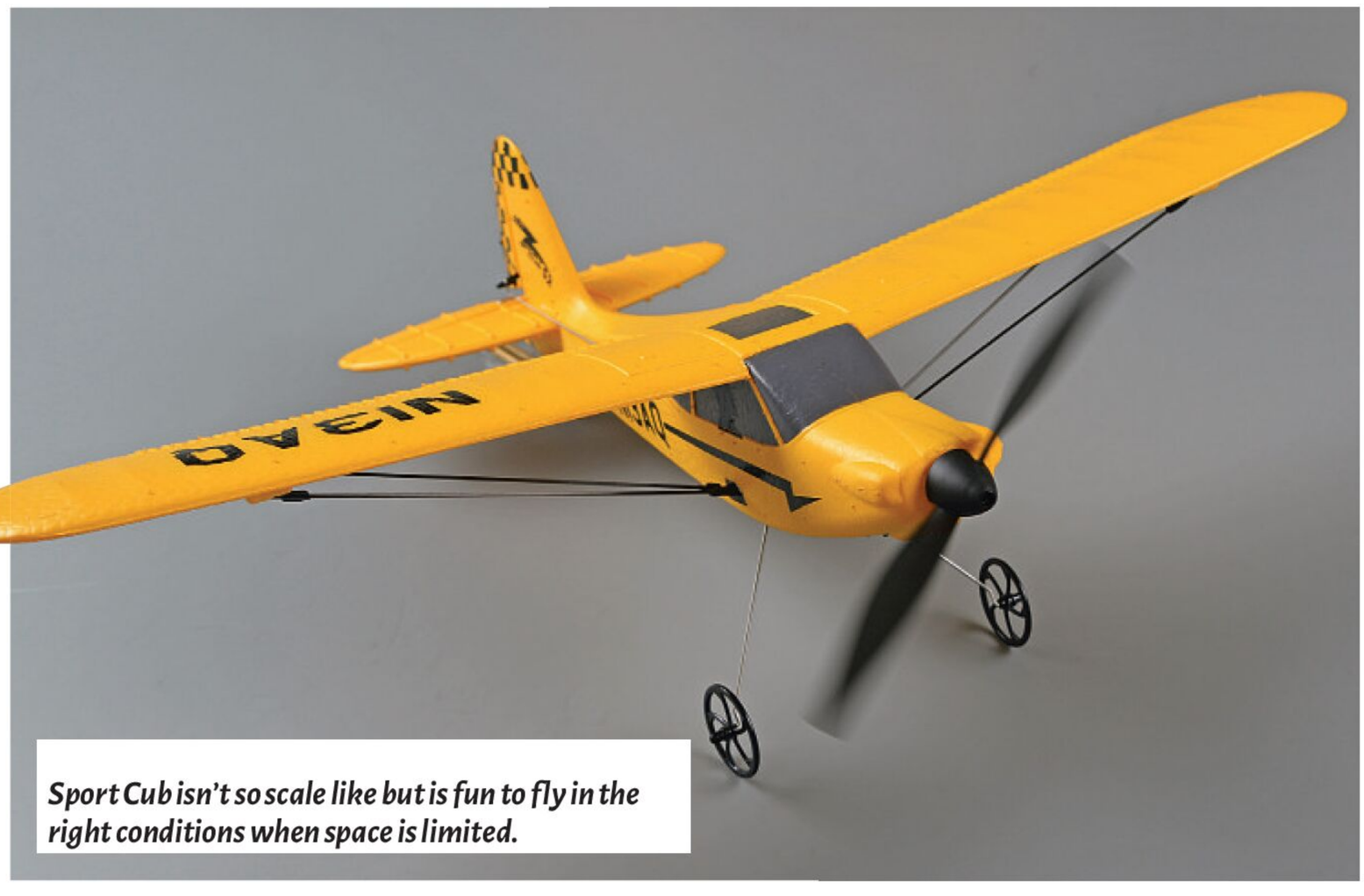
John Daniels tests a couple of mini models that are ideal for small field flying

Words **John Daniels**

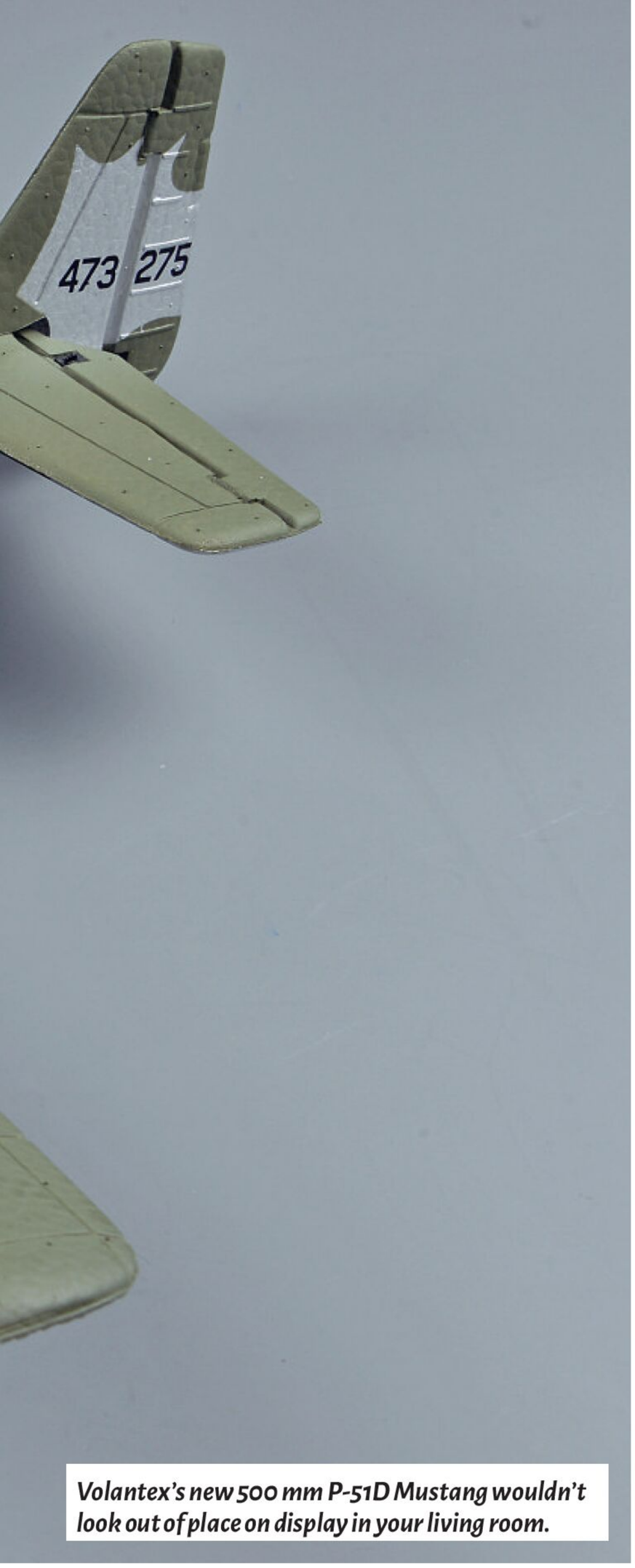
Photos **Kevin Crozier**

One of my monthly treats is my model club's indoor flying session. We have the use of a four-court school sports hall but at around 50 foot in width you do need to have your eye on the ball when flying otherwise those all too solid walls on either side can loom up and provide an unintentional crash barrier to our fragile indoor models.

Around ten or so years ago Ready To Fly indoor models were relatively easy to come by. A lot of my models' date from around that time but whilst I am fairly accomplished at missing those walls my concentration does lapse from time to time, so my models are starting to show their age after several meetings with the brickwork! Unfortunately, there doesn't seem to be the demand for such models these days, maybe because a lot of modellers are now retired and have the time to build their own lightweight indoor models. However, I'm still a wage slave so I prefer to spend my limited spare building



Sport Cub isn't so scale like but is fun to fly in the right conditions when space is limited.



Volantex's new 500 mm P-51D Mustang wouldn't look out of place on display in your living room.

time making larger R/C models. Some of those small, traditionally built scale models do look appealing though, so maybe one day...

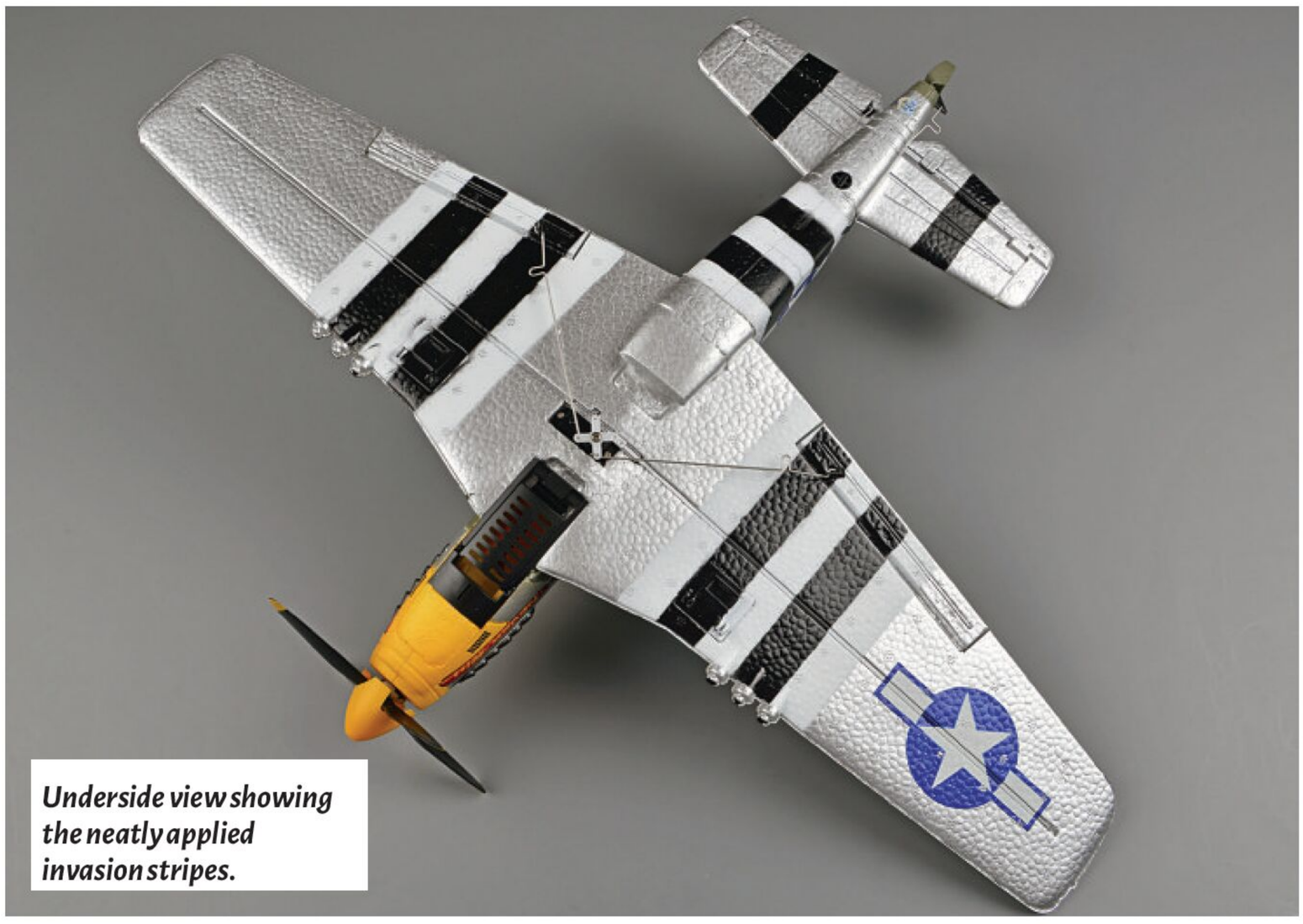
CASTING AROUND

I mentioned this dilemma to our editor, Kevin and it seems that he was having similar thoughts. He had cast around for modern day RTF indoor models and thought he had the answer in the form of the Volantex series of small 400 mm span warbirds. But these proved far too sprightly to fly indoors in a similar sized hall. Those walls did prove the value of Volantex's pop off propeller savers though!

He also tried the 400 mm span, 3-channel Sport Cub from the same series and by increasing the rudder throw to allow it to turn tightly enough to miss the walls this little yellow high winger did allow him to enjoy a few flights. But, like the warbirds, it really is a bit too fast for indoor use, so he had retired it, saving it for those fabled calm, sunny summer evenings which sadly didn't really materialise much last year.

Volantex's UK distributor, CML, then sent over one of the larger 500 mm P-51D Mustangs to review. The original 400 mm Mustang, like others in the same series, including the Sport Cub, are powered by 1S LiPo powered brushed motors, but the new larger models have 2S brushless power systems. This rules them out for indoor flying, unless you have access to a really big hall, I guess. But as KC wanted a quick review of the P-51D, he asked me to take a look and to see what I thought of the little yellow Sport Cub while I was at it!

Box contents.



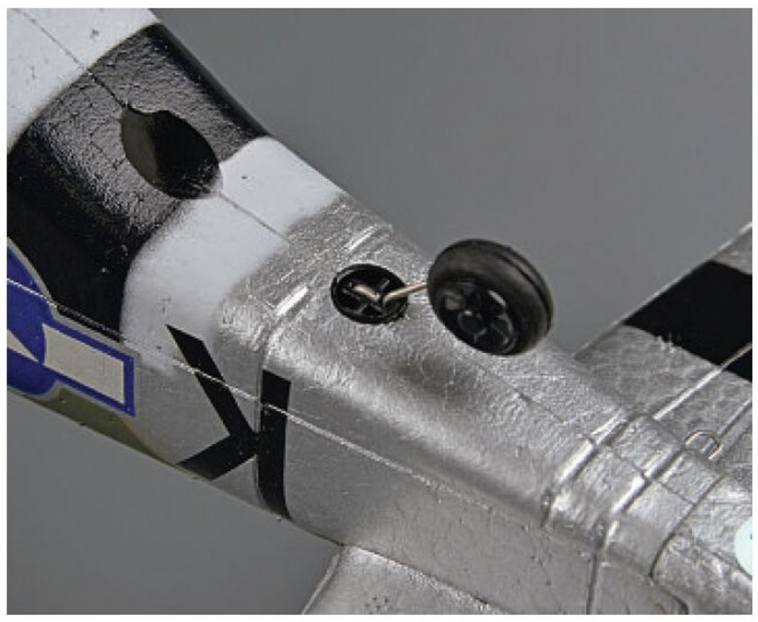
Underside view showing the neatly applied invasion stripes.

Mustang is supplied in a handy carry case.

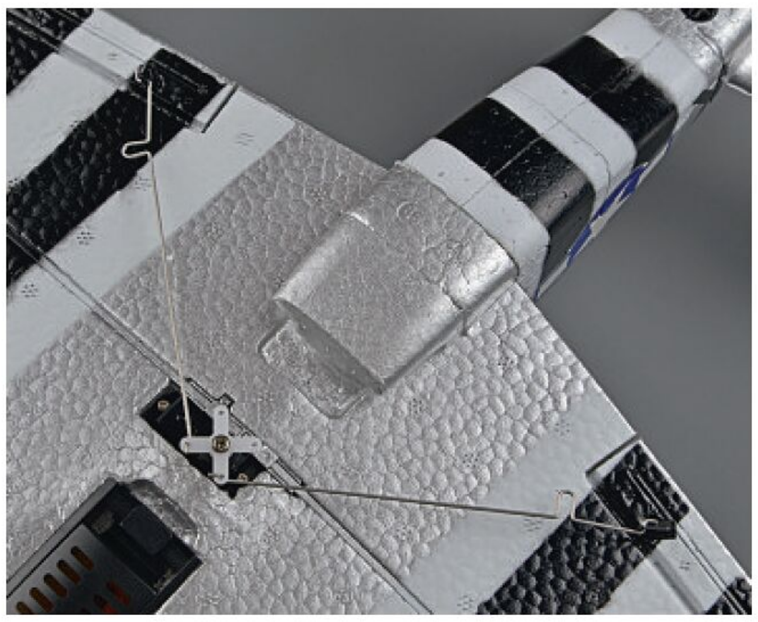
Main wheels are a push fit into slots underneath each wing.

MUSTANG FIRST

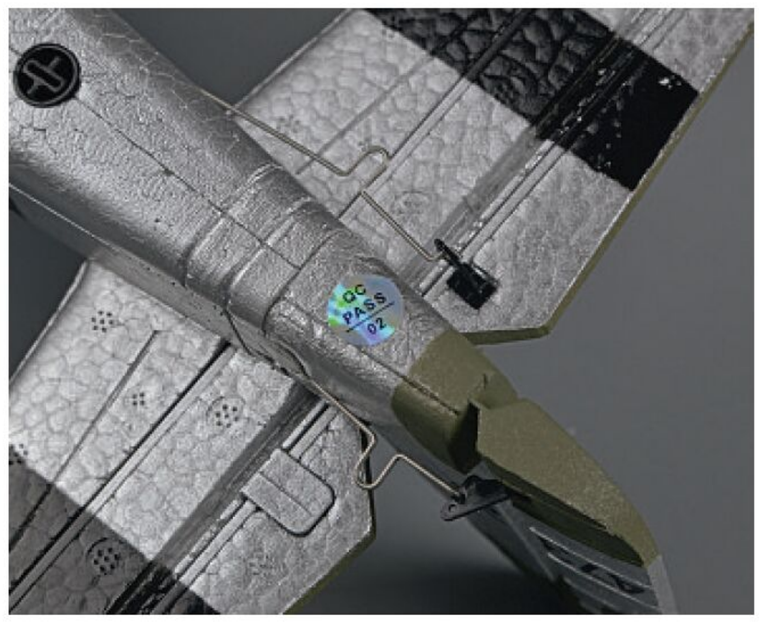
The original Volantex warbird series comprises of several popular WW2 aircraft including a Spitfire, a P-40, a Zero and two Mustangs in different colour schemes. They are all 4-channel of 400 mm wingspan and come complete



Tail wheel is a simple push-in fit too.



A single servo drives both ailerons.



Tail linkages. Neutral adjustments are made by closing or expanding the U bends in the pushrods.

with a transmitter, spare props, a 1S 400 mAh LiPo and a matching charger.

The new 500 mm wingspan 4-channel P-51D Mustang is, to my eyes, a more scale like representation and would, at a quick glance, easily pass as a well finished plastic kit. It wouldn't be out of place on display on a shelf in your living room.

Painted to replicate the Delaware based Mustang 'Never Miss', this neat little fighter is painted matt green on top with a silver underside and neatly applied invasion stripes. It comes with two four-blade propellers, slide on main wheels complete with doors, 4 x 2 g digital servos, a ready paired 4-ch. transmitter and a 2S 400 mAh LiPo with matching USB charger. The motor has been upgraded to brushless and it fair nips along, pacified in great part by an on-board X-Pilot 6-axis gyro stabilisation system.

The one-piece aircraft is very nearly ready to fly and just requires the fitting of the neat scale like prop, which clips securely in place with a firm push. It's fitted with a very effective prop saver. In fact, when flying it over anything less bowling green standard turf the chances are that it will pop off after every flight when it catches the grass. But that's no bad thing as I'd rather have that than bending or breaking a prop every time it is flown. It also means that the model will go back inside its carry box for storage between flying sessions. If you leave the prop in place, it cannot be stored in the box.

I tend to leave the main and tail wheels off when flying as it looks so much better 'wheels up', as any WW2 warbird does when in flight. The main legs simply push into place into square slots on the underside of each wing and will click into place if pushed right in. But I stop just before this point so that the legs can be easily removed before a flying session.

After fitting the prop all that needs to be done is to charge the 2S LiPo supplied and to fit four AA cells into the battery box at the back of the Tx. A USB charger is supplied to charge the 2S LiPo, but I prefer to use the balance function of my AC/DC charger. The pack is fitted with a red JST connector and an XH balance lead so connecting it to a 'proper' charger is quick and easy to do.

> "I tend to leave the main and tail wheels off when flying as it looks so much better wheels up"

DATAFILE

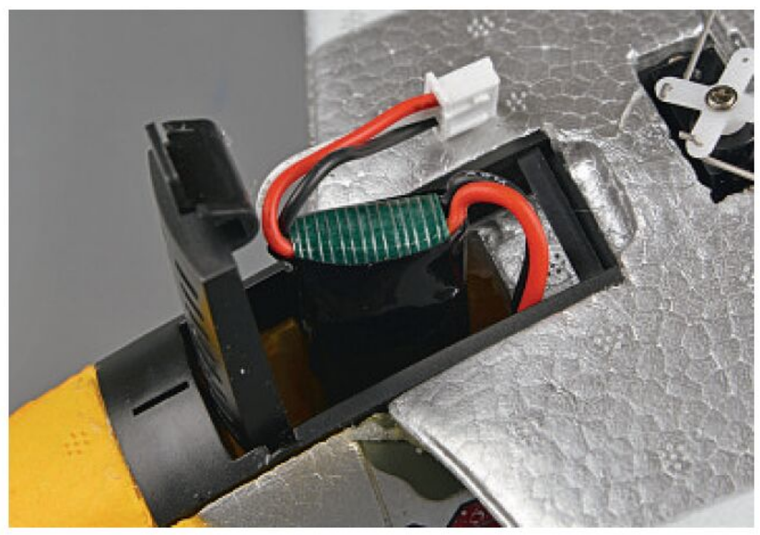
Model:	P-51D Mustang, Green
Model type:	Mini warbird
Manufacturer:	Volantex
UK importer:	CML Distribution
	https://www.cmldistribution.co.uk
RRP:	£124.99
Length:	318 mm (12.5")
Wingspan:	500 mm (19.7")
Motor size:	1806 Brushless
Servos:	2 g x 3, plus X-Pilot gyro stabilisation
Functions (servos):	Ailerons, elevator, rudder, throttle
LiPo:	2S 400 mAh

FIRST SORTIE

Plug in the LiPo and the X-Pilot stabiliser kicks in immediately, twitching the tiny servos, with the mini warbird showing its eagerness to get airborne. The transmitter is supplied as Mode 2 and features three flight modes: Full Assist, Soft Assist or No Assist. The mode select switch is on the top right shoulder of the Tx but features a different set of nomenclature. Pushing the switch away to its Expert position will give you No Assist, Midd setting gives you Soft Assist whilst pulling the switch towards you enables Beginner mode and Full Assist. I recalled David Ashby's reviews of some similar small warbirds and he recommended using the Midd position for most of his flying so that's where I started.

After checking that all the controls were moving in the correct directions and that they were also responding correctly to the X-Pilot as it was swung on each axis in pitch, roll and yaw, the throttle was raised and the little Mustang was given a gentle underarm toss into the sky. Even on partial throttle the small 1806 brushless motor and 2S combo has plenty to give and 'Never Miss' was happily zipping around and putting a big smile on my face. She displayed a slight amount of porpoising in pitch but other than that she proved very easy to fly. You'll want to keep her close though as at those sort of speeds she covers ground very quickly and you don't want to find yourself hearing the Signal Loss Alarm, which kicks in at the maximum range of 656 feet.

A USB charger is supplied for the 2S 400 mAh LiPo but thanks to the use of popular connectors it is easily matched up to an AC/DC charger.



The LiPo slides vertically into the battery bay.

Simple transmitter has a gyro mode switch top right and an Aerobatics push button top left. The Sport Cub has a similar Tx, but the Aerobatic switch mount is blanked off.

Time now to explore some aerobatics. Even in the Midd setting there's quite a lot of elevator so the Mustang can easily be guided through some nicely rounded loops. However, application of full aileron merely results in the beginnings of a tight turn. On the left shoulder of the Tx is a 'One-key Aerobatics' button and when pressed

Like the Mustang, Sport Cub comes in a handy carry case.

Kit contents.

this automatically feeds in the additional aileron throw needed to perform a roll. I quickly became accomplished at pressing this button and then immediately pushing the aileron stick to the left or right to initiate a roll. It works with elevator too but as mentioned before there's plenty of movement there to perform loops without assistance, at least in Midd mode.

EXPERT & BEGINNER MODES

Flicking the mode switch to Expert turns off the X-Pilot stabiliser system and I immediately regretted doing so, even with 40 plus years of flying experience under my belt! To be fair the instructions caution to use the X-Pilot whilst flying, which sort of begs the question: why make it so it can be switched off? A few hairy seconds later I had it back at the Midd position, so it was now time to try flying the Mustang in Beginner mode. As expected, this calms things down a lot, but it also reduces the model's turning capabilities which is not a good thing in my book due to the model's fairly high flying speed. With Beginner mode selected and an inexperienced pilot on the sticks I can easily see it quickly going out of range and maybe flying out of sight.

So, stick to the Midd setting and you'll have a ball with this little fighter!

ONE-KEY TAKEOFF

As discussed previously, on the left shoulder of the Tx is the One-key Aerobatics button. This kind of 'does what it says on the tin' but it has another function as it provides what is called 'One-key Takeoff'. If pressed before raising the throttle and launching the model it will hold the Mustang level as it climbs. Then, to quote the manual, '*The airplane will take off automatically to a proper altitude and hover in a certain area.*' Maybe loiter is a better word than hover, but I've yet to see this in action because if you touch any of the controls then the plane will exit this function and return control to the pilot – and I can't help but touch the sticks! The best I've achieved is a short auto climb out before I felt the need to take back control, but it didn't feel any more stable than a normal climb out.

To be honest this is the sort of auto pilot function that is aimed at new pilots trying to fly on their own, but I wouldn't want to recommend this kind of model to a beginner. Yes, you could probably get away with making a few short flights whilst banging the sticks around, but will it really teach you anything useful? Far better to join a model club and get instruction on a proper trainer. Eventually you'll likely either break something or the plane could fly away.

It's a neat looking mini warbird and ideal for small field or large garden flying.

Sport Cub is less scale like but it's clear which aircraft it represents.

A 1S 400 mAh LiPo powers the Volantex 400 mm series of mini models.

This time the LiPo goes in lengthways in its battery bay.

Small but mighty control surfaces, so much so that I much prefer flying it with reduced controls in Beginner mode. It's almost like guided free flight!

MUSTANG SUMMARY

In my opinion, whilst this new, larger Volantex P-51D is really not a model for novice pilots it is great fun to fly for anyone with a modicum of stick time. The Midd position for the X-Pilot system is the best Goldilocks setting so leave it there and you'll have lots of fun zipping her around, looping and rolling. Just remember to push the Aerobatics button before moving the ailerons if you want to perform those kinds of stunts!

SPORT CUB

There's a new, larger, brushless version of the Sport Cub too in red or blue. But shown here is the original 400 mm yellow version fresh from its aborted indoor flying sessions.

DATAFILE

Model:	Sport Cub, Yellow
Model type:	EPP mini high winger
Manufacturer:	Volantex
UK importer:	CML Distribution
	https://www.cmldistribution.co.uk
RRP:	£69.99
Length:	285 mm (11.22")
Wingspan:	400 mm (15.75")
Motor type:	Geared, plus prop saver
Servos:	2, plus X-Pilot gyro stabilisation
Functions (servos):	Elevator, rudder, throttle
LiPo:	1S 400 mAh

> "Midd position for the X-Pilot system is the best Goldilocks setting so leave it there and you'll have lots of fun"

Presentation is similar to the Mustang with the one-piece airframe supplied in a square carry box and protected by an inner foam tray. It comes with the same type of transmitter, although in this case the Aerobatics button is not present and the switch position is blanked off. The X-Pilot controls are the same and as before I started flying at the Midd setting. Ironically, this gives this smart little high winger a little too much control and I actually prefer flying her in Beginner mode. So equipped she will float around the sky in large circuits and figures of eight. Aerobatics are a bit of a flop so it's best to forego those (maybe get a 500 mm Mustang instead!) and just enjoy some simple R/C flying.

The Sport Cub comes with a simple wire push-in undercarriage but unless you are flying over very short grass it is best omitted otherwise there's a danger of flipping the model over every time you land it. Kevin said that it worked fine though for taking off and landing in a sports hall – if you can find a big enough venue! Sport Cub comes with a two-blade prop and two spares, plus a spare prop saver.

The 1S 400 mAh is best charged using the USB charge lead supplied. I couldn't use my normal charger this time as it only works for 2 – 6S packs.

AND FINALLY...

Both of these small models are fun to fly but in very different ways. Choose the Sport Cub for gentle, no frills floating around, whilst the larger 500 mm brushless P-51D Mustang is sure to put a smile on your face whether zooming around on fast passes or performing neat loops and assisted rolls.

Whilst they will never surpass my larger sport and scale models for flying at club level, I can see them earning a well-deserved place in the car for taking on holiday or simply for popping out to a nearby playing field for a quick session on a calm summer's evening. ■

Popham Airfield
EGHP
The Spitfire Flying Club

NEW DATE FOR 2025

POPHAM MODEL SHOW

10th – 11th May 2025

Everyone is welcome to join us at this fantastic two-day model show with a jam-packed flying programme showcasing the epic skills of over 45 world-class pilots.

- Fixed wing (electric, I.C. and turbine)
- Gliders
- Rotary
- Multi-rotor

SCAN ME *for more information*

PLUS

- High speed Tiny Whoop racing
- Spectacular RC drifting
- Mighty RC tank display
- Fantastic array of static and powered model boats
- Traders and catering

All contributions subject to availability

Popham Airfield, Coxford Down, SO21 3BD (just off the A303 between Basingstoke and Andover)

BRITISH SCALE NATIONALS

Danny Fenton had a few jobs to do in order to ready his F4C Hurricane and F4H Auster for the UK's top scale competition at BMFA Buckminster

words & photos **Danny Fenton**

An extremely busy few months distracted me from my ongoing projects and although I was keen to get back to my quarter scale Chipmunk the British Scale Nationals held in mid-September focussed my thoughts.

I was disappointed that support for F4B (scale control line) in the UK had dropped to such an extent that there were not enough entrants to hold a competition for the class at the Nats. At least three entries are required and I was the only one. Chatting with Matt Cordwell, it has happened before. I just hope the exposure F4B got from the World Champs, and our success there, will inspire a few to give scale control line a go. It would be wonderful to field a full team of three pilots when we, the UK, host the World Championships in 2026. In fairness, four modellers were in touch over the Nats weekend and are indeed keen to give it a go. So, fingers crossed!

I have realised that my Chipmunk was not a good choice to maximise the scoring potential. I have selected my 2026 control line subject, but I will keep that decision close to my chest until nearer to the event.

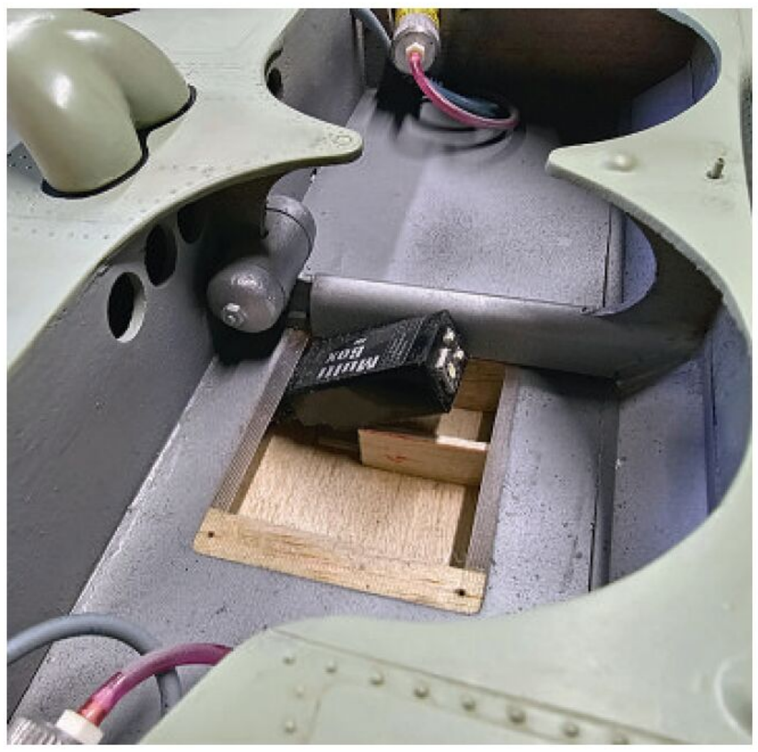
My models, an Auster, Chipmunk and Hurricane, ready to do battle at the British Scale Nationals at Buckminster.

Dave Charles flew his wonderful Typhoon to win Gold in F4C at the British Scale Nationals.

HURRICANE FLAP SERVOS

So, with my Chipmunk not competing at the Nats, I turned my attention to my F4H and F4C models. I decided that it was time that my Hurricane, which I built in 2009, flew and to that end I started getting it ready for F4C.

The flaps had shifted over time and the four (yes, four) small servos' end points were out. When I built this Brian Taylor design, I struggled with operating all four flaps and tried all sorts of ways to move them with just one or even two servos, but I struggled. In the end I used four small servos and a JR Multibox. This unit allows four servos to be driven by one channel and the endpoints set for each servo. Fortunately, I had made the Multibox accessible in a wheel well and a quick refresh of the instructions had the flaps all nicely synchronised.



Removing the floor in the Hurricane's wheel well exposed the JR Multibox. This synchronises the four mini flap servos.

> "When I built this Brian Taylor design, I struggled with operating all four flaps"

STATIC PROP

I needed to make a scale prop for the Hurricane, so I downloaded photographs from the web for reference and carved a blade from maple using a spoke shave. I could have used a softer wood for this, such as balsa, but I enjoy the close grain and rugged properties of maple. It also allows for fine edges without the risk of breakage.

This single blade was then used to create a mould. Unfortunately, my silicone had gone a bit 'funny' and was very thick. This meant the mould was full of bubbles that resisted removal, even using a vacuum chamber.

Amazingly, three blades were cast using Biresin G26, an unfilled fast cast polyurethane resin, and despite being very rough they cleaned up well. I needed to fill a few pin holes and sand off the lumps produced by the voids in the mould but within a couple of hours the blades were ready for primer.

A hub was made to hold the blades from more maple and the blades were sprayed satin black. I still need to work out how to apply lettering as some are in white and that probably means dry rubs will be needed.

I needed to make a scale prop for my Hurricane, which was entered in F4C.

The lumps and bumps are from the poor quality of the mould - too many bubbles!

The three blades after cleaning up with Perma-Grit tools in the Dremel.

I chose to make the hub a hexagon. This allowed a flat side to rest on the table of the drill press and made drilling accurate holes for the blades straightforward.

The blades were painted satin black and fixed to the maple hub.

The hub was simple and was made using a paper template tack-glued to a block of maple; this made sure it was accurate. The blades were fitted and glued in place. With hindsight it may have been better, for storage reasons, to make the blades a push fit so that the prop could be dismantled.

The blades were painted satin black and fixed to the maple hub. The tips were masked and painted, the circular logo added using paint masks and the yellow carefully airbrushed. Tamiya water-based paint was used with a .3 mm nozzle and 25 psi in my Harder & Steenbeck airbrush. Some additional stencilling or decals are needed but that's for a later date.

NEW BATTERIES

I removed the twelve 4600 mAh A123 cells (6S 2P), replacing them with 2 x 5S 2700 (5400 mAh) LiPo packs. Unfortunately, the wing needs to be removed to access the new batteries; the A123 cells were charged in the model which is not something I would advocate with LiPo packs. The C of G needed some work as the LiPo packs were a little lighter.

The only remaining task was to fit new O-rings in the retract air valve as the existing rings had become flattened over the years.

DB AUSTER

My DB Sport & Scale Auster was flying in F4H at the Nats and it too needed a few upgrades. The last time the aircraft flew it really didn't fly well. I tracked the problems down to the gyro settings in the FrSky receiver. I completely started again, including the gyro calibration. This appears to have sorted the model and it now goes where I want it to! I still need to dial in the throw rates and the gyro but at least now it is flyable.

A scale prop was made for the Auster. Rather than carve it from scratch I started with a 13 x 8 beech prop. The outline and the tips were all wrong but with some careful sanding

Finished static prop. As a temporary measure the spinner is the same for both the static and flying prop.

A static prop was also made for my Auster which was flying in F4H.

Andy Bowman had to repair a broken flying wire on his Tiger Moth. It was fortunate that Steve Jackson came so well equipped! Andy got on much better when he switched from sunglasses to an un-tinted pair.

Pierre Delrieu and Hubert Sacriste came over from France and it was lovely to see them - and Pierre's Storch.

"Unfortunately, the weather played a part in ruining my plans for flying the Hurricane"

something close was created. Satin black and some masking of the yellow tips completed the exercise.

I also changed the wheel covers for some nice cast resin wheels. This was much more like the full size.

Unfortunately, the weather played a part in ruining my plans for flying the Hurricane and I didn't get an opportunity in the two weeks before the Nationals to test fly the model. So, alas, it couldn't complete any flights, but it did at least get a static score, which was of interest.

BACK TO BUCKMINSTER

Models were assembled in the Goldsmith Hangar from Thursday evening, with static starting early on Friday. The atmosphere was great, as usual, with everybody catching up and enjoying the social side of scale competition.

The first flights of all rounds started on Friday afternoon. The forecast wasn't great for Sunday so we needed to make the most of the weather whilst we could.

Nigel Nixon's lovely Tucano.

Mat Dawson flew his Firecrest with a five bladed prop. Doesn't it look awesome!

Dave Charles accepts his trophy for winning F4C from Ian Pallister, FSMAE.

Martin Fardell won F4H flying his delightful Avro 504.

Nigel Nixon won the Flying Only class with his Oscar.

I had a great event. My models didn't do well but it isn't always about that. One thing that does suffer when I compete is that I do not get pictures of all the models so there are only a few shown here. But it was lovely to see the two British team members from Romania fly their models, Nigel Nixon in F4H with his Tucano and Mat Dawson flying his Blackburn Firecrest but this time in F4C.

IT'S A WRAP

That just about wraps up a really good British Scale Nationals. The radio control classes were well supported and we had a great competition. However, Free Flight and Control Line didn't get the numbers. If any of you are interested in flying control line scale, please get in touch - we need an F4B team for 2026.

As always if you want to drop me an e-mail, I can be reached at **cammnut@gmail.com** ■

British Model Flying Association

Protecting and promoting UK model flying for 100 years

Unbeatable membership benefits include:

- CLASS LEADING £25,000,000 liability cover.
- £35,000 personal accident cover as standard.
- CAA Operator Registration - made easy as part of our membership process.
- The BMFA News magazine for members available as a paid subscription or free download. Also, the ability to download the British Drone Flyers News.
- Expertise and guidance on all aspects of model flying is just an email or phone call away.
- Access to the BMFA Affiliated Club network (over 750 clubs)
- The BMFA Achievement Scheme - helping you succeed at your flying ambitions.

Yearly fee: Senior £49.00 / Junior £20.00
Family Partner £30 / Family Junior £15.00
Physical membership card £4.00
*NB membership year runs to Dec 2025

Are you ready to join us?

Join at: https://bmfa.azolve.com

T: 0116 2440028 W: www.bmfa.org E: admin@bmfa.org

BMFA, c/o BGA, 8 Merus Court, Meridian Business Park Leicester LE19 1RJ

BMFA BUCKMINSTER

BMFA NATIONAL CENTRE AUCTIONS COMING SOON

March 8th

- Collectible engines and kits - over 300 lots of collectible aeromodelling items as well as modern engines and kits.
- Broadcast live on line – remote bidding only

March 22nd

- Airframe and accessories sale – over 300 lots of brand new in box and new/unflown airframes and accessories.
- The largest collection of models and kits we have seen in one sale – get sorted for Spring!
- Live at the BMFA National Centre for in person viewing and bidding and also broadcast live on-line, don't miss out!

For full details, to register, view catalogues and place bids (pre-bidding supported for both auctions) visit the BMFA National Centre website and click on the Auctions tab.

Website: www.nationalcentre.bmfa.org

Tel: 0116 2441091 Email: manny@bmfa.org

SCOUT EXPERIMENTAL 5A

Nick Fellah presents a pictorial storyboard of the scale details undertaken when building his DB SES5a, with additional static pictures supplied by **Danny Fenton**

Words **Nick Fellah**

Photos **Nick Fellah, Danny Fenton**

The SE5a RAF Scout Experimental 5a of the Royal Aircraft Factory was one of the fastest and deadliest aircraft of WW1. However, this 'Spitfire of the Great War', as it is sometimes referred to, had its faults before it became a formidable fighter plane.

The SE5 was designed by Henry Folland, John Kenworthy and Frank Goodden and was powered by a 150 hp V8 Hispano-Suiza engine. The first prototype made its maiden flight on November 22nd, 1916, and so began its journey from a terrible aeroplane to an exceptional fighter aircraft.

The first two prototypes were involved in crashes, with chief RAF test pilot Major F. W. Goodden losing his life on the 28th of January 1917.

The SE5 entered service with No. 56 Sqn. RFC during April 1917. This squadron was home to several aces, one of them being Albert Ball, who was very instrumental in improving the SE5 into a formidable fighter.

HISSO & VIPER

A problem with both the supply and reliability of the 200 hp Hispano-Suiza (nickmaned Hisso) engines troubled the SE5a. Modifications carried out by the Wolseley factory improved the Wolseley Viper engine and this became the standard powerplant fitted to the SE5a. The planes equipped with these engines were nicknamed 'Viper'.

Two guns were fitted to the SE5a, a Lewis gun on top of the wing and a fuselage mounted Vickers.

Some of the famous aces of WW1 who flew the SE5a were:

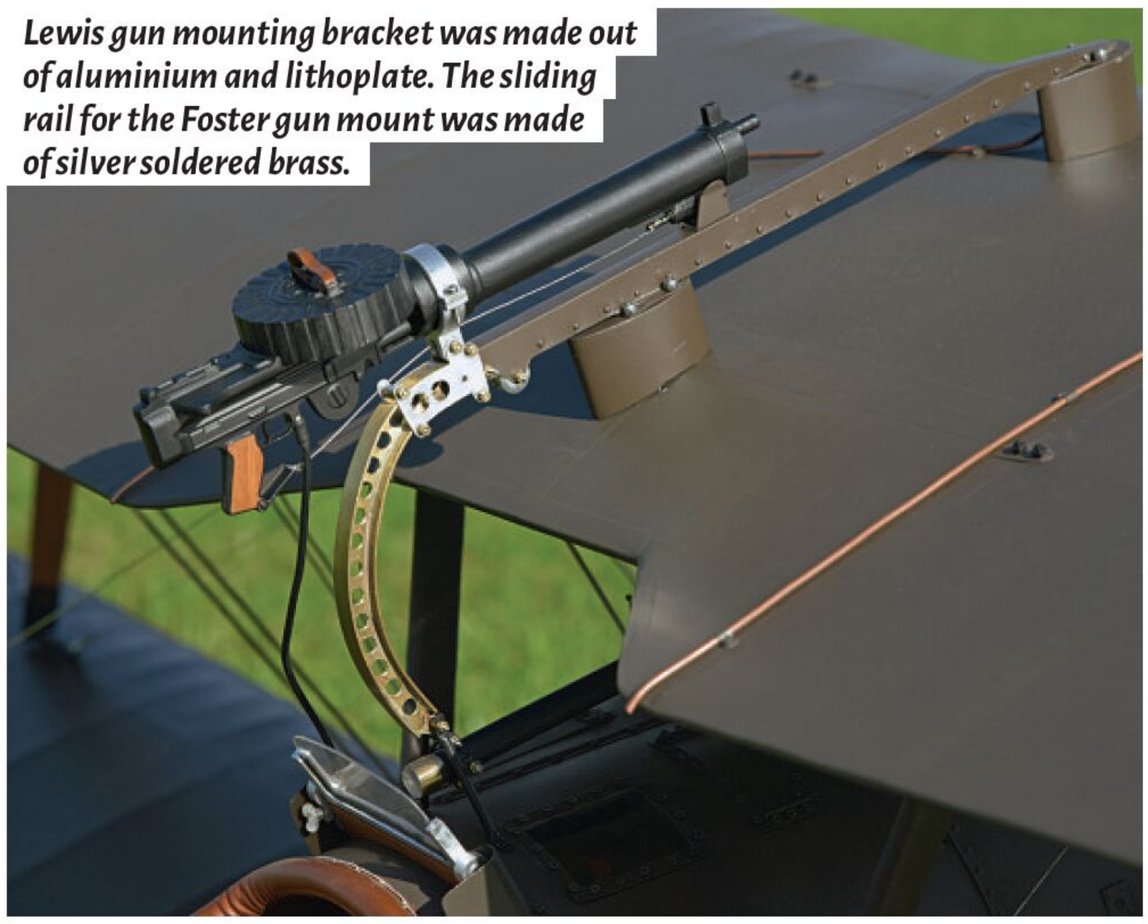
Maj. James McCudden VC DSO
Maj. Edward 'Mick' Mannock VC DSO
Capt. Albert Ball VC DSO
Maj. W. A. Bishop VC DSO.

MY SE5A JOURNEY

Six years ago, I purchased a DB Sport & Scale 1/4 scale SE5a kit from an elderly modeller who had decided that he was not going to build the model. The kit was the old version with two full

Text continues on page 28.

Nick's lovely SE5a photographed by Danny Fenton at the BMFA Scale Day in Buckminster. Although Nick didn't enter his SE5a he did ask if the plane could be given a static score. The judge who kindly did this gave it an overall score of 9 out of 10.

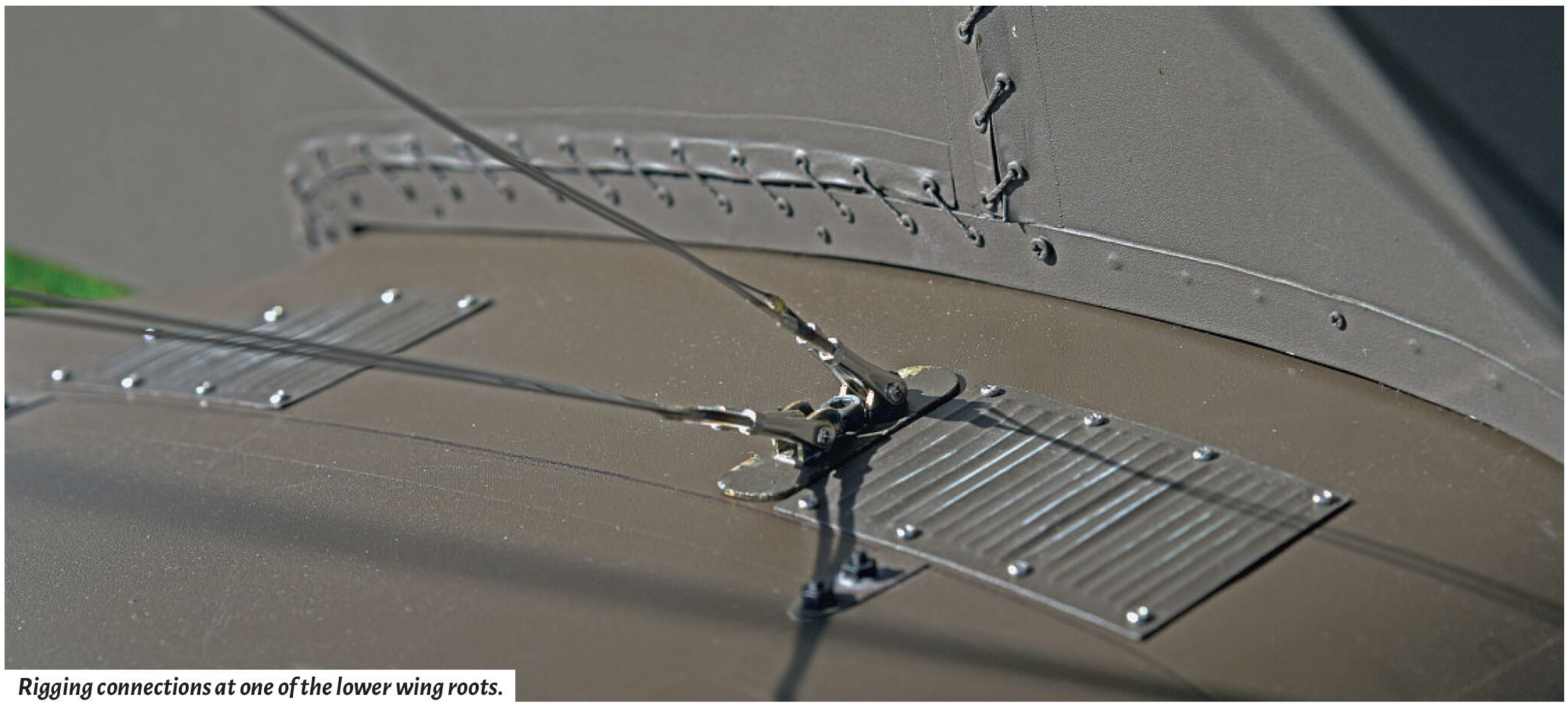


Lewis gun mounting bracket was made out of aluminium and lithoplate. The sliding rail for the Foster gun mount was made of silver soldered brass.

Close up of the Vickers gun with the Aldis gunsight behind.

Aldis sight and mounting brackets. Windscreen mount is fabricated from aluminium.

Aileron servo and dummy pully wheel fitted to the lower wing.



Rigging connections at one of the lower wing roots.

Upper aileron control horn.

Lower aileron showing the rib tapes to good effect.

Fabricating the cockpit instrument panel, making wide use of 3D printed parts.

Tail group showing one of the control run inspection panels.

On/off switches for the engine magnetos.

Cockpit panel in situ and nearing completion.

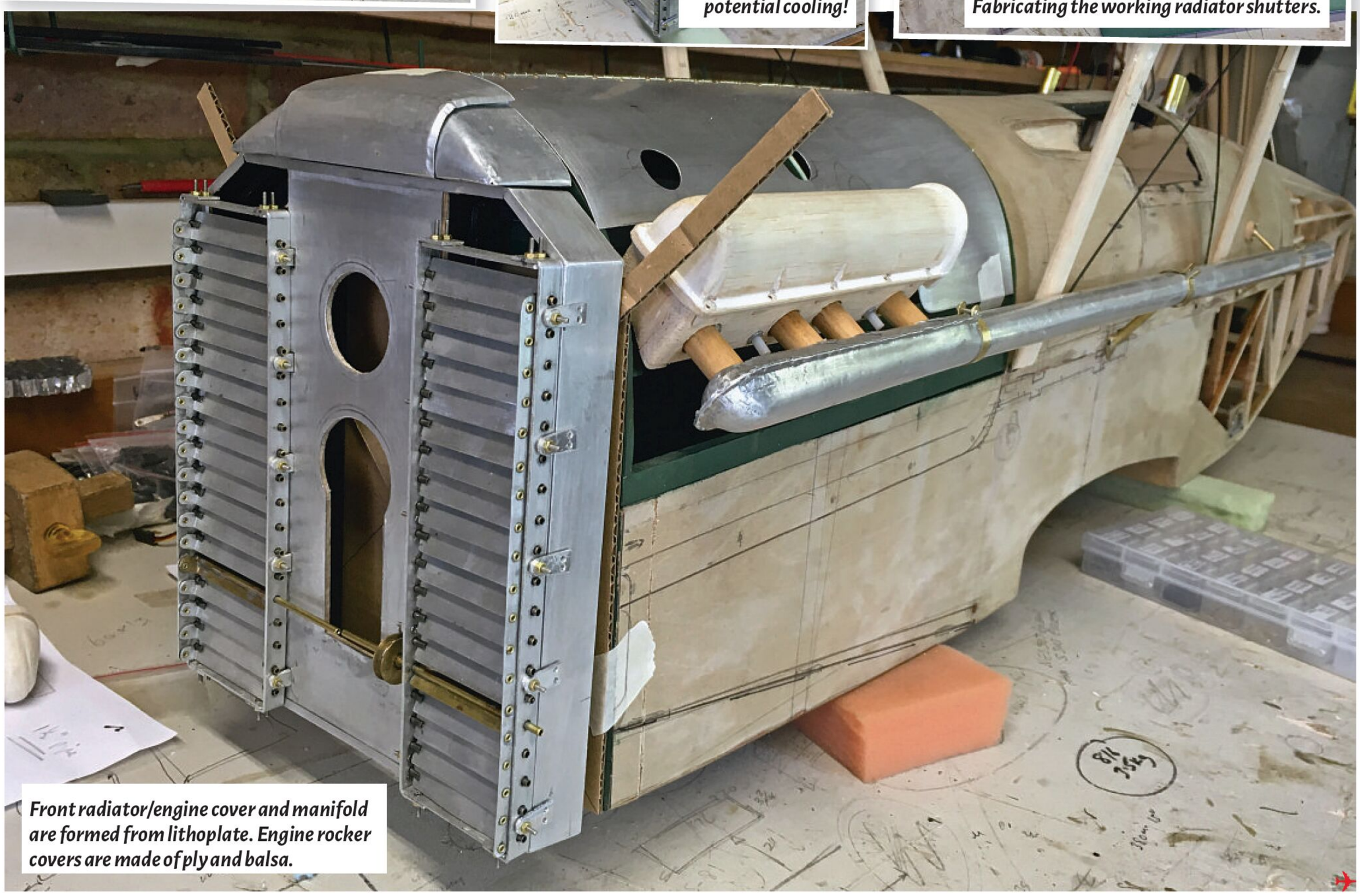
Scale propeller hub fitted to the Laser V200 engine.

A peek into the finished cockpit.

Rudder bar.

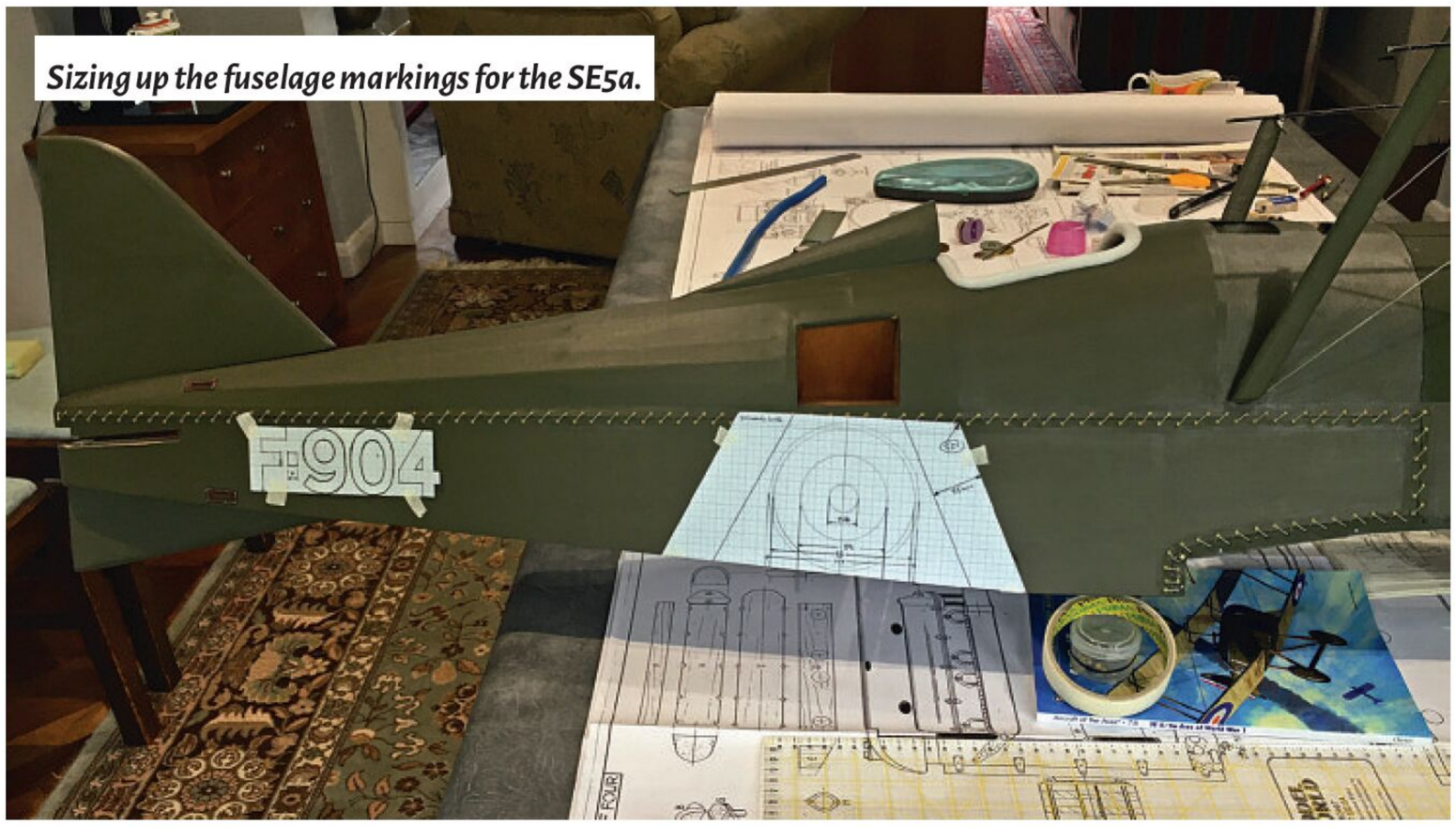
Laser V twin will be spoilt with all that potential cooling!

Fabricating the working radiator shutters.



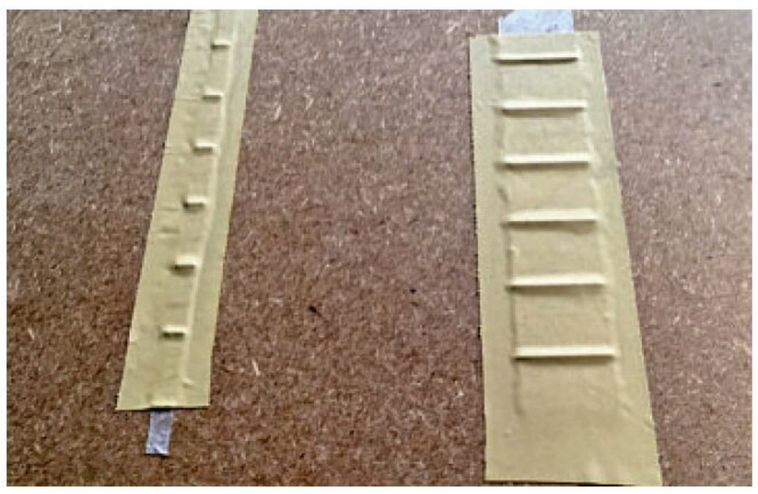
Front radiator/engine cover and manifold are formed from lithoplate. Engine rocker covers are made of ply and balsa.

Close up of the Vickers gun cover and inspection hatch.

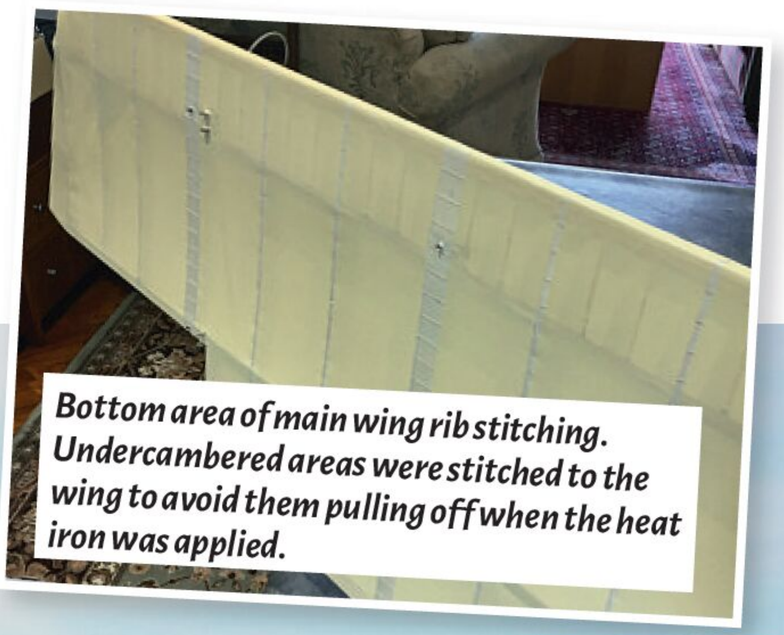


Sizing up the fuselage markings for the SE5a.

Finished fuselage markings and distinctive side stitching.

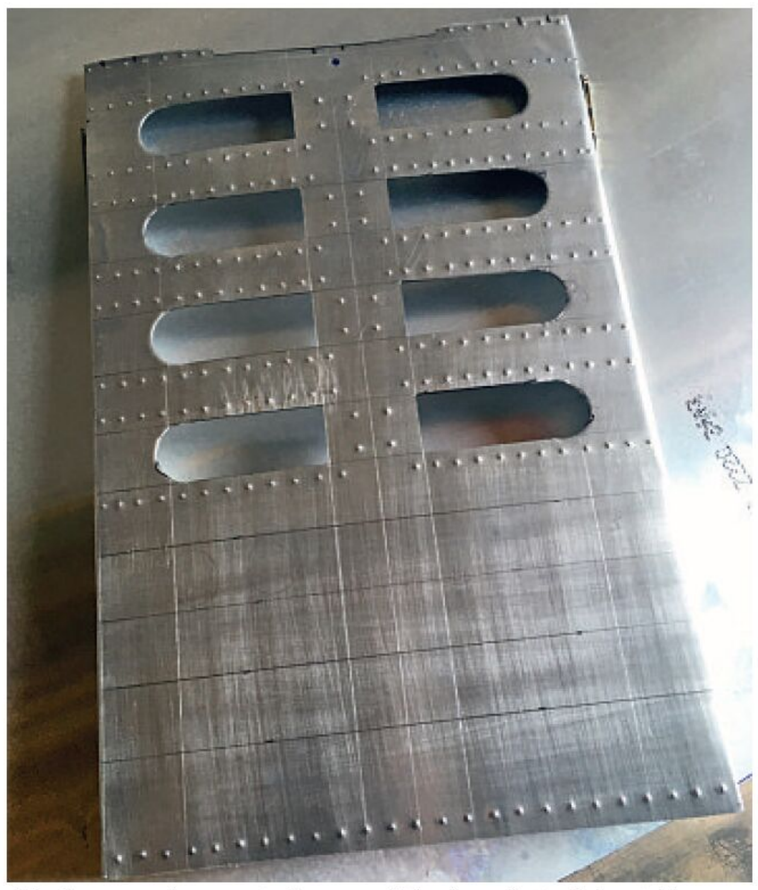


Practicing some rib stitching before trying it on the model.



Bottom area of main wing rib stitching. Undercambered areas were stitched to the wing to avoid them pulling off when the heat iron was applied.

Nick's model was constructed from an old version of the DB Sport & Scale kit with two full upper and lower wings. The latest version has four separate wing panels and a quick rig system.



Under-engine metal pan with simulated rivet lines.

1/4 scale WW1 tyre with 'Palmer Cord Aero Tyre' annotation.

Lithoplating the tank area. Note the channel for the Vickers gun.

Various lithoplate parts sprayed and ready to be fitted.

Fabricating other small lithoplate parts.

Wheel bungee fairing was made out of balsa and spray painted.

Working locker access hatch and starter magneto winding handle.

Lots of lovely scale details are shown here, some of which can be seen close up in the nearby group of pictures.

Foot plate for the pilot to step into when climbing into the cockpit.

The pilot needed to be careful to keep away from the exhaust pipes on each side of the cockpit!

Pitot tube is neatly represented.

upper and lower wings. My main interest in the R/C hobby is WW1 model aeroplanes. I've always wanted to build a scale model and after further research this kit suited my needs perfectly.

Around five years ago I started the build and completed the wings, tail, fin and fuselage. These were built off the plans supplied with the kit. However, due to ill health the build was halted for around another year.

Four years ago, I read a very interesting article about a model scale build of the SE5a and I also visited Old Warden and spent some time admiring SE5a F-904 in the Shuttleworth Collection. This rekindled my enthusiasm and so I decided to set myself a challenge to see if I could build a near scale model replica of the plane at Old Warden. After purchasing a number of books and magazines on the SE5a, I resumed the build.

I discovered that I would need to alter my model as some areas like the undercarriage, windscreen and the radiator were not the same as fitted to F-904 at Old Warden. The first obstacle was to build a replica of the undercarriage. After further investigation I managed to get this done to my satisfaction, then came the windscreen build, then the radiator and so on.

A friend had at my local R/C flying club just happened to ask me if the radiator on my aeroplane was going to be a working shutter type as per the real SE5a. To my surprise I accepted the challenge and so I set about building a working replica of the radiator. At the time I didn't realise how challenging this would be and this is why you don't see many of these on WW1 R/C scale models!

TRUE SCALE

The true scale challenge was now set and so I changed everything on the original plans that came with the kit to accommodate as many of the scale changes that I could manage with my skill levels.

The fuselage had to be virtually rebuilt and altered to fit the scale cockpit interior.

The following areas were made from lithoplate:

- Engine cover/bonnet
- Main fuel tank
- Under-skin of the engine bay
- Surround for the front radiator
- Storage compartment cover behind the pilot

Plus, many other small items, some of which are shown in the accompanying pictures. ■

DATAFILE

Model:	SE5a
Built by:	Nick Fellah
Model type:	Kit built WW1 biplane
Manufacturer:	DB Sport & Scale
	https://www.dbsportandscale.com
RRP:	£498.00
Scale:	1/4
Length:	159 cm (62.1/2")
Wingspan:	203 cm (80")
Flying weight:	7.25 kg (16 lb), Nick's model 20 lb
Engine:	ST 2000-25, Laser 150 – 160,
	Nick's model Laser V200
Functions:	Ailerons, elevator, rudder, throttle
CG:	5.5" from top centre section L/E

Nick Fellah lends scale to his lovingly crafted quarter scale rendition of SE5a F-904 housed at the Shuttleworth Collection.

RBC kits

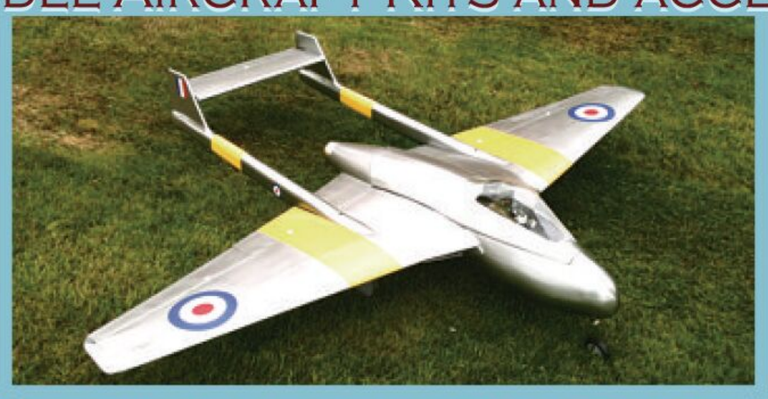
WWW.RBCKITS.COM

Finest wood build kits superb cad design, high precision cnc cut clear cad drawings and download instructions
Check the shop also , all build and flight proven

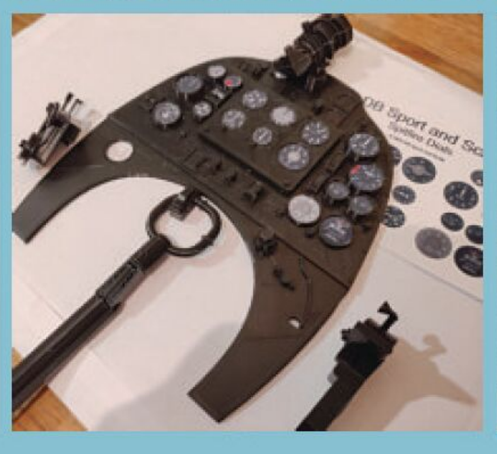
Low shipping cost shipping worldwide www.facebook.com/rbc.kits

DB Sport & Scale Ltd

Radio Controlled Model Aircraft Kits and accessories



Kits, Plan Packs, Fasteners, 3D Printed Accessories and More



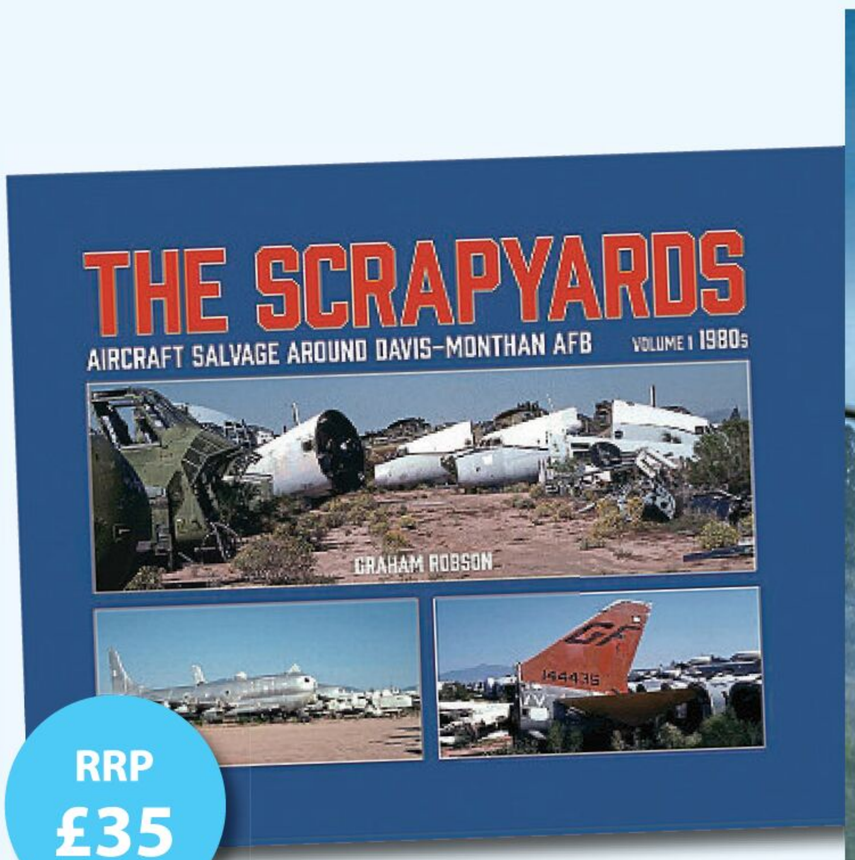
SALES@DBSPORTANDSCALE.COM WWW.DBSPORTANDSCALE.COM

Phone: 01656 514950

Get 20% off a selection of aviation and railway reads from Mortons Books

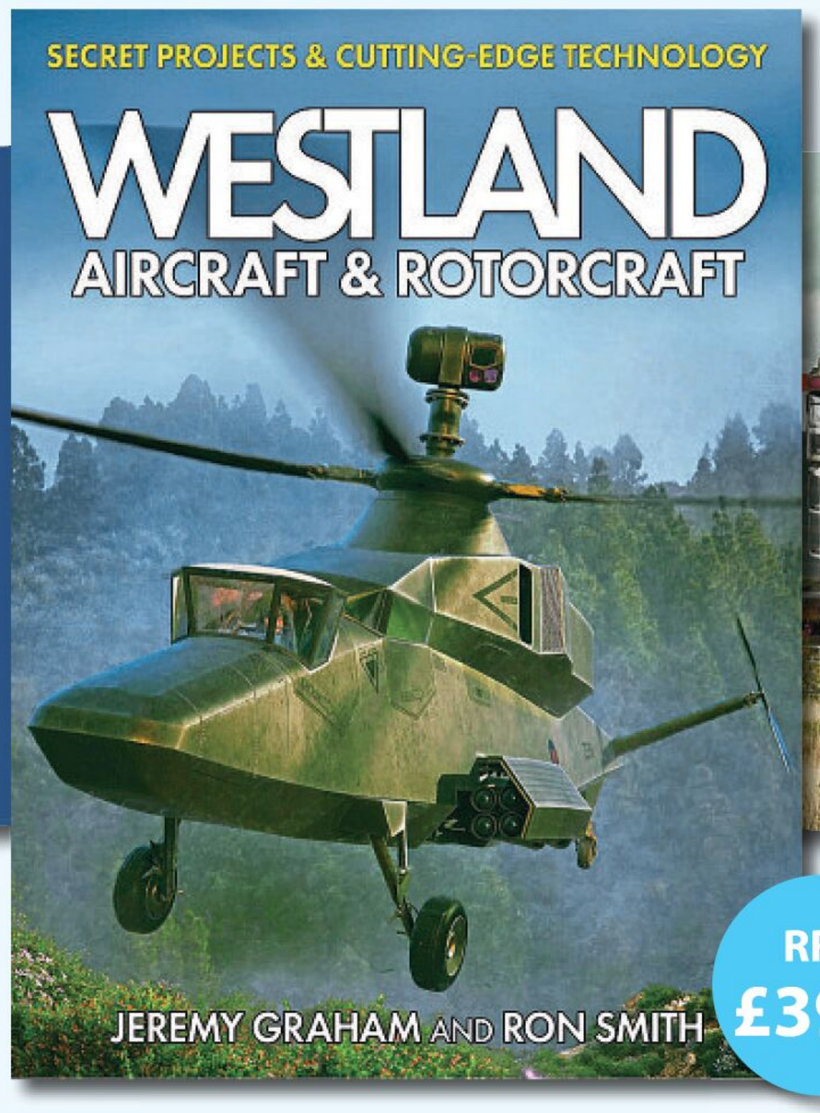
‘FLASH20’ for 20% off

Use code ‘FLASH20’ at the checkout



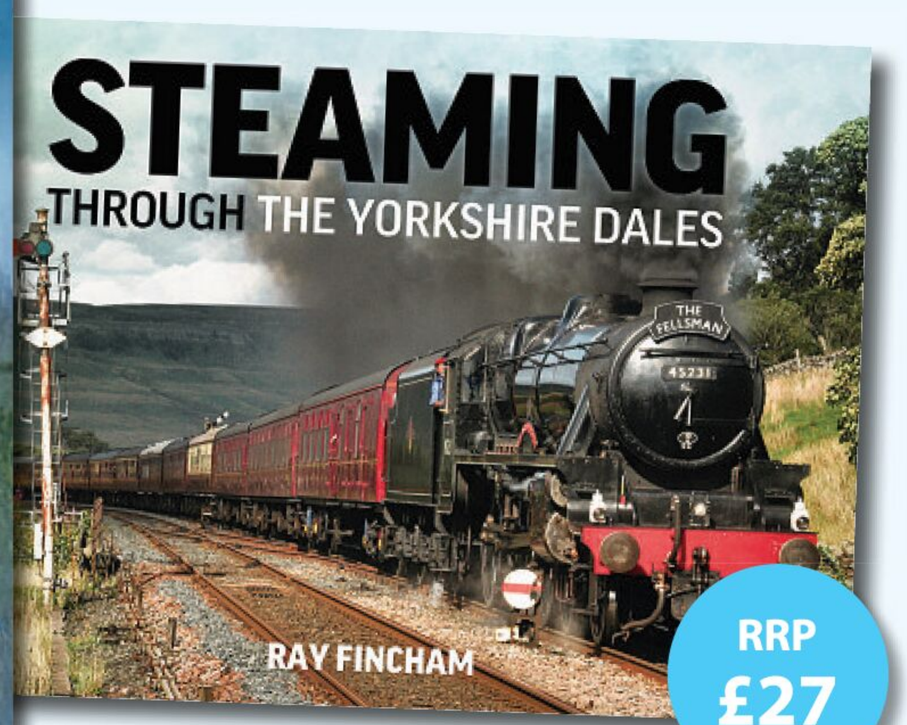
RRP £35

THE SCRAPYARDS: AIRCRAFT SALVAGE AROUND DAVIS - MONTHAN AFB VOL 1 1980s



RRP £39.99

WESTLAND AIRCRAFT & ROTORCRAFT: SECRET PROJECTS & CUTTING-EDGE TECHNOLOGY



RRP £27

STEAMING THROUGH THE YORKSHIRE DALES

RRP £11.99

SECRET PROJECTS OF THE LUFTWAFFE

RRP £40

RONNY BAR PRESENTS SPITFIRE – THE MERLIN VARIANTS

RRP £16.99

EAGLES OF THE LUFTWAFFE: FOCKE - WULF FW200 CONDOR

mortons books

Excludes bookazines

ORDER NOW: www.mortonsbooks.co.uk

Tel: 01507 529529 Offer expires: 31.12.25

Airbrushes.com

Your UK HUB for everything to do with AIRBRUSHING!

SCAN ME

Iwata Kustom CS Airbrush

IN STOCK

FEB 2025

iwata VAULT

Generous 0.5 oz / 14 ml Fluid Cup

Dual Cutaway Handle

New Rapid Access Handle Design

Elevated Main Lever

Top brands in stock:

GodHand · LIQUID PIGMENTS · SPARMAX · LIFECOLOR ACRYLIC HOBBY COLORS · MODEL CRAFT

www.Airbrushes.com 01903 767800 sales@airbrushes.com

The Airbrush Company Ltd. 79 Marlborough Road, Lancing Business Park, BN15 8UF

WHEN LIFT TAKES A COFFEE BREAK

Chris Williams and friends enjoy another scale get together atop White Sheet Hill, plus CW maidens yet another soarer. The man is a model making machine!

words & photos **Chris Williams**

For a large part of 2024 the winds have been coming in a largely westerly direction, albeit in industrial quantities. But for August's White Sheet Scale Fly-In we were treated to a day of 'the Lord giveth and the Lord taketh away'. Massive thermals saw Phil Huddleston's T46 seemingly spend most of the day reduced to a speck, and then there were periods when the lift took a coffee break...

The prospects for entertainment were good, then, and first up was Will Hosie's mighty Arcus for the next iteration of the bungee launching process. This time around the mono-wheel was down - would this ease the transition from rest to flight? Once again event director Jim Emptage strained mightily on the fin against the pent-up energy of the bungee but once he let go the Arcus trundled prettily down the slope and took to the air with the minimum of fuss and drama. (Will informs me that the bungee cord/shackles are stressed to 750 lbs and full flight is achieved with nine metres of stretch.) Thus fortified with success, Will planned to do the same with the also mighty 10.6 metre Nimbus 4 but was thwarted by problems with the servo wiring. So maybe next time.

An unusual sight was the presence of Steve Vine's K11 motor glider, technically a light aircraft but with enough glider DNA to qualify for this event. As I experienced with the original prototype, this model copes with slope soaring with ease and its good low speed handling makes slopeside landings a doddle.

As a big change from his previous third scale Topaze project, Richard Edmunds had worked past midnight to complete his Slingsby Prefect from the RCM&E free plan. An injudicious choice of moment for the maiden flight saw the lift die and a hurried landing halfway down the slope. Success soon followed thereafter and Richard declared himself well satisfied with his efforts.

Smallpiece launches the K11 motor glider.

CW's latest scaled down design, the ASK18, in action at the White Sheet Club.

Richard Edmunds with his newly crafted Prefect from the RCM&E free plan.

Our event director releases the fin of the mighty Arcus.

Ian Duff displays his new ASW 22 at the August White Sheet event.

After the midair a few years ago with his previous ASW 22, having found the all-moulded model to be un-repairable, Ian Duff arrived on this occasion with a very sleek-looking Baudis ASW 22. This too, with its optimised efficiency, made hay in the burgeoning thermals and soon joined the other specks.

As it turned out this was to be the first real chance for me to put the little fifth scale Pirat through her paces. Once again, the expanded capabilities of the smaller model became apparent as thoughts of sudden sink were nicely countered with the knowledge that the small size and light weight of the model mean that sudden landings on the edge of the hill hold no fears.

An excellent day then, made all the more satisfying with the news that the council were going to repair the track the following week, making it more easily available to all.

> "Richard Edmunds had worked past midnight to complete his Slingsby Prefect from the RCM&E free plan"

PROJECT COMPLETION

After the conclusion of the T21 came the difficult job of casting around for a new subject, as I seem have built just about all the sailplanes that have attracted my interest over the years. Then I thought of the K18, surely the most elegant of the ASK series? Soon, the mouse was scurrying

The Edmund's Prefect in action on White Sheet Hill.

Your scribe's fifth scale Pirat excelled in the variable conditions.

K18 airframe ready for covering.

Simplified jig supports with cable ties holding the fuselage to the jig.

Bill Ebdon displays the finished product.

across its pad and the business of balancing scale fidelity against practicality began.

The biggest problem, I have found, is that with top-mounted wings the use of a thinner model type wing section causes a conflict with the scale sit of the wings, with much head scratching involved in a resolution.

With a fuselage of this type, it was once again a jig build and this time around I experimented with a simpler form of jigging mount, relying on cable ties to hold the framework down, which saved a mountain of scroll saw work. Despite the front half of the fuselage being sheeted with ply, the better to resist the forces of unruly fingers, the final AUW came out at 9.5 lbs, which seemed rather light by my usual beefy standards. The whole airframe is covered with heatshrink film, which may have something to do with it, and the rather fiddly process was helped quite a bit by a CW administrative error that saw me with not just one, but two sealing irons. As many of you must have experienced, changing the temperature between shrink and application is an annoyingly slow process and now I could have an iron always set to each task. My self-congratulatory bubble soon burst when I kept picking up the wrong iron and found myself having to start again with a new piece of film. In order to avoid this state of affairs

"The K18 is even more elegant in the air than it is on the ground"

Motley Crew with his version of the K18.

Bill Ebdon gets the prototype away.

ASK18 in action at the White Sheet Club.

Flying above County Model Flying Club in Wiltshire after an aerotow launch.

I decorated the hotter iron with large round spots of orange reflective vinyl on the handle, thus evincing a feeling of cloying smugness, whereupon I immediately made the same mistake again!

The maiden aerotow was an anti-climax, with no issues and very satisfactory stall tests. The K18 is even more elegant in the air than it is on the ground and is very pleasant indeed to fly.

Even before the airframe was completely finished, Motley's eyes had glazed over and before too long his version was also ready to fly.

Here are the K18 stats:
Span: 3.8 m
Scale: 1:4.2
Weight: 9.5 lbs (4.3 kgs)
Wing section: HQ35/12 throughout

SCALED DOWN SPAR SLOTS

In case anyone was wondering why I seem to have chosen 4.2 scale so often, here's the explanation...

Having decided to build smaller models, the better to match my advancing years, I have scaled down many of my original 1:3.5 scale designs; these usually featured 6 mm square spars and 6 mm balsa sheet. If you scale down the drawing such that that all the 6 mm spar slots magically become 5 mm square slots, thus saving hours of tedious drawing, the scale then works out at 4.2. This has proven to be an ideal size for my age demographic, which explains why I have stuck with it.

PENETRATING ANALYSIS

Thin cyano is really useful stuff, right?

Here's what you might not know, but on the other hand might already have found out. This adhesive has only one purpose

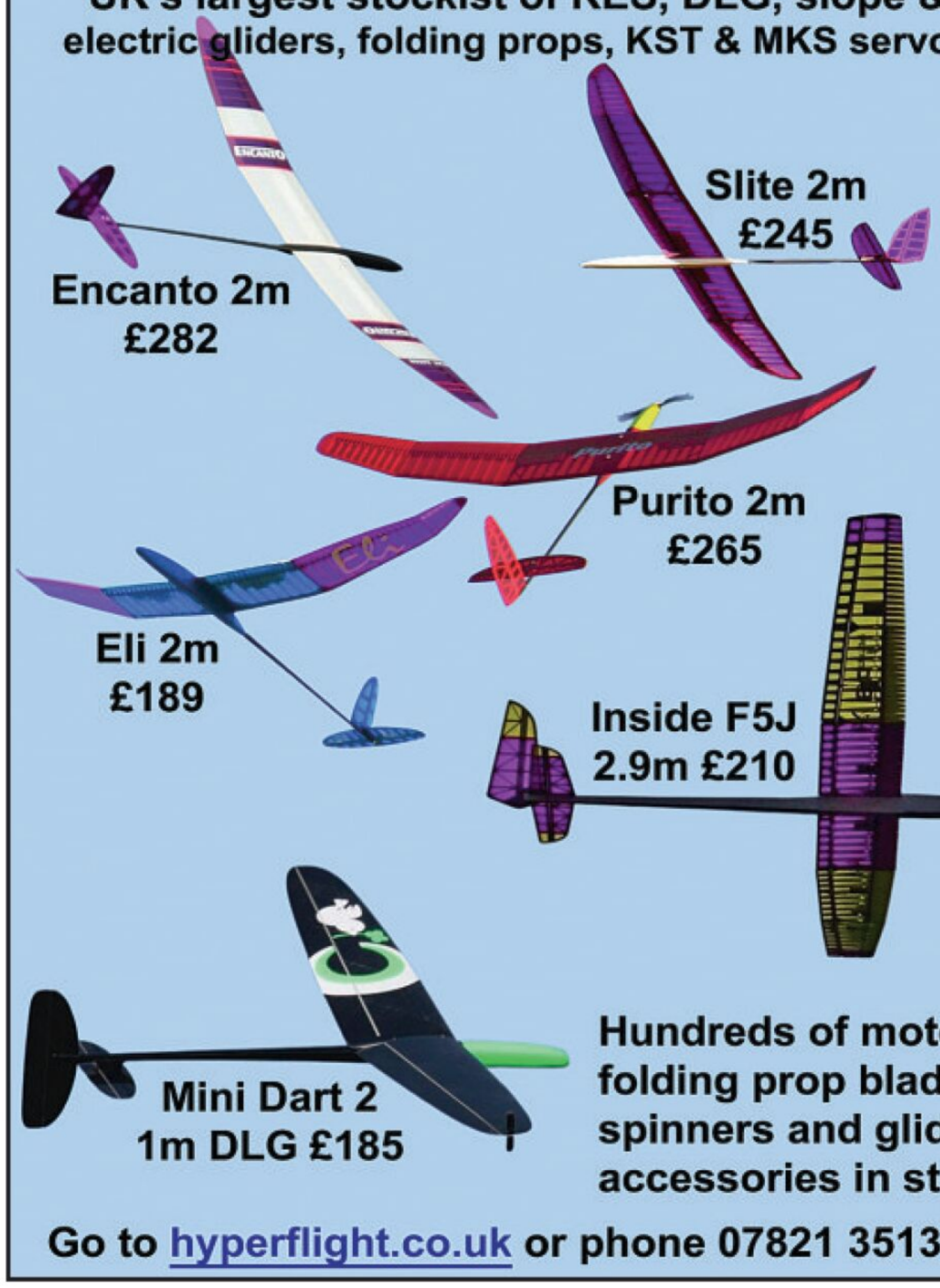
in life; once applied to any surface, it races along all available pathways until it reaches your fingers, where it fulfils its manifest destiny.

At least, that's what I tell them at A & E...

c_williams30@sky.com ■

Hyperflight.co.uk

UK's largest stockist of RES, DLG, slope & electric gliders, folding props, KST & MKS servos



Hundreds of motors, folding prop blades, spinners and gliding accessories in stock.

Go to hyperflight.co.uk or phone 07821 351341

RCM&E

Make referencing easy and keep your copies in perfect condition

Each binder stores 12 issues

Only £11.99 each

Free delivery to UK

For EU and RoW delivery charges, see www.classicmagazines.co.uk

Call: 01507 529529

bit.ly/modelmags

REMAP

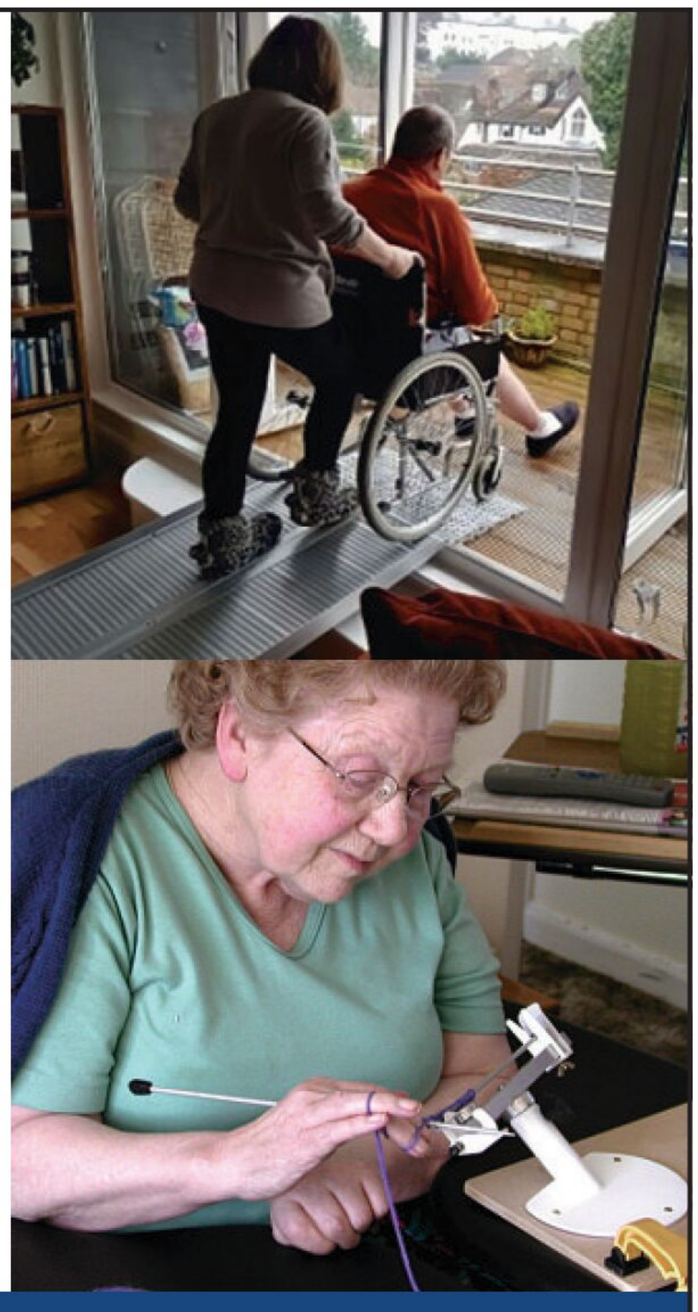
Be a part of making things possible!

REMAP is a charity which connects volunteer inventors with local people with disabilities to help them achieve greater independence and enjoyment of life's opportunities.

Our REMAP volunteers operate throughout England, Scotland and Wales. We have over 60 volunteer-led branches that support their local communities throughout England, Scotland and Wales.

COME AND JOIN US...

- Make a significant difference to somebody's life in your local area.
- Enjoy the opportunity to meet other, like-minded people.
- Receive recognition for the skills and experience you bring to your branch and the people we help.



Find out more about volunteering: www.remap.org.uk

Charity no: 1137666 | Scotland: SC050584

Microaces™

MAKING HISTORY

scan to visit
microaces.com

MICRO SCALE KITS FOR RADIO CONTROL

Bristol F.2b

Fokker D.VII

R.A.F SE5a

Nieuport 17

R.A.F SE5a

Nieuport 17

Fokker Dr.1

Sopwith Camel

Hansa Brandenburg W12

Sopwith Pup

MADE IN BRITAIN

View the complete range of Microaces electronics, kits, spares & accessories at:

www.microaces.com

Designed, manufactured, supported and warrantied in the UK.

Microaces Ltd, The Factory, 14 Alder Hills, Poole, Dorset. BH12 4AS email: support@microaces.com

MILES MAGISTER PART 3

Roy Thompson finishes and flies his newly restored Bowmans semi-scale kit

Words & Photos **Roy Thompson**

In the last part of this feature, I had finished the electric power conversion. Now I needed to get her looking pretty. As with most projects it's the last 20% that always seems to take 80% of the time.

RESEARCH

If you look back to the first part of this series (Dec issue), I said that the Magister was not on my radar and that's true. I didn't really know much about Miles aircraft in general and to do this aircraft justice I needed to learn more.

There are several books about the Miles Magister and an internet search also found a wealth of information and pictures. All of which was fantastic but to really understand your latest muse the best way is to see one in the flesh. Fortunately, here in the UK we have several examples of Miles Magisters in museums and in flying condition. In the Shuttleworth Collection at Old Warden there are two flying examples, both of which you can

After months of work what have I achieved? For a start, I now have what is probably the best scale model I own.

There are two Miles Magisters in the Shuttleworth Collection. This one is painted in the wartime camo scheme with yellow underside.

Cowl detail of P6382.

get up close to and take in all their details. So, I took myself off to Shuttleworth, camera in hand and snapped away at every possible angle I could think of.

Two things about the Magister puzzled me. The placement of the venturi tubes that provide vacuum air to drive the instruments varies from aircraft to aircraft; some are on the left-hand side of the fuselage and some are underneath. The other conundrum was a glass tube instrument filled with pink fluid on the instrument panels. There was only one thing for it and in the maintenance hangar I asked one of the engineers; I found out later he was Jean Munn, the Chief Engineer.

The glass tubes are a simple pitch indicator. As a retired avionics engineer you'd think I know this but every day is still a school day.

Why are venturi tubes in various places? Answer: because they are and you wouldn't be wrong wherever you put them as each airframe is unique.

Now knee deep in information about the Maggi, I was ready to tackle every detail.

3D PRINTING

I have become hooked on 3D printing. It is amazing the sheer amount of stuff you can create, from the smallest of parts to a complete model. There are so many unique ways to use this tech and if you can imagine it in CAD, you can print it. I mean, where else can you find a fifth scale refuelling panel for a Miles Magister?

The other Magister at Old Warden is yellow all over, showing the pre-war RAF training livery.

The venturi tubes are in different places on each aircraft. You wouldn't be wrong wherever you put them as each airframe is unique.

Using a 3D printer is great if you need multiples of an instrument, say for the two identical panels in the Magister, as once you've created the files printing repeats is easy.

One of the 3D printed panels in its final position.

The 3D printer was also used to make the venturis and fuel filler hatches.

For the Magister there are a host of details you can add and this kept my 3D printer busy with cowl latches (to hide the cowl fixing screws), torque links for the undercarriage, stowage latches and, of course, venturi tubes of my own design. I could have included pilots on the list, but I'd already found two ideal figures online, although they did get boosters to lift them up a tad.

The areas in need of most attention were the open cockpits. I could have gone down the old school route by making instrument panels from thin ply or plastic card, but I've got a 3D printer to play with and I'm going to use it!

One offs do not save you any time; there is still all the finishing, like painting, adding instrument faces and decals. But if you are going to need multiples, or a different scale later, once you've created the files printing repeats is simple and they will be consistent.

Not all the detailing is so high tech. The cockpit rims, door frames, stowage door and wing joint strips were all made the old way, from a cornflake packet. Replacement windscreens were fabricated from new clear

plastic using card templates made from what was left of the old windscreens.

PAINTING

The Miles Hawk and Magister series enjoyed a long and illustrious career so there is an enormous choice of colour schemes. My model came in the RAF yellow and camo scheme of the war years and that is how I intended to keep it. Here, again, every example is different and there does not seem to be one set scheme. So, as with the venturi tubes, I assumed that I wouldn't be wrong whatever I choose.

During the time it took to get to this point an untouched kit came up for sale in Portugal. It was complete, including all the original instructions and plans. I wasn't about to buy a third model, but I did contact the seller and he kindly photographed all the paperwork for me before selling the kit. This was a great help, not least because it showed that Bowman had included a copy of an Aeroplane Monthly magazine article from March 1980. This contains a three-view drawing of a 15 EFTS Redhill Maggi in summer, 1940.

Regarding scale detail, this is what Bowman had to say:

Colour Schemes - All models with spats fitted were bright yellow with a gloss finish. Use the transfers provided, referring to the scale drawings for the correct positions of application. If you wish you can use the kit to build the camouflaged variations of the Magister. This variation did not use the spats and was camouflaged on upper surfaces and yellow on lower surfaces (including halfway up the fuselage sides). Magisters finished in this type of scheme can be seen at the Duxford, Newark and Shuttleworth collections. The eight-page booklet included with this kit shows the various schemes and modifications carried out to the Magister over the years.

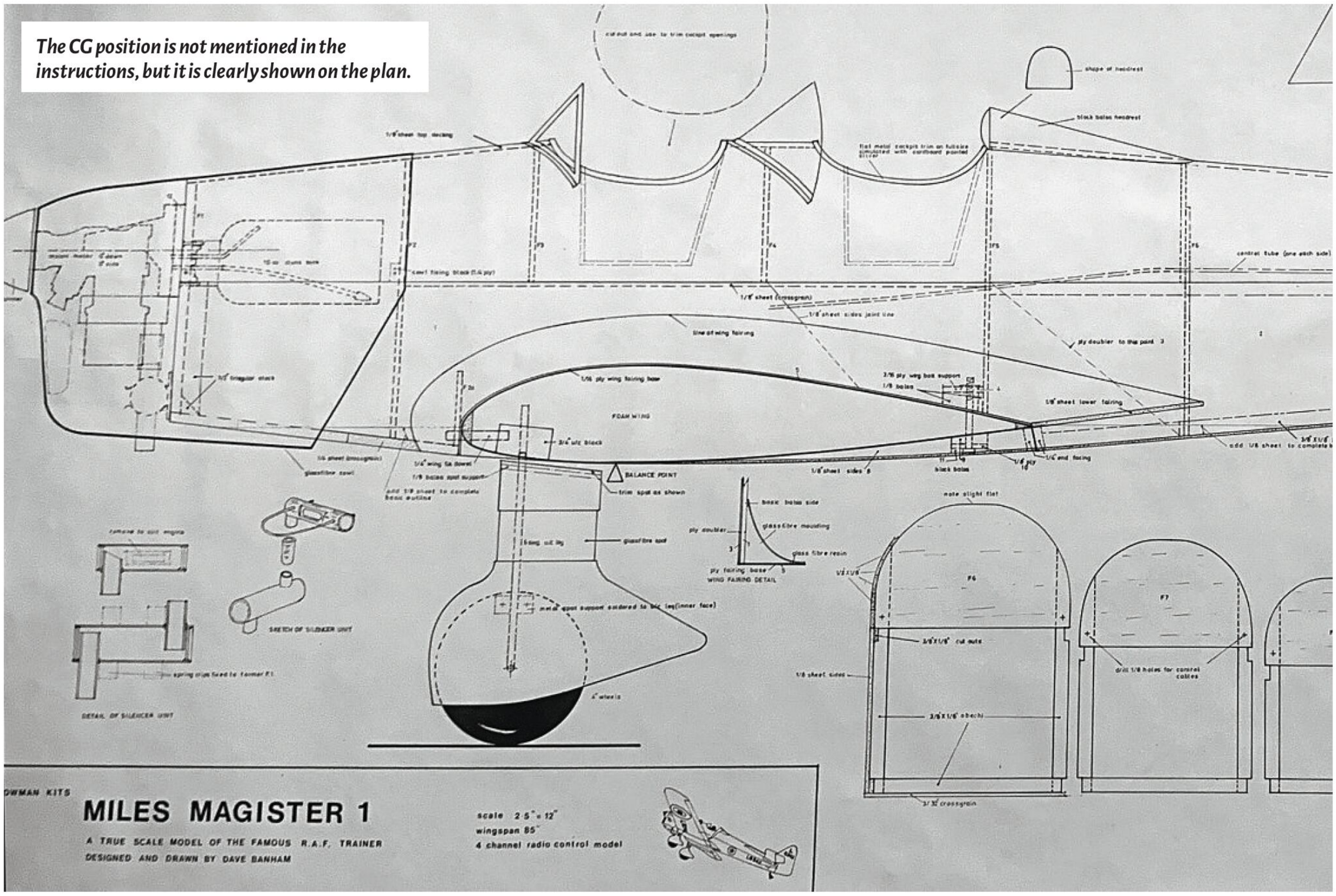
A pair of suitably scaled pilots finishes the job nicely.

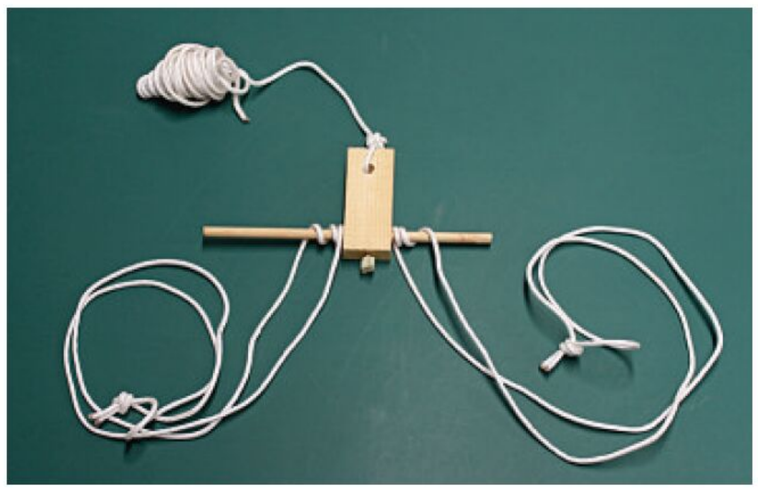
The paints I used were Humbrol acrylic aerosols for the Dark Earth and Dark Green, and Halfords aerosol for the primer and gloss yellow. To get a soft edge to the green I just sprayed freehand without any templates. I also needed a complete new set of decals which were ordered from Pyramid Models.

VANESSA RIG

The model's first flight took place long before I added any finishing touches. After all, before

Roy with his latest Bowmans kit restoration, fitted with the old patched up cowl for the test flights.





Making a Vanessa Rig needs just a few parts.

you start putting heart and soul into all the detail you need to know the basics are right and you have a flyer.

Getting the C.G. correct was my biggest worry. You may remember I started out with no plans or instructions for this model and not much to go on online, other than one kit review which said:

'This is a moderately fast and stable model. Provided the Centre of Gravity is in the right place it is undemanding to fly.'

That's great but where was that right place? I don't know why I was so paranoid about it. After all, it's a standard layout and flies like a big trainer, so I had been told. I could have got away with eyeballing it but, no, I wanted accuracy!

There was nothing for it then but to draw it all out to scale on paper, figure out the MAC and calculate the C.G. point. For good measure, I also used an online C.G. calculator which came to similar numbers. Having done all of that, I eventually received the plan photos showing the C.G. location. After printing the pictures and taking scale measurements, the C.G. appeared to be 92 mm from the root leading edge. That was my third check, so there were no excuses for getting it wrong.

For some reason Bowman never quoted the C.G. in the instructions but they did give the control throws as:

Rudder 1" left and right (widest point)
Ailerons 1/2" both ways (at inner-most point)
Elevators 1/2" each way

The plans also show the engine thrust angles at zero each way.

Of course, knowing where the C.G. ought to be and getting it there are two different things entirely. Due to the size and weight of this model I didn't fancy trying to check the C.G. using my Great Planes Balancer, nor my fingertips. So, I decided to try something new, a Vanessa Rig.

A Vanessa Rig holds the model from above, with two loops of cord running under the wings and going up, looping twice around a spindle held in a T-piece hanging from above. By rotating the spindle, you can alter the length of the cord between the front and the back of the wing, thus altering the angle that the model sits at, until it's level. The spindle should be located directly over the balance point and by dropping a plumb bob down from it you can see exactly where the C.G. point is.

It sounds a bit complicated but once you have tried it, it's simple to use. My rig consists of a 12" dowel, a 6" piece of 1" x 2" timber for the T-piece, with two holes, one for the dowel to pass through

Vanessa Rig in use, hanging from a sturdy garage roof beam.

and the other for the lifting cord to hold it from above. All it then needs is two long loops of cord and a plumb bob. If you want to be flash, add a pully to the roof of your workshop and a tie-off; by running the lifting cord through the pully you can lift the model up and down to a convenient hight.

Scorched earth! Roy prepares the Magister for another sortie.

On a roll. Note the fitment of one of the new, more detailed cowls.

With ample power the model climbs well and simple aerobatics are straightforward.

Do you remember that large piece of lead that was in the model at the beginning? Well, it was going to come into play again. With the model assembled and installed in the rig, and my battery pack as far forward as it could go, my concerns about the Magister being tail heavy were realised. However, not by as much as I had feared, it needing an extra 200 g of nose weight, meaning that using larger battery packs was a possibility.

DAYLIGHT UNDER THE DUNLOPS

With a 6S 5200 mAh LiPo charged we headed to the flying field for her first shake down. The motor run up showed a total static power of 1578 watts, spinning a 18 x 8 wooden prop. Weighing in at 13 lbs, the 10 lb max. figure on the box was blown out of the water but, as I've said before, I never believe box figures. Anyway, that power figure is amazingly close to the 120 four-stroke figure I started with, so we will assume it's adequate.

There came a point where there was nothing else to do but give her a go. I'd been told that these models fly like a big trainer and now I can agree with that. The first flight was kept short, at just over two minutes, and I only flew circuits. She was quickly airborne at little over half throttle, using some rudder to hold her straight and allowing the tail to come up first before lifting off. Not needing full throttle during this flight showed that the prop was a little big. The trims only needed minor adjustments, the control throws were just about right, and she did fly very well.

A FEW FLIGHTS LATER

Now fully finished the total weight of the Miles Magister has grown to 14.3 lbs and she flies using a 16 x 8 prop on a 6S 6000 mAh pack.

A few flights in, I have increased the control throws as early flights showed a tendency to nose over on landings, not helped by flexing of the undercarriage legs. A little extra elevator movement paid dividends, making the landings more enjoyable.

With ample power the model climbs well and simple aerobatics are straightforward, with all the basic manoeuvres being possible. The stall shows nothing nasty, just a nose drop. On calm days landings are moderately fast and the model would benefit from adding flaps to slow her down. But with her size and weight she handles breezy days just fine.

After all these months of work what have I achieved? Well, for a start, I now have what is probably the best scale model I own, and I have also saved another 1980s Bowman model from being lost. ■

Pilots' Pictorial

Get your planes in print! Get in touch… kcrozier@mortons.co.uk

LUCKY FUN FLY

Designed to fit or just really lucky? I'll let you decide!

Yes, it does go in the car fully, with about 1/2" to spare. It's a twin drone motor Class 1 fun fly model with a 'lucky' wingspan!

Martin Wood

FLYING BOAT HEAVEN

Here's some pictures of flying boat heaven at Longham one Saturday morning. The photos are by Phil Burton from the Christchurch Club using an iPhone 11. Amazing quality for a mobile phone. It shows the early morning light nicely, I think.

The model is 100" span and based on the Ivan Pettigrew 'Short Solent 480' plan. It is 9 years old and has 140 flights - nearly 12 hours in the air. It only weighs 8 lbs and can fly very slowly; at around scale speed I suppose. The motors are 4 x 2215/25 budget outrunners turning GWS 3-blade, handed 10 x 6 props. Power is more than enough with 3S and to get the model to balance it needs two 5000 mAh batteries in the nose so duration can be up to 25 minutes, although my brain has usually had enough after five minutes!

Mike Roach

SOUTHERNER MAJOR

Like a lot of older modellers, I was brought up on free flight, then control line and eventually radio control which I have been doing for the last 45 years. Some of the early free flight models were classic designs, such as the Southerner - lovely to look at from any angle. The original design has been scaled up to 84-inch wingspan and called the Southerner Major. When I saw it, I just had to build it.

I decided to go for a short kit of pre-cut ribs and formers to make life easier (which it didn't). Having recently finished the build I have yet to fly it, having missed the end of any decent weather. Power is by an SC 52 FS which I think will be about right for floating around. The black and white covering is copied from an American model which I saw online.

Richard Acland

DIAMOND SEASON HAWK

Following my recent articles, I thought your readers might like to see a few photos of my new PSS Hawk. I chose to finish it in this year's 'Diamond Season' design. I have made much more extensive use of 3D printed parts than on my MB-326K Impala. I have printed parts for all the compound curve surfaces often difficult to form with Correx and anywhere else where I felt an aerodynamic or cosmetic gain could be made. To that end I have printed the entire tail assembly, along with all the formers, nose and ailerons, as well as the intakes, belly tank and cockpit detail.

I've just posted up the details of it on RCM&E's modelflying forum within the PSSA section should anyone want to take a look. Search for 'Diamond Season Hawk build details'.

Phil Stone

EXPAT PITTS

This picture was taken at KAMS airfield in Perth Western Australia. It's a modified Pitts Special S2B of 73-inch wingspan fitted with a DLE 60 cc twin and Futaba radio gear.

I used to fly in England at St Austell Model Flying Club and had many good memories there until I moved to Perth in 2008. I know some of their members are avid readers of your magazine and would love to see a former member mentioned.

Gary Payne

The Christmas Edition comes in a festive gift box with a carry handle. Handy for storage too!

SPARMAX ARISM MINI KIT (CHRISTMAS EDITION)

Barry Stevens unwraps a seasonal airbrush and matching compressor set

words >> **Barry Stevens**
photos >> **Barry Stevens, Kevin Crozier**

The timing of this article might seem a little strange, covering as it does the Christmas Edition of the Sparmax ARISM Mini Kit. However, after sitting in Kevin's queue of products awaiting photography, by the time it reached me the last issue before the festivities (January edition) had just been put to bed. Hence, it's appearance here in the next available issue. But not to worry as I've been told that the supplier's seasonal sale at **https://airbrushes.com** ends on the 2nd of March, so you've still got time to order one. But do hurry as stock is limited and the Christmas Edition will only be available whilst stock lasts. The usual price, plus VAT, is £225.00 but it's currently on sale at £198.00. So, get your skates on!

If you do miss out then don't despair too much as the Sparmax ARISM Mini Kit is also available from Airbrushes.com in its standard form, in a choice of eight different colours but without the Christmas accessories.

GIFT BOX

The Sparmax ARISM Mini Kit is ideal for beginners through to experienced airbrush users. Apart from its obvious use for painting parts of our radio-controlled model aircraft, as well as being great for adding weathering details to scale models, the kit contents can also be used for other hobbies and crafts, as well as art and graphics projects.

The heart of the ARISM kit is the Mini compressor, whose small footprint is ideal for worktop use. Rubber feet help it stop moving about when switched on and there's even a holder for the supplied airbrush moulded into the carry handle, so helping to keep your workspace clutter free. The portable nature of the ARISM Mini means that it is also easy to store and the small case is anodised a nice shade of red to compliment the festive feel.

A MAX-3 airbrush is supplied in a protective pouch. The MAX-3 is well suited to the small Mini compressor as it can atomise suitably thinned

Christmas Edition box contents.

Sparmax MAX-3 is a dual-action airbrush with a 1/4 oz (7 ml) fixed cup. It comes with a protective pouch.

The braided hose is of a good length.

Glass cleaning pot is of a nice weight to stop it toppling on the workbench.

Simple in function and form, the ARISM Mini compressor is the perfect match to the MAX-3 airbrush. Note the airbrush holder in the front of the handle.

Here are the Christmas Gifts. The cleaning brushes and airbrush cleaner will probably get most use in my workshop.

paint well at low pressure. It features a 0.3 mm needle and nozzle which makes it suitable for general purpose use as well as applying fine details. A high-quality braided hose is supplied to connect the airbrush to the compressor.

Also supplied is a Sparmax Cleaning Pot with an integral airbrush holder in the lid. This can be used to clean the airbrush by spraying excess paint into the pot before filling the paint cup with the airbrush cleaner supplied, which can also be sprayed directly into the pot.

FREE GIFTS

All of the above is standard with any ARISM Mini Kit, but the Christmas Edition comes with a selection of extra free gifts. This includes a handy set of five cleaning brushes, two pots of acrylic colours in Christmassy shades of red and green, plus a pot of airbrush cleaner.

Last but not least are the two Christmas stencils. I'm not sure how many aeromodellers will be using them to spray jingle bells and Santa's face on their models but I'm sure they will find good use when added to the colouring sets of younger members of a modeller's family!

NEW YEAR FUN

I mostly use my airbushes for applying large areas of paint, but I also have the urge to try something a little more delicate, maybe applying some nose art to a foam fighter. This is the sort of thing that the ARISM Mini Kit is well suited to. It will be fun finding out!

NEW STYLE

Build this simple to build small glider and go back to basics when launching it. Ton van Munsteren shows how

Words & Photos: **Ton van Munsteren**

For a new design I sometimes look online for inspiration. I had the idea to make a Self Launching Glider when I came across a glider called Stylus. It was a model from RCM magazine in the USA.

The intention was not to hand launch but to shoot it with a bungee, so to reduce the model's air resistance the fuselage was slimmed down and the profile was modified to AG35, which was also made slimmer. It still looked a little like the Stylus but with so many changes a new name called New Style was put in place.

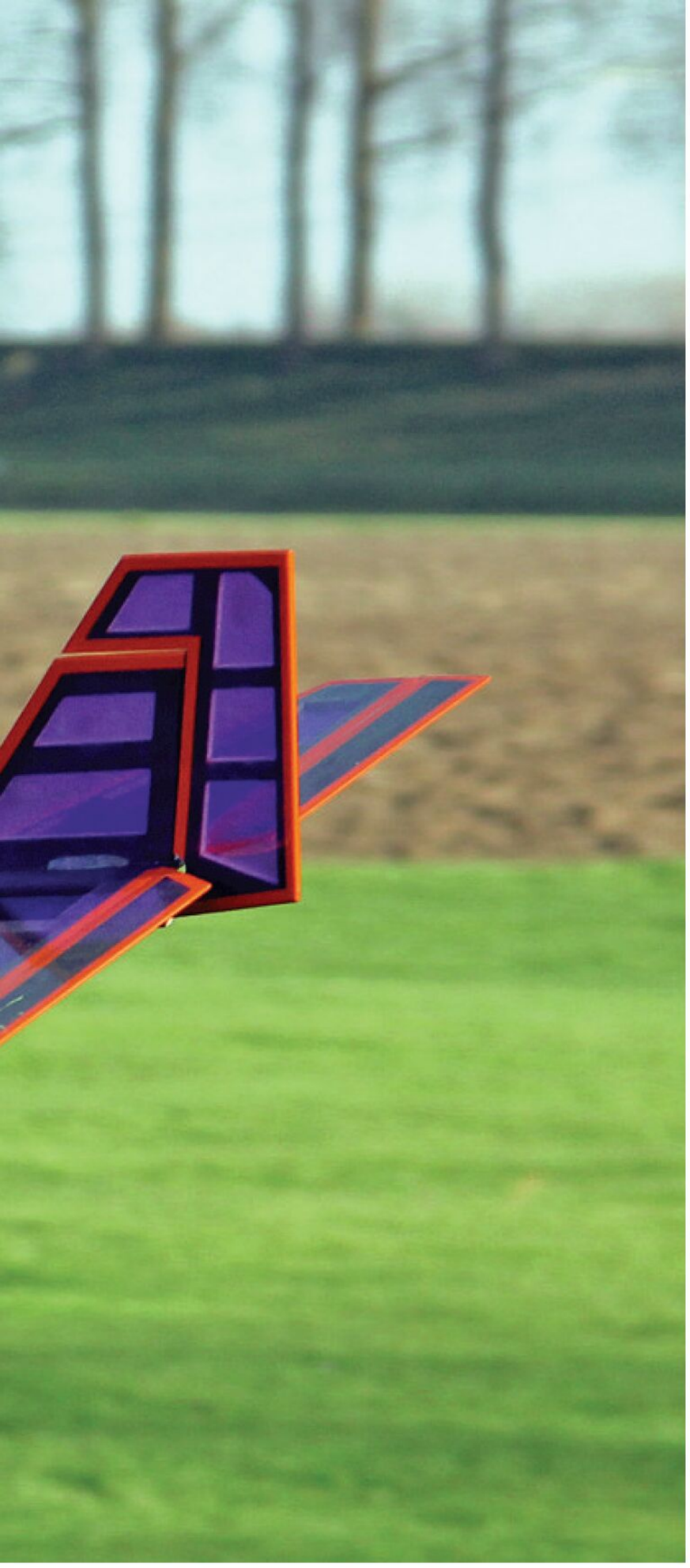
There are no ailerons on this model and only rudder and elevator are used to fly it. With all those changes it came out very well. It's not a difficult model to build and not only would it be a nice plane for experts to fly but it would also be a great first model for a beginner.

TAIL

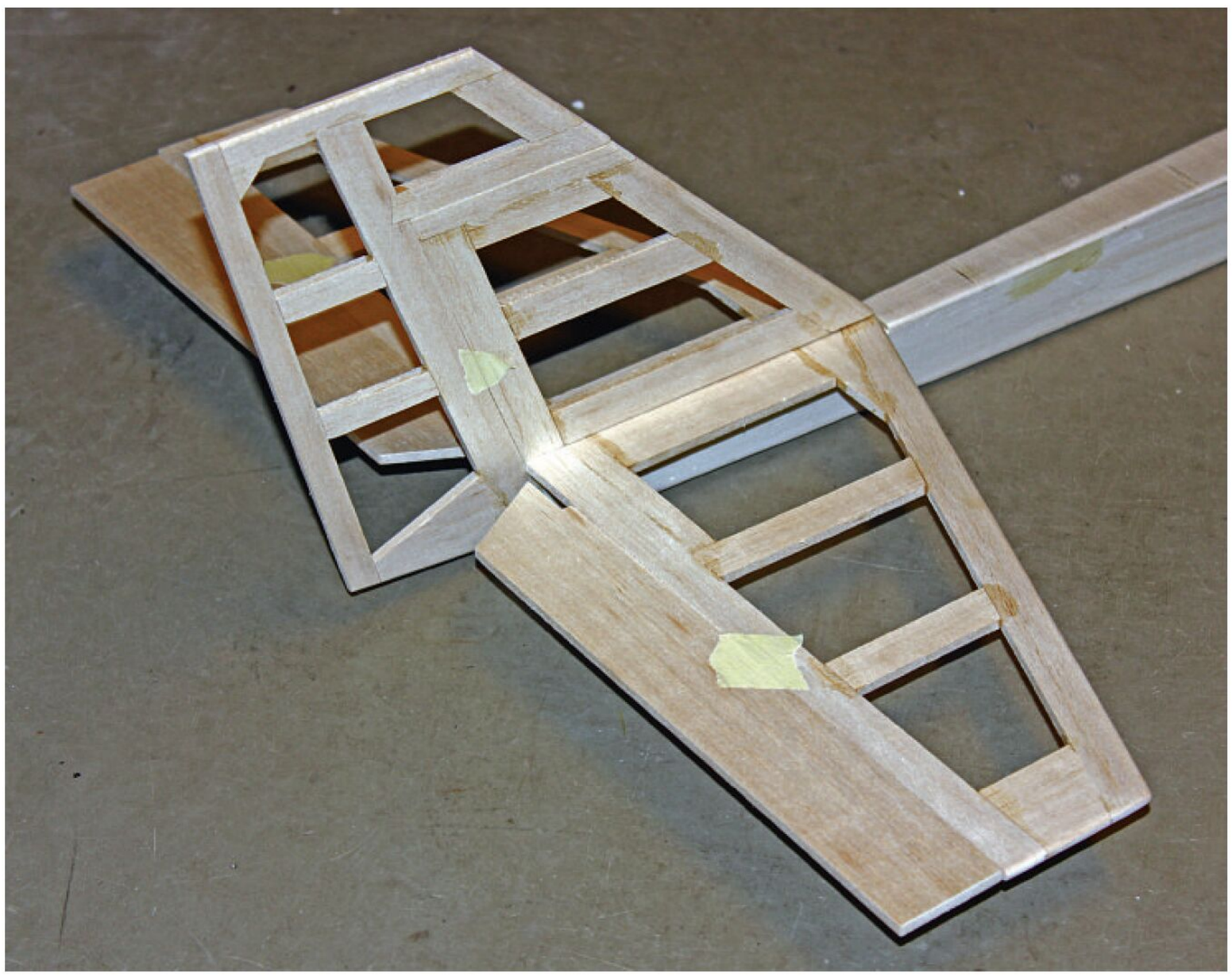
Using my laser cutter, I cut my own parts, which is great fun. My machine is not that special but for me it's good enough to make my own parts.

Within an hour the stabiliser and fin were built and left for the glue to dry. How did I do that? Well, the stabiliser comes to life by

Rediscover the joys of using simple hand launching methods such as shooting with a bungee.



Or hook New Style up to an e-glider or a foam tug model for some aerotowing fun.



Stabiliser and fin should take less than an hour to build.

New Style shows off its simple to build airframe.

pinning S1 on the board, followed by gluing S2 - S4. On both sides add the tips S5 and finish the frame by gluing leading edge S6 in place. Next S7 and S8 were glued in place and the stabiliser was ready for covering.

The fin was built in the same order, starting with T1 pinned on the board, followed by T2 and T3 and finishing the frame with leading edge T4. With T5 and T6 glued in place the fin was ready.

> "There are no ailerons on this model and only rudder and elevator are used to fly it"

From there it's on to the rudder, starting by pinning T7 on the board, gluing on T8 to T10, then, finally, T11 and T12.

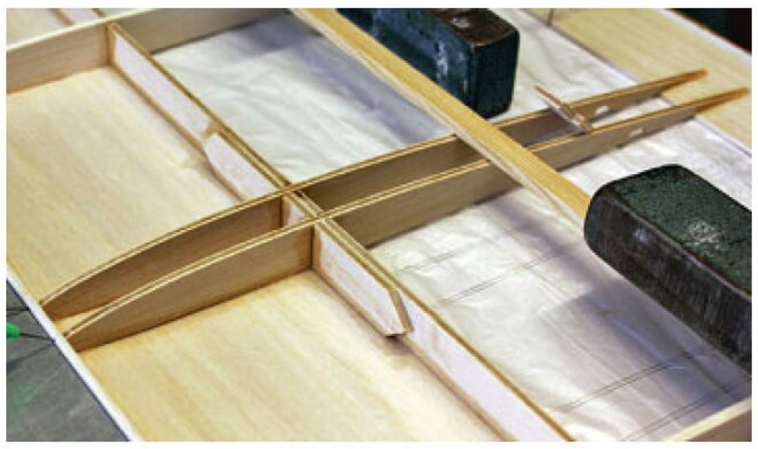
When the tail parts are finished give them a good sanding. Round off the leading edges and give the rudder a nice chamfer, ending up with a 3 mm thick trailing edge.

FUSELAGE

Since my cutter files are based on 500 mm length balsa, I started by gluing together F01 which is made out of two parts. Make sure the left and right sides are equal and straight. Then glue reinforcement F02 on F01 and make sure you have a left and right-hand side. It can be handy using F04 and F05 as an alignment tool for F02. Next, place F03 – F05 in their slots, holding them square and glue them in place.

With one side F01 on the board we can now place the other side onto formers F03 – F05 and check that they are parallel

Weighing down the wing centre section while the glue sets.



Central ribs showing the ply wing spar reinforcement plate.

Wing bolt plate is shown before gluing it into the cutouts on the underside of the central ribs.

Adding a wing tip joiner plate.

Scrap balsa is used to fill in the space at the front of the central ribs ready to take the wing dowel.

Each wing tip follows the same simple build process as the centre section.

A cutout needs to be made in the lower tip sheeting to make space for the wing tip joiners.

before gluing with cyano. Turn the fuselage upwards and align it over the plan, adding F06 and F07, then pull the end of the fuselage together.

To reinforce the sides and to provide more material for rounding off the edges add 3 x 5 mm balsa strips. Align the fuselage over the plan and add the top and bottom cross grain sheeting using 3 mm balsa. Don't forget to add the control runs for the rudder and elevator before closing up the fuselage.

From there go to the front section and add some small strips to give a little extra strength where the top planking and the hatch will go.

BATTERY ACCESS

With the nose top sheeting in place begin work on the hatch, which is made from two layers of 3 mm balsa, cross grain. Make them to the correct length and glue them on top of each other. By holding them in place while the glue sets the hatch will retain the right shape and will follow the shape of the fuselage.

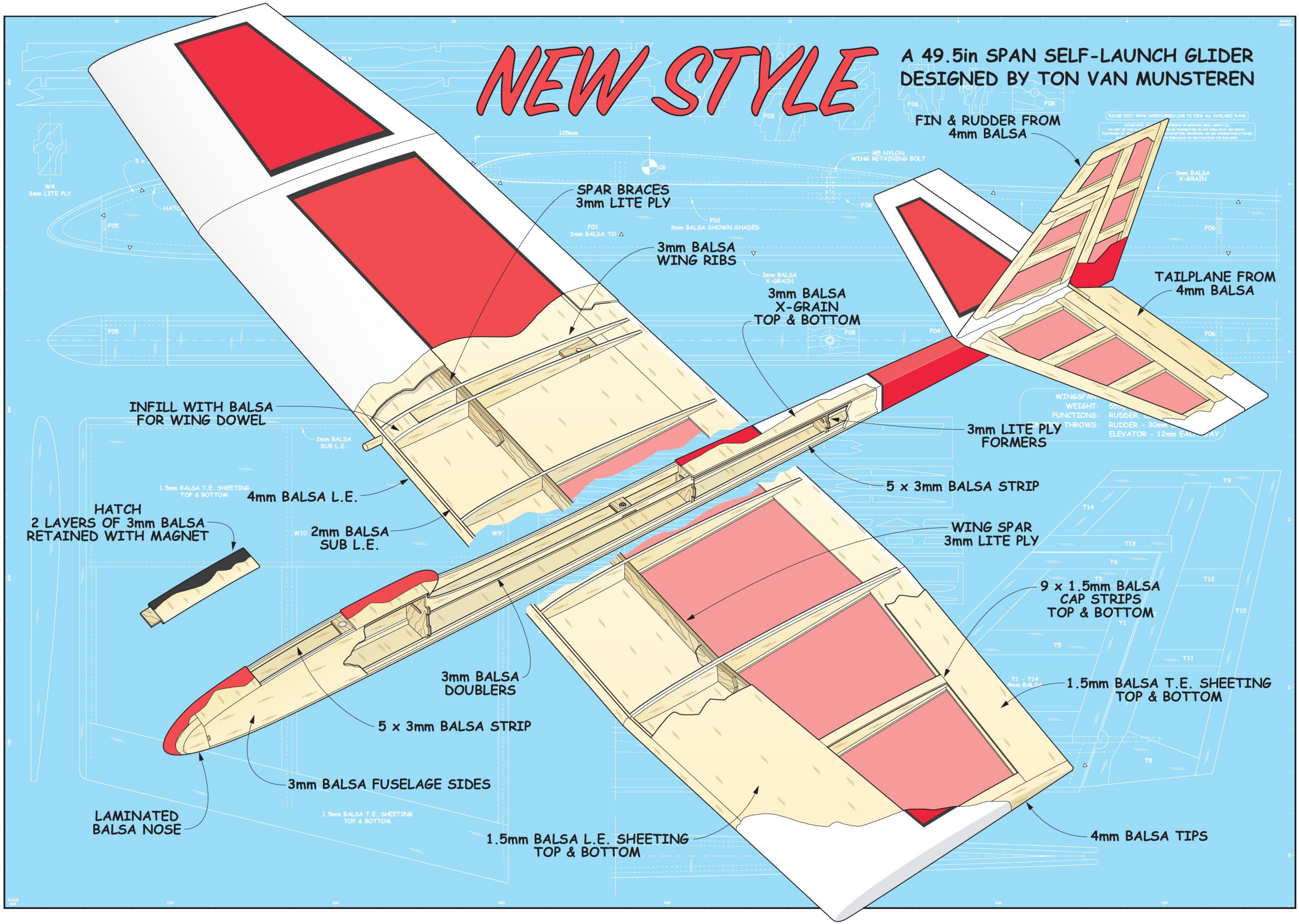
Add a small piece of balsa as a lip and a small magnet in the fuselage. Using an M3 eyelet screwed into the hatch it will be easy to remove.

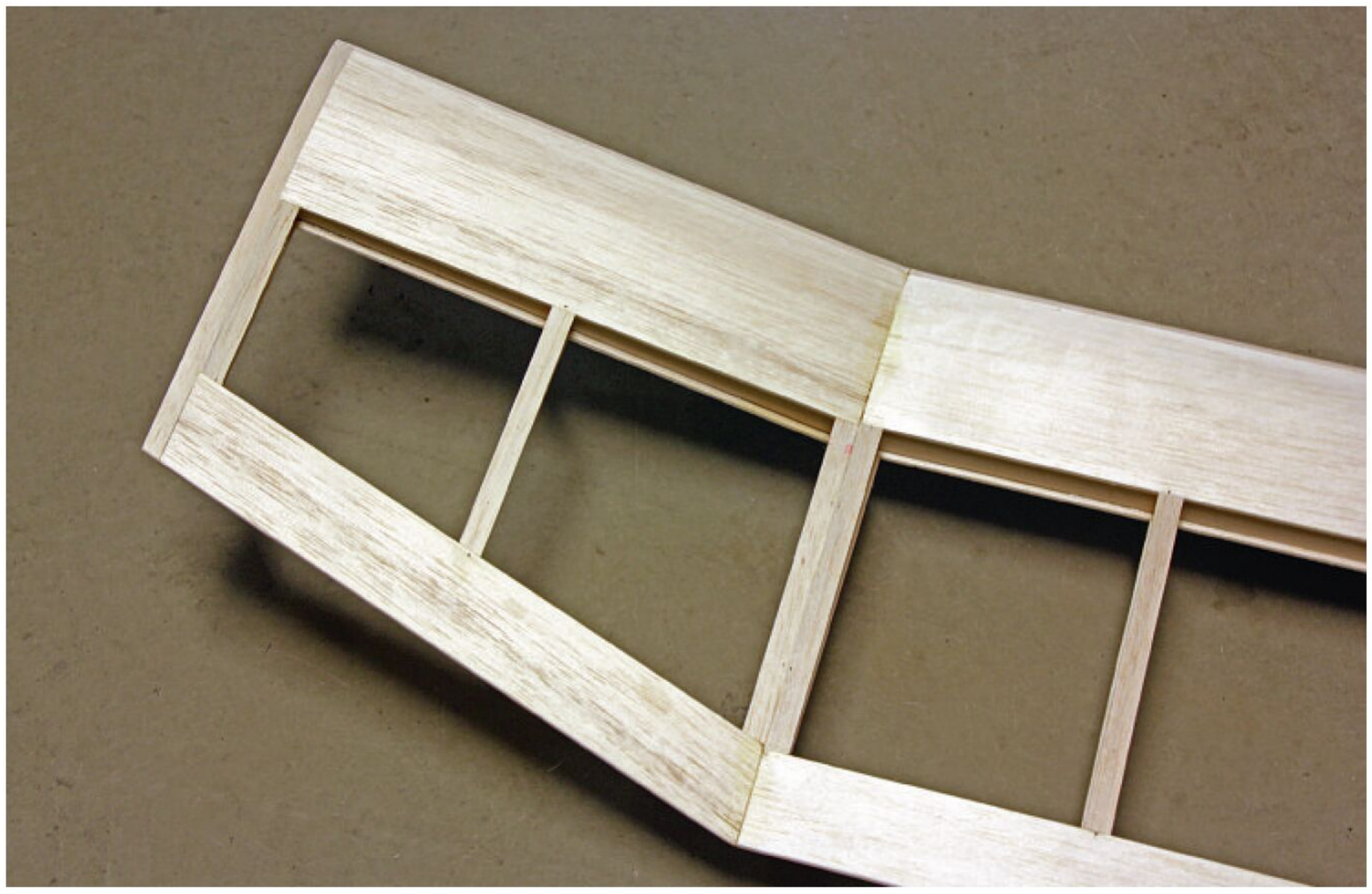
THREE PANEL BUILD

The wing is not a difficult job and is very straightforward. The plywood main spar W01 is

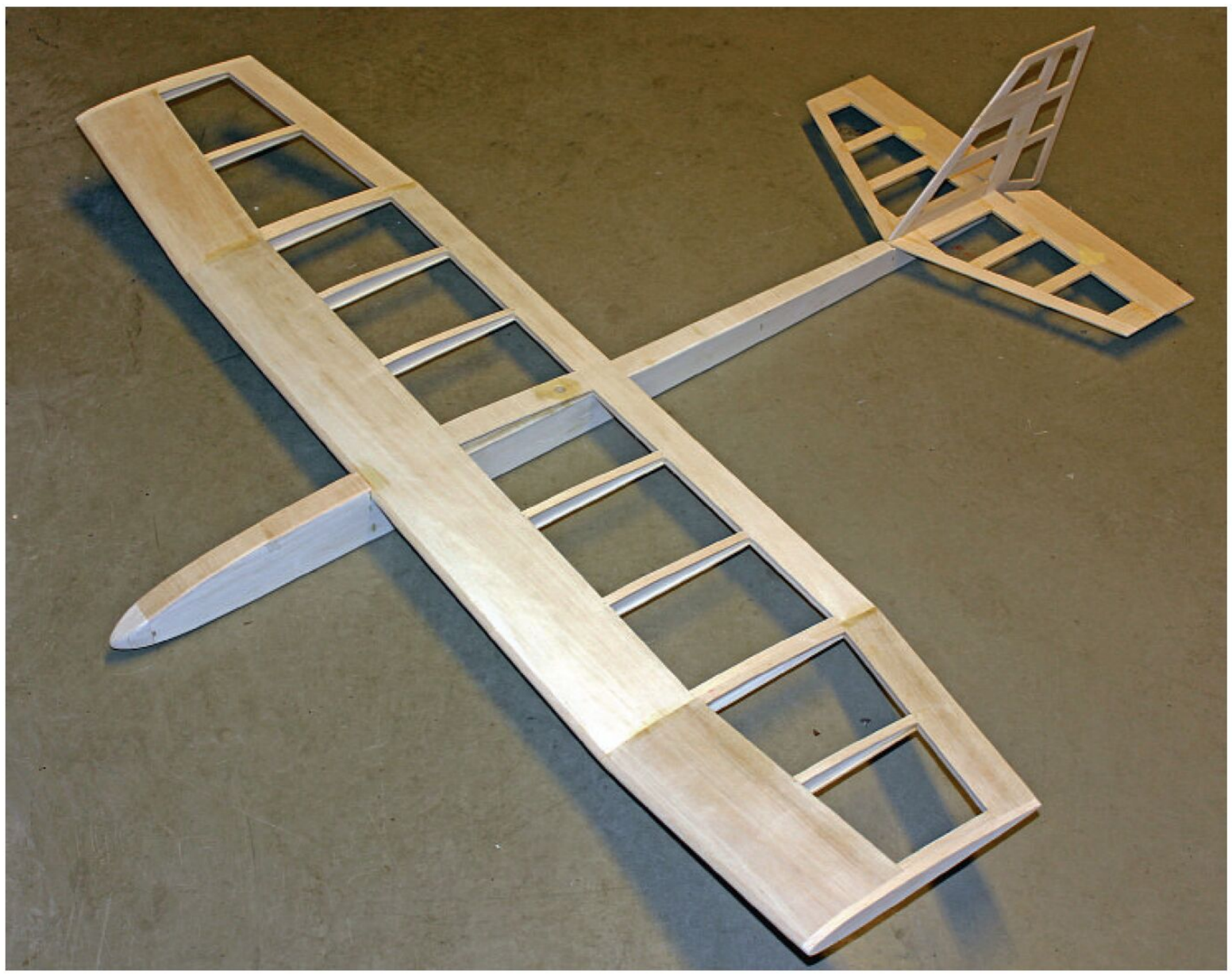
NEW STYLE

A 49.5in SPAN SELF-LAUNCH GLIDER DESIGNED BY TON VAN MUNSTEREN





Wing tip added and giving a neat finish to this simple to build wing.



New Style shows off its simple but elegant airframe before covering with heatshrink film.

Let your imagination go wild when covering your own New Style.

Using a long drill to ream out the wing dowel hole. Make your own by gluing a drill bit into a length of tubing.

"It really is a very easy wing to build"

built from two pieces and when glued together W02 will reinforce the joint.

Start by placing 1.5 mm balsa sheet on the board and glue the main spar along the edge, making sure it is straight. Add the trailing edge using 1.5 x 35 mm wide balsa. Add wing ribs W03 – W06 and W11 for the outer wing panels. Next, glue W04 in place and add some scrap balsa between both W03 ribs to retain the wing dowel. The centre section can now be sheeted at the front, root and trailing edges, and cap strips fitted over the ribs. The outer wing panels can now be built in the same manner.

Before gluing the outer and centre wing panels together make small openings in the wing sheeting in the outer panels to allow W11 to slide into place. Make sure that all the wing sections are flat and parallel so that the wing is straight. Finally, give it all a good sand to make the structure smooth for covering.

Align the wing on the fuselage and drill the hole for the wing dowel through the hole in former F04. You can make a long drill from a piece of tube with a drill bit glued in the end tube. That way you can make it as long as you like. You can now glue the dowel into the wing.

That's all there is to it. It really is a very easy wing to build.

USE ANY COVERING YOU LIKE

For covering I use heatshrink film. I normally cover the parts before gluing it all together. I even make the hinges from covering film.

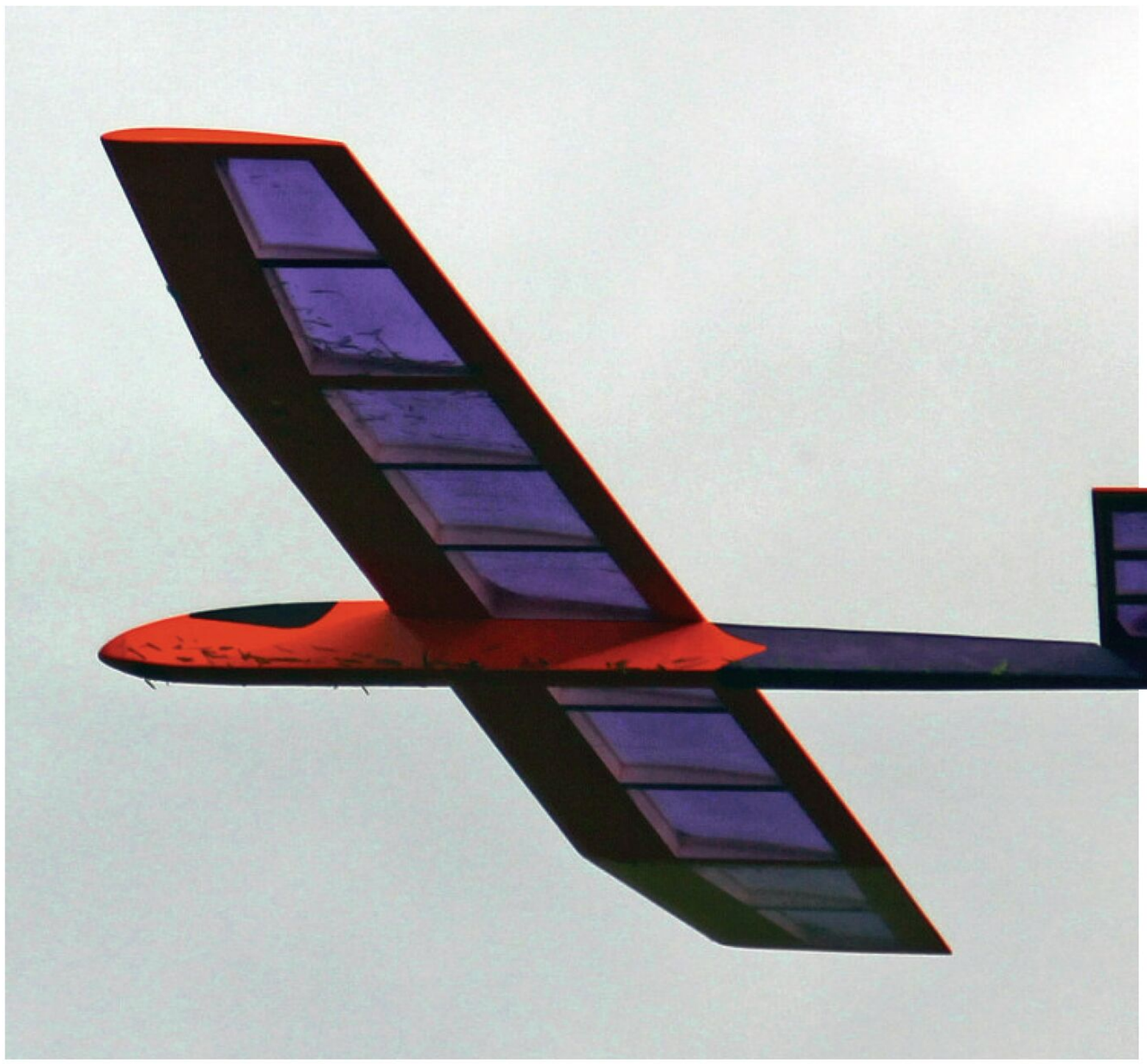
If you use transparent covering keep in mind that the build of the model needs to be as clean and neat as possible. Also, make sure

Ton favours HK film for its many bright colours.

A pair of square balsa sticks, held firm in a drill press vice, provide a simple solution for balancing this lightweight glider.

New Style is hooked up to its aerotow line with a Velcro pad.

After the towplane slowly takes up the slack in the line and accelerates, New Style follows and is up and away.



Floating by ready to sniff out the smallest patches of lift.

that all the parts are sanded smooth because a model's final finish is only as smooth as the parts underneath.

After the covering is finished, we can now glue the tailplane and fin in place. To add strength glue pieces of triangular balsa along each side of the fin. These can also be covered before gluing them in place.

CLOSE TO HITTING THE BUNGEE

We are getting closer to the maiden flight but first we need to fit the radio. The servos I use are the mini 9-gram units. They could be smaller but during a bungee launch I think a 5-gram servo would be on the limit and could be quickly damaged.

Place the radio as far forward as possible and don't forget to leave some room for a small amount of lead. I use a DX8 with the smallest possible Lemon receiver which I placed behind the servos. In the nose there is a 2S 500 mAh LiPo, using a UBEC to drop it to the right voltage for the receiver.

Check the CG, which needs to be at about 105 mm from the leading edge. When that's done make a decision about which way you want to launch New Style for its test flights.

Making some low-level turns, still searching for any signs of lift.

DATAFILE

Name:	New Style
Model type:	Self Launch Glider
Designed by:	Ton van Munsteren
Wingspan:	1260 mm (49.6”)
Length;	42.5” (1093 mm)
Weight:	555 g (19.6 oz)
Functions (servos):	Rudder (1), elevator (1),
Control throws:	Rudder 30 mm left/right, Elevator 12 mm up/down

Lining up to land near the end of the tow line ready to hook up for another soaring session.

Or how about trying this often-overlooked launching method? New Style rests in a piggyback cradle on top of a Pinestik trainer.

Scan this QR code for construction shots and views of the New Style or visit: https://youtu.be/ByeQNDGLXbo

DON’T THROW, SHOOT!

We have two options for a solo hand launch.

Use a long bungee line made with a red rubber bungee from HK and some line to lengthen that. The tow hook should than be located about 30 degrees in front of the CG or do some tests for the best location.

Or - and this is what I like to do - is to shoot the New Style with the same red rubber bungee but double up the rubber to make it shorter, which will give it more power. The line can now be much shorter, at about 20 metres, and the hook location is below former F04.

TOW BY E-GLIDER

There is a third option for hand launching and that is by aerotowing New Style behind an electric glider like my RES-Eagle (RC2190). Use a small piece of Velcro on the nose of the New Style and some of the counterpart on the line coming from the RES-Eagle. This is a good option when there are no thermals and you still want to have fun with your glider.

SHOOT FOR THERMALS

It’s great fun shooting the New Style into the air and when there is a thermal it will be easy to find. The reaction of the model to lift is very clear and the model will turn in a blink of an eye. Thermal turns can be very tight so there is no problem holding the model in any lift. When you are way up high, flip New Style inverted to have some more fun, then walk to the bungee and make a landing right next to the line. Hook New Style back on, walk some steps backwards and shoot it again, ready to search for a new thermal.

Alternatively, hook New Style up behind a RES-Eagle or similar e-glider for some aerotowing and have fun with your mate who is flying the towplane. ■

Motors, ESC's, LiPo's, Chargers, Servos, Props

High Quality, High Performance, Large Range, 60/120C, 3S 2,200mAh Only £24.00!

We stock: ARTF's and BIY Kits, BL Motors, Motor Mounts, ESC'S, UBEC'S, Plastic Props, Wooden Props, Folding Props, 3 Bladed Props, Prop Balancers, Spinners, LiPo's, Ni-Mh, Futaba and Radiolink Radios, Servos, Servo Leads, Servo Testers, Connectors, Cables, Heatshrink, Chargers, LiPo Dischargers, Watt Meters, Tools, Soldering Equipment, EDF Units, Electric Retracts, Undercarriages, Covering, LED Lights, Pilots, Tachometers, Glue, plus many other items. Please have a look at our easy to use website for more information. www.4-Max.co.uk

2S 4000mAh LiPo Battery for Spektrum Transmitters

Purple Power Professional LiPo's (JST-XH)

PPL-25C2S-0350	25C/50C, 2S (7.4V) 350mAh	£4.50
PPL-60C2S-0450	60C/120C, 2S (7.4V) 450mAh	£4.70
PPL-60C2S-0800	60C/120C, 2S (7.4V) 800mAh	£8.50
PPL-60C2S-1000	60C/120C, 2S (7.4V) 1000mAh	£9.25
PPL-60C2S-1300	60C/120C, 2S (7.4V) 1300mAh	£11.00
PPL-40C2S-1800	40C/80C, 2S (7.4V) 1800mAh	£14.50
PPL-60C2S-2200	60C/120C, 2S (7.4V) 2200mAh	£18.25
PPL-40C2S-2600	40C/80C, 2S (7.4V) 2600mAh	£20.00
PPL-40C2S-3300	40C/80C, 2S (7.4V) 3300mAh	£25.00
PPL-25C3S-0350	25C/50C, 3S (11.1V) 350mAh	£8.50
PPL-60C3S-0450	60C/120C, 3S (11.1V) 450mAh	£9.50
PPL-60C3S-0800	60C/120C, 3S (11.1V) 800mAh	£12.00
PPL-60C3S-1000	60C/120C, 3S (11.1V) 1000mAh	£15.00
PPL-60C3S-1300	60C/120C, 3S (11.1V) 1300mAh	£17.00
PPL-60C3S-1800	60C/120C, 3S (11.1V) 1800mAh	£21.75
PPL-60C3S-2200	60C/120C, 3S (11.1V) 2200mAh	£24.00
PPL-60C3S-2600	60C/120C, 3S (11.1V) 2600mAh	£30.00
PPL-60C3S-3300	60C/120C, 3S (11.1V) 3300mAh	£38.00
PPL-60C3S-3700	60C/120C, 3S (11.1V) 3700mAh	£43.00
PPL-60C3S-4500	60C/120C, 3S (11.1V) 4500mAh	£55.50
PPL-40C3S-5000	40C/80C, 3S (11.1V) 5000mAh	£56.50
PPL-60C3S-6000	60C/120C, 3S (11.1V) 6000mAh	£70.00
PPL-60C4S-1800	60C/120C, 4S (14.8V) 1800mAh	£30.00
PPL-60C4S-2200	60C/120C, 4S (14.8V) 2200mAh	£33.50
PPL-60C4S-2600	60C/120C, 4S (14.8V) 2600mAh	£39.50
PPL-60C4S-3300	60C/120C, 4S (14.8V) 3300mAh	£49.00
PPL-60C4S-3700	60C/120C, 4S (14.8V) 3700mAh	£55.00
PPL-60C4S-4500	60C/120C, 4S (14.8V) 4500mAh	£70.00
PPL-60C4S-5000	60C/120C, 4S (14.8V) 5000mAh	£78.50
PPL-60C4S-6000	60C/120C, 4S (14.8V) 6000mAh	£96.00
PPL-60C5S-3300	60C/120C, 5S (18.5V) 3300mAh	£63.00
PPL-60C5S-3700	60C/120C, 5S (18.5V) 3700mAh	£71.00
PPL-60C5S-4500	60C/120C, 5S (18.5V) 4500mAh	£86.50
PPL-60C5S-5000	60C/120C, 5S (18.5V) 5000mAh	£96.00
PPL-60C5S-6000	60C/120C, 5S (18.5V) 6000mAh	£118.00
PPL-60C6S-3300	60C/120C, 6S (22.2V) 3300mAh	£79.00
PPL-60C6S-3700	60C/120C, 6S (22.2V) 3700mAh	£85.00
PPL-60C6S-4500	60C/120C, 6S (22.2V) 4500mAh	£103.00
PPL-60C6S-5000	60C/120C, 6S (22.2V) 5000mAh	£115.00
PPL-60C6S-6000	60C/120C, 6S (22.2V) 6000mAh	£139.00

Prop Drivers/Adapters

PP-PDRV20-30	For 2.0mm shafts	£3.49
PP-PDRV23-47	For 2.3mm shafts	£2.50
PP-PDRV30-50	For 3.0mm shafts	£2.75
PP-PDRV32-50	For 3.2mm shafts	£2.75
PP-PDRV40-50	For 4.0mm shafts	£2.95
PP-PDRV50-80	For 5.0mm shafts	£3.95
PP-PDRV60-60	For 6.0mm shafts	£4.75
PP-PDRV80-12	For 8.0mm shafts	£5.95
PP-PDRV10-12	For 10.0mm shafts	£7.95

Brushless Electronic Speed Controllers

4M-HESC15AV2*	15A, Burst 20A, 5V 2A BEC	£17.99
4M-HESC20AV2*	20A, Burst 30A, 5V 1A BEC	£19.99
4M-HESC30AV2*	30A, Burst 40A, 5V 5A BEC	£22.99
4M-HESC40AV2*	40A, Burst 50A, 5V 5A BEC	£31.95
4M-HESC50AV2*	50A, Burst 70A, 5V 5A BEC	£45.95
4M-HESC60A35V2*	60A, Burst 80A, 5V 7A BEC	£47.95
4M-HESC60A40V2*	60A, Burst 80A, 5V 7A BEC	£47.95
4M-HESC80AV2**	80A, Burst 100A, 5V 5A BEC	£62.00
Fly Fun 110A HV	110A, Burst 140A, OPTO, 6-14 LiPo	£129.99
Fly Fun 130A HV	130A, Burst 160A, OPTO, 6-14 LiPo	£141.99
Fly Fun 160A HV	160A, Burst 200A, OPTO, 6-14 LiPo	£189.99

* XT60, ** XT90 on battery side

UBEC's (Voltage Stabilisers/Regulators)

4M-UBEC5A	5A UBEC, 7A Peak, 6-29.4V I/P	£14.99
4M-UBEC-7A	7A UBEC, 7.5A Peak, 6-29.4V I/P	£19.99
4M-UBEC-15A	15A UBEC, 28A Peak, 9-51V I/P	£29.99
HW-UBEC25A	25A UBEC, 50A Peak, 3-75.6V I/P	£64.99
5A UBEC	With Switch and Digital Display	£16.99
15A UBEC	With Switch and Digital Display	£29.99

This New Series of Professional Outrunners are of the highest quality and are comparable to the well known quality brands but at a fraction of the price as we get them straight from the factory, there is no middle man mark up. All motors are dynamically balanced in the factory to ensure super smooth and vibration free operation, along with longer bearing life. They also feature larger diameter shafts for superior strength. A standard rear mounting kit comes with all motors which includes the "X" mount and bolt on prop driver and screws.

Outrunners - Professional Black Series

PO-2826-	920kv, 1040kv, 1290kv, 1420kv, 2200kv	£22.99
PO-2830-	980kv, 1210kv, **1350kv**, 2150kv, 2700kv	£25.49
PO-2834-	910kv, 1020kv, 1160kv, 1680kv, 2100kv	£27.49
PO-3535-	870kv, 1090kv, 1390kv	£28.99
PO-3541-	810kv, 920kv, **1070kv**, 1270kv	£33.49
PO-3547-	700kv, 800kv, 960kv, 1190kv	£35.99
PO-5055-	500kv, 595kv	£61.00
PO-5065-	360kv, 420kv	£75.50
PO-6366-	230kv	£99.99

Part numbers in RED are approved by the BMFA for their Payload and Egg Challenges

Tel: 01256 782512 — **www.4-Max.co.uk** — Sales@4-Max.co.uk

The Electric Flight Specialists

Great Value Quality Servos From £3.28

	Part Number	Type	Torque / Speed	Price
	4M-037AH-0045	Analog Sub Micro 3.7g	0.45Kg @ 4.8V - 0.10sec/60° 0.55Kg @ 6.0V - 0.08sec/60°	1pcs £6.84ea 5pcs £6.16ea
	4M-045DH-005	Digital Sub Micro 4.5g	0.5Kg @ 4.8V - 0.10sec/60° 0.6Kg @ 6.0V - 0.08sec/60°	1pcs £4.72ea 5pcs £4.25ea
	4M-056DHVMG-009 (High Voltage)	Digital Metal Geared Only 8mm Thick - 5.6g	0.90Kg @ 4.8V - 0.14sec/60° 1.05Kg @ 6.0V - 0.12sec/60° 1.20Kg @ 7.4V - 0.10sec/60°	1pcs £9.94ea 5pcs £8.95ea
	4M-094DMGB-014	Digital Metal Geared Ball Raced Wing Servo Only 8mm Thick - 9.4g	1.4Kg @ 4.8V - 0.12sec/60° 1.9Kg @ 6.0V - 0.10sec/60°	1pcs £11.54ea 5pcs £10.39ea
	4M-090AH-017	Micro Analog 9g	1.7Kg @ 4.8V - 0.09sec/60° 1.9Kg @ 6.0V - 0.07sec/60°	1pcs £3.99ea 5pcs £3.59ea
	4M-100AMG-022	Micro Analog Metal Geared - 10g	2.2Kg @ 4.8V - 0.12sec/60° 2.5Kg @ 6.0V - 0.10sec/60°	1pcs £7.49ea 5pcs £6.74ea
	4M-100DMG-022	Micro Digital Metal Geared - 10g	2.2Kg @ 4.8V - 0.12sec/60° 2.5Kg @ 6.0V - 0.10sec/60°	1pcs £9.05ea 5pcs £8.15ea
	4M-094DHVMG-026 (High Voltage)	Digital Metal Geared - 9.4g Ball Raced, 8mm Thick	2.0Kg @ 6.0V - 0.09sec/60° 2.6Kg @ 7.4V - 0.07sec/60°	1pcs £14.99ea 5pcs £14.17ea
	4M-160AH-027	Mini Analog 16g	2.7Kg @ 4.8V - 0.13sec/60° 3.0Kg @ 6.0V - 0.11sec/60°	1pcs £6.29ea 5pcs £5.66ea
	4M-175AMG-030	Mini Analog Metal Geared - 17.5g	3.0Kg @ 4.8V - 0.13sec/60° 3.5Kg @ 6.0V - 0.11sec/60°	1pcs £8.73ea 5pcs £7.86ea
	4M-175DMG-030	Mini Digital Metal Geared - 17.5g	3.0Kg @ 4.8V - 0.13sec/60° 3.5Kg @ 6.0V - 0.11sec/60°	1pcs £9.99ea 5pcs £8.99ea
	4M-253AB-028	Standard/Mini Size Ball raced - 25.3g	2.8Kg @ 4.8V - 0.12sec/60° 3.3Kg @ 6.0V - 0.10sec/60°	1pcs £6.79ea 5pcs £6.11ea
	4M-410ABH-052	Standard Analog 41g	5.2Kg @ 4.8V - 0.20sec/60° 6.5Kg @ 6.0V - 0.16sec/60°	1pcs £4.73ea 5pcs £4.26ea
	4M-455AH-033	Standard Analog 45.5g	3.3Kg @ 4.8V - 0.15sec/60° 4.0Kg @ 6.0V - 0.12sec/60°	1pcs £6.99ea 5pcs £6.29ea
	4M-556AMG-087	Standard Analog Metal Geared - 55.6g	8.7Kg @ 4.8V - 0.15sec/60° 9.4Kg @ 6.0V - 0.13sec/60°	1pcs £12.59ea 5pcs £11.33ea
	4M-556DMG-087	Standard Digital Metal Geared - 55.6g	8.7Kg @ 4.8V - 0.15sec/60° 9.4Kg @ 6.0V - 0.13sec/60°	1pcs £15.74ea 5pcs £14.17ea
	4M-620DHVMG-112 (High Voltage)	Digital HV Metal Geared Dual Ball Raced 62g	9.35Kg @ 6.0V - 0.15sec/60° 11.2Kg @ 7.4V - 0.13sec/60°	1pcs £18.89ea 5pcs £17.00ea
	4M-556AMG-118	Standard Analog Metal Geared - 55.6g	11.8Kg @ 4.8V - 0.20sec/60° 13.2Kg @ 6.0V - 0.18sec/60°	1pcs £14.69ea 5pcs £13.22ea
	4M-556DMG-173	Standard Digital Metal Geared - 55.6g	17.3Kg @ 4.8V - 0.18sec/60° 20.4Kg @ 6.0V - 0.16sec/60°	1pcs £17.84ea 5pcs £16.06ea

For more information on all these products and hundreds of others, please visit our website

Tel: 01256 782 512

www.4-Max.co.uk

Sales@4-Max.co.uk

4max

The Electric Flight Specialists

BIY (Build it Yourself) Kits

VALUEPLANES

£424.99

Fokker DVII
Wingspan 2100mm/83” Weight 6000g/13.2lbs
Battery 6S 5000mAh (Supplied Separately)

£439.99

Miles 2.H Hawk Major
Wingspan 2480mm/98” Weight 9300g/20.5lbs
Battery 10S 5000mAh (Supplied Separately)

£109.99

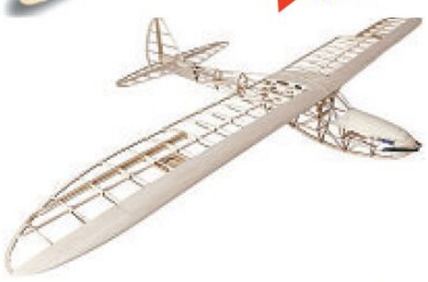
Cloud Clipper
Wingspan 1800mm/71” Weight 1800g/4lbs
Battery 3S 2200mAh (Supplied Separately)

£99.99

Cloud Walker
Wingspan 1650mm/65” Weight 1250g/2.75lbs
Battery 3S 2200mAh (Supplied Separately)

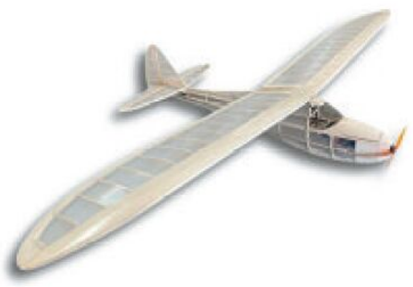
£169.99

Lippisch G108
Wingspan 2750mm/108.25” Weight 1700g/3.75lbs
Battery 3S 2200mAh - 3S 3700mAh (Supplied Separately)



£139.99

Super Sinbad
Wingspan 2500mm/98” Weight 1900g/4.2lbs
Battery 3S 2200mAh - 3S 3700mAh (Supplied Separately)



£49.99

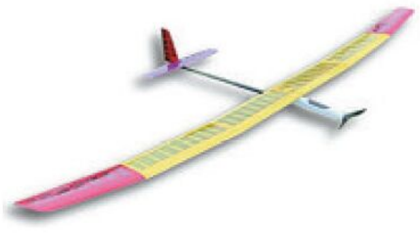
Micro Sinbad
Wingspan 1230mm/48.4” Weight 190g/6.7oz
Battery 2S 350mAh (Supplied Separately)

£169.99

Leprechaun
Wingspan 2600mm/102” Weight 1650g/3.6lbs
Battery 3S 2200mAh - 3S 3700mAh (Supplied Separately)

£49.99

Micro Leprechaun
Wingspan 1200mm/27.25” Weight 350g/12.3oz
Battery 2S 450mAh (Supplied Separately)



£169.99 Kit
£299.99 ARTF

VP2600 Glider
Wingspan 2600mm/102” Weight 850g/1.9lbs
Battery 3S 2200mAh (Supplied Separately)

For more information on all these products and hundreds of others, please visit our website

Tel: 01256 782 512 — **www.4-Max.co.uk** — Sales@4-Max.co.uk

4max
The Electric Flight Specialists

Chargers, Wattmeters, Servo Testers and Power Supplies

HOTA D6 Pro - Dual I/P, Dual O/P 650W Charger

The D6 Pro is a dual I/P (AC & DC) and dual O/P high quality charger with each output capable of charging . It can Charge between 2S - 6S LiPo, LiHV, LiFe and Li-ion batteries, Eneloop, Ni-Cd, Ni-MH, Ni-Zn. It also features wireless charging so you can charge your phone at the field. Great Value for just.

New

£109.99

HOTA F6+ - Dual I/P, Quad O/P 1000W Charger

The F6+ features dual I/P (100VAC - 240VAC & 6.5VDC - 30VDC) and has 4 high powered outputs each can charge up to 250W. It can charge between 2S - 6S LiPo, LiHV, LiFe and Li-ion batteries, each up to 15A.
1S - 12S Eneloop, Ni-Cd, Ni-MH, Ni-Zn.
Brilliant Value for just.

New

£199.99

HOTA H6 Pro - Dual I/P, 700W Charger

The H6 Pro Smart Charger features dual I/P (100VAC - 240VAC & 6.5VDC - 30VDC) and can deliver up to 700W, 200W on AC (max 26A). This is the charger when you need large packs charged quickly. Balance current 2A Fantastic Value for just.

New

£79.99

HOTA S6 - Dual I/P, Dual O/P 650W Charger

The S6 is a high quality dual I/P (AC & DC) and dual O/P high quality charger with each output capable of charging . It can charge between 2S - 6S LiPo, LiHV, LiFe and Li-ion batteries, Eneloop, Ni-Cd, Ni-MH, Ni-Zn.
Outstanding Value for just.

New

£169.99

ToolKitRC Q6AC - 1000W, Dual I/P, Quad O/P

The ToolkitRC Q6AC is a Dual Input, Quad Output Smart Charger. 2-6S LiPo, LiHV, LiFe, Lion and 1-16S NiMh.
The charging power output on AC is up to 400W, on DC with a suitable power supply up to 1000W.The high power quad O/P charger.

New

£175.99

ToolKitRC Q4AC - 200W, Dual I/P, Quad O/P

The ToolkitRC Q4AC is a Dual Input, Quad Output Smart Charger. 1-4S LiPo, LiHV, LiFe, Lion and 1-10S NiMh.
The charging power output on AC is up to 100W, on DC with a suitable power supply up to 200W.The Q4AC has intuitive menus.

New

£69.99

ToolKitRC M7AC - Multifunctional Dual I/P, 350W Charger

The M7ACs core function is being a single channel battery charger. 100W O/P when powered by AC and 300W when powered by DC. It is compatible with the main battery chemistries and supports direct connection with both XT60 and XT30 batteries.

£84.99

ToolKitRC M7 - is the worlds smallest 200W charger/ servo tester/cell checker with a colour screen!

Same size as the popular M6 but with 33% more power! With a 200W, 10A charger at its heart the M7 also has a servo tester, cell checker, a wattmeter, PWM/PPM/Sbus input testers and output generator along with a variable voltage and current DC output control. All of these features at an fantastic low price of

£49.99

ToolKitRC M9 - Dual I/P & Dual O/P, 700W

So many functions in a small charger! Battery internal resistance checker, wattmeter, servo tester, (Can output PWM/PPM/SBUS standard signal, accuracy up to 1µs) LiPo balancer.
It also charges all the main types of rechargeable cell up to 25A. USB type A & C outputs

£79.99

ToolKitRC M4Q - 200W Quad Out Charger

The M4Q is a 4 in1 charger that has 4x 50W charging circuits when powered by DC (4x 25W when powered by AC). Allowing you to balance charge 4 batteries at the same time. It features an internal power supply so you can just plug it into your nearest mains socket. It can also be powered by DC when at the field.

£84.99

ToolKitRC M4 Pocket - 80W O/P Charger

The ToolkitRC M4 Pocket is a small but powerful ~80W charger featuring dual input (USB Type-C / XT60) and dual output (XT60 / XT30). The charger can charge up to 4S LiPo/LiHV/ LiFe batteries. It can also be used to charge USB mobile devices with a USB-C socket.
It features a 1.54" Wide angle colour display

£24.99

SKY High Power Discharger -

Fed up at how long it takes you to discharge your unused batteries ? Then this is the discharger you have been waiting for. This can discharge your batteries up to 35A! (max 250W). Just set the discharge current and the end voltage you require and push the button, simple as that. We recommend that you just finish the storage process off on your charger.

£119.99

For more information on all these products and hundreds of others, please visit our website

Tel: 01256 782 512 — **www.4-Max.co.uk** — Sales@4-Max.co.uk

Counterpoint

A selection of new gadgets, kits and bits for you to buy

LIGHTWEIGHT PUSHER PROP SPINNERS

£7.90 - £14.80 l www.4-max.co.uk

Designed specifically for use with opposite rotation/pusher props in electric installations these high-quality spinners will run true and stay in shape thanks to their lightweight machined aluminium backplates that ensure no backplate flex. They also have a unique 'easy trim' feature where the spinner nose around each propeller cutout is thinned to half the thickness of the surrounding material, which makes trimming to suit different blade shapes simplicity itself. Available in black or white in a range of six diameters, from 45 mm to 75 mm.

SUKHOI SU-57

£174.99 l www.cmldistibution.co.uk

Following the release of their F-22 Raptor, F-18 Hornet and F-15 Eagle, XFly Model has further expanded their twin 40 mm EDF range with a pair of new models, the first of which is this lovely 700 mm span SU-57, a faithful replica of Sukhoi's multi-role stealth fighter that includes scale details such as air intake, cockpit, nozzle and full-flying horizontal stabilisers. A factory installed pair of twin 12-bladed 40 mm fan units, 1413-KV5500 brushless motors and 20A brushless ESCs, along with the owner's choice of 4S 1800 to 2600 mAh LiPo combine to deliver flight times of around 3 - 8 minutes and an abundance of thrust for fast climbs, rolls and loops, with high-alpha manoeuvres also on the menu. Moulded from EPO and easy to assemble with no glue required, the model comes with pre-fitted servos (5 x 9 g) and a fixed U/C that can be left off if desired for hand-launching. For intermediate pilots, the aforementioned 4S 1800 to 2600 mAh LiPo and 4-channel minimum Tx and Rx are required to complete.

F-14 TOMCAT

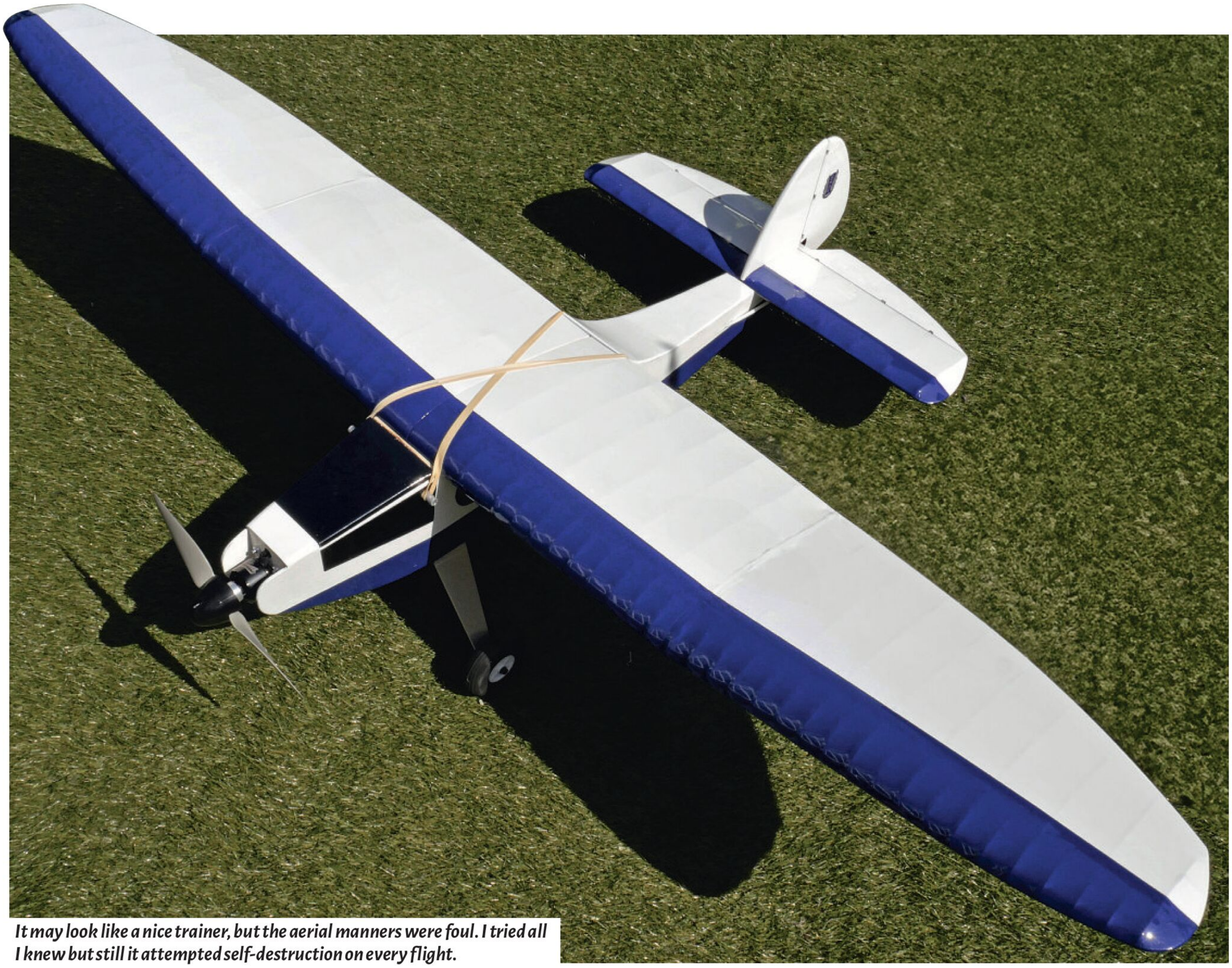
£239.99 l www.cmldistibution.co.uk

The second addition to XFly Model's twin 40 mm EDF range, their iconic F-14 Tomcat, features functional variable-sweep wings (970 mm extended span), full-flying stabilisers and a livery based on the VFA-103 Strike Fighter Squadron 'Jolly Rogers' version. The model's engaging aesthetics are matched by a superb flying performance. A low wing loading, full-flying stabilisers and powerful, pre-fitted powertrain, comprising twin 12-bladed 40 mm fan units, 1413-KV5500 motors and 20A ESCs, bring a fun-filled performance to your fingertips, including fast climbs and loops, whether the wings are extended or retracted, enjoyed over flight times of around 3 to 6 minutes. High torque servos deliver crisp and precise control to the variable sweep wings, making the transitions accurate and smooth, whilst the fixed U/C and steerable nose wheel make life easy for ROG operation from smooth surfaces. Assembly is a breeze in around 15 minutes with no glue required, making this jet a hassle free addition to your collection. Just add a 4S 1300 to 2200 mAh LiPo and 5-channel R/C.

J-10 VIGOROUS DRAGON

£259.99 l www.cmldistibution.co.uk

The Chengdu J-10 fighter jet, nicknamed 'Vigorous Dragon', is a high performance, multi-role, all weather, third generation fighter aircraft, brought to the R/C arena by FMS in the form of this 690 mm span EDF. Available in either Air Force (grey) or Aerobatic Team (blue) liveries, the airframe is formed from high-impact EPO foam adorned in a water-based paint finish and full, tough gloss paint film that's both water and heat resistant. Supplied with a pre-fitted 64 mm, 11-blade fan unit, 2840 KV3150 brushless motor, high-performance 40A ESC (with reverse thrust function) and a Reflex V3 gyro flight controller, the model effortlessly reproduces the authentic sight and sound of a fighter jet when paired with a 4S 2200 to 2600 mAh LiPo. Scale details include non-functional scale detachable weapon sets (Air Force livery only), air refuelling probe, cockpit interior, pilot figure and five high intensity navigation lights. The airframe sits on a rigid fixed U/C, the CNC machined shock absorbing metal front nose leg helping smooth out the take-off and landing phases. Add your choice of 4S 2200 to 2600 mAh LiPo and 6-channel R/C and she'll be good to go after about 30 minutes of assembly and testing.



It may look like a nice trainer, but the aerial manners were foul. I tried all I knew but still it attempted self-destruction on every flight.

TRIALS & TRIBULATIONS

Dave Goodenough begins this month's selection of shed and flying field topics with a dodgy test flight

Words & Photos: **Dave Goodenough**

A while back I bought three kits from Brazil. You might remember the pretty 'La Senorita' review a few months ago. One of the other kits was a supposedly easy to fly 'Old Timer' style rudder/elevator/motor model of 1.4 metre wingspan. A nice looking 'pudden' of a plane. I built it, balanced it and took it to the flying patch, which is where all my troubles began...

Rechecking the C of G and confirming that all else was working, I rolled it forward, gave it the beans and took off. It wasn't in the air for long, but it used a lot of sky whilst it was up there! A classic case of rearward balance, whose cavorting tested the strength of the model, its undercarriage and my Pampers! Sage advice and comments were put forward by the assembled greybeards, but I knew I'd checked the C of G correctly - hadn't I?

I rechecked the instructions and the balance mark on the model, at about 20% wing root chord, seemed very conservative. One design oddity noted during the build was that the wing section is not your usual 'flat bottom and round nose'. The underside is dead flat right to the leading-edge tip and then rises sharply into a thick section. A nearby photo shows what I mean. I was always advised - and have seen in the many wing sections used for designing models - that a rounded nose prevents the airflow from breaking away suddenly and leading to unintended flight reactions. Was this the cause of my test flight woes?

I rebalanced the model by using a heavier LiPo, moving the C of G to around 16% wing root chord, normally a recipe for a 'dead' response flight. A quick genuflect (can't touch you for it!), shove the noise stick forward and hang on! The flight was better but still not what I'd call comfortable. The change of balance and increase in power helped a lot but I still maintain that the curious rib profile was the cause of my uneven piloting and raucous mirth amongst the gathered brethren.

Further test frights pushed me beyond the tolerance of this model's terrifying tantrums and I stripped all the avionics out for recycling into another model. You may have seen the airframe on eBay. Lord help you if you bought it, despite my honesty regarding its waywardness!

Poet Walt Whitman said it best: 'Here is what has come to the surface after so many

Time and again this is how the flights ended. I’d think the approach was okay and then the model ‘went wonkity’. No, it wasn’t a stall, just an uncommanded change in flight pattern.

I’m convinced that the cause of the model’s dreadful performance in flight was the seriously odd rib profile, leading to an unpredictable airflow.

throes and convulsions’. I couldn’t have put it better myself.

MOWN-ING MINNIE

One of the club tasks down Cheadle way is to keep the grass down to a decently short sward, a job undertaken by all members as directed by the texted round-robin rota. Being as I was a newbie to the task I was taken through the various procedures and incantations necessary to fettle and fire up the old-but-sturdy ride-behind cylinder mower. No problem, I used to fix and sell these things in a previous business life, thought I.

Off I went upon the motorised throne, enjoying the ride and reminiscing as I went, which is where it all went a bit Pete Tong! Puttering along, clippings a-fly, I reached the end of the strip and needed to turn the rumbling chariot, whereupon a touch of the trouser twitters ensued. I made it round, but it was an untidy manoeuvre, complicated by the need to put an end to the 20-degree list-to-port speed lean. Well, that concentrated the mind and stiffened the sinews!

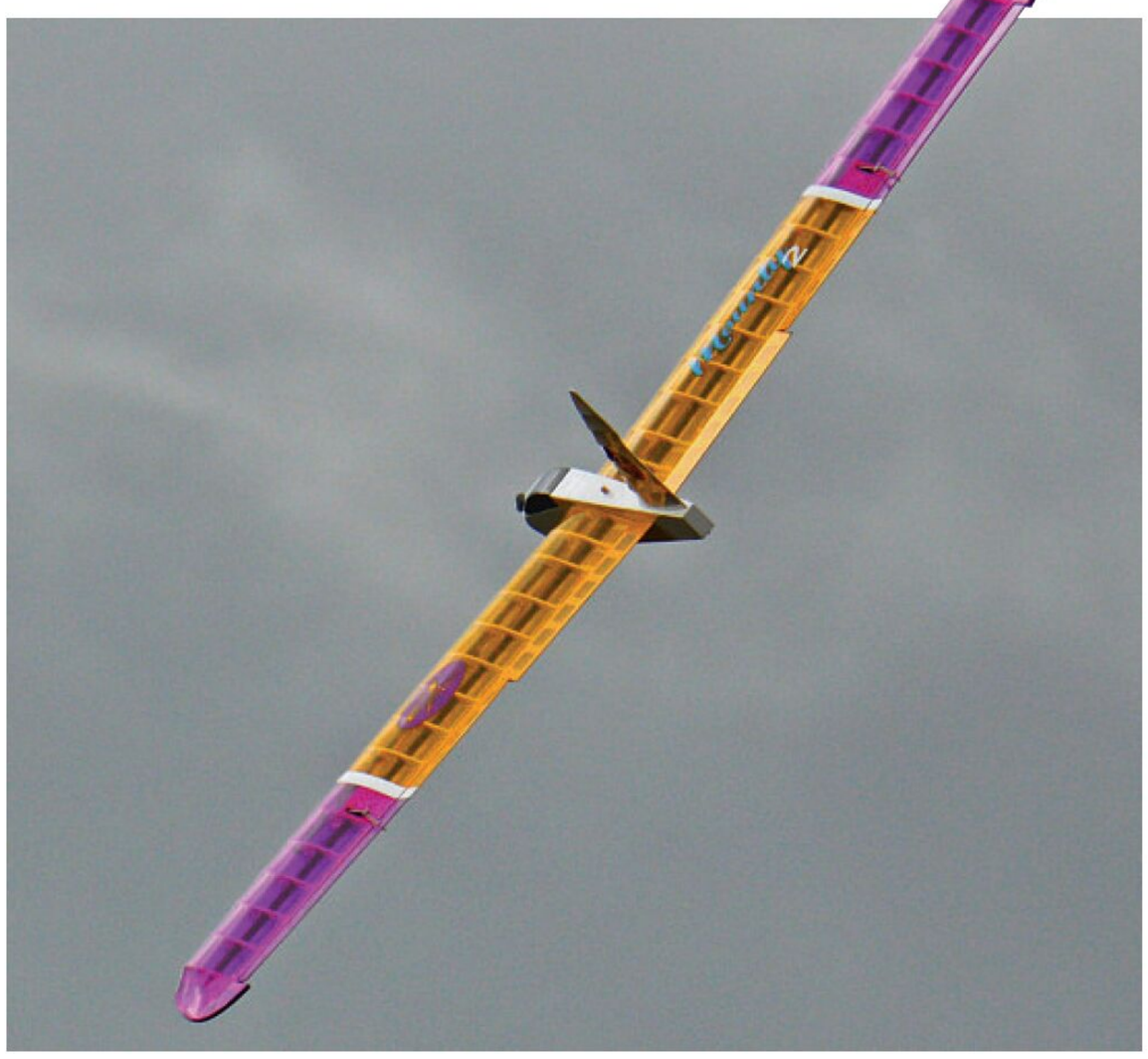
Like many things in life - and especially when flying your models - don’t assume you know it all already and don’t lose focus on what you’re doing. There’s always something waiting to bite you in the fundament!

MOUNTY MAGIC

A while back I mentioned that I’d sourced a tailless model, the ‘Mounty 2’ from Robert Schweissgut’s **wing-tips.at** site in Austria. The kit of mainly light poplar plywood was superbly prepared and router-cut instead of the more usual laser cut components. Everything fitted ‘just so’ and the square section carbon tube spars were both strong and rigid. The manual, although German language, had easy to follow illustrations and the build was logical, fast and pleasurable. The power and servo recommendations in the manual were unavailable in the UK but a call to George at 4-Max and his supply of exactly the equipment needed found me finishing the model in record time.

A frightening sight! All togged-up for a test flight in single figure temperatures. The model coped very well - I didn't!

Easy 2 beginner's kit by Hiesbok Models, sourced from Crafty Supplies. It's a superbly prepared starter kit for not much money.



Mounty 2 hauling around against a threatening sky. It's a lovely model to fly in so many varying conditions.

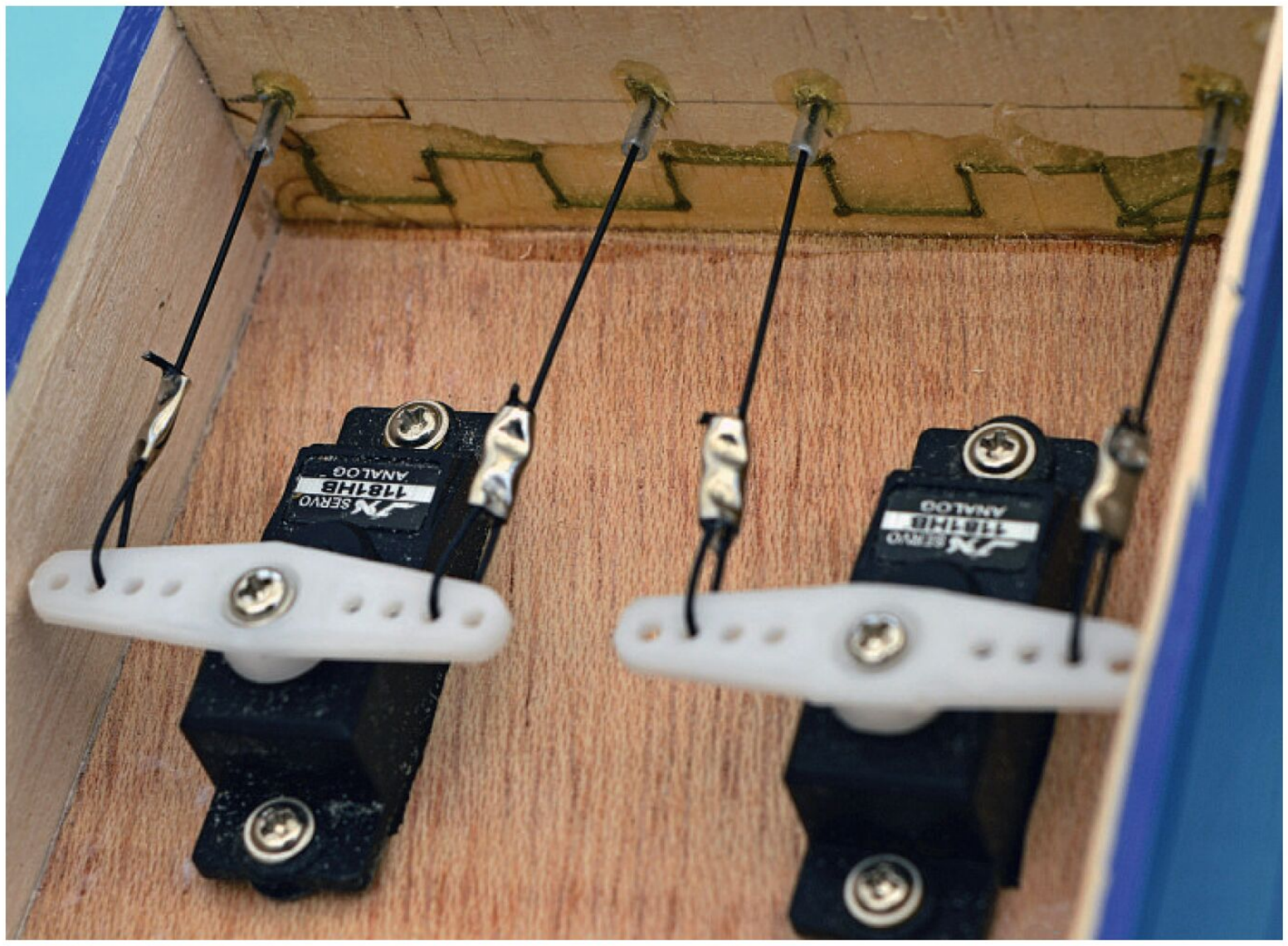
Breezing past in changeable conditions. Mounty 2 is a gem in the air, whether across the slopes or over flat land under power.

Knowing that this model has a wide speed range, thanks to YouTube videos, and will thermal due to its relatively low wing loading, I used a bright translucent colour scheme to aid eyeballing the beastie in flight. With no further pre-testing excuses available it was time to commit aviation.

You may have seen the result of the first test flights when I previously showed a form of fin modification for this model, where the plug-in magnetic mount couldn't manage the rufty-tufty landings that the local terrain forces on many of our slope-side models. The rubber-banded 'breakaway' fin mod worked well in torrid arrivals and the interrupted flight tests resumed.

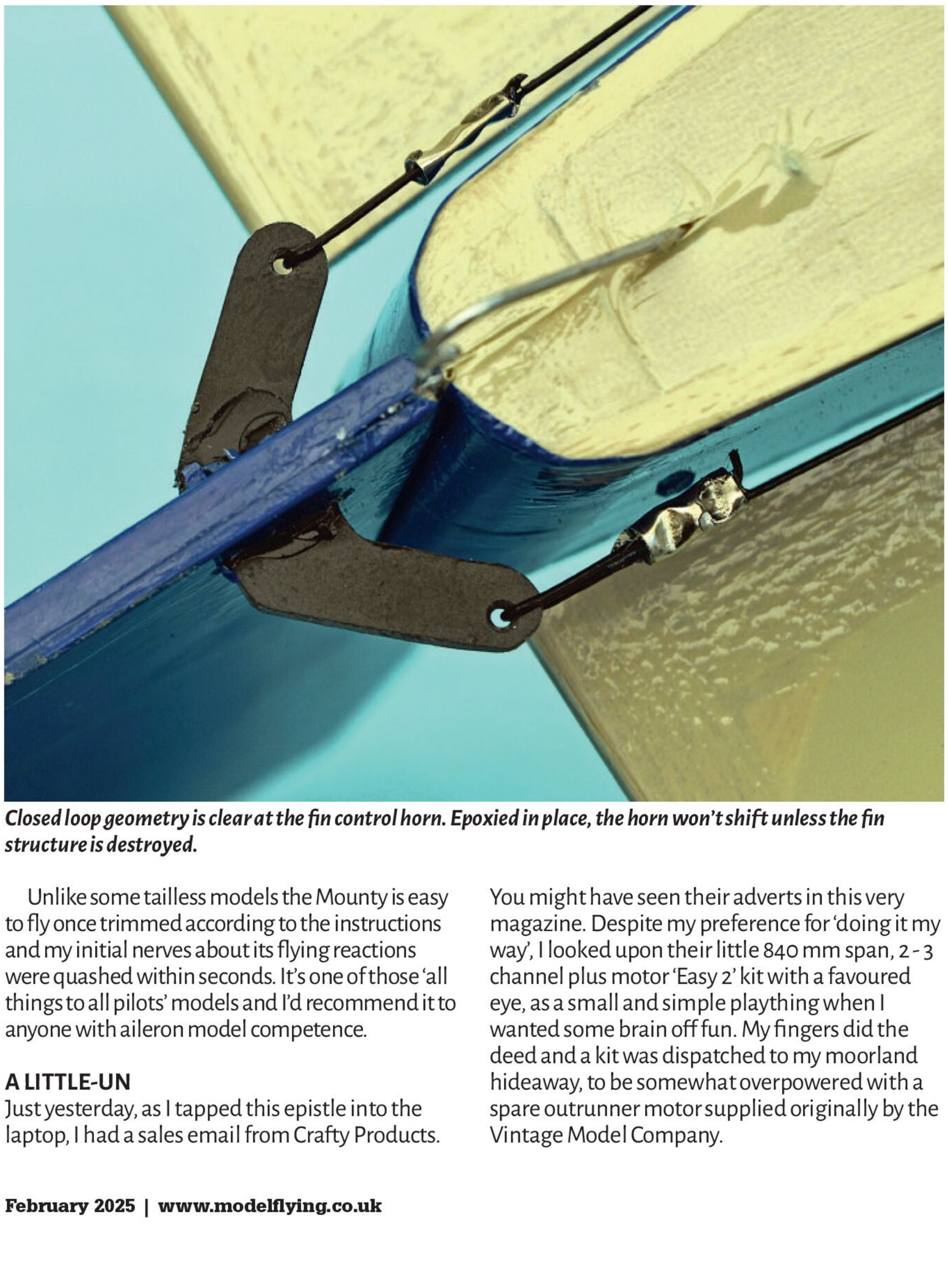
I must admit that I've thoroughly enjoyed flying this model and it has become the first one in the car when I head out to enjoy some aerial playtime. At 1600 mm wingspan it's small enough to be handy as a powered glider and big enough not to be twitchy. The Mounty can be configured for whatever flight responses you demand. Move the battery forward to shift the Centre of Gravity a few millimetres and you have a faster flying model that 'grooves' well and penetrates in stronger breezes. Moving the battery a tad rearward, to cope with lighter conditions, and increasing the elevon deflection a little slows the speed and allows you to play silly billies.

I rarely use the motor when at the slopes unless I've perpetrated a dimwit mistake and flown out of lift, but the power comes into its own when operating from flat flying fields. The power set supplied by George at 4-Max is perfect, giving a fast climb if needed. Or if just a bit of whiffling around suits your mood, dial back the throttle and enjoy.



Closed loop controls in the Allen A-4 are from simple 50 lb stainless steel fishing trace. Crimped and cyanoed, they won't pull loose.

A top view of the Allen's rear fuselage shows that the closed loop wires are straight, just as they should be for best control and minimal friction.



Closed loop geometry is clear at the fin control horn. Epoxied in place, the horn won't shift unless the fin structure is destroyed.

Unlike some tailless models the Mounty is easy to fly once trimmed according to the instructions and my initial nerves about its flying reactions were quashed within seconds. It's one of those 'all things to all pilots' models and I'd recommend it to anyone with aileron model competence.

A LITTLE-UN

Just yesterday, as I tapped this epistle into the laptop, I had a sales email from Crafty Products. You might have seen their adverts in this very magazine. Despite my preference for 'doing it my way', I looked upon their little 840 mm span, 2 - 3 channel plus motor 'Easy 2' kit with a favoured eye, as a small and simple plaything when I wanted some brain off fun. My fingers did the deed and a kit was dispatched to my moorland hideaway, to be somewhat overpowered with a spare outrunner motor supplied originally by the Vintage Model Company.

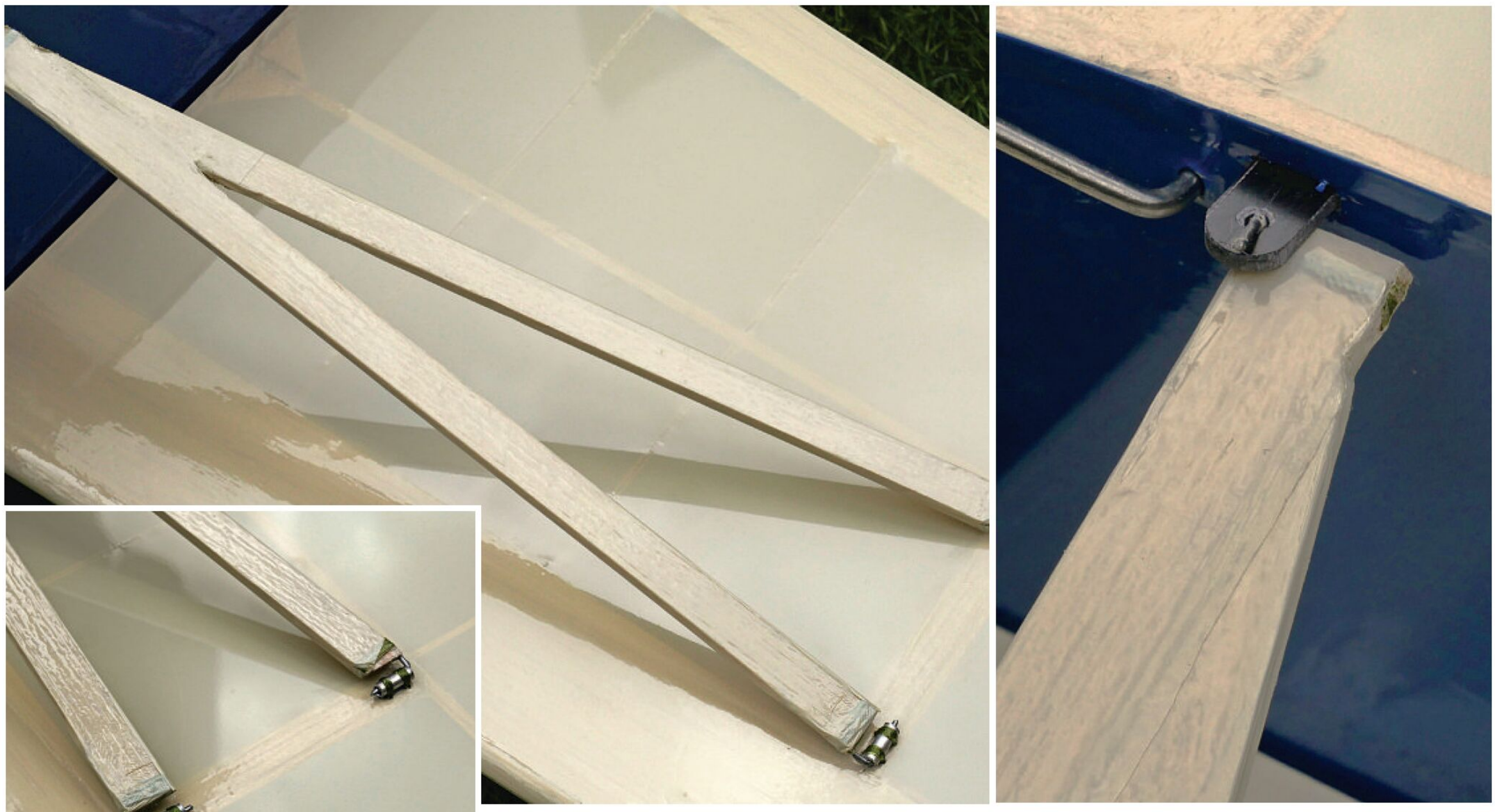
The kit is manufactured by the Czech Hiesbok company and I spent some time rummaging through their website. It was a revelation! I know I bang on about bringing more youngsters into the hobby and this Czech company provides kits for them in abundance, from simple kiddie playthings right through to R/C models of all types and even F1H competition gliders. It's true that postage from the Czech Republic can be a bit harsh but spread across the purchase of two or three kits it works out to be quite reasonable.

I'll be delving into their website again and hope that some currently unavailable models make a return to 'in stock' status.

BEGINNERS BUNDLE

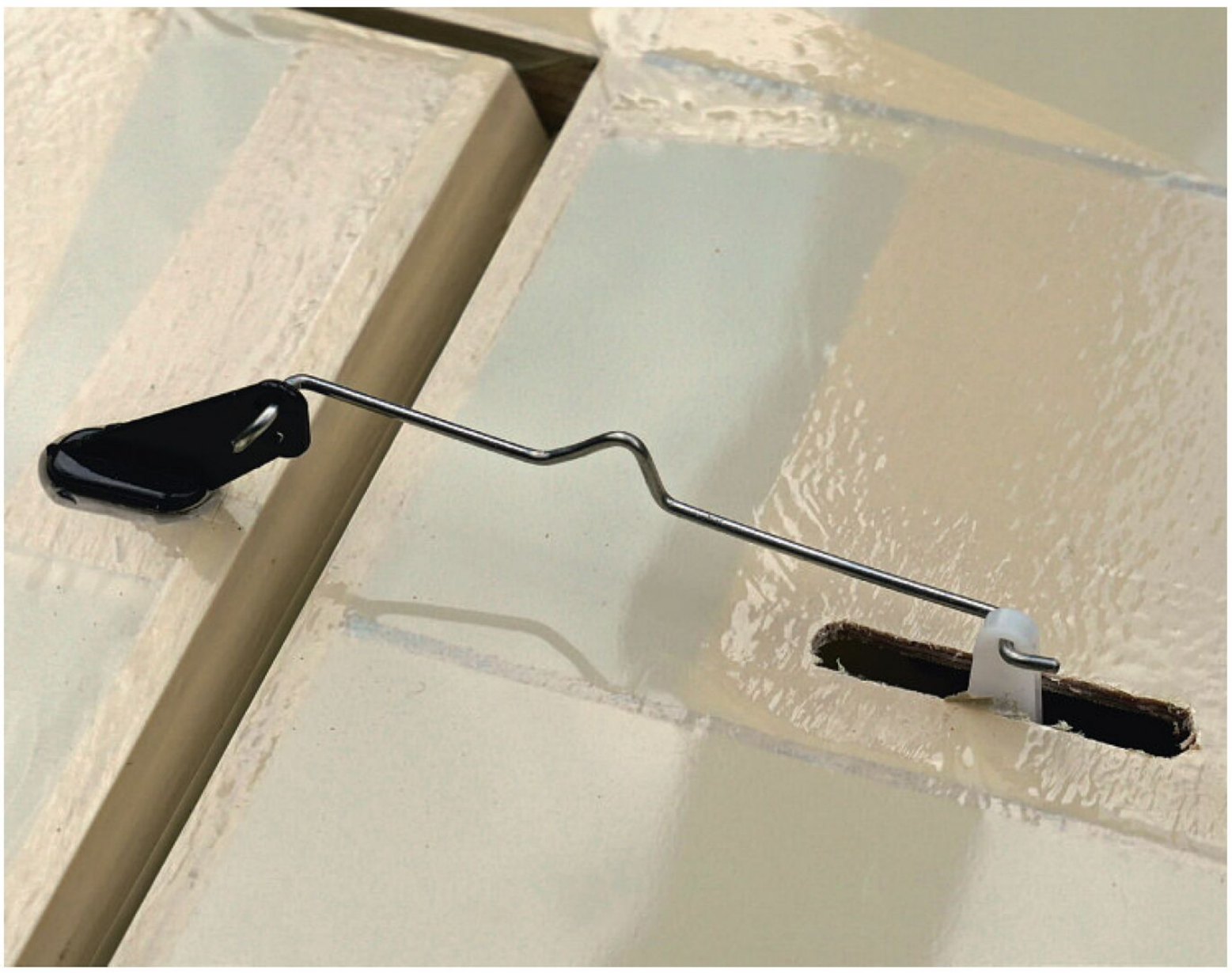
Construction of my Allen monoplane has reached the fitting-out stage and choosing the method of tail feather control loomed large. I chose closed loop control lines. Using 30 lb Dacron fishing line was one idea but I eventually decided that it was best suited to smaller and lighter models such as those built for indoor work. I've gone with light fishing trace wire instead, the lightest 50 lb coated stainless steel line that I had handy.

Laying in closed loop lines is fiddly but not at all difficult. The crucial part of the process is ensuring that there is no slop or slackness in the finished control. Any looseness that allows the control surface to move without specific input from the transmitter is a recipe for uncertain flight and possible control surface 'flutter' - a real model killer! For smaller models like the lightweight 650 g, 54" wingspan Allen a straightforward connection between control horn and servo arm is adequate. Go larger and heavier with your model and you'll usually need a closed loop tensioner as part of the control system. It's a device outside the scope of beginners' models for now but may be detailed in the future.



The Allen wing struts are very simple devices. A loop hook at the fuselage end and spring-apart to attach the wing end bends. Although only for show they do help to stop the wings from sliding off in flight.

Closed loop 'pull-pull' controls have two specific requirements that shouldn't be compromised. The width of the servo arm holes used must be matched by the flying surface control horn and those control horn holes should align with the hinge centre line. This allows the control lines to maintain tension throughout the full range of movement/surface deflection. A mismatch of the horn widths or centre line alignment will cause one or both of the problems we don't want - slackening or tightening of one line as the control surface is operated. It's basic geometry of course, a dirty word to some and hard to visualise for others, but in its simplest form it's just a simple parallelogram.



Aileron pushrods couldn't be simpler with 'Z' bends at either end. The 'V' is for tweaking length adjustment. It's all that is needed for the small, low stress aileron forces.

Closed loop controls are probably the most positive form of flying surface control and are usually lighter than any pushrod or snake. It certainly reduces weight in the one place we don't want too much, at the rear fuselage. Every excess gram in the model's tail needs up to four or five to counterbalance it in the nose. Think about it; it's simple mathematics/balance/leverage after all.

Another consideration is that the closed loop lines should ideally be absolutely straight and direct from servo arm to control horn. Unlike control snakes, closed loop lines don't like changes of direction and for preference should have none, or only the slightest minor redirection via a guide, usually a tube. The photos show how it was achieved on the Allen tail end.

Once you're comfortable with the system and its very positive operating action you'll find other reasons to install it in future models. Trust me, would I lie to you?

STRUT YOUR STUFF

On some models you will see wing struts, those fuselage-to-wing supports that share flying loads on some planes. On larger models they can be quite substantial but on smaller models they usually only provide realism without any real strength. They are a distinctive part of the Allen A-4 design so needed reproducing, but in a simple to make and attach form.

Attaching the fuselage end of the struts was achieved by using a fibreglass crosspiece glued in the fuselage, leaving a small 6 mm projection on either side of the fuselage sides. A 1 mm dia. hole provided the attachment point. The fuselage end of the 'Vee' strut had a 0.6 mm piano wire loop-and-tail anchor, Dacron bound and cyanoed.

My little Rossiten motor glider pays the price for me ignoring the conditions and a lack of effective model controls.

The wing attachment was formed with simple wire bent ends and tail anchors. The photos show the idea. They are 'sprung' into two small tubes on each wing underside, also Dacron bound and cyanoed.

The result may not be perfect. It was never intended to be, but it does give the correct 'look' to the model and despite being there just for effect, it helps to prevent the wing from departing in flight. Always a good thing, don't you think?

DESTRUCTIVE TENDENCIES

One model I built a while ago, the Rossiten motor glider, had never seen air under its wings until recently. Built very light indeed as a simple 'fair weather and almost no breeze' device, I finally blew the dust off it a few days ago, as I type. The forecast was benign, the breeze minimal and the chaps were foregathering en piste. Time to get on and do it. Lots of oohs, aahs and 'wotsit?' were uttered before I connected the LiPo and readied the model for aviation in the slightly invigorated breeze. A bit of power saw it sit disconsolately on the lawn, refusing to move. More power simply annoyed it without shifting the thing. I picked it up, gave it all the 2S LiPo had to offer and launched...

Well, it flew - or rather hovered - as it sat there a few feet in front of me whirring away and going almost nowhere, including up or down. Tentative tail feather wiggling showed that they sort of worked but were somewhat vague in directing the model to do anything. A couple of minutes later and some 10 metres in front of me, I brought it back to earth.

There was a similar weight 3S LiPo in the 'Charged & Ready' box, so that was slotted in and a quick nudge on the throttle proved there was more 'go' available, but the breeze had risen just a tad more. No matter, launch and be damned!

Damned I most certainly was. There was a little more flight speed, the model also climbed a

> "I had not stopped the proceedings when I had found the controls were too weak and the breeze too strong"

smidgeon, but the rudder was its downfall. A little cross-breeze direction change proved that the rudder was about as effective as telekinesis and the Rossiten blundered off downwind, deciding to answer the controls just a bit too late and arriving somewhat untidily, re-kitting the fuselage.

It served me right. I had not stopped the proceedings when I had found the controls were too weak and the breeze too strong. Lesson to self: don't ignore what's patently clear and don't think 'Oh, it'll be okay', 'cos it won't.

PETER MILLER

Model builders worldwide will know of Peter Miller's work, the 200 published plans, many hundreds of articles and his informative books. Sadly, Peter passed away early in November in his 87th year.

Others closer to Peter will have known him better but for me and my wife, we knew him in his later years following a visit to his Suffolk home a decade ago. We stayed in touch via emails, almost daily at times, often chatting about our individual projects and passing ideas back and forth. Peter was a font of knowledge and I learned much from him.

He also told of his own history. How many knew that in his early days he lived in rural Argentina or that his father was a decorated WW1 pilot? Later, during his own days 'in the service' in Aden and other postings, he further developed his passion for designing and making models. The fund of stories from that time was a deep well of humour, both of service life and model flying. Photography was another of his life-long interests and he was latterly involved with an online image sharing group where his input was well received. Settling in the family home for the rest of his life and working locally until his retirement, Peter's output of models, plans and articles never stopped. In fact, we had discussed his next project just days before he was taken from us.

Never one to 'suffer fools', Peter could be prickly at times and by his own admission, curmudgeonly. Some of his views and comments were sharply observant of his fellow man, a trait I found refreshing; a man with a distinct 'take' on life that was rarely diverted.

For those of us that knew him, we will all have our distinct memories to remember him by. Others worldwide will see his body of work and marvel at his output whilst enjoying his model designs for many years to come, all eminently flyable, just as he designed them to be.

By coincidence, my own building board has a Miller/Schumacher design in process. 'The Big Ship' was a Miller favourite and just a few weeks ago he had given his seal of approval to my enlarging the design to become 'The Bigger Ship'. Thank you, fella, I'm going to enjoy this one!

Peter remained a single man and to my understanding leaves no heirs. His last page has turned, leaving us with his body of work to remember him by. Like so many others around the world those of us that knew him will mourn his passing and I hope his new self-designed wings do him proud.

Fair weather and safe landings, Peter!

TAILSKID

With the Rossiten to repair and the Allen A-4 to test the workbench needs something to cover the somewhat scarred building board with a plan, materials, shavings and dust. I've recently had several less-than-well-known aircraft 3-views enlarged in an attempt to kick-start my atrophied brain into some form of action.

What planes are they and what will I do with them? You'll see something arrive on these hallowed pages, but just what curious aviatory device it might be I'm afraid you'll have to wait and see.

Send me an email: **Coetquidan@yahoo.com**

USEFUL LINKS

Mounty 2 kit
https://www.wing-tips.at/Portraet/Modelle/modelle.htm

Easy 2 kit
https://craftyproducts.co.uk/collections/all
https://www.densmodelsupplies.co.uk/

Hiesbok
https://www.hiesbok.cz/

RC-S100neo doesn't come with superfluous leads, just a manual and an AC power cord (not shown).

OVERLANDER RC-S100neo

Barry Stevens upgrades to a new balance charger

Words **Barry Stevens** Photos **Barry Stevens, Kevin Crozier**

One of my workhorse chargers is the Overlander RC-S65 which is a forerunner of the RC-S100neo being reviewed here. The RC-S65 has provided sterling service over recent years and the only thing I can really find fault with it is that it is limited to charging up to 4S LiPo packs. This really covers the bulk of my packs so is not a huge problem but with recent forays into 5S and 6S powered models I welcomed the chance to test this new 'neo' unit from Overlander which can charge those extra couple of lithium cells.

OUT OF THE BOX

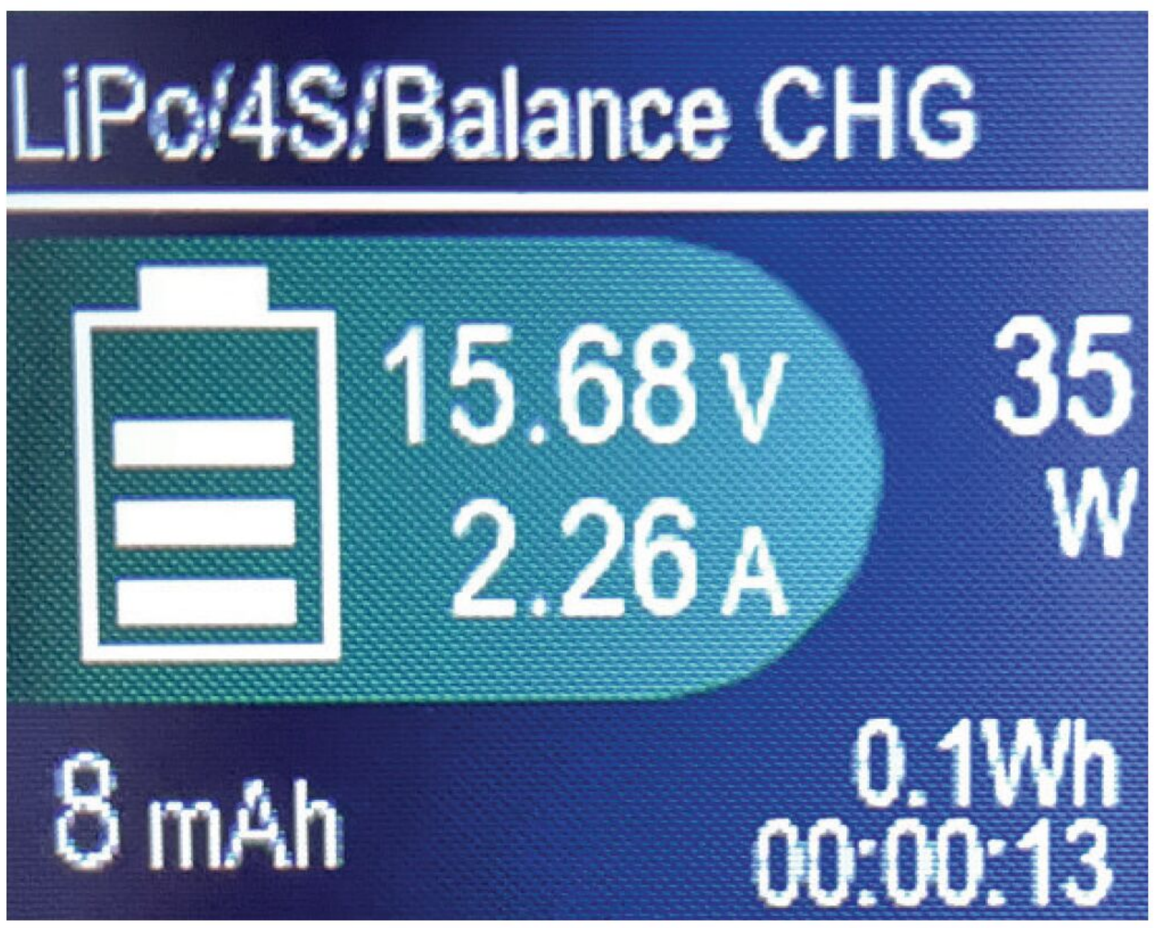
Gone are the days when chargers were supplied with a variety of charge leads. This one simply comes with an AC power cord and an instruction booklet. That's no bad thing in this more environmentally aware era as for many users a lot of those leads were of the wrong type and ended up in one of those rarely opened plastic tubs of bits and bobs that we all have cluttering up our sheds and workspaces. Over the years most of us gather our own collection of cables fitted with our favourite connectors so it makes sense for the charger manufacturers to cut back on those often-unwanted leads. However, if you do find

Front panel showing, from left to right, the temperature probe port (Ni packs), balance lead port (Li packs), main output port and the USB-C firmware port.

Rear panel incorporates an efficient cooling fan with AC and DC inputs on either side.

Most modellers will use this versatile charger to keep their LiPo power packs and NiMH radio packs in good condition.

Menu access and selection is via a neat roller button.



Home screen has a battery icon showing the status of an attached battery pack. The icon turns red when discharging so don't panic when you first see it - it's not a warning light!

"I much prefer to use a balance board to avoid putting any strain on the pack's balance connector"

that you need a specific type then it's worth looking at the Overlander website where you'll find a wide selection fitted with all the common connectors: **https://www.overlander.co.uk**

TALKING OF LEADS

The main output of this charger, located on the front side panel, is in the form of an XT60 male connector. So, you'll need to use charge leads fitted with XT60 female connectors or a suitable adapter if you have a collection of, say, 4 mm lantern leads.

The balance lead receptacle is of the commonly used XH variety and it can be used with up to 6S balance leads. You can either plug in your LiPo directly if fitted with an XH lead or use a balance board (not supplied) for connecting other kinds of balance leads. I have several EH packs, so I have a suitable balance board close to hand if charging one of those. Even with XH equipped LiPos I much prefer to use a balance board to avoid putting any strain on the pack's balance connector, either at the connector itself or internally underneath the LiPo's heatshrink covering.

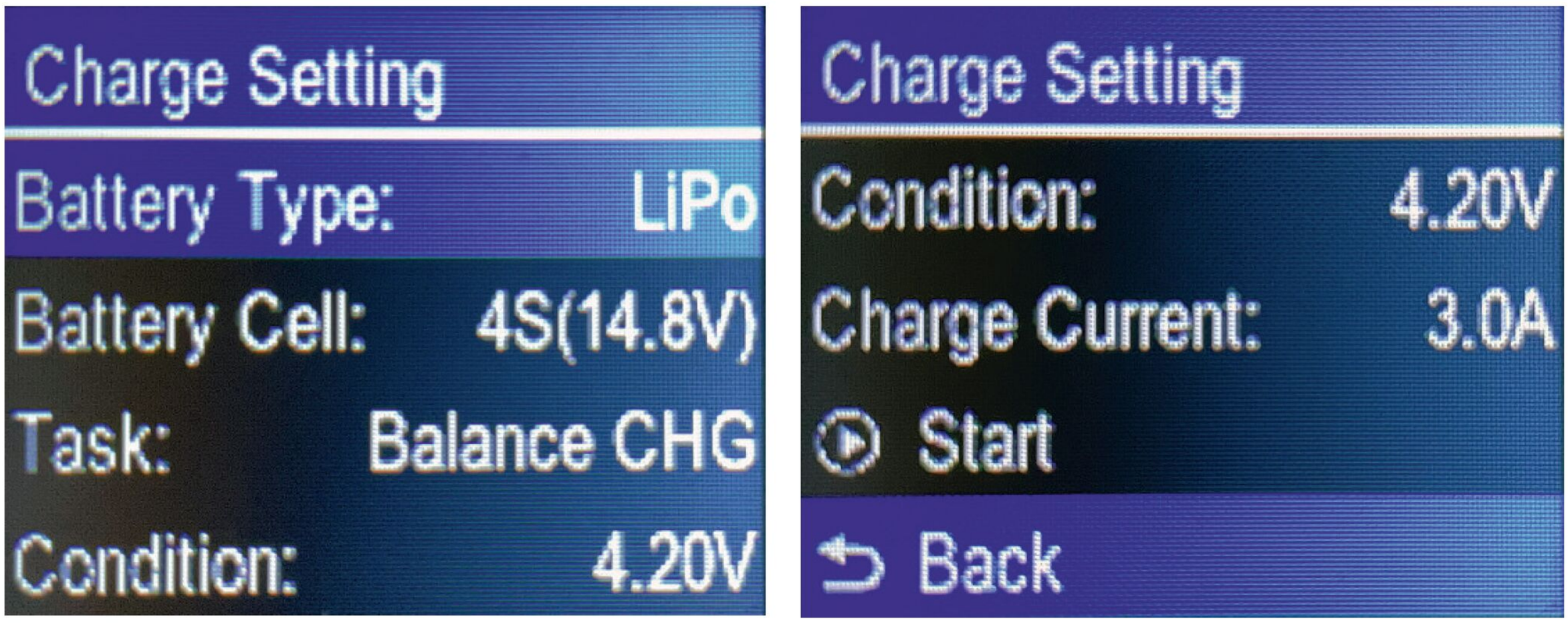
Next to the balance connector on the front panel is a servo style input for fitting a temperature probe. This enables the setting of a cut-off temperature when charging either a NiMH or NiCd battery pack, although most people simply trust the Delta Peak function of modern chargers to stop the charge process of their nickel chemistry packs.

A further connector, located to the right of the main XT60 output, this time USB-C, allows for connection to a computer for firmware upgrades.

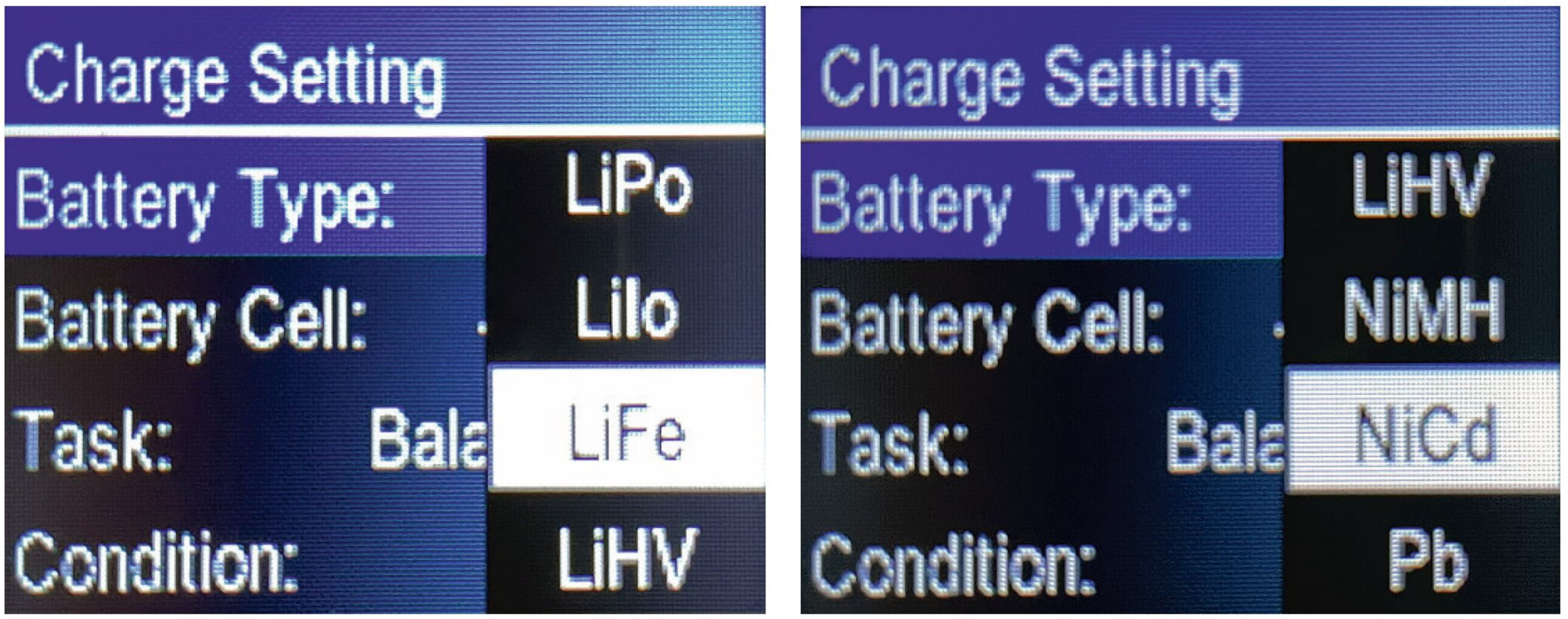
POWER IN

At the back of the case is found the AC 100-240 V mains input for plugging in the supplied power cord. Alternatively, you can use the XT60 male connector situated on the other side of the cooling fan to connect to a DC source of between 6 and 30 volts.

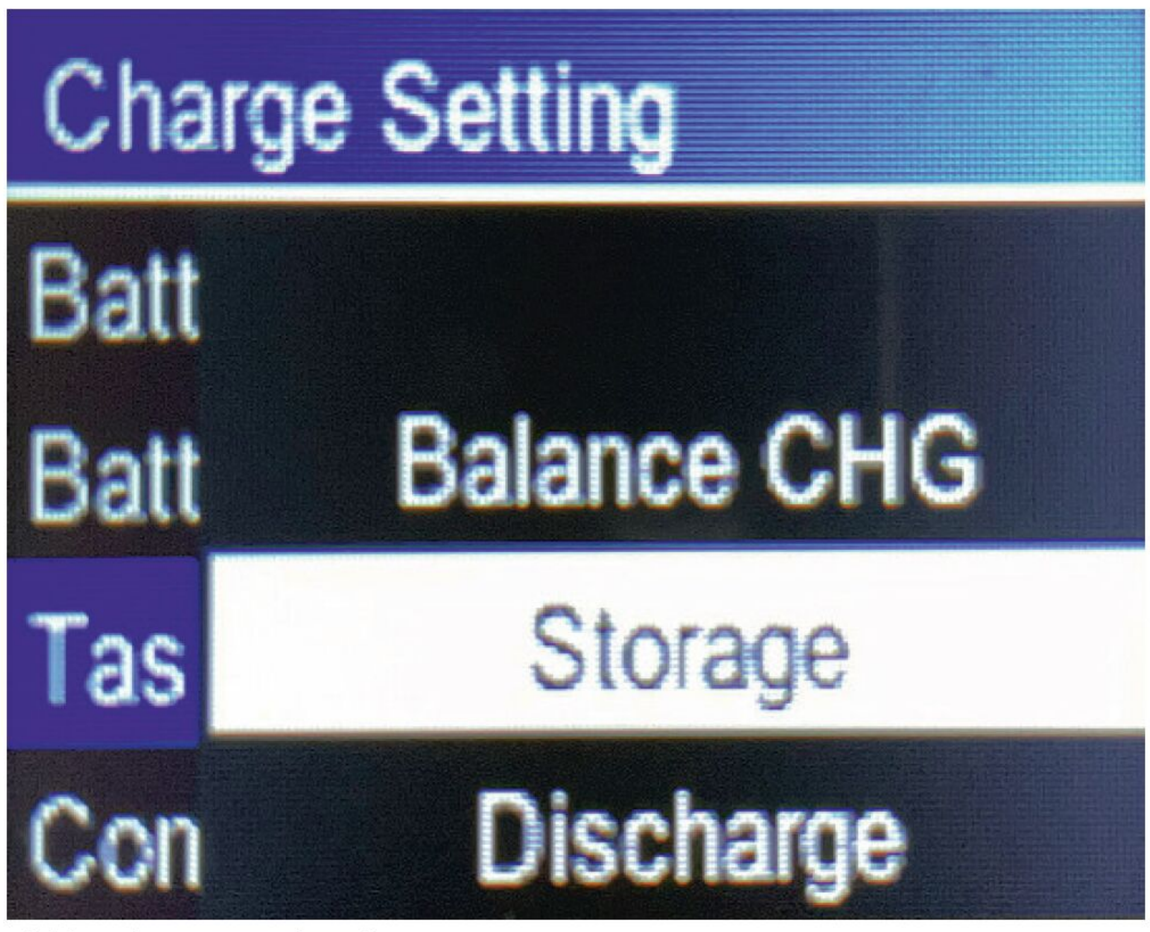
Charge power of this unit is 100W with AC or 200W with DC.



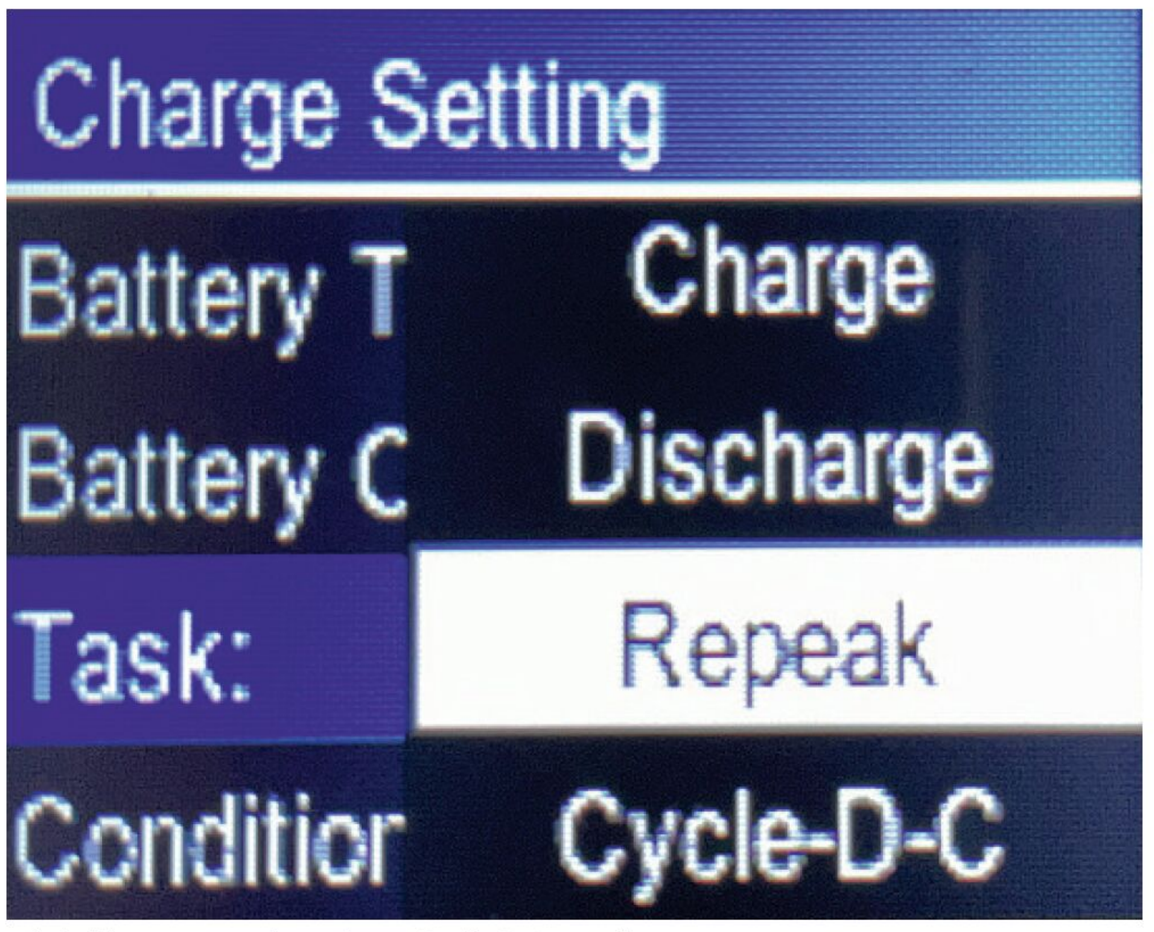
Full list of Charge Settings.



Full list of Battery Types.



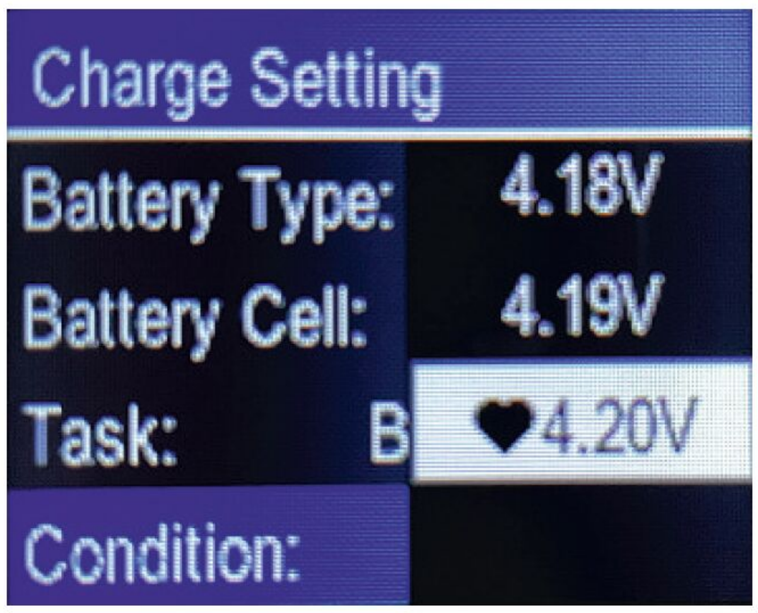
Lithium battery pack options.



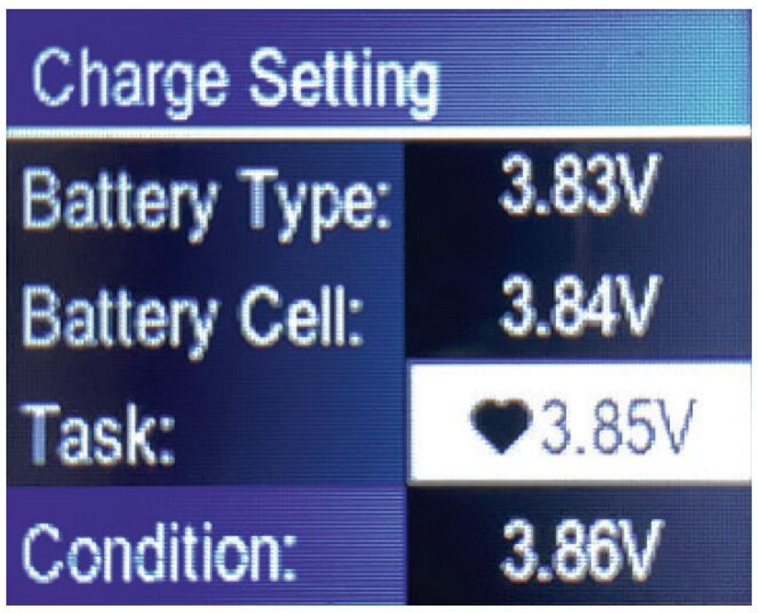
Nickel battery pack options. Cycle C-D not shown.

LET'S CHARGE

This charger has a few additional functions up its sleeve, but most people will want to use it for charging flight and radio packs. It can support LiPo, LiIon, LiFe and LiHV batteries of 1 to 6S configuration as well as NiMH and NiCd batteries of between 1 and 15 cells. It can also charge Pb batteries, including AGM and Cold Charge options.



This handy heart icon shows the recommended cell end voltage when charging a LiPo.



The neo's heart icon also pops up next to the recommended storage charge voltage.

Access to the menus is via a simple roller button. This needs to be used with a bit of care as it is quite sensitive and it's very easily to rotate it too quickly and whizz past the setting you require. Selection of a setting is made by pressing down the roller button.

When powered up the home screen shows the current state of an attached battery pack in the form of a stylised battery icon with internal bars that either fill up as it is charged or fall as it is discharged. The icon is blue when charging but changes to red when discharging.

From the home screen, pressing the roller brings up the *Charge Setting* menu. The top setting is *Battery Type*, as per the list at the top of this section. Scroll and press to select.

Next is *Battery Cell*, however the neo seems pretty good at detecting the number of cells, so this is already set in most instances. But you should always check it and change if necessary. The example shown is for a 4S LiPo.

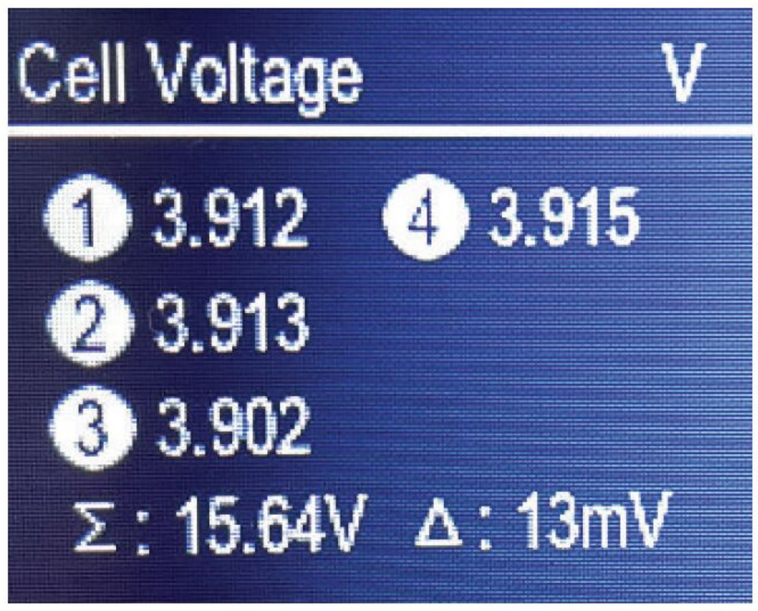
Task is the next setting and for Lithium chemistry packs this is simply a choice between Balance Charge, Storage or Discharge. For Nickel based battery packs you can select Charge, Discharge, Re-peak or Discharge/Charge and Charge/Discharge cycles. I still use NiMH packs to power the R/C gear in most of my models, although I have recently started using two LiPos via PowerBox switches for bigger aircraft. So, for me, the NiMH Charge setting is well used, however I always use a battery monitor that applies a load to the pack to check that it is fully charged. Occasionally the lights on the monitor do not turn fully green when the load is applied so this is when I use the Re-peak function to ensure that the battery is fully charged. A short Re-peak is often all that is needed to put my mind at rest. If you haven't got a battery monitor with a load function, then do get one to test your R/C packs before flying – they are worth their weight in gold!

Fourth in the list of Charge Settings is *Condition*. For Lithium packs this is the voltage per cell at which you want either a charge or a storage session to stop. Whilst you can choose your own preferred voltage from the drop-down list the neo gives a neat indication of the recommended end voltage for a battery being charged or put into storage in the form of a heart symbol placed next to the relevant setting. For a LiPo this is 4.2 V when charged or 3.85 V when the cell is being put into storage. You can change either value, but this is a very handy visual aid for those new to charging modern battery packs. For Nickel chemistry packs the Condition changes to the Delta Peak value, shown in millivolts (mV). The heart symbol appears next to the recommended setting but is, again, user adjustable within the limits of the drop-down list.

The final Charge Setting is *Charge* or *Discharge Current*. This is, again, adjustable but I tend to stick to my favourite settings of 1C for LiPos and 0.4A when charging my NiMH radio packs.

It takes a very short time to check the recommended settings or to change any values if required. The *Start* function can then be selected and your chosen charge, storage or discharge function will begin. Whilst the neo is working the display can be changed to show the individual Cell Voltages of a LiPo. A further roll of the dial brings up the Internal Resistance (IR) of each cell. If you take a regular note of the IR values then it quickly becomes apparent when a pack is starting to lose performance, probably before you notice it in flight. This takes on extra importance if you use the same LiPo to power your model's radio gear too.

As you would expect from an up-to-date charger the LiPos I have charged and then returned to storage charge have all been efficiently processed. When double checked on my battery monitor the cell values have all balanced closely together. However, my battery monitor is cracking on a bit so it's probably more accurate to trust the charger readings!



Battery Monitor function can be accessed by rotating the roller whilst charging or discharging. It will also work when the unit is unplugged. Simply insert a balance lead and the screen will light up to show the status of the attached pack.

Internal Resistance (IR) of each cell can be measured but you'll need to have the unit plugged in to access the Battery Resistance Meter.

ADDITIONAL FUNCTIONS

One of these is using it as a standalone battery monitor. It does not need to be plugged in to do this so simply insert a LiPo balance lead into the balance port to see the individual cell voltages.

It can also be used as a 2 – 30 volt DC power supply, during which it will automatically switch between constant current and constant voltage modes.

Lastly, if a brushed electric motor is connected to the main output port, then you can call up the DC Motor Run-In function to slowly bed in the brushes of a new or refurbished motor. When my sons were racing R/C cars in pre-brushless days this would have been invaluable to ensure that any new brushes were optimised for best performance, but I'd struggle to find a use for this for my model aircraft these days. However, brushed motors are still popular for some forms of modelling, especially marine models.

FINAL THOUGHTS

So, there we have it. Overlander's RCS100neo is a thoroughly modern, single output, AC or DC powered charger. It will reliably charge all the popular battery chemistries used by aeromodellers and it also has very useful battery and Internal Resistance monitoring functions too. It is priced at a very reasonable £49.99.

I'll be using this one alongside my old Overlander RC-S65 and I'm sure it will give the same level of sterling service we've come to expect from products supplied by this much-respected modelling company. ■

"If you take a regular note of the IR values then it quickly becomes apparent when a pack is starting to lose performance"

OVERLANDER® BATTERIES

EXPERTS IN CHARGE!

Find us online & be the first to find out about our offers:

Overlander Batteries

OverlanderBatts

UK'S LEADING MANUFACTURER FOR RC BATTERIES SINCE 1975.

LIPOS

SKU: 2567

2200mAh 11.1V 3S 35C **£17.99**

Overlander brings the buzz with our thrilling range of LiPo batteries! From tiny twirlers to grand UAVs, we've got the juice for every gadget in your arsenal. Packed with premium Fullymax cells, our batteries promise top-notch performance and durability!

NIMHS

SKU: 2866

2000mAh 4.8V 4S Eneloop **£19.99**

Charge up the excitement with our NiMH battery packs, ranging from the sleek 2/3AAA to the powerful SubC! Whether it's aerial flips or endurance runs, you can count on our Premium Sport, Low Self-Discharge (LSD) and Panasonic Eneloop packs.

LI-IONS

SKU: 3117

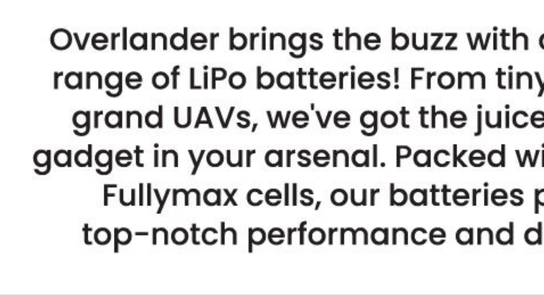
2200mAh 7.4V 2S Samsung **£17.99**

Explore our array of packs, featuring 18650 and 18500 cell sizes from renowned manufacturers such as Panasonic and Samsung. We're committed to going beyond the standard, providing customised pack builds tailored to your unique requirements.

What's New?

Explore the newest arrivals in our LiPo battery collection.

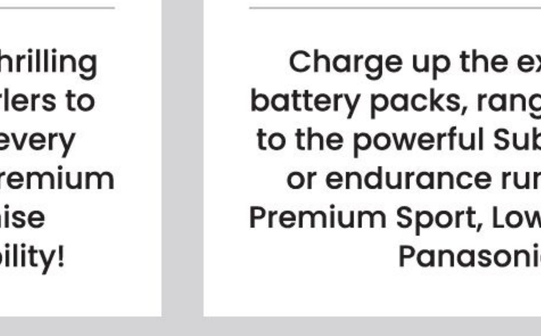
500mAh 7.4V 2S 80C LiPo



Ideal for miniature fixed-wing aircraft and mini drones or quadcopters.

SKU: 3507 **£9.99**

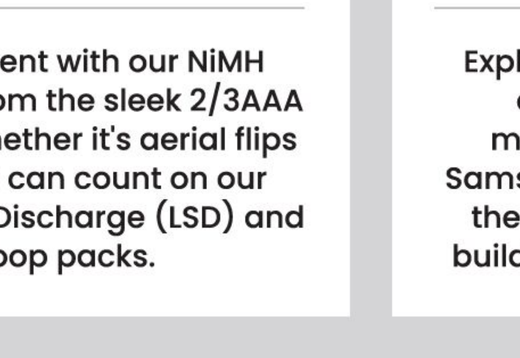
350mAh 11.1V 3S 40C LiPo



Perfect for small drones, helicopters, airplanes and gliders.

SKU: 3545 **£9.99**

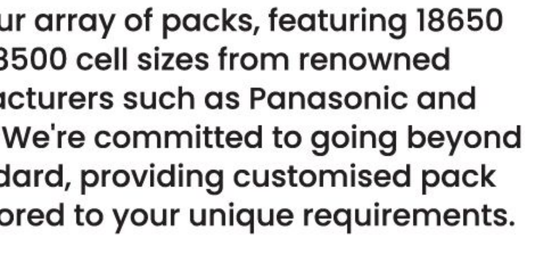
4000mAh 7.4V 2S2P Digi-Power LiPo



Specially constructed with a JR connector for receivers and servos.

SKU: 3533 **£33.99**

650mAh 11.1V 3S 50C LiPo



Suitable for miniature aerobatic airplanes, racing drones and FPV quadcopters.

SKU: 3546 **£11.78**

Unit 1, Jesmond Dene, School Lane, Forton, Preston, Lancashire, PR30AT | 01524 793328 | support@overlander.co.uk | www.overlander.co.uk

Power Unleashed!

Charger Collection for Optimal Performance

RC-S100neo

£49.99

SKU: 3625

1-6S LIPO
1-15S NiMH

100W

12A

NEWEST ADDITION

The RC-S100neo is the newest addition to the Overlander charger range. It offers 100W AC and 200W DC power with a charge current up to 12A. It supports a wide range of batteries, including LiPo, Li-Ion, LiHV, LiFe, NiMH, NiCd and Pb. Compact and portable, it features advanced modes like balance, storage and fast charge, plus built-in safety protections. Perfect for home or field use, it's the ultimate solution for fast, reliable charging.

RC6-VSR

£49.99

SKU: 3129

1-6S LIPO
1-15S NiMH

80W

7A

BEST SELLER

Power up the fun with this 80W, 7A AC/DC charger! It's your top pick for charging all your favourite battery types. Featuring charge, discharge, balance, storage, and fast charge modes, it's the epitome of versatility and efficiency. What's more, it's loaded with safety features, including capacity, temperature, and time limits. It comes complete with a range of leads for various connectors, ensuring it's all set to team up with a diverse range of batteries.

VSRmini

SKU: 3249 **£34.99**

A compact 60W, 6A AC charger for 2-4S LiPo and 6-8S NiMH. Small in size, yet mighty in performance, it's your trusted companion for efficient and dependable RC battery charging.

RC-S65

SKU: 3394 **£37.99**

A sleek 65W, 6A AC charger for 2-4S LiPo and 6-8S NiMH. Packed with dynamic balance charging and top-notch safety, it's your compact powerhouse for peak RC performance.

RC-3S

SKU: 2913 **£16.99**

Super compact 12W LiPo Charger for 2-3S batteries. Equipped with an LED indicator a built-in JST-XH balance port and provided with a setting card for effortless use. Simplify your charging experience!

Overlander Industrial

Join us to bring your unique ideas to life! No project is too small for us.
We thrive on collaborating with innovators and DIY-ers who are passionate about their custom projects. We specialise in crafting bespoke battery packs using a variety of cell types, including LiPo, Li-Ion, LiFePO4, NiMH and alkaline.

45 years experience

UK-based support

Quality guaranteed

Get in touch today, and let's explore how we can work together to power your project dreams into reality.

Scan to explore our custom battery service website

Powering your innovation **www.overlanderindustrial.co.uk**

All Write

Have your say in RCM&E's monthly chat room

Top letter

For his letter this month Philip Williams wins a compact e455 multi chemistry AC input charger courtesy of Overlander Batteries: www.overlander.co.uk

COPYRIGHT & PRO-PLANS

Thanks again for another super issue of RCM&E for October '24. The two bombers featured, the Handley Page Halifax and the free plan for the Boulton Paul P-75 Overstrand, both little modelled subjects, were both wonderful to see.

On the allied subject of the free plans, I did notice the addition of a little copyright notice box listing blanket copying exclusions without the 'prior permission in writing from the publisher'. The technique of printing the plans on both sides of the sheets, indeed that of splitting the large assemblies onto both sides of the sheet, does give rise to problems in the utilisation of these plans. I have now checked a number of these drawings and in no case can the missing part be cut out from the back of the plan without destroying a large chunk of the front part.

Now, our modern resource is the local plan reproduction shop. Here a couple of full-size photocopies will enable one to piece together a full building plan of your subject model, together with a set of part templates. However, my local copy shop staff are sticklers for compliance with copyright and they will not unofficially copy material covered by copyright declarations. This means that in their supplied form, for me, your rather tempting plans are quite unusable.

So, does Mortons Media intend that every RCM&E reader will have to gain 'written permission' in order to actually use the free plans in our magazines. If so, at what cost, and how far does this 'written permission' extend - one stated plan or all future plans.

Bearing in mind that for a builder no more than two copies would be needed to sort out a viable building drawing then this wide-ranging exclusion feels like a rather nasty little sting in the tail. I hope I'm wrong.

Philip Williams

Thank you for your message, Phil. I will ask Mortons legal team for their advice, as you raise a very fair point.

To be honest we rarely hear of problems about copyright regarding our plans - sadly many people just flout them and go ahead anyway - but we should be thankful that your copy shop has checked and is sticking by the letter of the copyright statement on our pull-out Pro-Plans.

Also, with home printers with flat top scanners being so common these days, I guess most builders just copy the parts they need to copy on their printer, so we don't hear anything about it. But I appreciate that is a bit of a faff with larger assemblies.

Anyway, please let me see what my more knowledgeable colleagues at Mortons HQ think and I'll let you know what they say...

RCM&E's Publisher, Steve O'Hara was soon back with a reply:

Basically, where someone has purchased an edition and wants to photocopy the plan for personal use, we have no issue with that.

The copyright statement below just protects Mortons Media against someone distributing or making money without our agreement:

PLEASE NOTE, THIS PLAN IS COPYRIGHT OF MORTONS MEDIA GROUP LTD. NO PART OF THIS PLAN MY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR ANY INFORMATION STORAGE RETRIEVAL SYSTEM WITHOUT PRIOR PERMISSION IN WRITING FROM THE PUBLISHER.

So, Phil, if you or any other reader show a copy of this page to your local print shop then, hopefully, they will copy the plans for you.

KC

ELMBRIDGE VIP

Great coverage by Dave Ashby of Elmbridge Model Club's Family Day (Elmbridge at 50, November 2024). As a bit of background, Air Vice Marshal Clive Evans was in attendance as he had a certain interest in John Simpson's Canberra. He actually flew the plane that John's model was based on.

James Bishop

TWOTTER TIPS

I have just read your flying review in the December 2024 issue of the XFly Twotter on floats (Twin Otter). I have flown as a passenger in one on the scheduled Loganair service to and from the beach at Barra (a recommended trip!) and so I too bought that model. I didn't try it on wheels; mine was straight to floats. I removed the nosewheel mounting and made a balsa cover for the hole. It does indeed fly very nicely. I had an untidy splashy landing like you described and one motor conked out for a couple of days, but it came back after drying out.

Two comments:

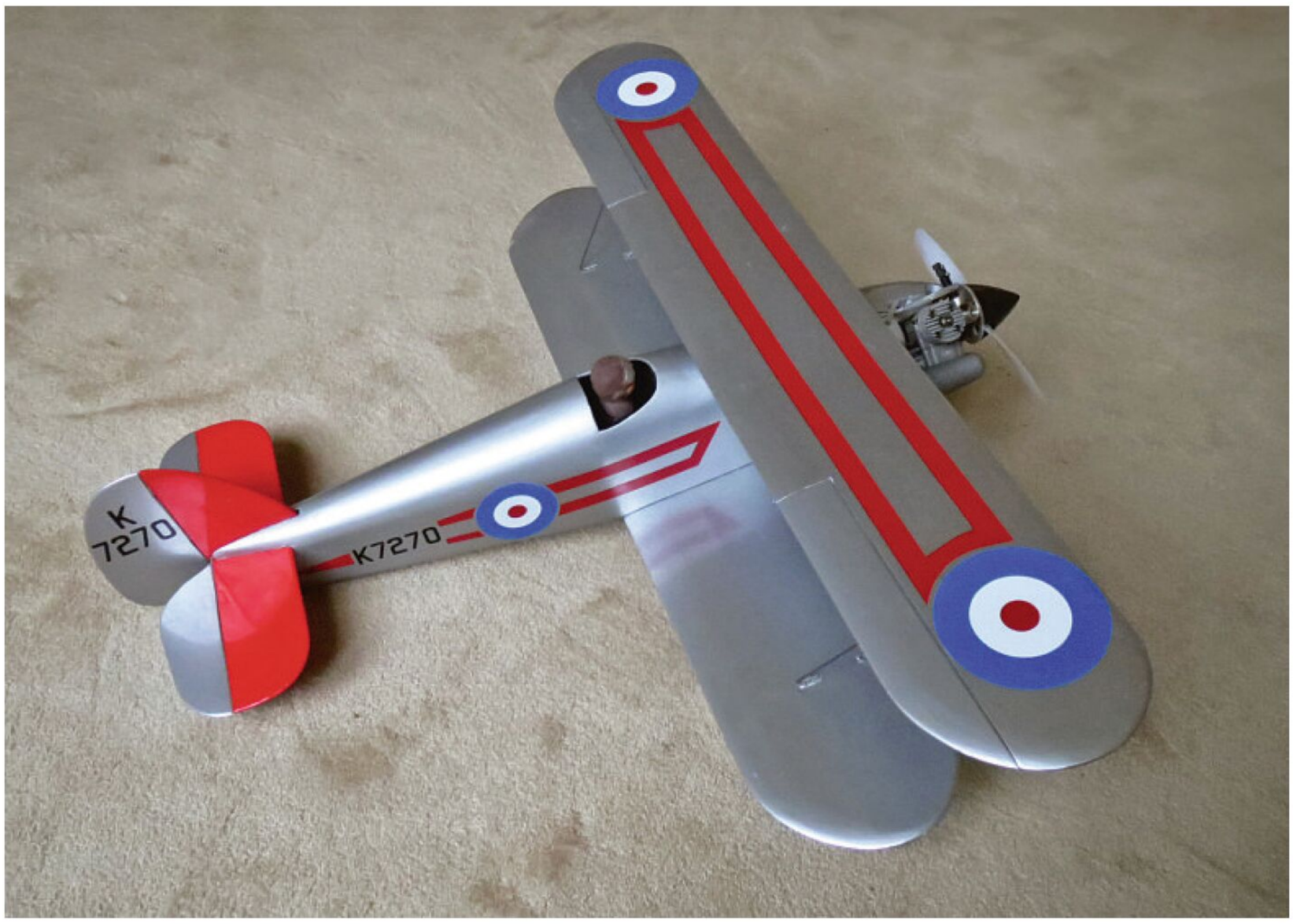
I mixed rudder into throttle and the water handing is much improved. Left rudder opens the right engine a little and right rudder opens the left motor. Great for stall turns too!

I tried it on 5S and it flies very well, being much more scale-like and still with plenty of power.

Alasdair Sutherland

kcrozier@mortons.co.uk

FURY STILL FLYING



I'm told that there is a picture of one of my old designs, a Hawker Fury, in the latest RCM&E that has been 'electrified' (All Write, November 2024). I thought readers might be amused to learn that the original still exists! After flying it around for a while with an MDS18 up front, more to try out the engine than anything else, in late 2020 I decided to refurbish it and fit ailerons using tiny servos that were unavailable back in the day. This was done by February 2021 but apart from a ground test I'm ashamed to say that I lost interest and left it to collect dust.

Apparently, last month my Teeny Trainer design was also mentioned in an article and this gave me a chuckle as I'm in the process of building one, modified for mild aerobatic performance, again with tiny servos and ailerons, to test a number of 1.5 cc engines I have in my collection. This time the original bit the dust many years ago. Small world!

John Rutter

TWICE SCALE TOPPER

I've been busy lately making scale gliders but not quite the usual type...

The scale is 2:1 and the originals are small Keil Kraft gliders from the 1950s. Specifically, the Comet 24" chuck glider and the Topper, a 40" towline job.

I've built the Comet in its original size with rudder/elevator and it flew so well from the slope that I decided to try a twice size version, hence 2:1 scale. That's now also flown and very well too.

ToppeToo is roughly twice the size of the original and is a great light wind floater with its 6 oz loading.

In contrast, I've also built a Veron Cirro-Sonic, which refused to respond to the rudder at all.

Keith Thomas

Thank you for sending details of your enlarged KK builds, Keith. Your message came to us via our Scale Gliding columnist, Chris Williams, and we thought our readers would like to know more about them. You also told Chris about radio conversion and enlargements of other classic free flight glider designs so please do send in details of those models too.

KC

LIPO SAFETY

Having just read the letter in the latest edition of RMC&E regarding fully discharging defective LiPo batteries, here is what I do and it seems to work well with no safety issues.

Having converted my inefficient halogen downlighter bulbs for more efficient LED bulbs at home there were quite a few redundant bulbs lying around. I therefore simply soldered two leads onto a halogen bulb's connectors and the appropriate XT60 connector onto the other end. On a dry day, outside away from anything flammable nearby, I simply plug the LiPo battery onto the halogen bulb and leave it until it is fully discharged (the bulb can get very hot). Correct me if I am wrong but I assume it would now be fully safe to be disposed at the appropriate battery container at the local council tip.

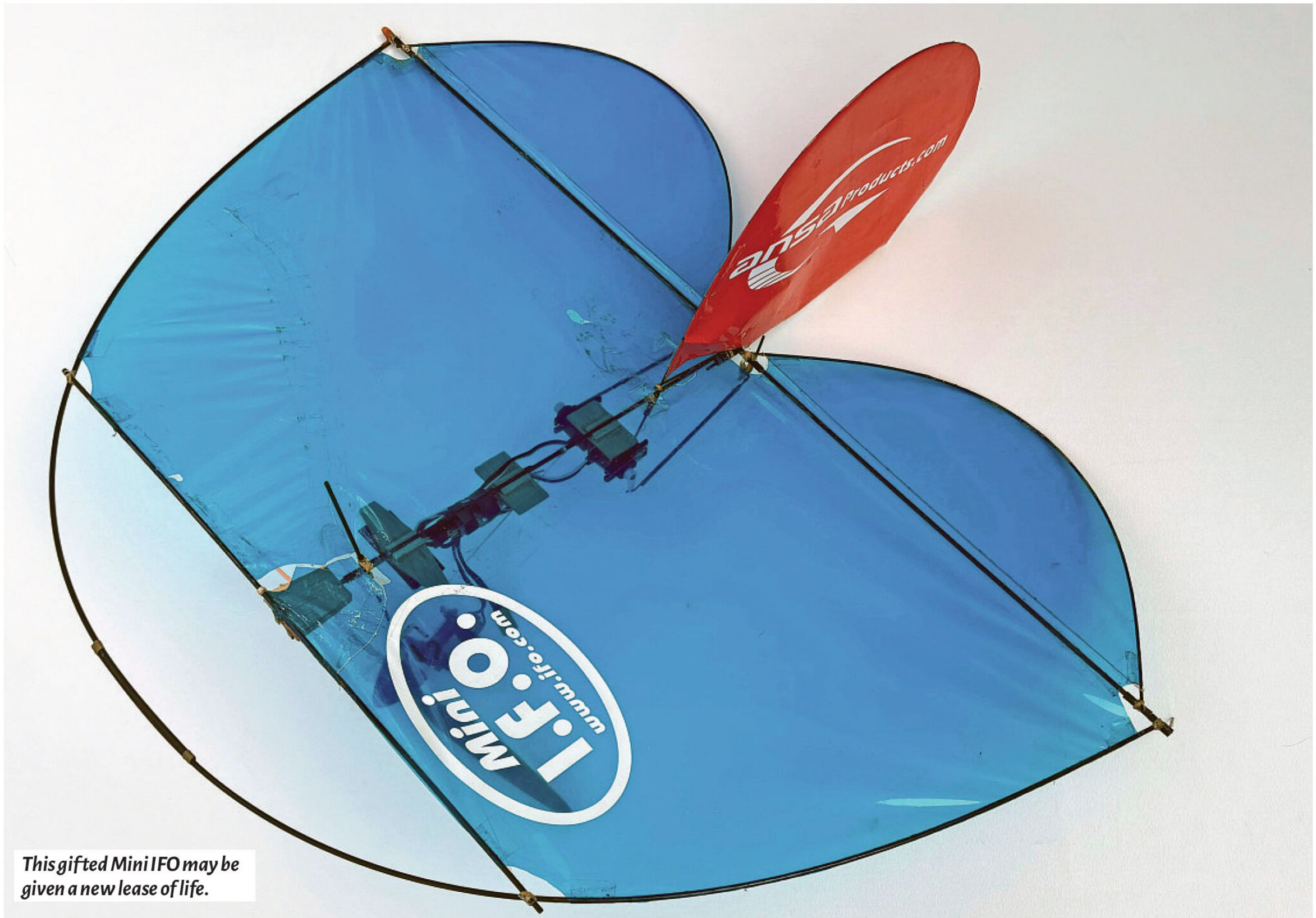
Whilst on the subject of LiPo safety, an incident at our club site highlighted the potential dangers whilst handling charged LiPo batteries. A member was using an electric engine starter when the hook & loop attached LiPo came adrift and was caught and cut by the propeller blade. It immediately caught fire. He quickly threw it away to a safe distance from anyone where it continued to burn vigorously, emitting huge volumes of noxious smoke. A valuable lesson learnt by everyone present on their potential dangers.

John Daunt

Thanks for your thoughts on LiPo discharging, John.

Regarding the use of a LiPo to power an engine starter, I think it would be wise to use additional straps to hold the battery pack in situ and not just rely on hook and look tape to hold a heavy LiPo in place. I am still using twin NiMh sticks to energise my own starter but they are firmly held in place by suitably shaped holders mounted underneath each end of the starter motor. Maybe suitably shaped LiPo holders would be an ideal project for all those 3D printing enthusiasts out there? They probably already exist so if any readers are aware of LiPo battery holders for use with electric engine starters then please let us know.

KC



This gifted Mini IFO may be given a new lease of life.

INDOOR FLYING OBJECTS

This time John Stennard covers a bit of 'retro' indoor flying, plus some up-to-date models and further No-Cal adventures

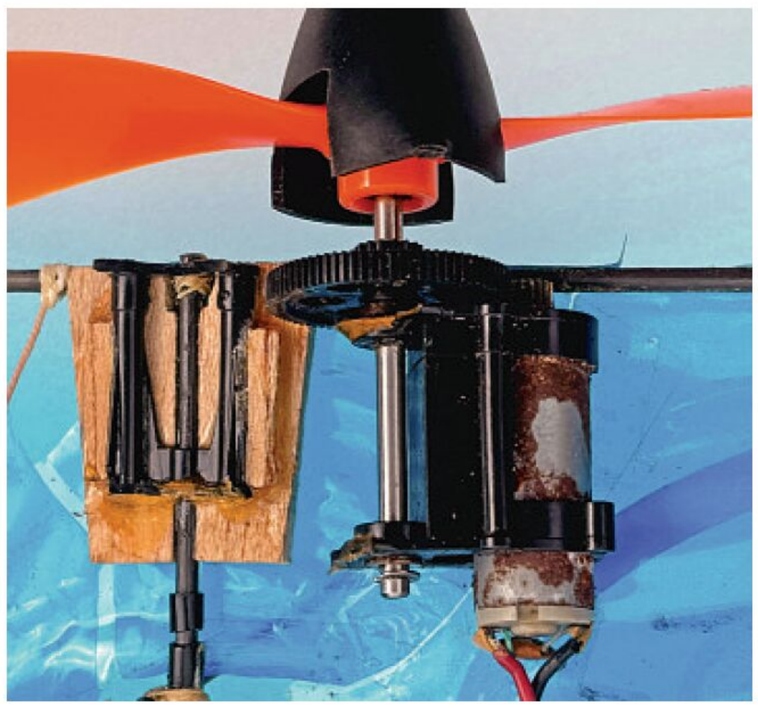
Words & Photos: **John Stennard**

The Wild RC Mini IFO. Yes, or no? The yes or no is whether I spend time renovating a gifted Mini IFO. It requires a new motor to replace the old geared brushed unit, a new receiver, an ESC and some TLC. The servos are bigger than required but could remain and a few bits of covering damage need patching. It will probably be a yes for old times' sake. Just look at the club photo of when the IFO and Mini IFO were the model to have. Basically, the only model safe to fly with IFOs was an IFO and we were flying in a two-court gym!

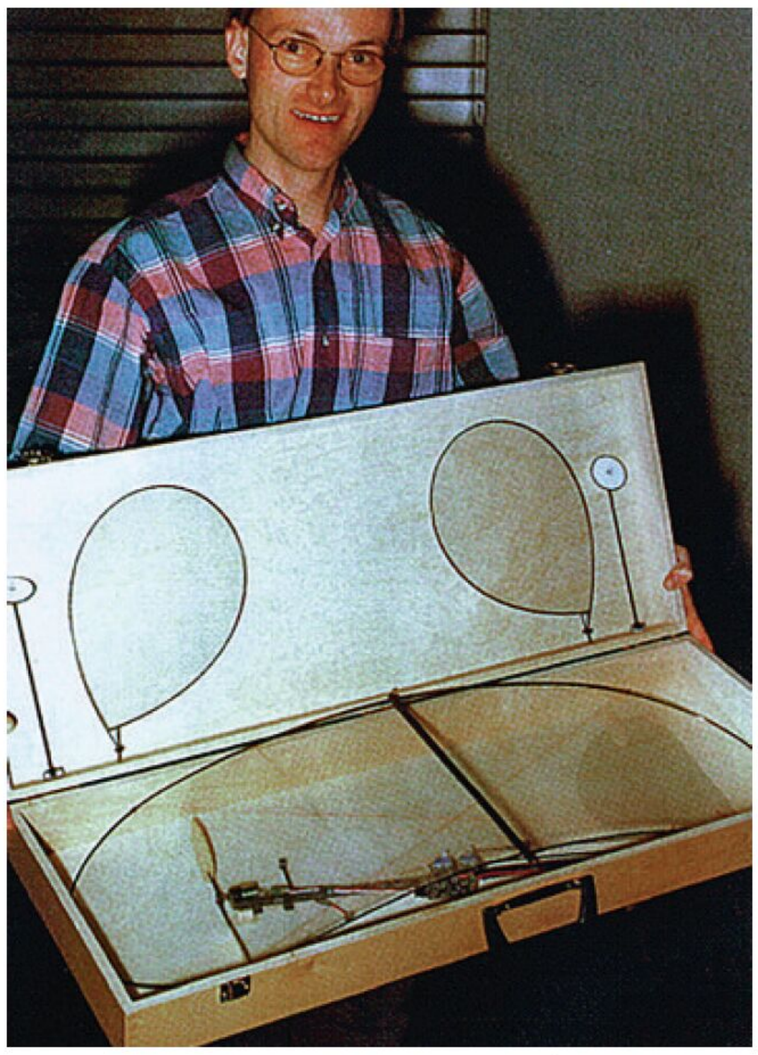
Two models that had a big impact in the early years of indoor flying, both employed a new modelling material for their construction. This was carbon fibre in the form of rod, tube and strip. For covering they employed different materials, with the German Stubenflieger (Housefly) using Mylar and the Wild RC IFO using rip-stop nylon. Both models initially used brushed motors and NiCad or NiMH cells. Later, of course, any modellers still flying them opted for brushless motors and LiPos.

The Stubenflieger was produced by Braun Modelltechnik in Germany and designed by

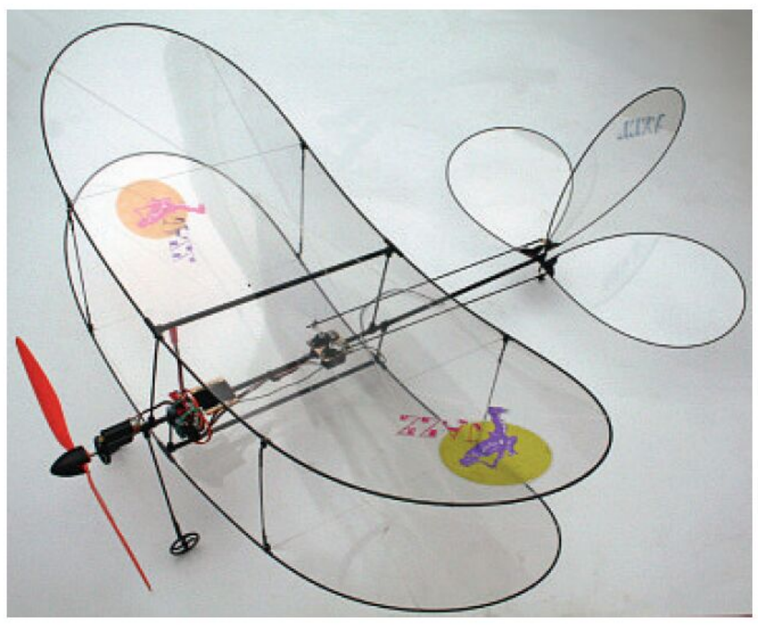
In its day the IFOs were a 'must have' model.



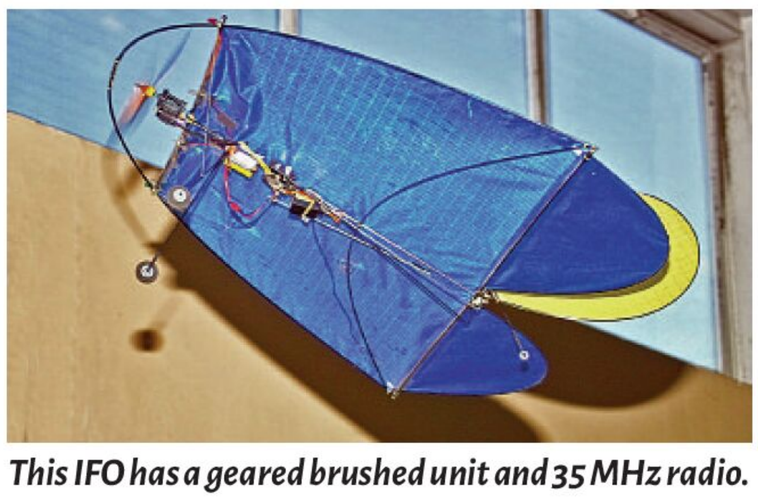
The old, geared motor will definitely have to go!



Designer Stefan and his boxed Stubenflieger.



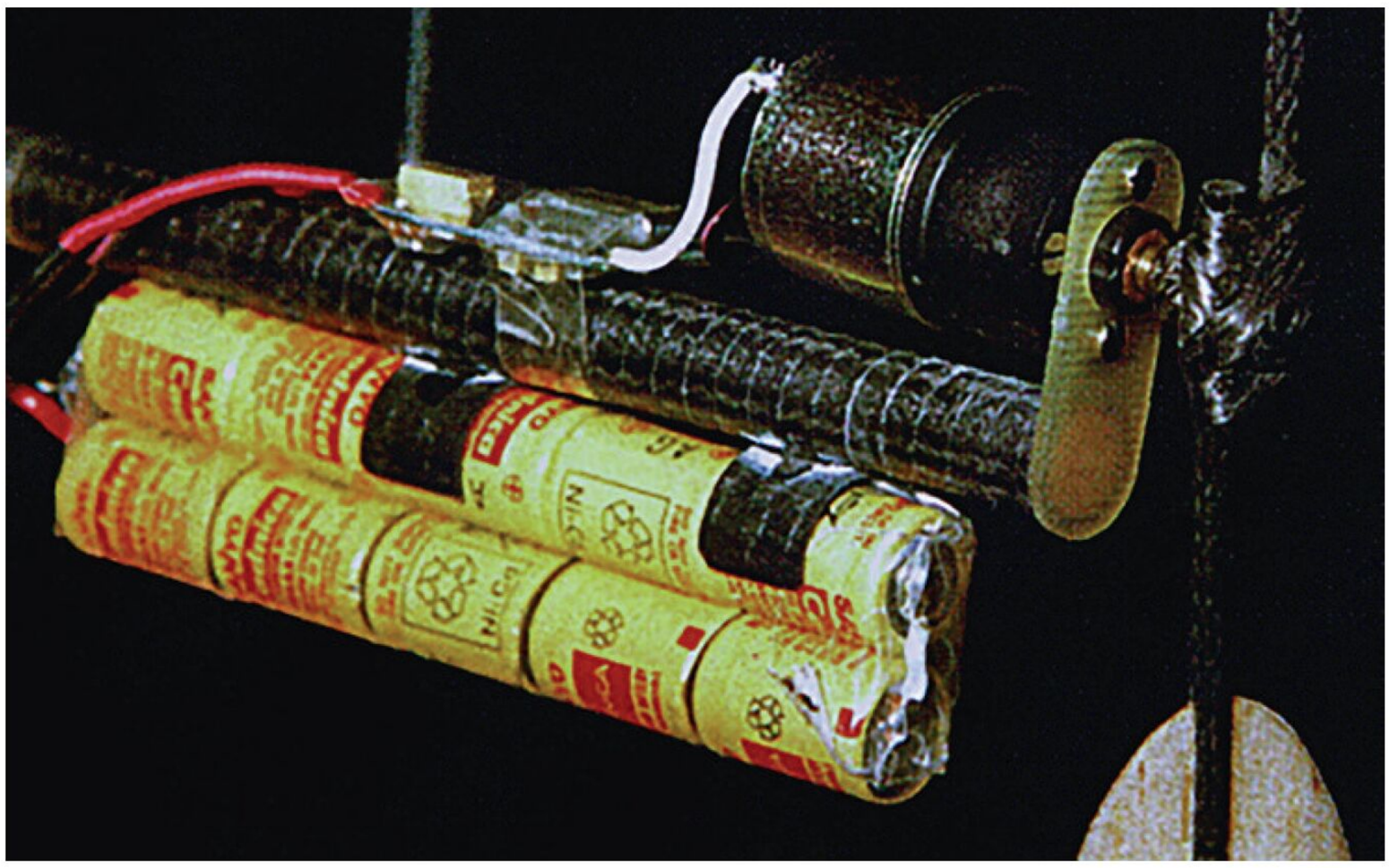
Jazz was one of several designs based on the same construction.



This IFO has a geared brushed unit and 35 MHz radio.

Vom Suppenkasper zur Stuben-fliege

From the original FMT Stubenflieger review.



Special high quality German motor with integral gearing and the Sanyo NiCad battery pack.

Stefan Dolch. He also designed the Maus (Mouse) which used the same materials. While the Stubenflieger was for slow cruising, the all-moving V-tail made it very manoeuvrable. The Maus was extremely aerobatic. The Stubenflieger was expensive and even available in a wooden carrying case. Unfortunately, all my Braun models were before I had a digital camera and I have no photos. Surprisingly, there was little available online but my contact at FMT (Flug-und Modell Technik), the German equivalent of RCM&E, found some photos from the March 1997 issue. A Stubenflieger in the original wooden case came up for sale recently and a high three figure sum was being asked. The basic design has been used for numerous models and I had a biplane version called the Jazz.

The IFO arrived around 2006 from the USA and was the brainchild of Dan Kreigh of Wild RC. The Mini IFO came out later when R/C equipment sizes had shrunk, although my gifted version has the brushed, geared motor. I had an early IFO courtesy of ANSA models and this design became extremely popular. The geared motor with a big prop enabled the model to have wide speed range. Construction involved a lot of CF rod bending, thread binding and gluing. The resulting model was very tough and resilient; however, it did require a different approach to piloting and could be a handful if treated without due care and attention. We would regularly have eight or more flying together with the inevitable results!

Compared to a modern foamy that has a similar performance, like the Nutball, the CF construction was slow and complex, but the flight performance was groundbreaking at the time. I've made micro versions which have flown extremely well but the small size can make piloting stressful as you are adding orientation issues. I've also made smaller examples of the Maus but the same applies. Not to forget the Vapors and similar micro indoor models, of course, where CF rod and mylar are still used to produce very light and agile models.

E-flite F-86 Sabre flies well on a 4S 450 LiPo.

New from Minimum, the Savannah micro EDF can be built for indoor or outdoor flying.

Minimum Hellcat is a not over complex build but needs careful piloting. The cartoon F6F is shown here next to the super scale P-51 Mustang.

> "Unlike the early UMX micro jets the fan in the Sabre sounds very realistic "

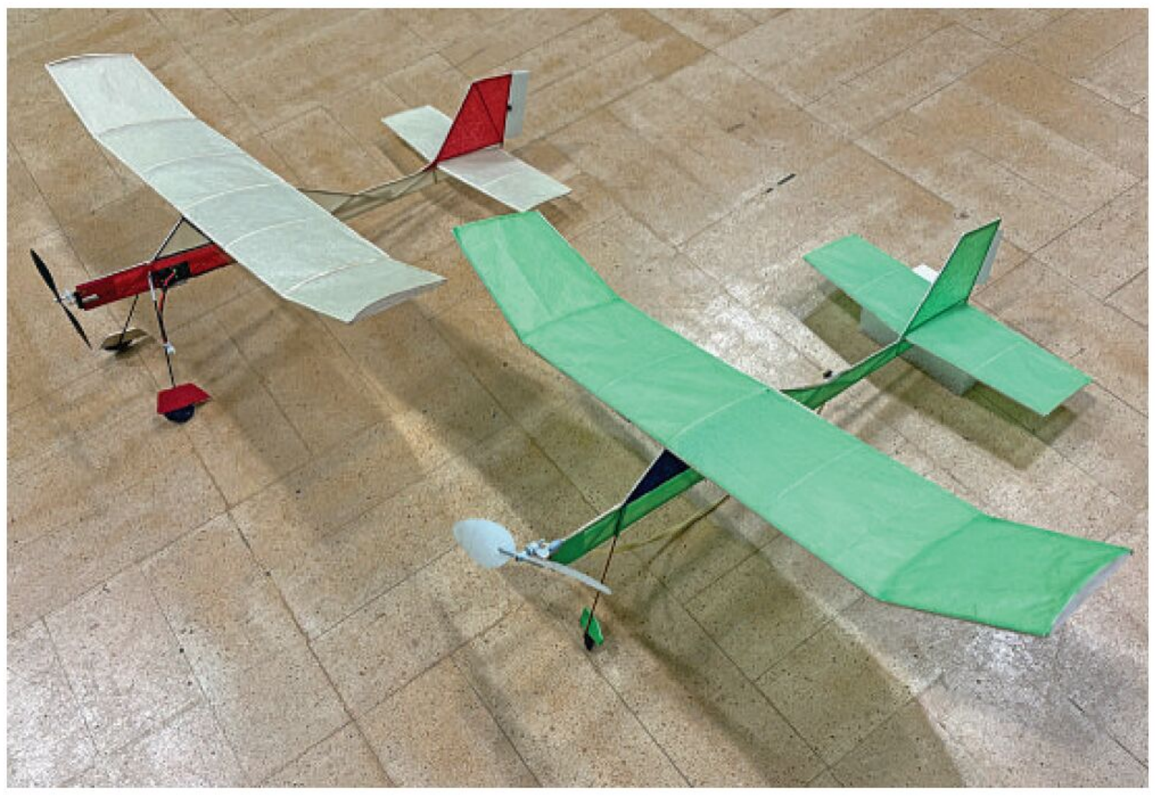
MICRO EDF

There have been a couple of new developments here with the E-flite F-86 Sabre and the MinimumRC Savannah. I have already mentioned the F-86 but now can make a few extra comments as I own one. I hadn't meant to but a combination of the appearance of the Savannah and a good price, plus free postage on the Sabre led me down the Sabre route rather than the Savannah. Kings Lynn came up trumps and I ordered in the afternoon, took delivery the next morning and was flying in the evening! E-flite have a 4S pack available but I already had a couple that I purchased from HobbyRC for use with my Mini-Draco.

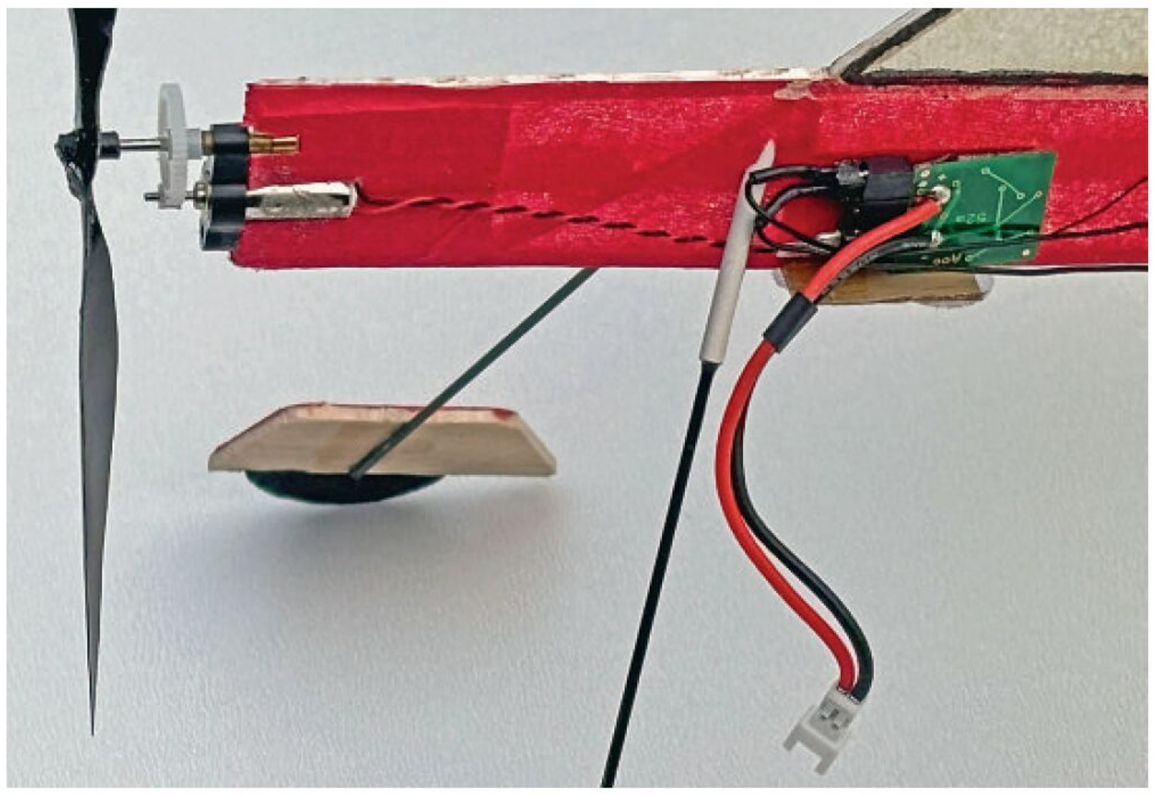
The UMX F-86 Sabre really is a gorgeous little model with a 443 mm wingspan, only 23 mm more than the Savannah. Although it uses the same diameter 30 mm fan, the F-86 has a brushless motor running on a 4S 450 size pack. This gives a flying weight of 169 g and a performance to match. With the right transmitter you get telemetry info on the flight battery state. Other than binding and setting the rates there is nothing to do other than go and fly! I had a quick attempt at a grass take off but soon abandoned this idea, although I reckoned that on well mown, very short grass it might work. After an easy hand launch, she was away, but not as responsive as I had expected. A quick switch to full rates had her zipping around the sky, looping and rolling with ease. However, she is small and in the prevailing light conditions there were opportunities for disorientation.

Three enjoyable flights were made but as a result I removed the undercarriage. I found that landing on our field's surface the U/C was more hazardous to the health and safety of the model than doing a belly landing. Unlike the early E-flite UMX micro jets, which were surprisingly noisy, the fan unit in the Sabre sounds very realistic. However, you won't be flying this model indoors while the MinimumRC Savannah does offer this option.

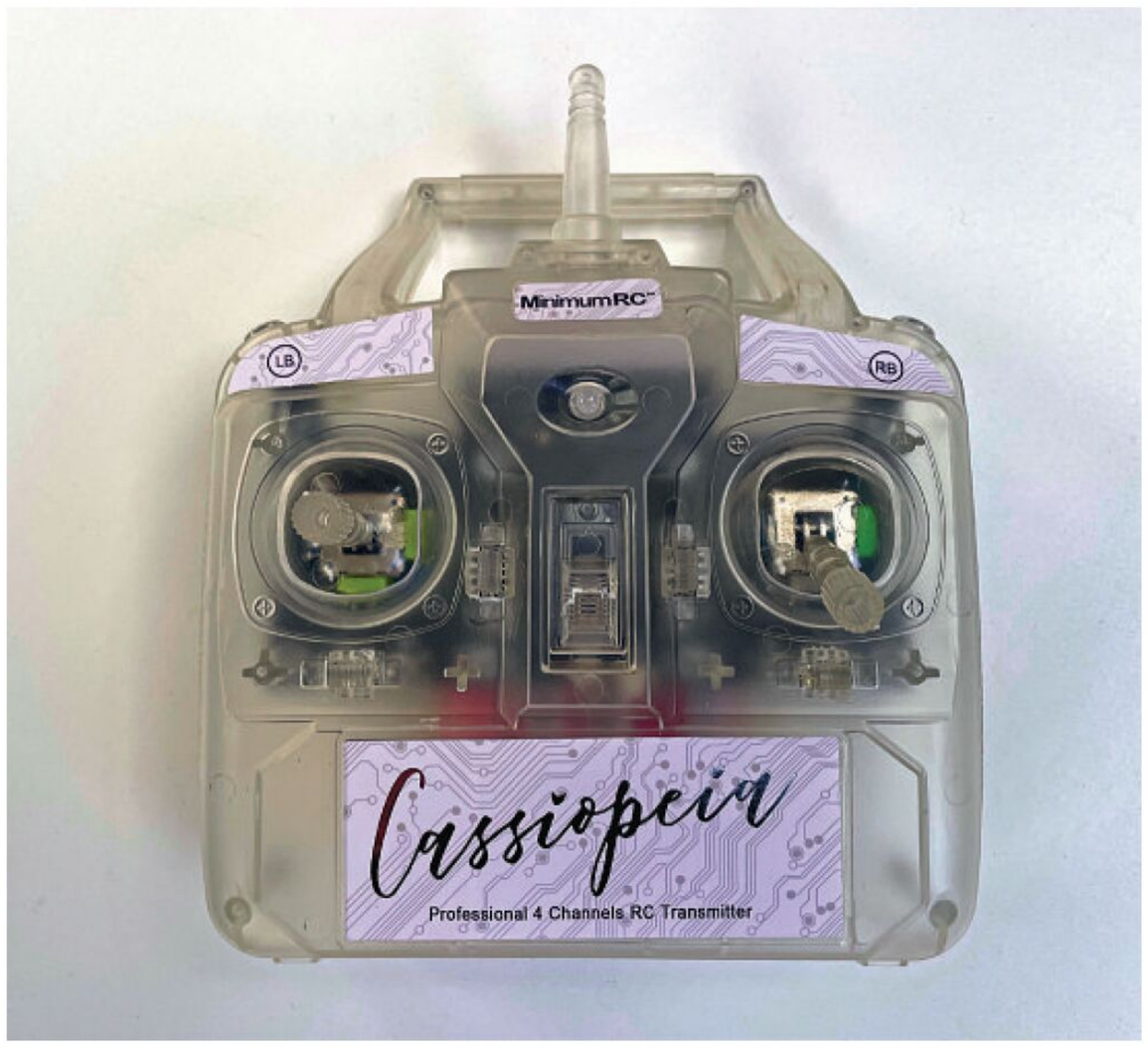
This an interesting concept as this new 420 mm wingspan model can be built in two versions. The airframe is the same, with the extensive use of lightweight moulded structural parts, and the same 30 mm EDF unit is used. The indoor version uses a coreless motor running on a 1S 280 LiPo while the outdoor version uses a 2S coreless motor using a special 2S 180 mAh LiPo. The 1S version has a listed flying weight of 46 g while the 2S version is 53 g. While it is possible to buy the Savannah kit for the 1S version and provide your own gear, possibly even from an earlier Minimum model, the 2S versions will require some new parts and this does push up the cost. You will need the 2S 8620 motor and a micro-Rx that will work from a 2S supply. Minimum has a special 2S micro-ESC with a 12A output. I have built and flown



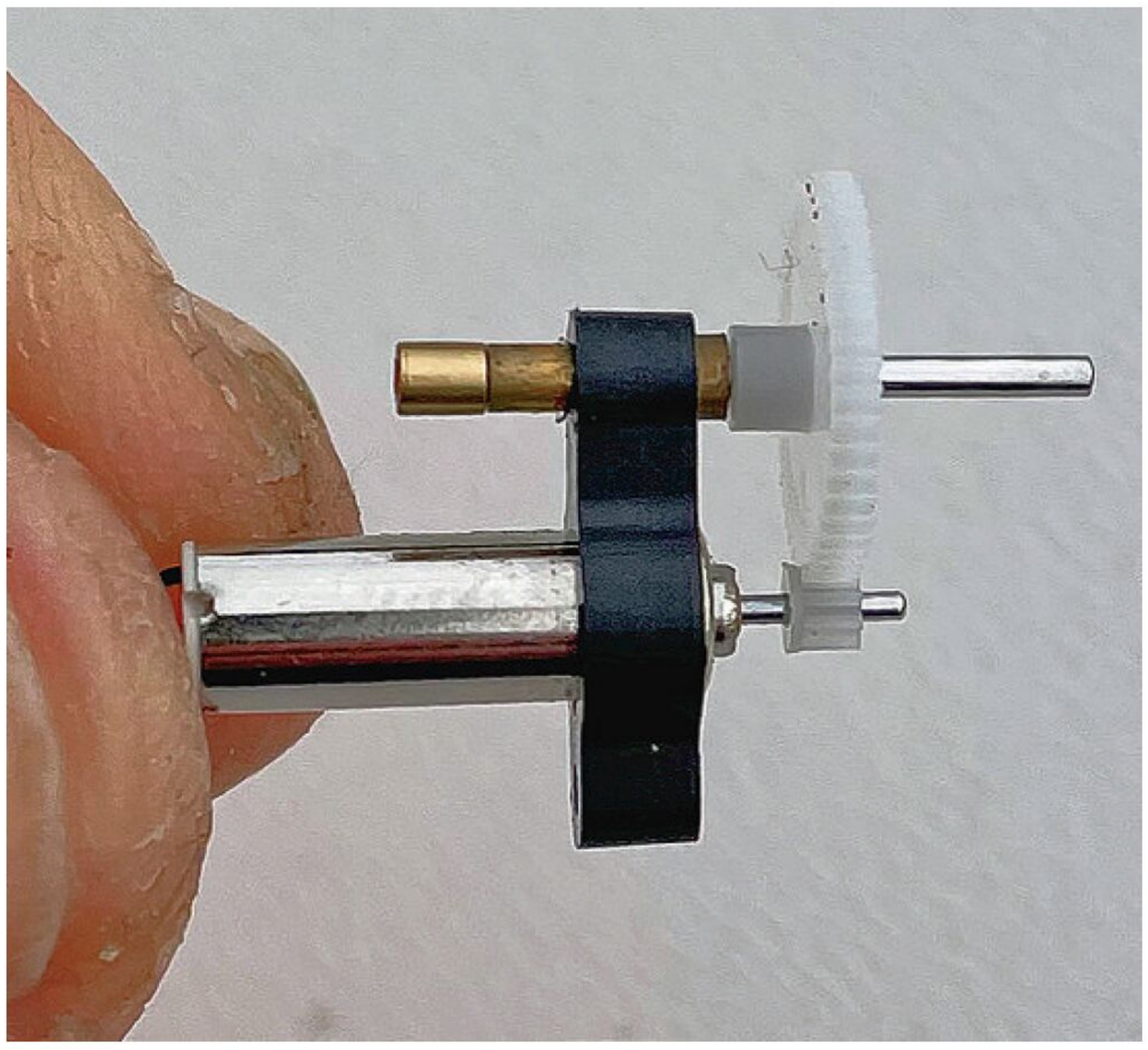
Rubber powered F/F Prairie Bird in front of my R/C version.



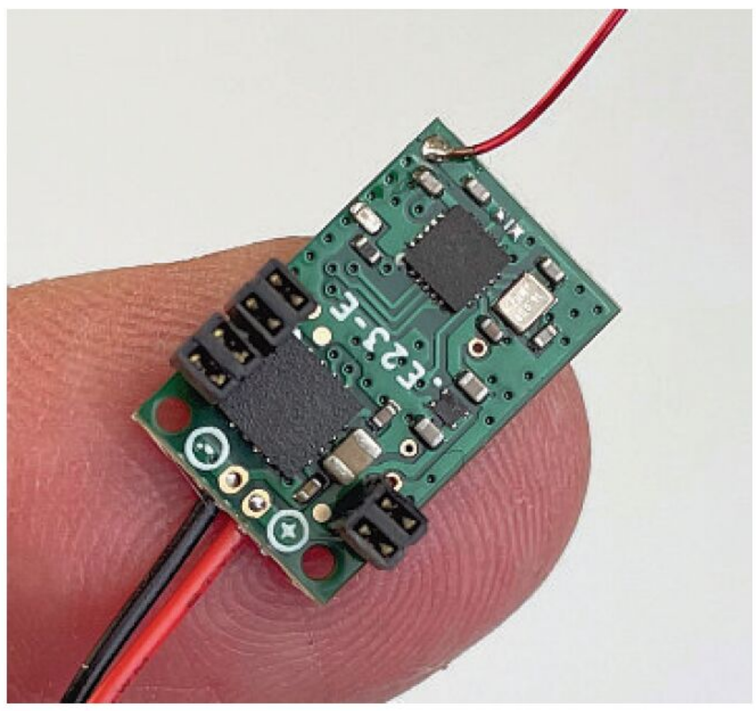
The long nose and forward Rx helps to achieve the correct C of G.



Minimum Cassiopeia transmitter is basic but works fine.



4 mm geared motor unit is fine if the model's AUW is kept low.



Three channel micro-Rx is suitably small and light.

the MinimumRC Hawk and it did not really have enough power for lively flying. The new 2S Savannah will address this issue.

These MinimumRC models are quite tricky to build well but do offer a building experience rather than out-of-the-box modelling. I was tempted but would have had to buy the complete package which would have been quite expensive. The E-flite F-86 seemed a better solution for an outdoor micro-EDF model.

Looking at the 1S Savannah, which can be flown indoors, the 46 g weight is quite high. My Strefford micro-EDF profile jet models fly best at around 30 g so I suspect the Savannah would have to fly quite fast, which does not suit all venues.

MORE MINIMUMS

In an earlier Insider, I mentioned the MinimumRC cartoon scale 'Q' series and, in particular, the Hellcat. The models in this series are more obvious indoor fliers; they are a step up from the original profile fuselage models but are simpler than the super scale models. While simpler they still need to be built with care to achieve good results. The construction is very similar to all the other Minimum models and the same R/C is required - a micro 4Ch Rx with integral ESC and three 1.7 g rotary servos.

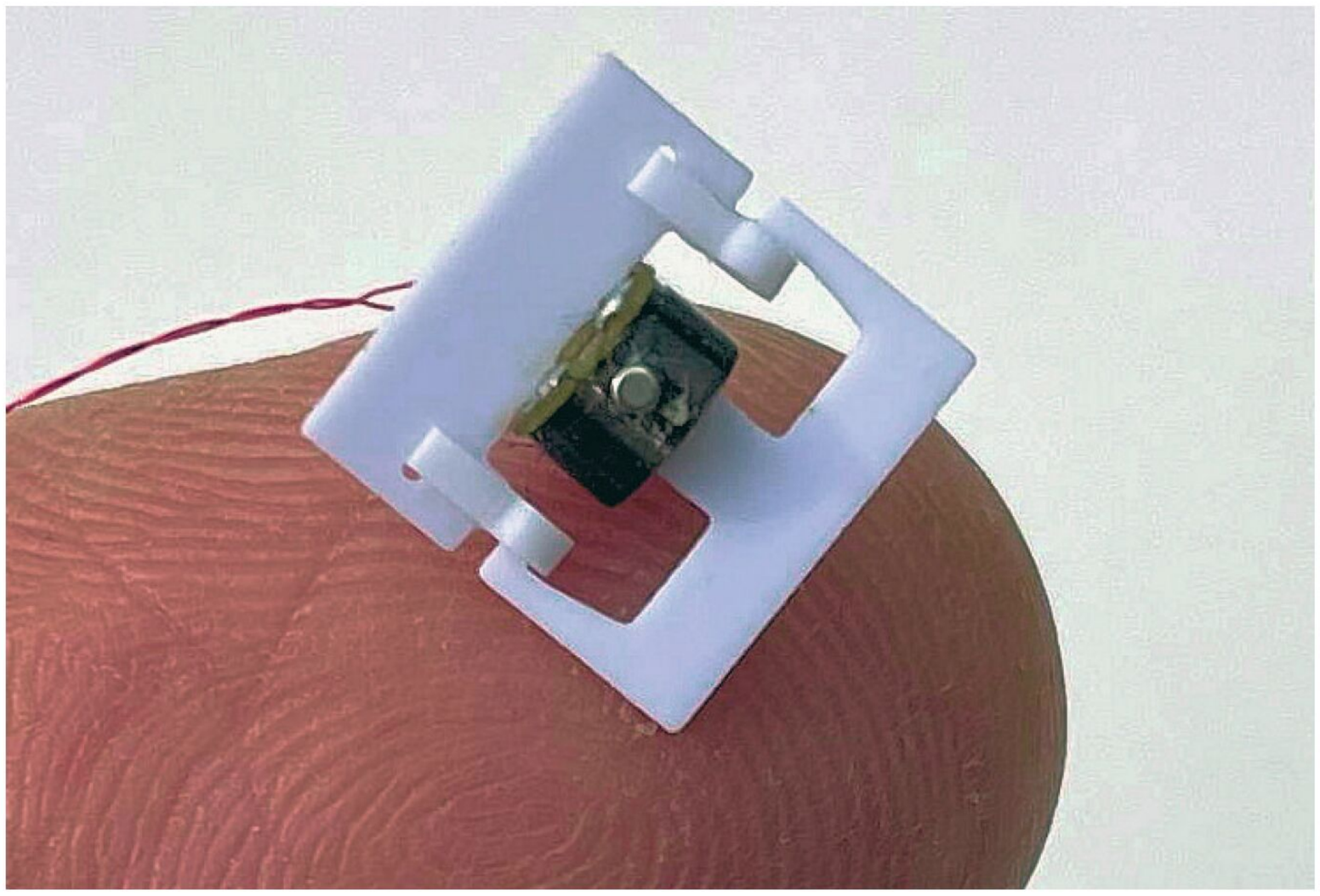
The resulting model is decidedly 'cute' and flies well. With a wingspan of 320 mm and a flying weight of around 37 g the Hellcat is quite speedy and is faster than the profile scale series of models.

In addition to the F6F Hellcat a P-40 Flying Tiger and an A6M5 Zero are available in the range.

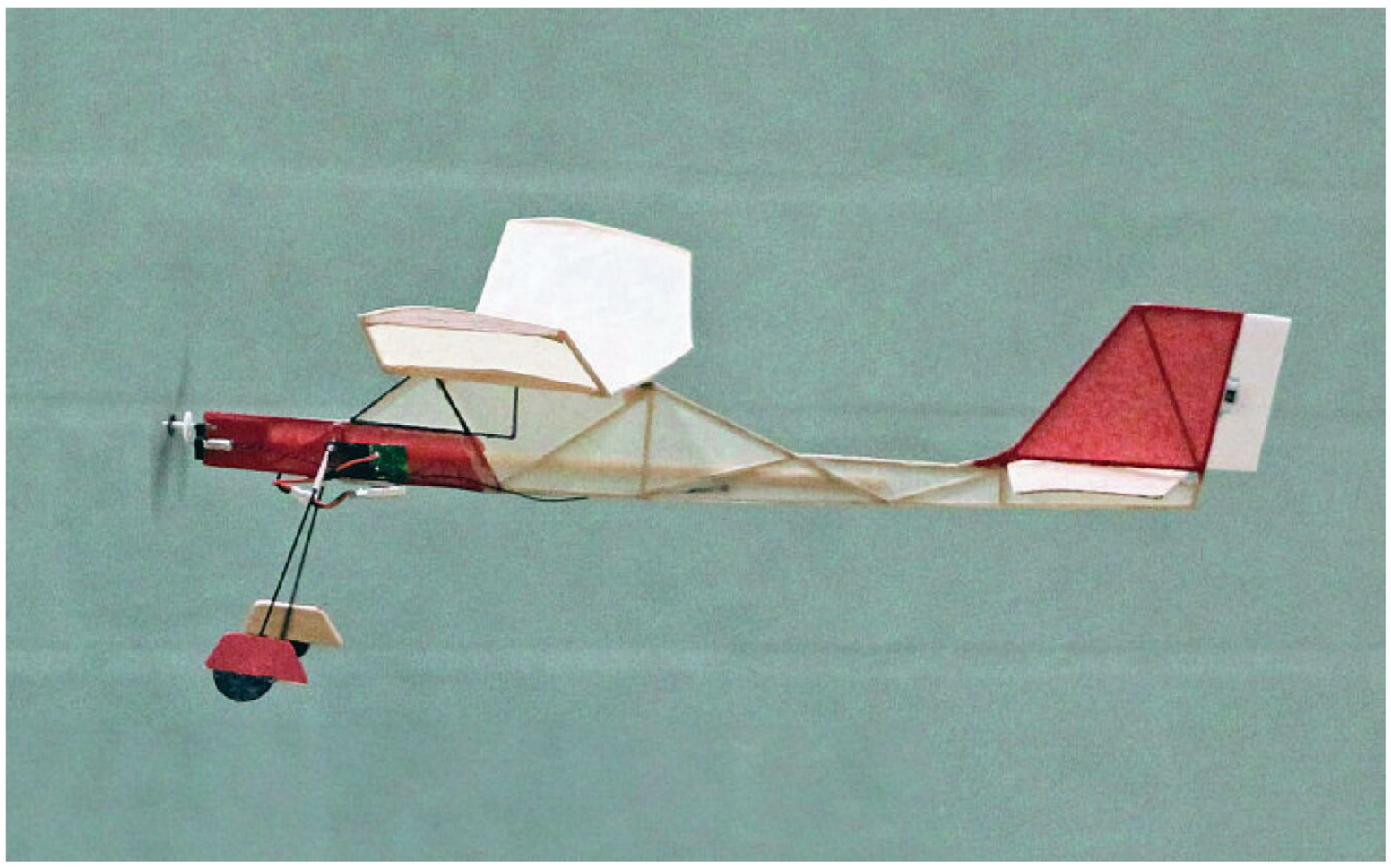
NO-CAL WEIGHT LOSS

In the August Insider I mentioned my experiments with radio controlled No-Cal models and showed my R/C No-Cal Prairie Bird. With a flying weight of around 10 g, it flies well but, as one would expect, it's all about weight. With these models one or two grams can make the difference between joy and disappointment. I mentioned that I had built several more models and will give some details.

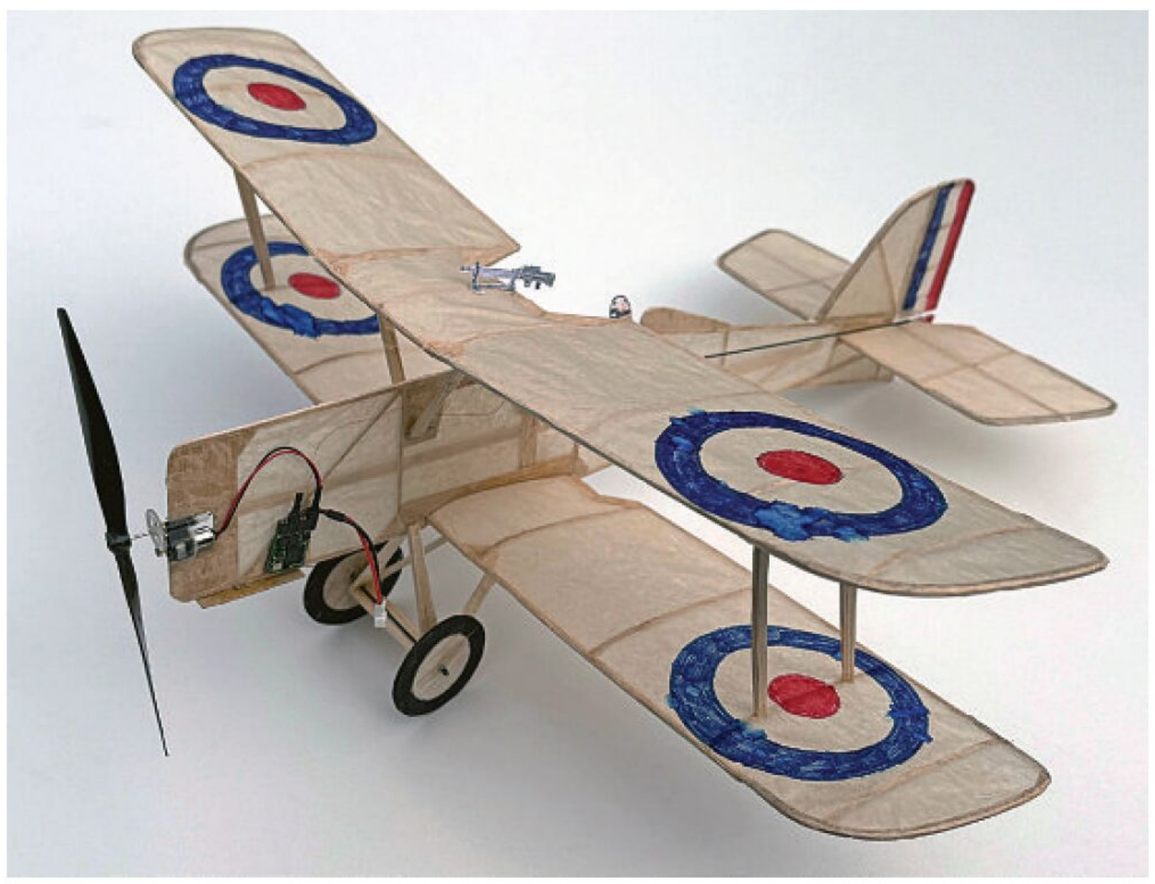
A web search revealed several downloadable plans, many free and mostly of WW2 fighters, but I did note a Piper Cub and a WWI SE5a. If you are not taking part in 'No-Cal' competitions the wingspan does not have to be a maximum of 401 mm. However, this is a convenient size and provides plenty of wing area if the model is lightly built to ensure a slow flying ability. Of course, without elevator control and no surplus power the pilot must be very sensitive as to how the model is flying and the amount of control required. The Prairie Bird has been a



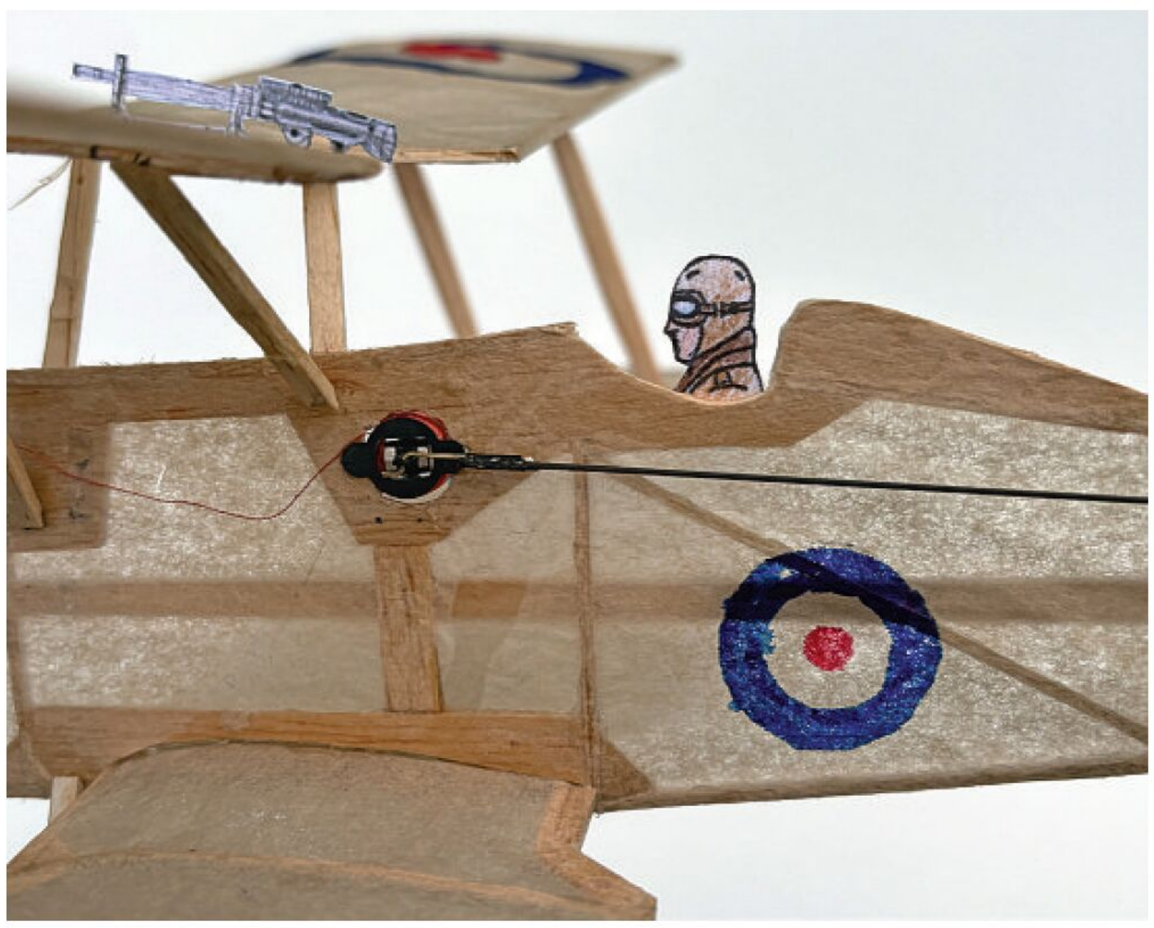
This size hinge actuator is fine with a light model.



Prairie Bird is delightful to fly and so slow!



My SE5a was, as anticipated, too heavy. The WW1 No-Cal biplane concept is great but low weights are very difficult to achieve.



This pushrod type actuator is more powerful and can be placed nearer the C of G.

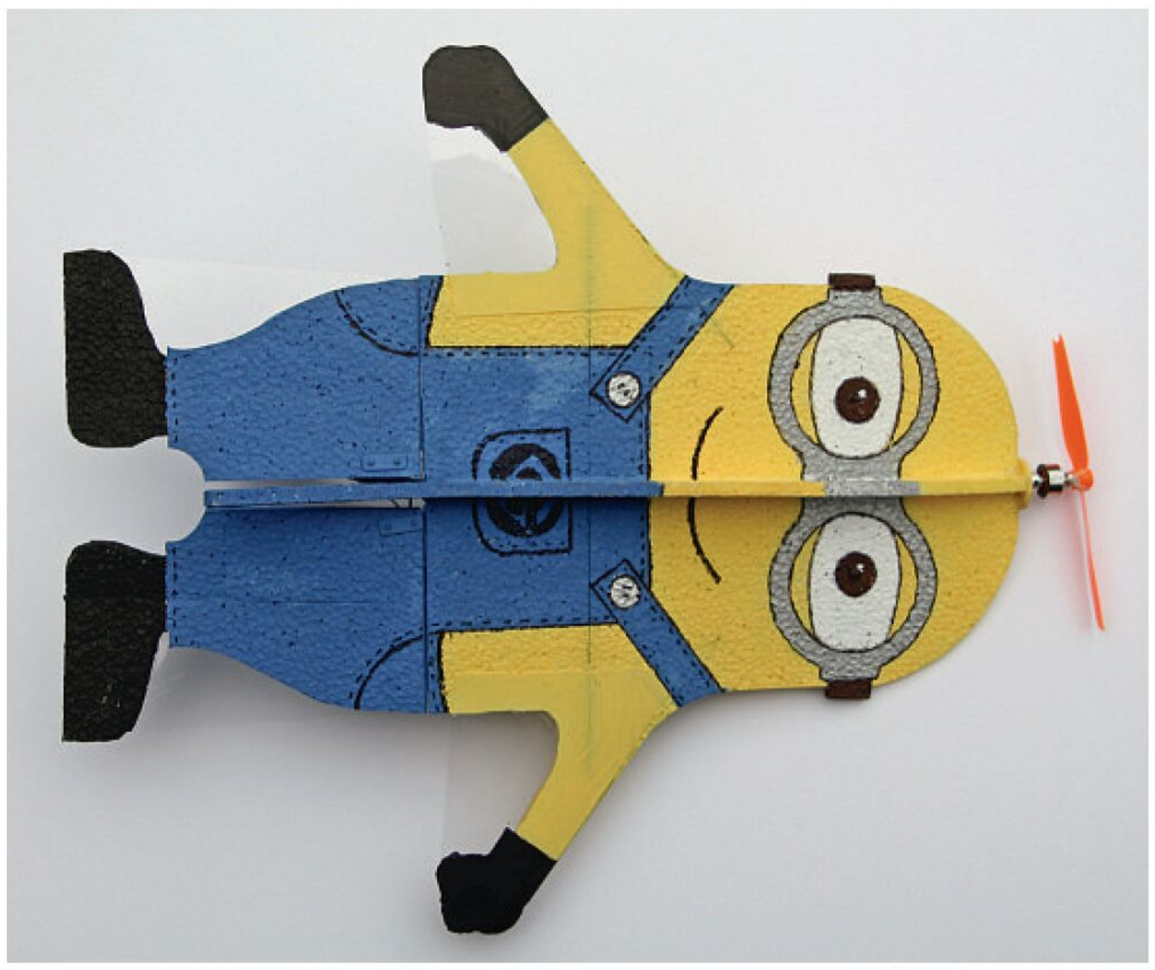
"The SE5a now flew well and only required the minimum amount of rudder to make it turn"

good opportunity for me to revive my stick and tissue skills that have not been employed for some while!

These models need a micro-RC system with magnetic actuators and the renowned DT receivers are no longer available. A new opportunity came via MinimumRC, who now retail their own dedicated micro-RC gear and parts. In addition to actuators, they have two sizes of 4 mm geared motors, a receiver and suitable LiPos. They also have their own small transmitter to match their receivers. This, strangely, is called Cassiopeia - yep, the lady who in Greek mythology fell out badly with Poseidon, quite a tale! So that I could pursue my No-Cal R/C experiments, I purchased a transmitter and several receivers. It's a basic four channel Tx, quite small and light, in fact not much bigger than the palm size transmitters often supplied with RTF helis and quads. The Rx weighs 0.8 g and is easy to bind. MinimumRC have an 'Ultra Micro Electronics Pack' which is a good way to start micro adventures and includes all you need for your first model. Two actuators are included so you could use one for an elevator.

Seeing the way forward, courtesy of MinimumRC, I decided to build the SE5a as my next model. This was quite challenging, with lots of balsa bending! I realised early on that this model was going to be a lot heavier, so I fitted a larger 6 mm geared motor as used in the Mini Vapor. Due to the distance between the rudder and the receiver I had to use an actuator which operated the rudder via a 1 mm CF pushrod. When fitting this I came across a

John's really nice Lancaster. More details next time.



The flying Minion used elevons and a small brushless motor.

forgotten fact; a 'Z' bend is required to link the pushrod to the actuator and this has to be made from brass wire to avoid interference with the actuator's permanent magnets.

As anticipated the SE5a was a much heavier model at 20 g ready to fly. It was stable but underpowered. The prop size was increased to 130 mm (the rubber powered version would have used a quite coarse pitch 150 mm prop). This made a difference but the SE5a was still underpowered. Of course, the motor unit was only designed for the 9 g Mini Vapor and the SE5a weighed 20 g, plus having far more drag. As a last resort a geared 7 mm motor was fitted with a 135 mm prop. The SE5a now flew well and only required the minimum amount of rudder to make it turn.

Unfortunately, some rain drops made my felt pen roundels smear so my SE5a looks now rather worn! However, the delightful floaty and slow flying of the RC Prairie Bird had been replaced by a model with a typical lightweight indoor performance. The loss of this magic encouraged me to try again and become a No-Cal weight watcher in the future. Put simply, unless the model can be kept to 10 g or less a 4 mm motor unit will not have enough power for good flying - or any flying at all!

COMING UP

Next time I take a look at a lovely Lancaster and helicoptering - but not as you know it! And next column's model with a difference is my flying Minion. ■

MEGA DEAL!

RCM&E

KEVIN CROZIER,
EDITOR

Welcome to RCM&E. In each issue we aim to bring to our worldwide readership the very best selection of radio control model aircraft news, views and kit reviews, alongside informative and entertaining feature articles covering each and every aspect of the diverse model flying and building hobby.

Whether you are interested in radios, warbirds, gliders, electric power, IC or petrol/ engines, jets, multirotors, new tech, traditional modelling or the latest techniques, we aim to cover the R/C model flying hobby in all its aspects.

Not only that but each issue contains at least one full-size model building plan.

All this for £31*

6 MONTH SUBSCRIPTION BEST VALUE

6 issues for **£31** direct debit.

save **£47**

Scan this QR code to secure the order

* This is a direct debit offer (Please see terms and conditions)

Call 01507 529529 and quote RCMEDPS1

Online: www.classicmagazines.co.uk/rcmedps1

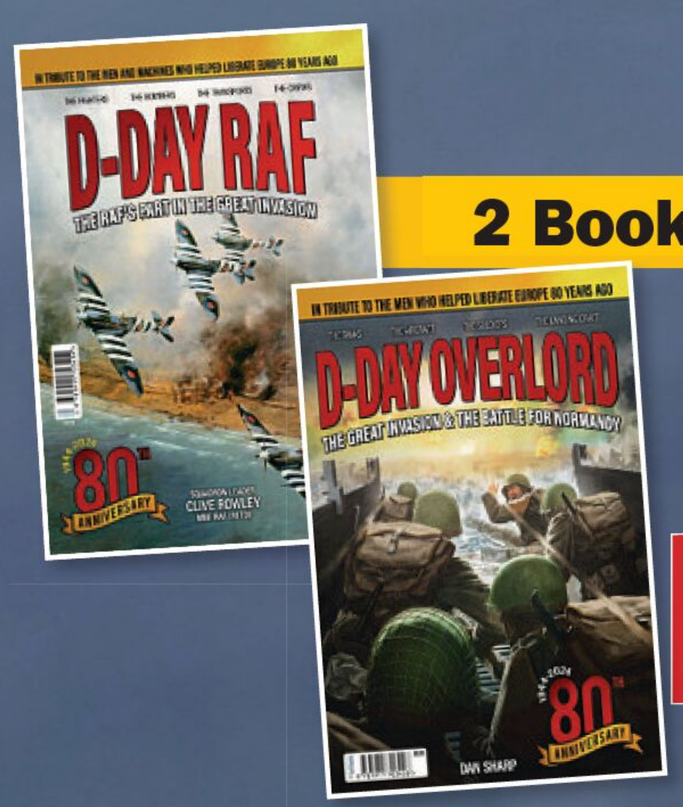
or scan the QR code to go straight to our secure online store

SUBSCRIBE TODAY

BUNDLE PACKAGE worth £78

6 issues of the magazine delivered direct to your door

6 issues of the digital version



2 Bookazines

RCM&E

All this for just over £5 per month

GREAT REASONS TO SUBSCRIBE

» Free UK delivery » Never miss an issue » Get it before it hits the shops » Digital version, so you can read on the move » 2 D Day bookazines

TERMS & CONDITIONS: Offer ends February 21, 2025. Subscriptions will start with the next available issue. Direct Debit payments will continue every 6 months unless you tell us otherwise. To view the privacy policy for Mortons Media Group Ltd, please visit www.mortons.co.uk/privacy. Please visit www.classicmagazines.co.uk/terms for full terms and conditions

A really nice example of a Red Lodge Westland Wessex.

PRESTBURY HELI DAY

Last summer the Prestbury Park club in Gloucestershire hosted their inaugural scale helicopter event. Steve Tew reports on the wide variety of models present

Words & Photos: **Steve Tew**

Anyone who knows me will know that my main interest is scale helicopters. So, when news broke of a new scale helicopter event I had to make space in my diary. This was the first scale helicopter event held at Prestbury Park Model Flying Club, so the level of attendance was uncertain. However, despite some questionable weather in the weeks running up to the event I can report that the conditions on the day could hardly have been better. Sunshine, light winds and no rain!

A big thank you has to go to the club members involved in organising the event. Greg Fitzpatrick was the main man, but I know he had help from Martin Briggs and Andy Brooks, and he also received advice from the BMFA regarding event safety.

Worries about attendance were soon laid to rest when vehicles laden with models started to arrive. I believe there were a total of 14 pilots booked in, but with all the club members, families and friends the BBQ was certainly a busy place, keeping Simon Leach, who cooks a tasty beef burger, fully occupied.

SCALE HELIS GALORE

I counted over 30 scale helicopters in attendance from 450 size right up to quarter

Jon Tanner just about to lift his Bell 47G. Three of these were in attendance.

My own Westland Lynx in Tiger Meet 2005 colours alongside the Glen Davis Vario Lynx.

If anyone stepped out of line, the consequences could be severe!

Martin Briggs flying his Vario R22. Very scale like flying.

scale and we were treated to a broad selection of types. Just to mention a few...

Alan Parish arrived with two Red Lodge Sea Kings and a turbine powered Vario R22. Andy Brooks was flying a Hirobo Bell 47G and his stunning CH-47 Chinook. Martin Briggs displayed his electric powered Vario R22. Glen Davis flew a Vario Lynx and also his Bell 412 UH-1D. Jon Tanner was also present with his Bell 47G.

There were plenty of pilots I didn't get the names of, flying a variety of models including a 500 size Sea King, a Schweizer 300C and another CH-47 Chinook. Seeing two Chinooks at the same meeting is quite rare!

There was also a Westland Wessex, at least two EC-135s and my own Hughes 500 and a Ken Gale original Westland Lynx in Tiger Meet 2005 colours.

The next PPMFC Heli Day will be held on Saturday 10th May. ■

Just a few of the scale models in the pits area.

Roban AS350 flown by Andy Brooks.

Alan Parish flying his Sea King on another successful sortie.

I didn't get the name of this Schweizer pilot, but it was flown very well.

Another Alan Parish model, his turbine powered Robinson R22.

Andy Brooks prepares his CH-47 Chinook.

Alan Parish laid out a selection of fine models.

Glen Davis' Bell 205 UH-1D with its side-gunner ready for action.

Nigel Moses owns this lovely EC-135.

DJI NEO

Kevin Crozier flight tests a palm sized photo drone

Words & Photos: **Kevin Crozier**

As a keen amateur photographer, I have been using a DJI Mini SE drone to supplement my camera collection. It is a very easy bit of kit to operate and I am always struck by the quality of the pictures and videos that it produces, especially when flown in strong winds that I probably wouldn't want to fly a model aircraft in. The fact that it can take highly stabilised images whilst being bounced around in such strong breezes is truly amazing considering it is at the lower end of the DJI range.

My version is the Fly More Combo, so called because it comes with three batteries to give you lots of flying and image taking time during a photography session. Just like flying an electric aeroplane, having just one battery would be quite limiting, although the flight duration of modern drones is actually quite decent.

I justify having this drone by using it to film stills and fly-by videos of kit review models and you may have seen some of these if you have viewed the QR videos that we have added to some reviews. Or maybe not....

The problem is that I often forget to grab my drone bag when going out for a photo session, especially if I have a clubmate taking flying pictures of a new model, and so those kinds of airborne shots sometimes get overlooked. So, when I saw that DJI had introduced a new palm size drone called the Neo which I could possibly leave inside my R/C transmitter case, thus guaranteeing that it would be available if required, my interest was piqued.

I headed to the local branch of a camera store to take a look at their display model but unfortunately, they did not have a Neo in stock for me to take away. The basic model, priced just under £170, comes as the drone only, which can be controlled by a smartphone. I had also budgeted for a spare battery, which retails at £35. This is a hard cased Li-ion pack of 1435 mAh capacity and it is marketed as being 'intelligent' thanks to its smart charging and discharge management capabilities; if left idle for more than three days it will gradually discharge to 60% storage charge. The shop assistant recommended that I buy the Neo and battery from their website for next day delivery.

Back home and checking out the various options, I eventually decided to go all in and invest in the Neo 'Fly More Combo'. This comes with three intelligent battery packs, a charging hub and an RC-N3 controller, plus accessories and costs £299. Since I had already committed to spending just over £200 on the drone and a spare pack, I reasoned that it would be worthwhile investing in a third pack, plus the more

Neo comes in an understated cube shaped box.

Main contents of the Fly More Combo. Shame there's no carry case with this one though!

Whilst not in use it's good practice to fit the camera/gimbal protective cap.

For a bit of fun try out the Palm Control mode, initiated by pressing this button on top of Neo.

Accessory spread. Top right are the short leads used to connect a phone to the controller.

"The basic model, priced just under £170, comes as the drone only"

convenient charging hub and a dedicated transmitter. This was a very similar set up to the Mini SE 'Fly More Combo' that I already had, with the exception that the Neo doesn't come with a soft carry case in which to keep everything together. More on that later...

FIRST IMPRESSIONS

The Neo is supplied in a small cube box, with the drone at the front, the Tx at the rear and the charging hub lying on top in a separate box. As with most tech products these days a full manual is available online, so a fold-out quick start guide is all that is provided to get you going. If you are familiar with other DJI drones then you probably won't even need to refer to that, but it will come in handy if you are starting from scratch. Also provided are two sets of spare 3-bladed props, a USB-C to USB-C charge lead and two smartphone connection leads, one with a Lightning plug to suit iPhones and the other fitted with a USB-C connector to suit other devices.

The Neo is small, measuring just 130 x 157 x 49 mm and is optimised for taking selfies whilst taking off and landing from the palm of your hand. To do this it has a flight mode called Palm Control, during which it will lock on to your face and then take off to follow one of a set of flight patterns selected via the Mode button and

RC-N3 controller is a worthwhile investment, allowing the Neo to be flown just like any other R/C model.

Rubberised holders provide a neat storage solution for each of the Tx sticks.

The charging hub caters for three battery packs, so providing plenty of flight time when out taking pictures with the Neo.

With the green LEDs all lit up it's time to go flying!

Stylish controller has an adjustable grip to suit most smart phones. Best not use a case though!

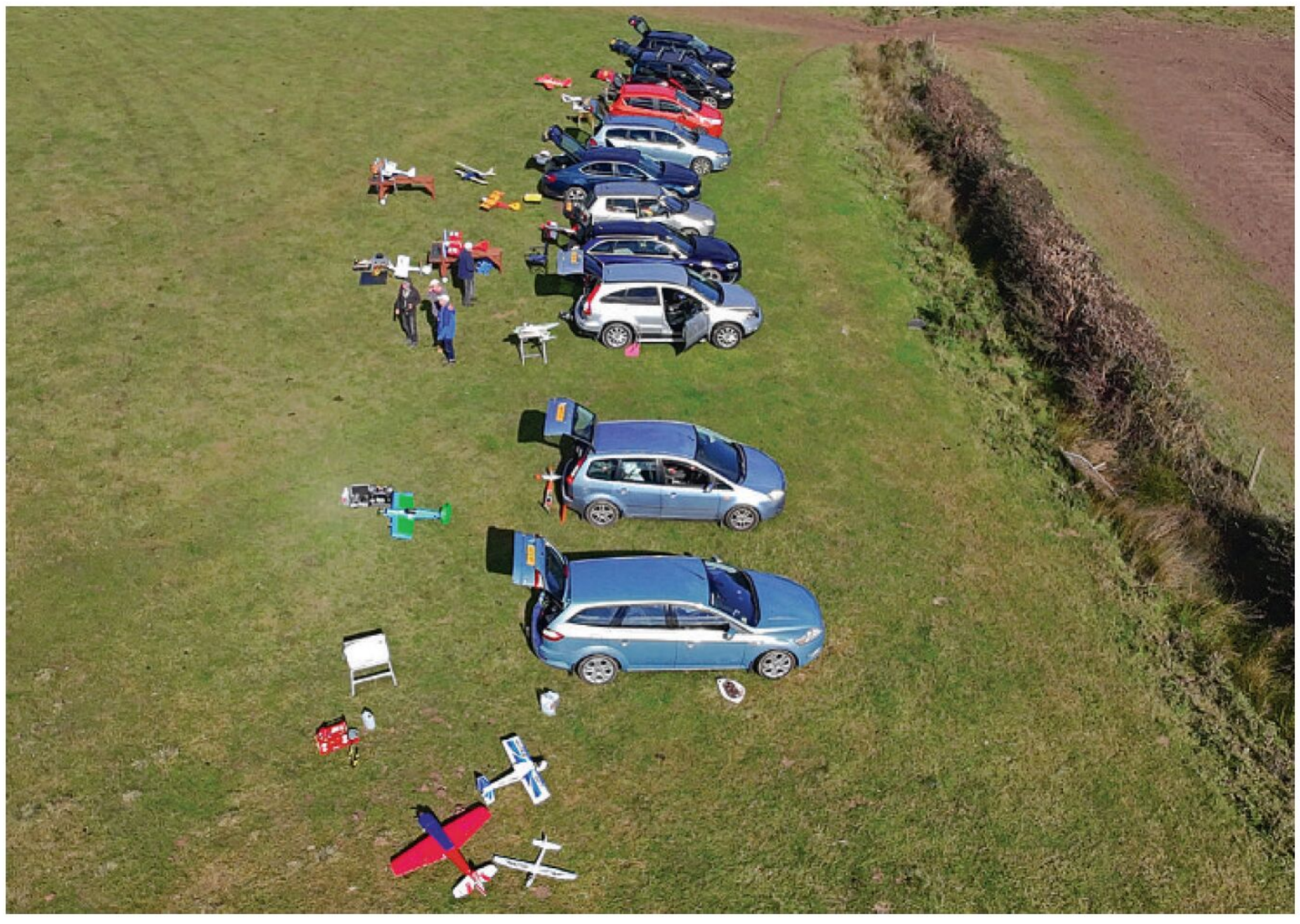
"With the phone plugged in and showing the DJI Fly app it can be used to show an FPV type view"

its associated indicator panel located on the upper body of the Neo. Alternatively, you can use a smartphone to control it via the DJI Fly app, using two virtual sticks to fly it in the usual fashion. There's also a voice control function with which you can send Neo spoken flight directives via your smart device.

TAKE CONTROL

This is all fun stuff, but I was more interested in flying it conventionally using the RC-N3 controller. This is a smart twin stick transmitter which comes set up as Mode 2 by default, which suits me, but other stick modes are available via the 'Control Stick Mode' page in the DJI Fly app. When not in use the sticks unscrew and are stored in snug fitting recesses on the underside of the Tx.

KC and flying buddy Leon (wearing FPV goggles) snapped by the Neo soon after take-off from the bright orange heli pad.



You'll often see small drones being used to take high level views of club members and their models. Neo is a perfect choice for this type of picture.

A high-level view of my local flying strip, hovering well back so as not to disturb the other pilots.

On top is a sliding smartphone holder which can be adjusted to suit the width of your phone. It's best to take the phone out of its case otherwise the holder may not grip it correctly and you certainly wouldn't want your phone to slide off and drop to the ground while the Neo is in flight! With the phone plugged in and showing the DJI Fly app it can be used to show an FPV type view from the stabilised camera mounted on front of the Neo, using the main flight controls to place the drone exactly where you want it before taking either a 12 MP still image or a 4K or 1080p video clip. The Neo doesn't have a microSD card slot, so all files are saved to 22 GB internal storage. Post flight the files are easily downloaded to your phone. The Neo can also be used with FPV goggles, DJI's Goggles 3 being the recommended set up.

In flight the camera can be tilted using a Gimbal Dial mounted on the top left shoulder of the Tx, with the Shutter/Record button being on the right-hand shoulder. In the centre of the controller, next to the power button, is a Mode switch to control the speed of the drone. Select either Normal, Sport (for slightly faster flight) or Cine (to slow things down when, say, recording a panned video clip). To the left of the Mode control is the Return To Home button; a short press of this button can also be used to brake the Neo and make it hover in the same place. There are two more buttons placed high on the outer side of each stick unit; the one on the left is a customisable Fn button which recentres the gimbal by default whilst the one on the right is used to switch between Photo and Video modes.

In use the controller is very easy to use, with smooth sticks and logically placed buttons, so it will feel very natural to R/C pilots from tyro level upwards.

CHARGING HUB

In its drone only configuration the Neo comes with one intelligent battery pack, charged via the USB-C port at the rear of the drone's body. This is claimed to give up to 18 minutes of flight time in a windless environment, but such conditions are very few and far between these days if flown outside in the UK, even in summer. So, the little Neo is sure to have to work a lot harder in more realistic flight conditions. This is where the Fly More Combo comes into its own, with its three battery packs banishing 'range anxiety' during most normal flying sessions.

The Fly More Combo is supplied with a three-port charging hub which is connected to the USB-C lead supplied. The hub charges each pack until the four indicators next to each one are lit up green. The hub also provides a convenient place to store all the batteries when not in use, during which they will automatically start their discharge management cycles if not used for more than three days.

IN FLIGHT

Neo comes with a pair of pre-fitted propeller guards. These are recommended if flying in Palm Control mode and would be a sensible fit if flying near children or pets. I did take mine off, just to see how easy it was to do, but I found that they were a bit of a fiddle to put pack on so mine have stayed put ever since. Apparently,

> “DJI’s Neo has proved to be a lovely little machine to take aerial pictures with”

they do have a slightly detrimental effect on flight time but nothing substantial.

Since most of my drone flying is done from rough grass, so that I don’t get in the way of any fixed wing flying, I have invested in a small fold-up take-off Heli-pad, otherwise the props on my drones would get caught in the grass when taking off and landing. This would be even more of an issue with the Neo, it being so close to the ground. Using the bright orange H-pad also makes it easy to aim for and to land on. I don’t use the RTH function to land because while it will land fairly close, it’s not likely to hit the small pad as horizontal accuracy is +/-1.5 metres when using GNSS satellite positioning.

With the pad providing a smooth surface to take off from the motors can be started by pushing the sticks into opposing bottom corners. Raising the throttle stick will cause the drone to lift off. At the end of a flight, lowering the throttle stick fully after landing will automatically shut down the motors. However, whilst I always perform a manual landing, I usually take off using the Auto Take-off button that is prominently displayed on the DJI Fly app screen. This needs pressing for a couple of seconds until an indicator around the circumference of the virtual button makes a full sweep. The Neo will then start up and take off automatically, rising to an altitude of 1.2 metres (3.9 feet) above the ground.

Neo is very easy to fly and it would make a great drone trainer, or even give you confidence before taking your first steps with an R/C helicopter. Use it in Normal model to fly large or small figure of eights, using the yaw (rudder) stick to keep it flying nose ahead. Speed things up by selecting Sport mode, although don’t get too excited as this only adds a moderate increase in airspeed, or slow things down by checking out Cine mode.

To be fair, when flown at most R/C flying sites, this little drone is most likely to be used to take high level group photos of your clubmates, or maybe a snap or video clip of models taking off and landing on your club strip. Such images can then be posted to your club website, printed in a club newsletter or even sent to this magazine with a couple of hundred words to let our readers know what is happening at your favourite model club - hint, hint!

It can do all this with ease and whilst tackling some strong breezes too. During a recent session with the Neo, I had packed in flying my fixed wing models for the day, the gusty, strengthening breeze making flying uncomfortable. I raised the little Neo aloft, just to see if it could even hold station in such a breeze and was amazed to see it hovering rock steady over the patch above tree height, relaying a perfectly steady picture back to my phone. The algorithms controlling the four props and the camera gimbal are obviously very well honed after many generations of previous DJI drones. The instructions do caution against flying the Neo in very strong winds though so there is a common-sense limit to what you can expect such a small drone to put up with.

Overall, the DJI Neo has proved to be a lovely little machine to take aerial pictures with and, best of all, it fits in my new Futaba soft carry case, which I purchased for a recently acquired new radio, where it sits in comfort, ready for its next call to action.

It needs a bit of finessing but a trial fit shows that Neo will drop into my new Tx case with ease.

ON THE CASE

Although the Neo is a snug fit in my new Tx case, as a nearby picture shows, meaning that it is close to hand when I am photographing a new review model, I still wanted to buy a small, cushioned bag to keep it in for use on holidays and days out, together with the RC-N3 controller, the charging hub, spare batteries and all its accessories.

I quickly discounted the same type of bag that was supplied with my Mini SE ‘Fly More Combo’ which retails at a fairly hefty £69. The cheapest official DJI bag costs £35 but I couldn’t find a picture of that one with a Neo inside, plus Tx etc. But I did find a picture on Amazon of a Neo and a controller snuggled inside a soft case for just over £25. Other unofficial Neo bags are widely available at lower cost, but some have no room for the Tx and the spare batteries, whilst my chosen shoulder bag, branded FPVtosky, shares a similar layout to the DJI bag that came with my Mini SE. In fact, it has slightly more space and more zip pockets too. Proper job! ■

Purchased for taking the Neo out on high days and holidays this well cushioned shoulder bag has several dividers to contain the drone, charging hub with batteries and the controller. Lots of side pockets too for all the accessories.

Composite RC Gliders

E-Versions available

Option Ready to Fly in stock

KST DIGITAL SERVO Official Seller

Newsletter sign up:

+49 (0)152 31 700 200
compositercgliders
composite_rc_gliders
@compositercgliders
info@composite-rc-gliders.com
www.composite-rc-gliders.com

RCM&E

To advertise here call

Karen on 01732 442144

Email: karen@talk-media.uk

Latest booking deadline for the next issue is Monday 3rd February 2025

ONLY £16.99

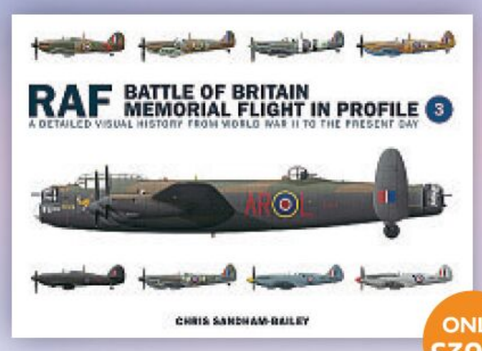
F-16 Fighting Falcon
by Bertie Simmonds

The F-16 was born from the crucible of the air war over Vietnam and the need for cheaper, simpler, and more maneuverable fighter aircraft.

ONLY £35

American Interceptor: US Navy Convoy Fighter Projects
by Jared A. Zichek

Dive into the 'paper projects', the unbuilt studies submitted to the Navy.



ONLY £39.99

Secret Projects of the Luftwaffe in Profile
by Daniel Uhr & Dan Sharp

Read about the competitions and requirements which produced innovative and unusual designs during WW2 and view the original German construction sketches.

ONLY £30

Messerschmitt ME 262 Development & Politics
by Dan Sharp

Discover the real history of the Messerschmitt ME 262 with research involving thousands of wartime documents spread across archival collections in three countries.

Luftwaffe Fighters: Combat on all Fronts Vol 2
by Neil Page

Renowned researcher and historian Neil Page looks at the German Jagdflieger throughout the conflict, covering campaigns, unit histories and ace pilot biographies, illustrated with more than 250 rare images.

ONLY £9.99

mortons books

ONLY £16.99

Fleet Air Arm Legends: Fairey Swordfish

Discover the story of the Swordfish's service across most theatres in WW2, with never-before published accounts from veteran aircrews.

ORDER NOW: www.mortonsbooks.co.uk Or call 01507 529529

WANT TO HEAR ABOUT OUR LATEST BOOKS?

Mortons Media Group is preparing to launch a new range of non-fiction books - from railway, military and aviation history to consumer issues, hobbies, crime, and politics.

If you would like to hear more about our upcoming book releases and special offers, sign up to our newsletter.

JOIN OUR BOOK CLUB!
AND RECEIVE 10% OFF!

To view the privacy policy of MMG Ltd (publisher of Mortons Books) please visit www.mortons.co.uk/privacy

Going Places

Diary dates for the coming season

If you are planning an aeromodelling event over the next few months, then please send details - **up to 100 words maximum** - to Beth Ashby at: **Beth.Ashby@artichokehq.com**.
If you intend to visit any events listed, then please check with the organisers before travelling in case of any last-minute changes.

JANUARY

Jan 11

Tonbridge Gassers and Rubber Fanciers Indoor Flying at Kings Sport Centre, 601 Maidstone Road, Rochester, ME1 3QJ. From 6:30 pm until 10:00 pm. Free flight, Lightweight R/C and 3D R/C timed flying sessions throughout the evening. Contact Steve on 0208 942 5000 or Eric on 07763 398 416.

Jan 18

Waltham Chase Aeromodellers Medium Hall Indoor R/C Meeting at Crofton Community Centre, Stubbington Lane, Stubbington, Hants PO14 2PP. From 6.30pm to 9pm. The sports hall is four-badminton court size and particularly suitable for lightweight indoor R/C models. Flying at these events will take place in accordance with our indoor flying guidelines (available on our website). Admission £8 for fliers and £2 for spectators and junior fliers, whilst accompanied junior spectators and parents of junior fliers admitted free. Fliers will be required to show proof of insurance. These events are supported by the BMFA Southern Area. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Jan 23

Waltham Chase Aeromodellers Small Models Meeting at Wickham Community Centre, Mill Lane, Wickham, Hants, PO17 5AL. From 7pm till 9.30pm. Hall is suitable for smaller indoor R/C models. Models to be limited to a max. weight of 95g for fixed wing inc. battery (max. 2S LiPo), helicopters limited to 305mm (12") rotor dia. Models will be weighed and judged on their suitability for the venue. Flying will be in accordance with our indoor flying guidelines on our website. Admission £6 for fliers, £2 for spectators and junior fliers. Accompanied junior spectators and parents of junior fliers admitted free. Fliers to show proof of insurance. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Jan 26

White Sheet RFC WSRFC F3f Winter League. Please check with the WSRFC before travelling: https://whitesheet.bmfa.club.

FEBRUARY

Feb 1

Waltham Chase Aeromodellers Large Hall Indoor R/C Meeting at Havant Leisure Centre, Civic Centre Road, Havant, Hants PO9 2AY. From 6pm till 9pm. An eight-badminton court size sports hall, particularly suitable for lightweight indoor R/C models. Flying at these events will take place in accordance with our indoor flying guidelines (available on our website). Admission £10 for fliers and £2 for spectators and junior fliers, accompanied junior spectators and parents of junior fliers admitted free. Fliers will be required to show proof of insurance. These events are supported by the BMFA Southern Area. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Feb 6

Waltham Chase Aeromodellers Small Models Meeting at Wickham Community Centre, Mill Lane, Wickham, Hants, PO17 5AL. From 7pm till 9.30pm. Hall is suitable for smaller indoor R/C models. Models to be limited to a max. weight of 95g for fixed wing inc. battery (max. 2S LiPo), helicopters limited to 305mm (12") rotor dia. Models will be weighed and judged on their suitability for the venue. Flying will be in accordance with our indoor flying guidelines on our website. Admission £6 for fliers, £2 for spectators and junior fliers. Accompanied junior spectators and parents of junior fliers admitted free. Fliers to show proof of insurance. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Feb 8

Tonbridge Gassers and Rubber Fanciers Indoor Flying at Kings Sport Centre, 601 Maidstone Road, Rochester, ME1 3QJ. From 6:30 pm until 10:00 pm. Free flight, Lightweight R/C and 3D R/C timed flying sessions throughout the evening. Contact Steve on 0208 942 5000 or Eric on 07763 398 416.

Feb 15

Waltham Chase Aeromodellers Medium Hall Indoor R/C Meetings at Crofton Community Centre, Stubbington Lane, Stubbington, Hants PO14 2PP. From 6.30pm to 9pm. The sports hall is four-badminton court size and particularly suitable for lightweight indoor R/C models. Flying at these events will take place in accordance with our indoor flying guidelines (available on our website). Admission £8 for fliers and £2 for spectators and junior fliers, whilst accompanied junior spectators and parents of junior fliers admitted free. Fliers will be required to show proof of insurance. These events are supported by the BMFA Southern Area. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Feb 20

Waltham Chase Aeromodellers Small Models Meeting at Wickham Community Centre, Mill Lane, Wickham, Hants, PO17 5AL. From 7pm till 9.30pm. Hall is suitable for smaller indoor R/C models. Models to be limited to a max. weight of 95g for fixed wing inc. battery (max. 2S LiPo), helicopters limited to 305mm (12") rotor dia. Models will be weighed and judged on their suitability for the venue. Flying will be in accordance with our indoor flying guidelines on our website. Admission £6 for fliers, £2 for spectators and junior fliers. Accompanied junior spectators and parents of junior fliers admitted free. Fliers to show proof of insurance. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

MARCH

Mar 1

Wrexham RC Model Swap Spectacular at Gresford Trust Memorial Hall, Gresford Trust, off High Street, Gresford, LL12 8PS, five minutes from A483, Junction 6 (What 3 Words: stubborn.scripted.nothing). All types of flying models, engines, R/C equipment, building materials and associated model flying paraphernalia. 20 plus large tables available at £6 each. Entry and setting up for Stall Holders from 8:00 am. Entry for buyers is strictly from 9:00 am to 12:00 midday, admission £3 each. Tea/coffee and biscuits will be available. For further information and booking please contact Malc on 07886 288371 or email malcolmpdi@yahoo.com

Mar 1

Waltham Chase Aeromodellers Large Hall Indoor R/C Meeting at Havant Leisure Centre, Civic Centre Road, Havant, Hants PO9 2AY. From 6pm till 9pm. An eight-badminton court size sports hall, particularly suitable for lightweight indoor R/C models. Flying at these events will take place in accordance with our indoor flying guidelines (available on our website). Admission £10 for fliers and £2 for spectators and junior fliers, accompanied junior spectators and parents of junior fliers admitted free. Fliers will be required to show proof of insurance. These events are supported by the BMFA Southern Area. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Mar 2

Retford Spring Swapmeet at Carlton-in-Lindrick Civic Centre, Oakham Drive, Carlton-in-Lindrick, Worksop, Notts, S81 9RE. (what3words, blog.otherwise.nurse). Table set up from 8:30am till 9:15am, tables supplied. Pre-booked tables £7. On the day £8. Admission £3. Doors open at 9:30am till 11:45am. Hot sandwiches, tea, coffee available. For further information and booking contact Lee Davies on 07900 156803 or email lee301269@gmail.com or visit www.rmfc.bmfa.uk

Mar 6

Waltham Chase Aeromodellers Small Models Meeting at Wickham Community Centre, Mill Lane, Wickham, Hants, PO17 5AL. From 7pm till 9.30pm. Hall is suitable for smaller indoor R/C models. Models to be limited to a max. weight of

95g for fixed wing inc. battery (max. 2S LiPo), helicopters limited to 305mm (12") rotor dia. Models will be weighed and judged on their suitability for the venue. Flying will be in accordance with our indoor flying guidelines on our website. Admission £6 for fliers, £2 for spectators and junior fliers. Accompanied junior spectators and parents of junior fliers admitted free. Fliers to show proof of insurance. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Mar 8

Tonbridge Gassers and Rubber Fanciers Indoor Flying at Kings Sport Centre, 601 Maidstone Road, Rochester, ME1 3QJ. From 6:30 pm until 10:00 pm. Free flight, Lightweight R/C and 3D R/C timed flying sessions throughout the evening. Contact Steve on 0208 942 5000 or Eric on 07763 398 416.

Mar 8

Gravesend Aeromodelling Flying Club Swapmeet at Istead Rise Community Centre, Worcester Close, Kent, DA13 9LB. From 10 am - 2 pm. Doors open for setting up at 9:00 am. Tables £6 each. Public £2 entry from 10 am. Plenty of free parking. Refreshments available. Booking essential. Contact Paul Holmes on 01634 261113 or 07984373012 or email pj.holmes303@btinternet.com

Mar 9

White Sheet RFC Scale Event. Scale Days could be either Saturday or Sunday, with the preferred day always being a Sunday. After analysing the forecasted conditions, the Scale Secretary will make the final on/off call on. Please note the reserve date of the 30th. Please check with the WSRFC before travelling: https://whitesheet.bmfa.club

Mar 15

Waltham Chase Aeromodellers Medium Hall Indoor R/C Meeting at Crofton Community Centre, Stubbington Lane, Stubbington, Hants PO14 2PP. From 6.30pm to 9pm. The sports hall is four-badminton court size and particularly suitable for lightweight indoor R/C models. Flying at these events will take place in accordance with our indoor flying guidelines (available on our website). Admission £8 for fliers and £2 for spectators and junior fliers, whilst accompanied junior spectators and parents of junior fliers admitted free. Fliers will be required to show proof of insurance. These events are supported by the BMFA Southern Area. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Mar 16

Horam Swap Meeting at Horam Village Hall, A267, Horam, East Sussex TN21 0JE. What3Words self.planting.brave. Doors open to sellers 8.00am. Tables and one seller £8.00. Buyers entry from 9.00am and entry £3.00. Doors close at 12:00pm. Refreshment including our famous Bacon Butties. For bookings (essential) contact Robert Richardson: rob.richardson@talktalk.net

Mar 20

Waltham Chase Aeromodellers Small Models Meeting at Wickham Community Centre, Mill Lane, Wickham, Hants, PO17 5AL. From 7pm till 9.30pm. Hall is suitable for smaller indoor R/C models. Models to be limited to a max. weight of 95g for fixed wing inc. battery (max. 2S LiPo), helicopters limited to 305mm (12") rotor dia. Models will be weighed and judged on their suitability for the venue. Flying will be in accordance with our indoor flying guidelines on our website. Admission £6 for fliers, £2 for spectators and junior fliers. Accompanied junior spectators and parents of junior fliers admitted free. Fliers to show proof of insurance. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

Mar 23

White Sheet RFC Open Slope for Vintage Scale, Modern Scale soarers, F3f and F5j competition models or 'Anything In Between' such as PSS gliders. The scheduled Sundays are preferred but as always Saturdays are an option. The Open Slopes Secretary will analyse the forecast and attempt to choose the most suitable day. The decision is usually made on the Friday before the event, occasionally earlier if conditions are more settled. Please check with the WSRFC before travelling: https://whitesheet.bmfa.club.

Mar 23

Southern Counties Spring Swapmeet, Mountbatten School, Romsey, Hampshire, SO51 5SY. One of the largest swapmeets in southern England with over 50 tables. Sellers with a booking admitted from 8:00 am. Buyers from 8:30 am onwards. Noon finish. Admission only £4, under16s free. First table costs £10 (including one admission), additional tables cost £6 each. Refreshments will be available. To pre-book tables only call Mike Stokes on 07702 742647. More details at hmfa.bmfa.org

Mar 30

Leafields Spring Swapmeet at Wharf Road, Pinxton, Derbyshire, NG16 6NY. The most popular swapmeet in the area with a well-established trading record of consistent numbers of traders and attendees. Doors will be open to the public at 10:00 am and traders are welcome from 8:45 am onwards. Admission is £2.00 pp at the door for adults with under15s free entrance. Hot and cold refreshments will be available throughout the course of the morning. Tables are available at £5.00 each and are selling very well so if you wish to wish to book a table, please ring Dave Moore on 07793 815654 or email at gyrservices@w3z.co.uk.

APRIL

April 3

Waltham Chase Aeromodellers Small Models Meeting at Wickham Community Centre, Mill Lane, Wickham, Hants, PO17 5AL. From 7pm till 9.30pm. Hall is suitable for smaller indoor R/C models. Models to be limited to a max. weight of 95g for fixed wing inc. battery (max. 2S LiPo), helicopters limited to 305mm (12") rotor dia. Models will be weighed and judged on their suitability for the venue. Flying will be in accordance with our indoor flying guidelines on our website. Admission £6 for fliers, £2 for spectators and junior fliers. Accompanied junior spectators and parents of junior fliers admitted free. Fliers to show proof of insurance. For further details please contact Alan Wallington on 01489 895157, email indoor@wcaero.bmfa.club or visit https://wcaero.bmfa.club

April 5

Delyn Model Flying Club Swapmeet at Halkyn Parish Hall and library, CH8 8ES. What 3 words shrub.poems.continued.off. A55 junction, 32b. Open for sellers from 8:30am and buyers from 9:30am. Unlimited parking tea and coffee available. Lots of model flying goodies on offer, come and fill your boots. For booking ring Bill Lowes on 07811 159891 or darcyrabbit@aol.com.

Apr 6

White Sheet RFC Scale Event. Scale Days could be either Saturday or Sunday, with the preferred day always being a Sunday. After analysing the forecasted conditions, the Scale Secretary will make the final on/off call on. Please note the reserve date of the 27th. Please check with the WSRFC before travelling: https://whitesheet.bmfa.club

Apr 12

CADMAC Swapmeet at Stannington Village Hall, Stannington, Northumberland NE61 6EL. The Village Hall is at the back of the Ridley Arms Pub car park. The event is open to all, but aeromodelling items only. Sellers fee £6 per table plus the entrance fee, all tables are provided. Admission £2, Ladies and under 16s free. Sellers set up at 12:00pm. Buyers enter at 12:30pm. Doors close at 3:00pm. All proceeds go to Northumbrian Air Ambulance. Please contact Bob Brown on rwbrown17@gmail.com or 07515 682543 to book a table.

Apr 12

Tonbridge Gassers and Rubber Fanciers Indoor Flying at Kings Sport Centre, 601 Maidstone Road, Rochester, ME1 3QJ. From 6:30 pm until 10:00 pm. Free flight, Lightweight R/C and 3D R/C timed flying sessions throughout the evening. Contact Steve on 0208 942 5000 or Eric on 07763 398 416.

Apr 12-13

The Great Cornish Model Show at Pool Academy, Church Road, Pool, TR15 3PZ. A celebration of modelmaking talent in Cornwall! Featuring around 15 working model train layouts, R/C and miniature model aircraft, model boats and ships, R/C trucks and cars, military modelling, model engineers, miniature figure painting, paper modelling, plastic kit modelling, wargamers, miniature room sets and dolls houses, modelling demonstrations. Full trade support. Open on Saturday from 10:00am – 5:00pm and Sunday 10:00am – 4:00pm. Tickets: Adults £8.00, under16s £5.00, Family £15.00, under 5s free. Free parking, easy access, hot food and refreshments all day. For more information, please visit www.hfmrc.uk

Marketplace

Sell off your unwanted airframes and engines or maybe buy a few new ones

To use our **FREE READERS' AD SERVICE** simply fill in the coupon provided and we'll print your advert here, in Britain's best-selling R/C flying magazine

FOR SALE

BIG-STICK 66" built, OS-GGT15 petrol engine, special Glo-Plug, no electric gear needed, great condition and ready to fly - £360. Max-Trainer 58", test flown only, uprated motor - £140. 07855 200745 or email dennis1945@proton.me (Newcastle).

RUCKUS, almost new with battery 3300/4S included. Uprated motor, as new, ready to fly - £150. Ruckus, great condition, with battery 3300/4S included. Uprated motor, as new, ready to fly - £140. 07855 200745 or email dennis1945@proton.me (Newcastle).

TWISTER 3D R/C HELICOPTER, 35m Rx, all servos and spares included. 3 sets of blades, tail boom, drive gear set, tail output gear set - £30 buyer to collect. 01494 445636 (Bucks).

HUSKY 72" foam, pristine condition, 6S 3000 battery - £180. Skynetic 56" foam powered glider, as new. 3S/2200 battery included. 07855 200745 or email dennis1945@proton.me (Newcastle).

DOUGLAS F4D SKYRAY EDF - £225. Newly built but not flown, 1350 mm length and 976 mm span. Complete with servos and electric retracts and comes with handbook. Uses 6S 5000 LiPo or similar. 07946 414532 (W.Yorks).

ASP 5 CYLINDER RADIAL engine, spark ignition or glow ignition with MRW on board glow system, fully tested. Cobra 3 in 1 mini lathe drill mill and some tools and instruction manual with little use – offers? Buyer to collect. 07818418766 (W.Sussex).

PROCTOR NIEUPORT ELEVEN, built, rigged, uncovered, superb - £495. Proctor Nieuport 28, 75% built with guns, wheels, plans etc. Selling as too big for workshop – offers? Lockheed Vega from FSM plans, needs motor and electrics – offers? Mr Mulligan, also from FSM plans, needs motor and electrics – offers? 01508 570941 (Norfolk).

GÖPPINGEN WOLF scale glider from RCM&E plan, ready to fly – offers? Stampe, built and partially covered and comes with a Laser 150 – offers? VK DR1 complete original kit - £200. Two OS91 motors NIB – offers? 01508 570941 (Norfolk).

SURPASS, many used motors, two and four stroke – offers? Clipped wing Cub in yellow Oratex, just needs a motor and radio – offers? Various other unflown gliders – offers? 01508 570941 (Norfolk).

TOPFLITE STINSON RELIANT, 2.55 m span. Fitted with Saito 150S Black Knight, never flown - £400 ono. Call Chris on 01584 890486 (Worcs).

WWI PLANES with petrol engines, never been used and in good condition. Fit your receiver and fly. Selling due to house move. Call David on 01371 852297 (Essex).

SE5a large R/C model, never flown. Made from free plan, all reasonable offers considered. Japanese WWII fighter plane – offers? 01393 463196 (Somerset).

SARIK HOBBIES HAWKER HUNTER FCA9, 48" span, 62" length, 4 lbs weight from laser cut balsa. Building manual and two sheet plan. Uses 6S LiPo and 90 mm EDF, lovely kit - £75 + P&P of £5.90. 07946 414532 (W.Yorks).

WANTED

HITEC SPECTRA 2.4 GHz module to replace non-working unit. Call John on 01435 862377 (East Sussex).

GRAUPNER MC24 transmitter with or without battery. Call Tom on 01389 874792 (Glasgow).

GRAUPNER TERRY (also called Chip) foamy glider. Also, E-flite Allusive glider, both preferred new and unmade or in very good condition. Call David on 07860 312025 (Kent).

ALL R/C MODELS WANTED, new or old, planes, gliders, kits, engines, boats, cars, radios, complete collections or job lots, countrywide collection. No hassle, cash buyer. Call David on 07940 791959 or email deserteagle357@hotmail.com (Clevedon).

ALL R/C MODELS, planes, boats, cars, kits, engines, radios etc. Complete collections wanted. Cash buyer, will collect countrywide. Email dorsetmodel@aol.com or call Michael on 01747 229725 (Dorset).

ALL UNMADE plastic aircraft kits; Frog, Airfix, Revell etc. Also aviation and military books, diecast aircraft etc. Please call 07973 885754 (Kent).

RCM&E

Post to: RCM&E, Marketplace, PO Box 99, Horncastle, Lincs, LNP 6LZ

FREE READERS' ADVERTISING

Please write your details in CAPITALS in the grid below, including a contact name and address or telephone number in the word count. Please also enter your full details in the address box below the grid.

PLEASE TICK: FOR SALE ☐ WANTED ☐

Free Readers' Ads will only be accepted on the coupon supplied.

Terms and conditions

We will endeavour to print your details in the next available issue of RCM&E. **Free Readers' Ads will only be accepted on the coupon supplied.** Coupons received after the copy date may be held over until the next issue. No responsibility can be accepted for misprints. Please comply with the Trade Descriptions Act when detailing goods for sale. This service is only available for private sales. Other services and trade advertisers must use the pre-paid classified section at the end of the magazine. Under 'The Business Advertisements (Disclosure) Order 1977', consumers must be able to differentiate between an advertisement for a private or trade sale.

Name .....

Address .....

..... Postcode .....

Tel. No. .....

Signature ..... Date .....

Next issue

AMBISAGRUS

When Bertrand Choupin decided to build his own high wing trainer as a Covid lockdown project he took a long look at the myriad of existing trainers to select a good looking one. He eventually settled on the Kamco Kadet to provide the inspiration for his new model, it being a superstar kit in the UK in the 1970s. The aim was to stay close to the original regarding aesthetical matters, but the design itself would be new and modern (electric to begin with) in all other respects.

Bertrand's major modifications were to give his model, now called Ambisagrus, a flat bottom wing with a 14% thick aerofoil and a slightly longer nose for easier balance when fitted with an electric motor. Finally, he wanted to 'Millerise' his project, adopting some of Peter Miller's favourite design tricks, such as the fuselage moments and construction of the tailplane surfaces, amongst others.

BEST OF BRITISH

Late September last year saw many modellers congregate at the BMFA National Centre at Buckminster for the Laser & Best of British Fly-in. The event obviously caught the imagination of many and the Saturday, which was the day that our roving reporter Danny Fenton chose to visit, was really well attended. A sprinkling of trade was very welcome too, with SLEC, Inwoods and Fighteraces keeping attendees topped up with essential winter building materials.

Danny had a wonderful time catching up with RCM&E readers, including the many modelflying.co.uk forumites who were out in force. Some took the opportunity to curse him for the Chipmunk and Hawker Fury Mass Builds that were run a few years ago as they were still working on them!

DRAW A PLAN

We are often asked where does one start when drawing up a model aircraft plan. Who better to answer that question than master plan maker Lindsay Todd, the designer of many of RCM&E's most popular plans.

Drawing a plan is not so difficult as it might first appear, says Lindsay, as it is just a series of logical sequences and some pretty basic geometry. In practice we can create a plan from any item that we can visualise in three dimensions. This can be from an existing drawing, photographs, a solid model or even your own sketch. All can be configured and drawn out to an appropriate size suitable for our purposes in third angle projection, which is a standard arrangement used to lay out an object such that it can be interpreted as an engineering drawing. Adopting this means we keep consistency in our drawings and clarity for everyone else, so we draw a plan by a set of rules.

RCM&E
MARCH 2025
Issue on sale
21st February

Editor: Kevin Crozier
kcrozier@mortons.co.uk

Publisher: Steve O'Hara,
sohara@mortons.co.uk

Publishing director: Dan Savage,
asavage@mortons.co.uk

Art Editor: Kelvin Clements

Design: Druck Media Pvt Ltd.

Group Advertising Manager:
Sue Keily

Advertising: Mason Ponti - mason@talk-media.uk – 01732 920499

Karen Davies - karen@talk-media.uk - 01732 442144

By post: RCM&E Advertising, Mortons Media Group Limited, Media Centre, Morton Way, Horncastle, Lincs, LNP 6JR

Sales and Distribution Manager:
Carl Smith

Head of Marketing: Charlotte Park

Commercial Director: Nigel Hole

Editorial address:
RCM&E, Media Centre, Morton Way, Horncastle, Lincolnshire LN9 6JR

Website: www.modelflying.co.uk

General enquiries and back issues:
Tel: 01507 529529 24 hour answer phone
help@classicmagazines.co.uk
www.classicmagazines.co.uk

Subscription: Full subscription rates (but see page 72 for offer): (12 months 12 issues, inc post and packing) – UK £76.20. Export rates are also available – see page 72 for more details. UK subscriptions are zero-rated for the purposes of Value Added Tax.

Customer services:
Tel: 01507 529529
Lines are open:
Monday-Friday 8.30am-5pm

Distribution: Seymour Distribution Ltd, 2 East Poultry Avenue, London, EC1A 9PT

Subscription agents:
RCM&E, Media Centre,

Morton Way, Horncastle,
Lincolnshire LN9 6JR

Printed: Acorn Web Offset Ltd, Loscoe Close, Normanton Industrial Estate, West Yorkshire, WF6 1TW

Published date: RCM&E is published on the third Friday of every month

Next issue: 21st February 2025

Advertising deadline: 5th February 2025

Pre order the next issue
www.classicmagazines.co.uk

Scan

Or call 01507 529 529

© Mortons Media Group Ltd. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage retrieval system without prior permission in writing from the publisher.

ISSN 0269-8307

The Publisher's written consent must be obtained before any part of this publication may be reproduced in any form whatsoever, including photocopies, and information retrieval systems. All reasonable care is taken in the preparation of the magazine contents, but the publishers cannot be held legally responsible for errors in the contents of this magazine or for any loss however arising from such errors, including loss resulting from negligence of our staff. Reliance placed upon the contents of this magazine is at reader's own risk.

RCM&E, ISSN 0269 -8307 (USPS 25434) is published monthly by Mortons Media Group Ltd, Media Centre, Morton Way, Horncastle, Lincolnshire LN9 6JR, UK.

Independent publisher since 1885

recycle
When you have finished with this magazine please recycle it.

CLASSIFIED »

RCM&E Web Directory & Classified

APOB
BUY * SELL* TRADE
01276 862551
EBAY; APLANEOLDEBARGAIN

www.mantuamodel.co.uk
179 Dedworth Road Windsor Berks SL4 4JN
Tel: 01753 856321
For all your modelling needs.
Metric and imperial Balsa. Plywood and Spruce. Radio Control - Accessories - Adhesives - Finishing Materials - Modellers Tools - OPS engines and spares
Distributor for Mantua Model of Italy - Mantua & Aviomodelli kits fast mail order service

Just Kits
R/C MODELS AND HOBBIES
Hull and East Yorkshire Premier Model Shop ~ For all your modelling needs
194 Hessle Road, Hull HU3 3BE • Tel: 01482 618001 • www.justkits.co.uk

Motors & Rotors
Email: info@motorsandrotors.com
www.motorsandrotors.com

www.phoenixmp.com
The On-Line shop of Phoenix Model Products
Famous for: • Balsa Kits • Realistic Prices • Excellent Services and Sound Advice
email: sales @phoenixmp.com Tel: 01626 332287
Designs by Stan Yeo

realmodelpilots@btinternet.com
RealModelPilots
www.realmodelpilots.co.uk

Sky High RC
www.skyhighrc.co.uk
Laser-cut rib sets for all categories of aero-modelling + RC equipment

Flying Widget Supplies
Supplier of new electric RC Gear 2.4ghz receivers, servos, speedcontrollers, motors, batteries & other RC equipment. I buy used radio gear both 35mhz and 2.4ghz Contact me for details
www.flyingwidgetsupplies.com
Tel: 07795363634 (After 6pm Please) email: Charliewidget@aol.com

Mail Order Service for: **Composite Materials**
Bucks-Composites
www.bucks-composites.com
Tel. No. 01903 765918
Mobile No. 07762 882378

ALWAYS IN STOCK:
Huge range of miniature fixings, including our socket servo screws.
ModelFixings.co.uk
also the home of **ModelBearings.co.uk**
• Taps, Dies & Drills • Adhesives
• Engine & Miniature bearings • Circlips, etc. etc.
Tel/Fax +44 (0)115 854 8791 Email: info@modelfixings.com

MODELLING MAGAZINES YOU'LL LOVE

GREAT OFFERS AVAILABLE ACROSS THE RANGE

SUBSCRIBE TODAY AND SAVE UP TO 49%
VISIT: WWW.CLASSICMAGAZINES.CO.UK/MODELLING24
CALL: 01507 529529 QUOTE: MODELLING24 EXPIRES 31/12/25

RCM&E Web Directory & Classified

Perma-Grit®

Tungsten Carbide Grit Abrasives

www.permagrit.com
01529 455034

LIGHTING FOR AEROMODELLERS

High intensity lights, flasher units and circular LED arrays for fixed wing, helicopter and UAVs.

See **www.lightingforaeromodellers.co.uk** and request PDF showing many more items.

If you buy one of our superb ARTB (ALMOST READY TO BUILD) kits,

WE WILL TELL YOU WHERE TO STICK IT!

Also, how to stick it and what glue to use.
Follow the precise step-by-step instructions and you can turn a box of quality parts into a top performing flying machine (additional items and equipment required).

All manufactured here in the UK under the watchful eye of CHRIS FOSS, the designer.

www.chrisfoss.co.uk

NEW PHONE NUMBER 07883 739518

RCM&E

To advertise please contact
Karen on
01732 442144
karen@talk-media.uk

Talk Media in association with MORTONS MEDIA GROUP LTD

Tom's Traditional RC Building Service

Tel: 0208 423 3509
Mobile: 0794 164 1440
Email: r.thomas74@btinternet.com

D.B. SPORT & SCALE LTD

RADIO CONTROLLED MODEL AIRCRAFT KITS & ACCESSORIES

ORDER ONLINE AT DBSPORTANDSCALE.COM
TEL: +44 (0)1656 514950 EMAIL: SALES@DBSPORTANDSCALE.COM

Tailor-Made Decals

We design and print tailor-made decals for scale model aircraft.
All sets are printed to order in the UK.
Bespoke requests are welcomed.
Contact us via Facebook, Instagram, website or email

MOORLAND SCALE MODEL DECALS

https://moorlandscalemodeldecals.co.uk info@moorlandscalemodeldecals.co.uk

Radio Controlled Aircraft, Boat and Model Engineering Plans & Parts

sarik hobbies

Plans
Laser Cut Wood Packs
Canopies & Cowls
Short Kits
Materials
Coverings
& much more

MODEL AIRCRAFT BUILDER
Find us on Facebook

The World's Biggest Selection*

www.sarikhobbies.com

* World's biggest selection of printed RC Model Plans & Short Kits.

RCM&E Shop Guide

Take advantage of this inexpensive way of promoting your business in the best-selling r/c magazine and reach over 45,000 loyal hobbyists!

GREATER LONDON

AVICRAFT Ltd
15 Chatterton Road, Bromley, BR2 9QW
Tel: 0208 460 0818
Open Tuesday , Thursday, Friday and Saturday 10am until 5pm
One of the longest standing British Model Shops. Specialists in Remote Control Equipment, Remote Control Planes and all associated accessories.

KENT

RAPID RC MODELS
Unit 5 A, Wallend Farm, Lower Road, Minster, Kent ME12 3RR. Tel: 01795 870414
www.rapidrcmodels.com
Open 7 days a week: Monday-Friday 10am-7pm, Saturday 10am-4pm, Sunday 10.30am-4pm
Suppliers of RC Model Aircraft and RC Accessories.

LINCOLNSHIRE

MASONS MODELS
20 New Road, Spalding, Lincs PE11 1DQ
Tel: 01775 722456
Monday, Tuesday, Friday & Saturday 9am-4pm; Wednesday 9am-2pm; Thursday & Sunday Closed.
www.masonsmodels.co.uk
All major credit cards accepted. Mail Order.

RCM&E
WWW.MODELFLYING.CO.UK

WWW.MODELFLYING.CO.UK

PARTING SHOT

PORTPATRICK PRINCESS
This fine-looking model of a Douglas DC-3 in Royal Aircraft Establishment livery is captured in camera by Chris Williams. Built in 2000 from the Top Flite Gold Edition kit by Trevor Hewson it's an all-built-up airframe fitted with custom-designed Robart air retracts.

Initially powered by 18 sub-C NiCd cells driving two 16 turn R/C car motors in series, geared 4.29:1 via MEC Superboxes, it was re-equipped with Astro 035 motors and the gearbox ratio dropped to 3.33:1. Propellers are Graupner 3-blade, 10" x 7". The model still flies on the Astro 035s but now on a 6S 4000 mAh LiPo battery with the gear ratio further reduced to 3:1. The LiPo upgrade reduced all up weight from 10 lb to 8 lb 12 oz, which, together with the greater reserve of power, has made it much more pleasant to fly.

Trevor's model spans 82.5" and is based on the RAe's 'Portpatrick Princess' which operated out of Boscombe Down for a while. Trevor says, *"It was chosen because the 'Raspberry Ripple' colour scheme lends itself well to film covering - and I don't get on well with paint!"*

DATAFILE

Photo:	Chris Williams
Camera:	Canon EOS 70D
Aperture:	f/5.6
Focal Length:	277 mm
Shutter Speed:	1/2000 sec
Lens:	EF 70-300 mm, f/4 - 5.6, L IS USM
ISO:	160
Setting:	Action program, pattern metering

THE PERFECT BUILD PROJECT FOR THOSE LONG WINTER EVENINGS

SUPERMARINE SPITFIRE
(50 Size)

VQA158

Wingspan: 1540mm (60in) | **Length:** 1230mm (48.4in)

£269.95

HAWKER HURRICANE
'Battle of Britain'
(60~90 Size)

VQA040-N

Wingspan: 1610mm (63in) | **Length:** 1290mm (50in)

£339.95

HAWKER HURRICANE
'Brown Camo'
(46 Size)

VQA041-B

Wingspan: 1486mm (58.5in) | **Length:** 1148mm (45in)

£249.95

T-28 TROJAN
'Camo'
(120 Size)

VQA162C

Wingspan: 1770mm (69.7in)
Length: 1350mm (53in)

£399.95

T-28 TROJAN
'Red/White'
(120 Size)

VQA162RW

Wingspan: 1770mm (69.7in)
Length: 1350mm (53in)

£399.95

T-28 TROJAN
'Silver'
(120 Size)

VQA162S

Wingspan: 1770mm (69.7in)
Length: 1350mm (53in)

£399.95

P-38 TOMAHAWK
'US'
(60 Size)

VQA163US

Wingspan: 1900mm (74.8in)
Length: 1200mm (47.2in)

£359.95

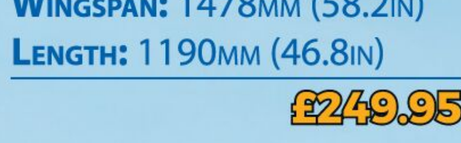
CESSNA 172 SKYHAWK
'US - Civil Air Patrol'
(55 Size)

VQA161US

Wingspan: 1730mm (68in)
Length: 1250mm (49.2in)

£299.95

CESSNA 172 SKYHAWK
'German'
(55 Size)



VQA161GE

Wingspan: 1730mm (68in)
Length: 1250mm (49.2in)

£299.95

FOKKER D.VII
'Black/White'
(120 Size)

VQA167BW

Wingspan: 1730mm (68in)
Length: 1350mm (53in)

£359.95

FOKKER D.VII
'Red/Blue'
(120 Size)

VQA167RB

Wingspan: 1730mm (68in)
Length: 1350mm (53in)

£359.95

FOKKER DR.1
'Red Baron'
(25-33cc)

VQA169R

Wingspan: 1850mm (78.2in)
Length: 1420mm (55.9in)

£424.95

FOKKER DR.1
'Camo'
(25-33cc)

VQA169CM

Wingspan: 1850mm (78.2in)
Length: 1420mm (55.9in)

£424.95

P-51B MUSTANG
'Tuskegee Airman'
(46 Size)

VQA05

Wingspan: 1478mm (58.2in)
Length: 1190mm (46.8in)

£249.95

AT-6 TEXAN
'Castrol'
(46 Size)

VQA01-N

Wingspan: 1540mm (60.5in)
Length: 1030mm (40.5in)

£259.95

P-39 AIRACOBRA
(20 Size)

VQA131

Wingspan: 1200mm (59in)
Length: 915mm (36in)

£169.95

YAK-1
'Green Camo'
(46 Size)

VQA054

Wingspan: 1520mm (59.8in)
Length: 1237mm (48.7in)

£249.95

A6M5 ZERO
'Pearl Harbour'
(46 Size)

VQA0151

Wingspan: 1580mm (62in)
Length: 1168mm (46in)

£249.95

DAGO RED MUSTANG
(46 Size)

VQA050

Wingspan: 1460mm (57.5in)
Length: 1270mm (50in)

£249.95

WASP TRAINER
'Blue'
(46 Size)

VQA012W

Wingspan: 1530mm (60.2in)
Length: 1130mm (44.5in)

£169.95

GRUNAU BABY V3
'German'

VQA069

Wingspan: 2100mm (82.7in)
Length: 1120mm (44.1in)

£249.95

MOTORSPATZ
'Red/Yellow'

VQA116

Wingspan: 2520mm (98.4in)
Length: 1120mm (44.1in)

£249.95

SCAN ME TO VIEW ALL VQ PRODUCTS

FREE DELIVERY SERVICE
ON ALL ORDERS OVER £150 (UK MAINLAND ONLY)

HOBBYPLASTIC.co.uk
AIRCRAFT | RADIO | ENGINES | ACCESSORIES | MATERIALS
YOUR ONE-STOP ONLINE HOBBY SHOP

MacGregor Industries
World Class Products • Excellent Service

TEL: 01628 760 430 | **EMAIL:** SALES@HOBBYPLASTIC.CO.UK
WWW.HOBBYPLASTIC.CO.UK • WWW.MACGREGOR.CO.UK

STİNG İN THE TAİL

NEW!

The all-new FMS 90mm EDF Super Scorpion V2 is here! Designed to elevate your flight experience with its upgraded inrunner motor and unique 12-blade fan, it has a real Sting in its Tail!

You'll feel the power and hear the difference! Choose between striking orange or camouflage paint schemes, both optimized for increased visibility and realism in flight. Available in 6S and 8S versions, this advanced sport jet delivers on every front; speed, stability and maneuverability. Ready to dominate the skies? The Super Scorpion V2 has arrived!

FEATURES:

- New! Improved CNC machined trailing link struts, ensuring smooth suspension and effectively reducing the impact force to the airframe during takeoff, landing, and taxiing.
- New! Available in both 6S (3670-KV1950 inrunner motor) and 8S (4075-KV1500 inrunner motor) versions.
- New! Available in two different paint schemes; orange and camouflage!
- Electric retracts with locked-rotor mode and over-current protection.
- Multi-plug connectors for added durability, reliability, and ease of assembly.
- Preinstalled ball link connector for increased throw and precision.
- Screw-together assembly.
- High-quality wear-resistant tyres.
- Buckle-design latch prevents unexpected canopy release in flight.
- Flap functionality to help ease takeoff and landing.
- Environmentally friendly water-based paint for better color and adhesion.
- High quality EPO foam.

FMS 90MM EDF SUPER SCORPION PNP V2 8S JET EDF ARTF W/O TX/RX/BATT £584.99 RRP
Part No: FMS145PCM8S (CAMO) – FMS145POR8S (ORANGE)
FMS 90MM EDF SUPER SCORPION PNP V2 6S JET EDF ARTF W/O TX/RX/BATT £559.99 RRP
Part No: FMS145PCM6S (CAMO) – FMS145POR6S (ORANGE)

IN ACTION! SEE IT

SUPER SCORPION

FMS Beautifully Crafted Foam ARTF Models

E&OE.

CML PRODUCTS ARE AVAILABLE IN ALL GOOD MODEL & HOBBY SHOPS. CHECK OUR WEBSITE FOR FULL DETAILS
WWW.CMLDISTRIBUTION.CO.UK

28

24

500

W1 3mm LITE P

W1 3mm LITE P

W4
3mm LITE PLY

HATCH
2 LAYERS OF 3mm BALSA

5 x 3mm BALSA STRIP

9g MINI SERVOS

HATCH RETAINING
TONGUE

F05

F05

300

2mm BALS
SUB L.E

1.5mm BALSA T.E. SHEETING
TOP & BOTTOM

20

16

PLY

PLY

3mm BALSA
X-GRAIN

105mm

CG

HATCH RETAINING
MAGNET

F03

F01
3mm BALSA TO △

3mm BA

BUNGEE LAUNCH HOOK

F03

F02

4mm BALSA L.E.

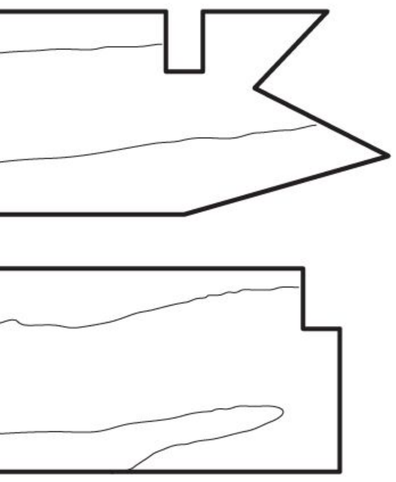
SA
E.

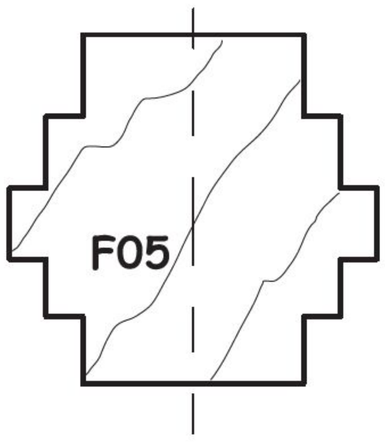
3mm BALSA
2 REQ'D

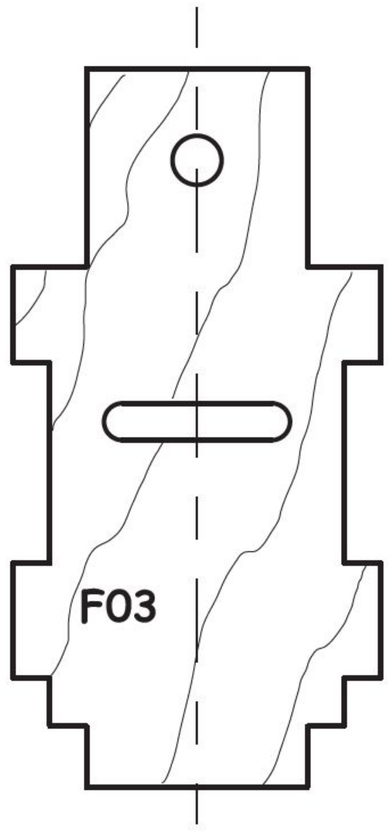
3mm BALSA

16

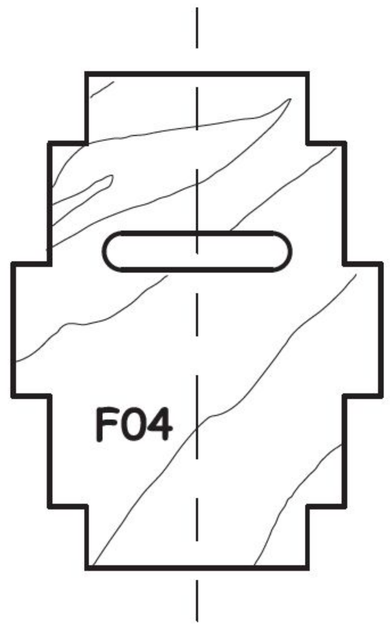
12

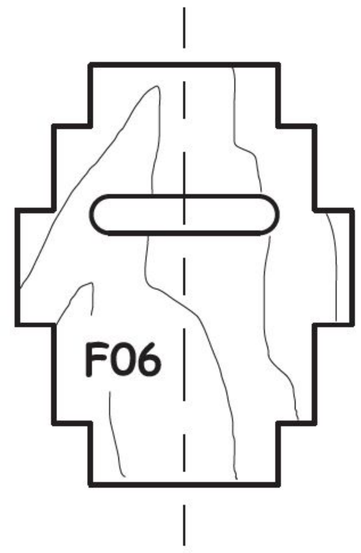


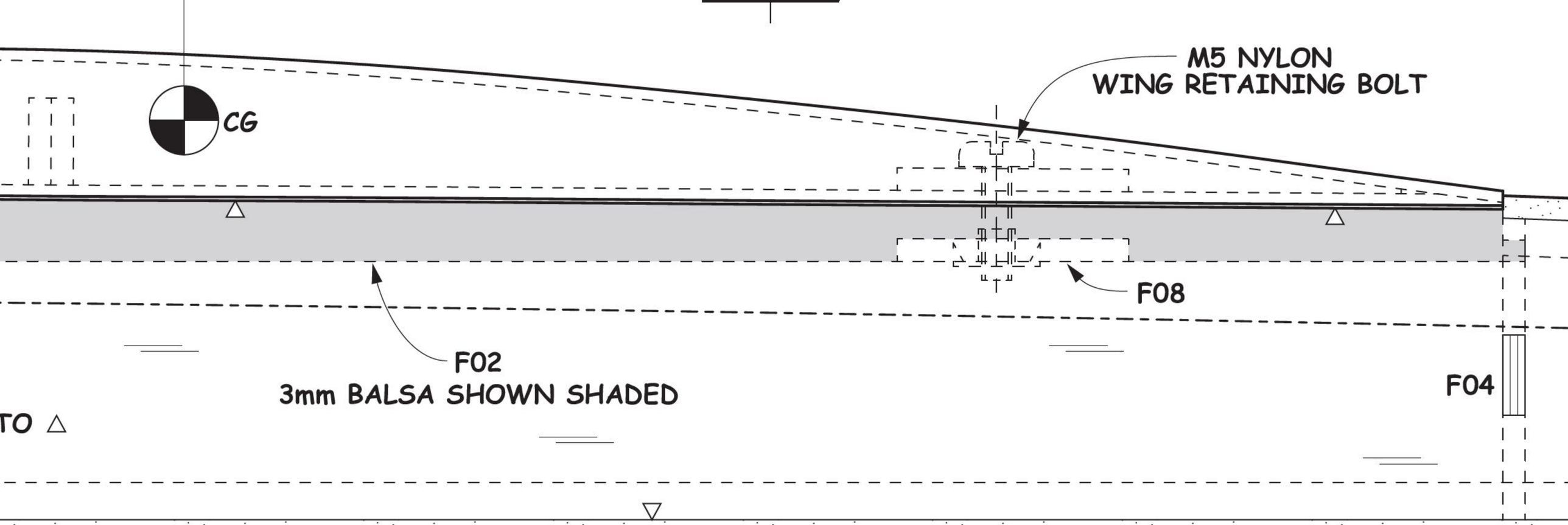


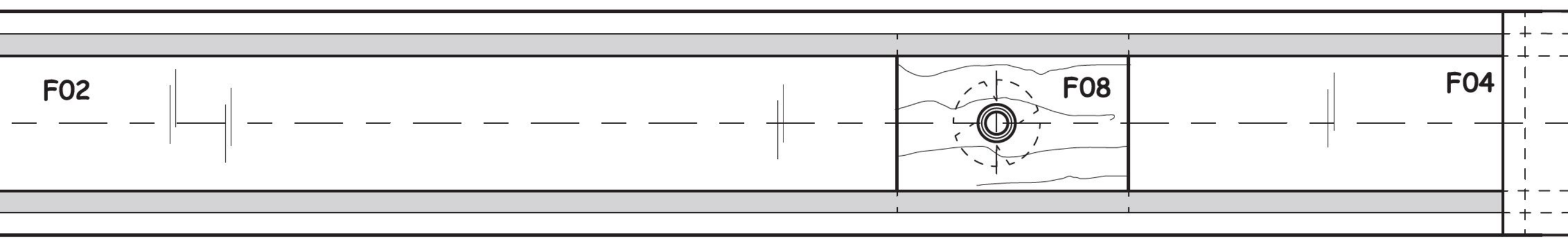


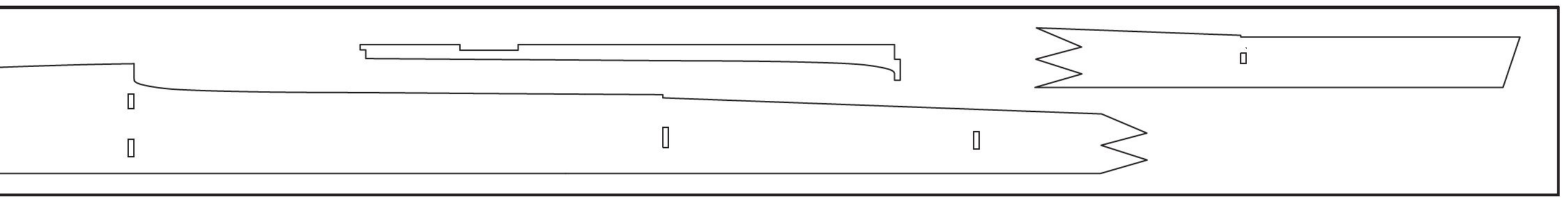
F03 - F08 3mm LITE PLY

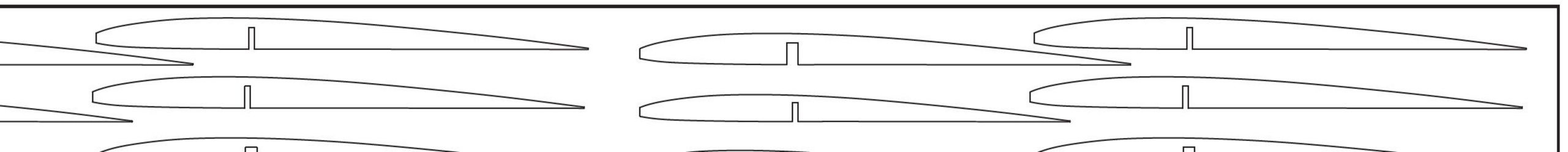




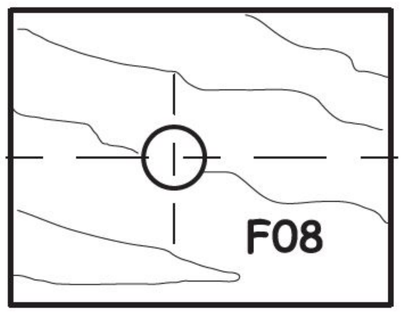








SCALE
INCHES



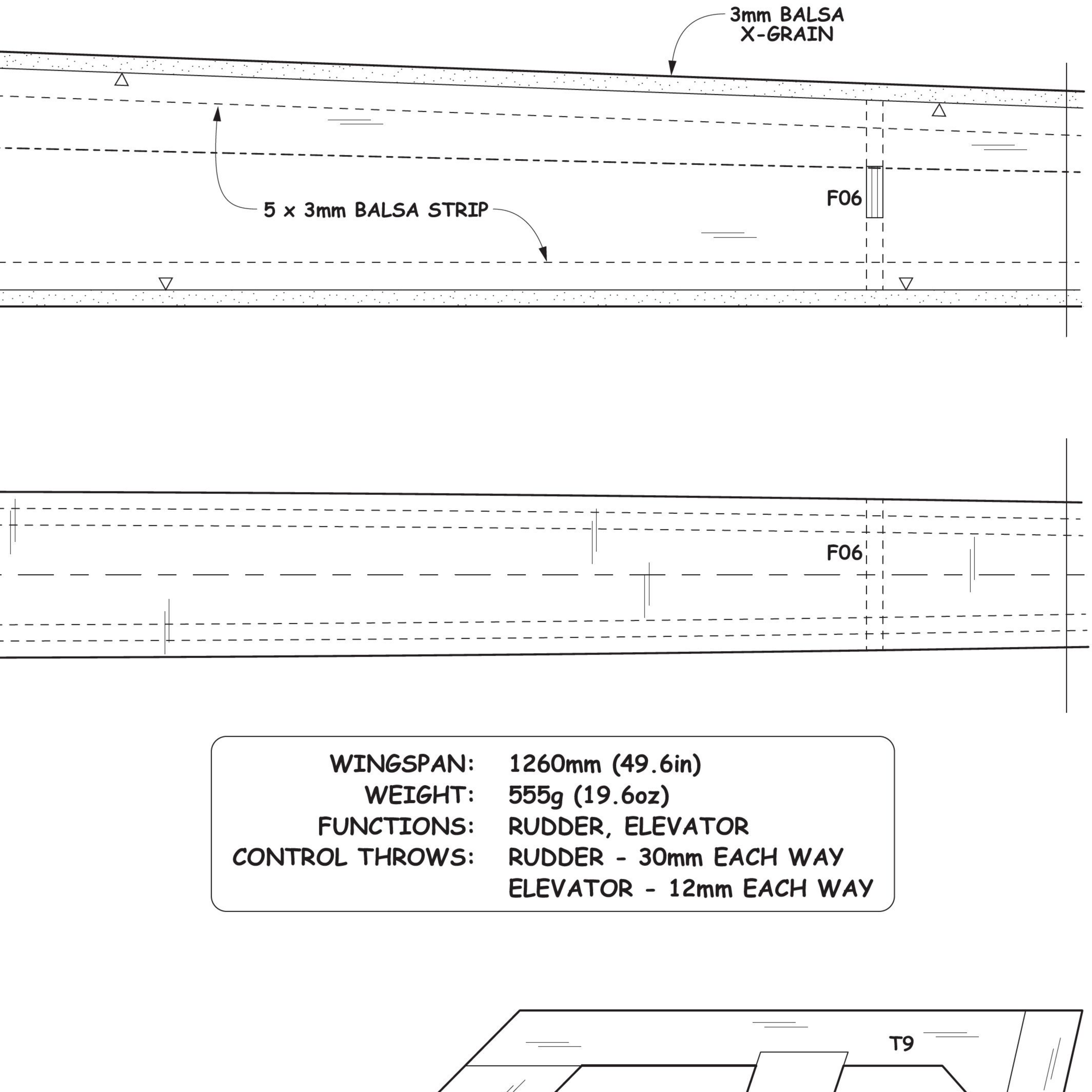
NEW STYLE

BY TON VAN MUNSTEREN

PLAN No: RC2269	No. OF SHEETS: 1 OF 2	First published in RCM&E February 2025

PLEASE VISIT WWW.SARIKHOBBIES.COM TO VIEW ALL AVAILABLE PLANS

PLEASE NOTE, THIS PLAN IS COPYRIGHT OF MORTONS MEDIA GROUP LTD.
NO PART OF THIS PLAN MY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR ANY INFORMATION STORAGE RETRIEVAL SYSTEM WITHOUT PRIOR PERMISSION IN WRITING FROM THE PUBLISHER.



WINGSPAN:	1260mm (49.6in)
WEIGHT:	555g (19.6oz)
FUNCTIONS:	RUDDER, ELEVATOR
CONTROL THROWS:	RUDDER - 30mm EACH WAY
	ELEVATOR - 12mm EACH WAY

W13
4mm
BALSA
2 REQ'D

W13

1.5mm BALSA T.E. SHEETING
TOP & BOTTOM

W11

W10

2mm BALS
SUB L.E

1.5mm

200

100

SCALE
MM

100

200

SA
E.

W9

BALSA T.E. SHEETING
TOP & BOTTOM

2 REQ'D

3mm BALSA

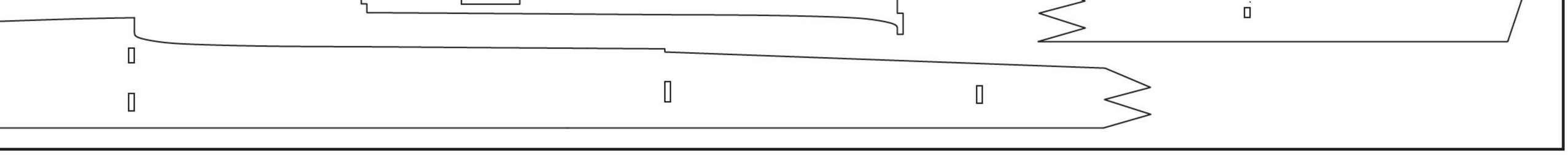
4mm BALSA

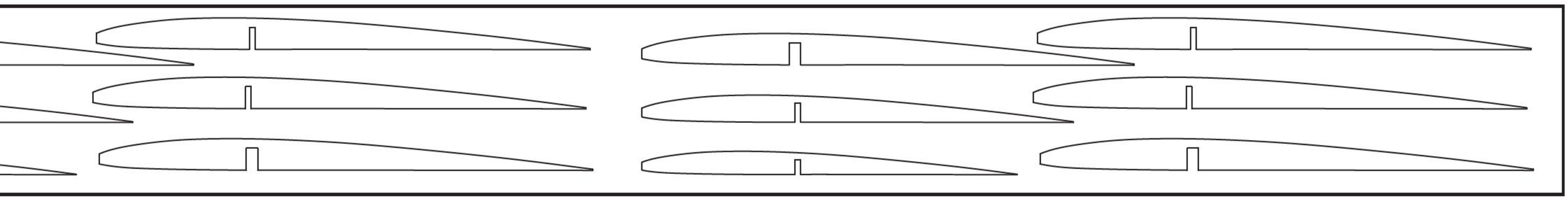
3mm LITE PLY

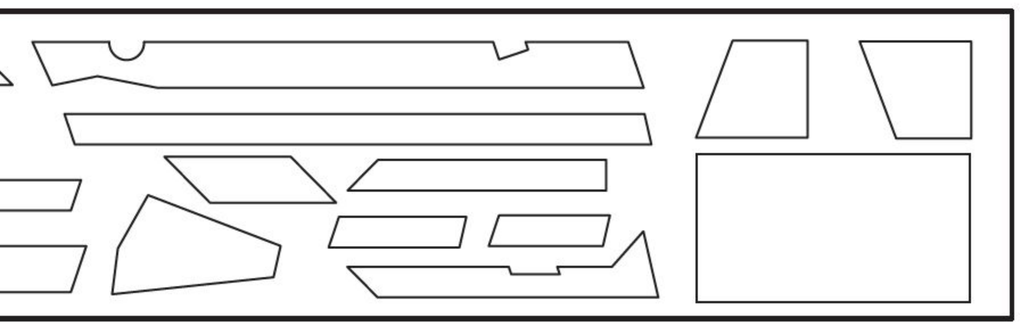
SUGGESTED LAYOUT OF PARTS (DRAWN AT 25%)

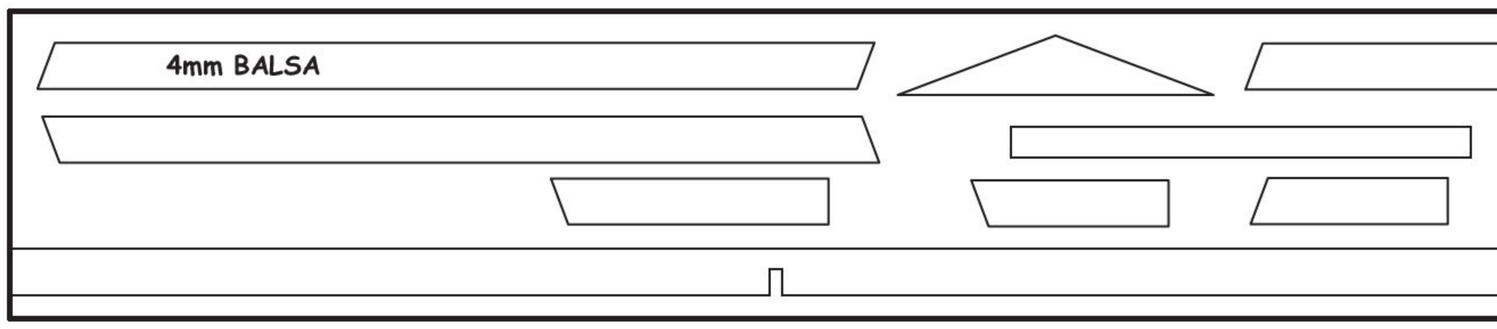
300

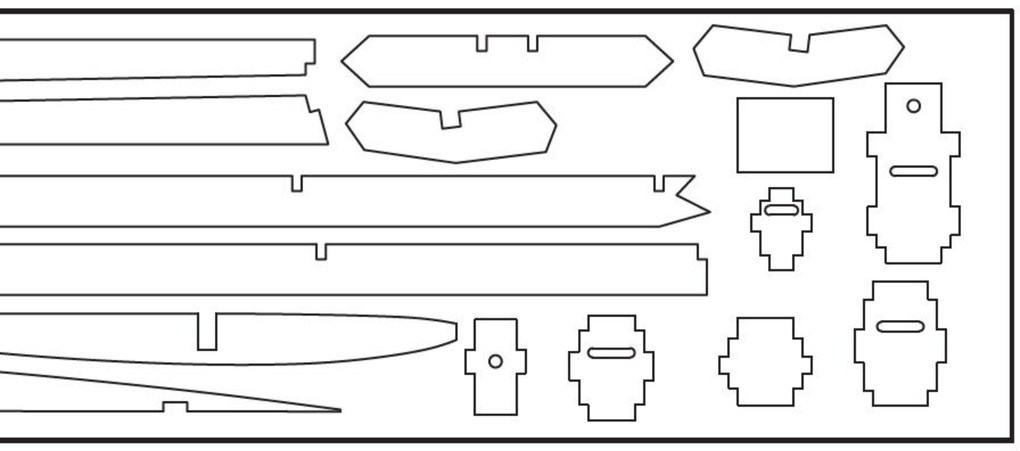
400

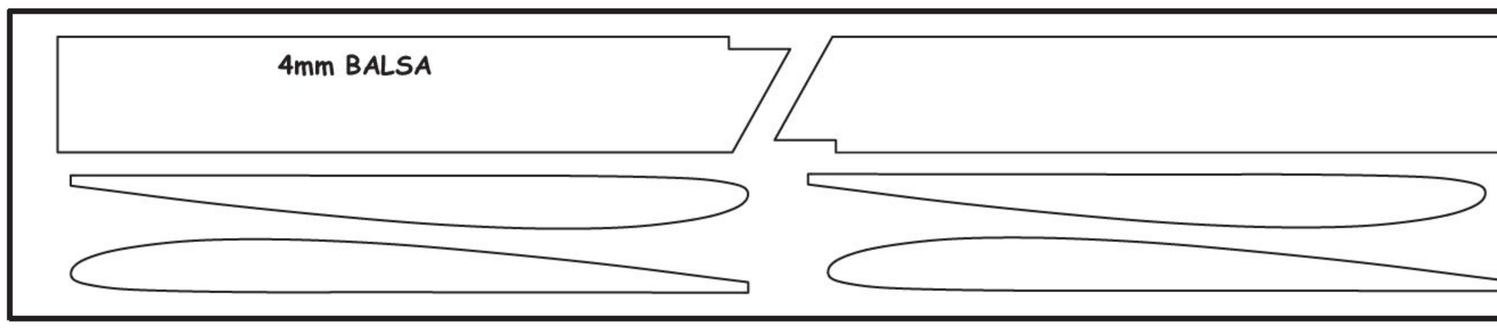




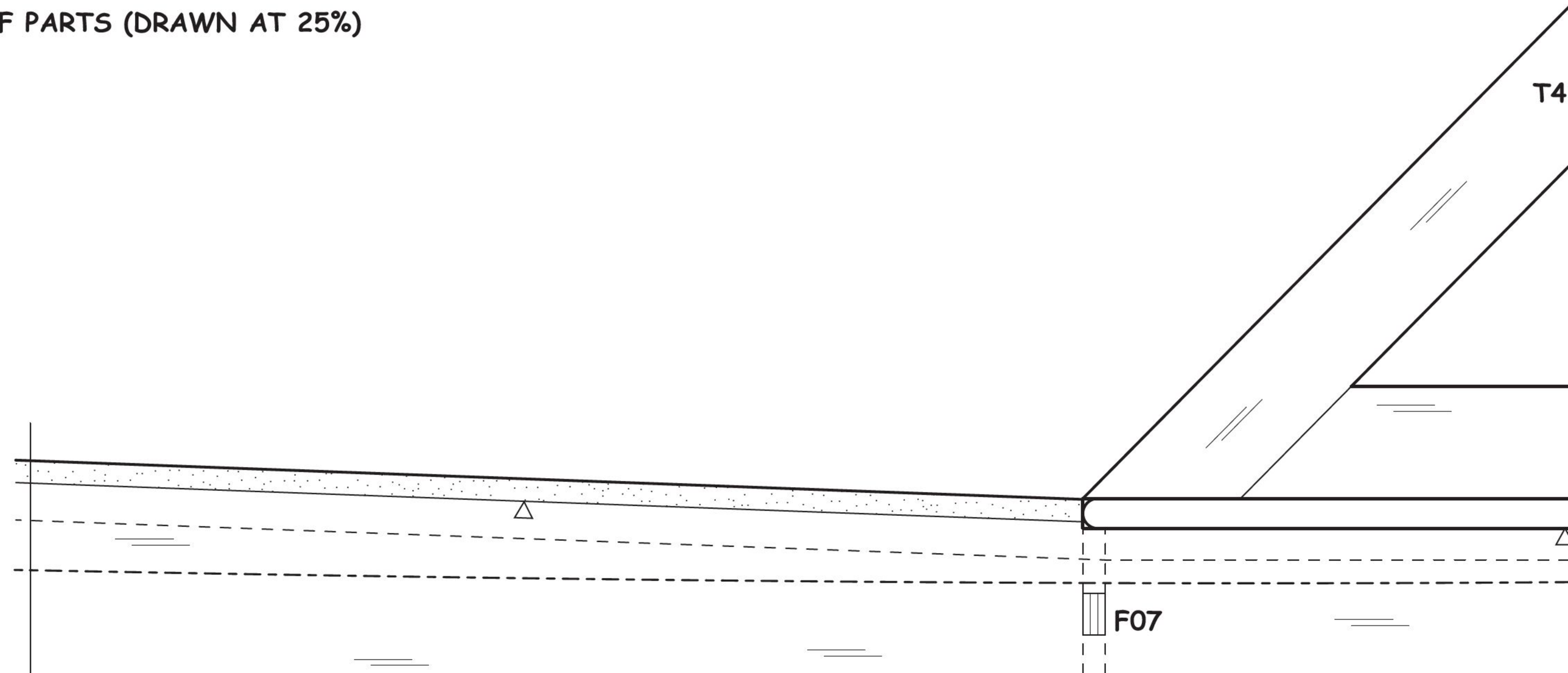




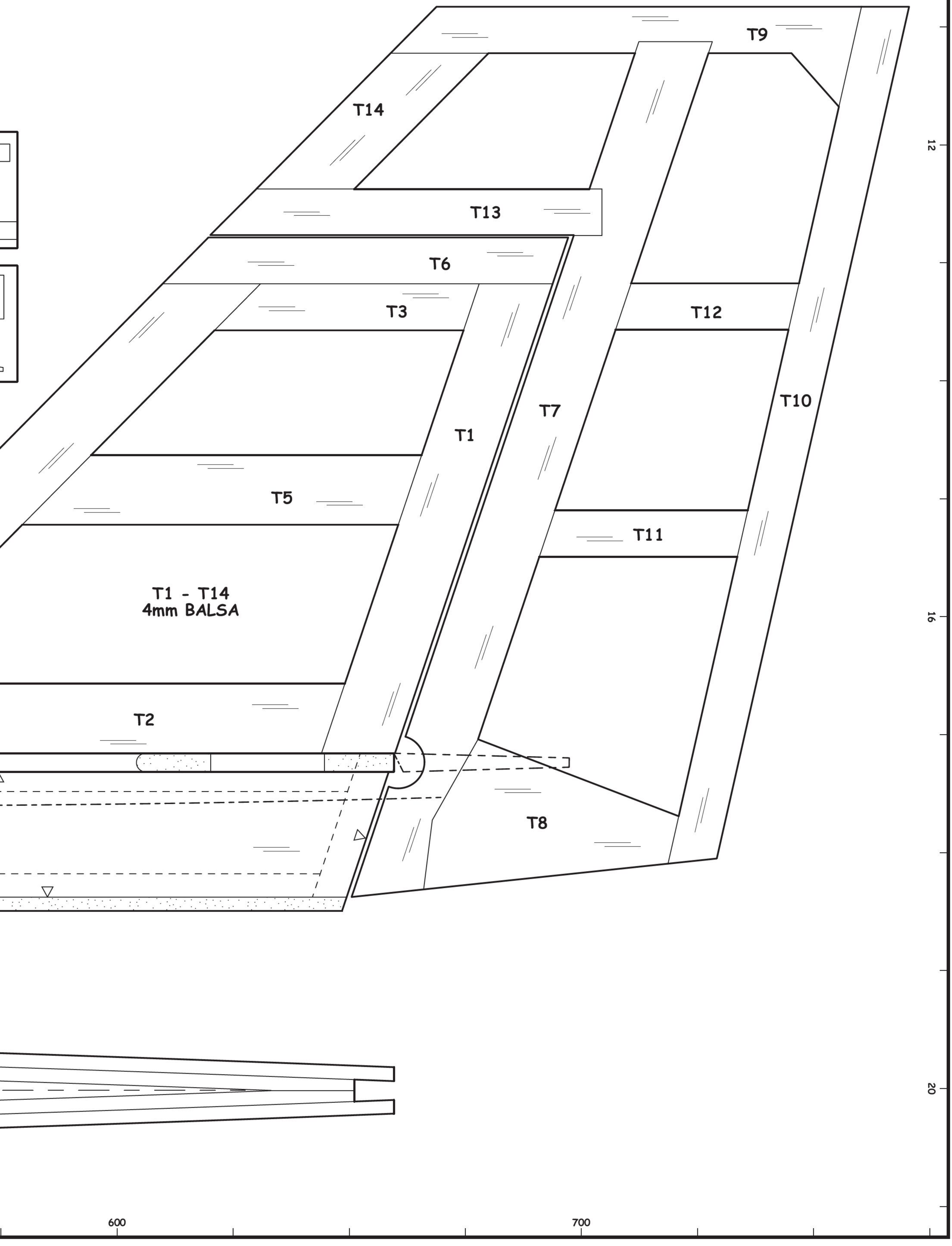




F PARTS (DRAWN AT 25%)



CONTROL THROWS: RUDDER - 30mm EACH WAY
ELEVATOR - 12mm EACH WAY



28

24

500

W6

W5

W12

1.5mm BALSA L.E.
TOP & BOTT

1.5mm BALSA
TOP &

300

20

16

SHEETING
TOM

INFILL WITH BALSA
FOR WING DOWEL

W5

W3

W3

1.5mm BALSA SHEETING
TOP & BOTTOM

W4

T.E. SHEETING
BOTTOM

16

12

W8 4mm BALSA L.E.

W7 2mm BALSA
SUB L.E.

LSA
EL

W3

W3

W5

W2

W1

W4

8 4 SCALE INCHES

W5

W6

W12

4

8

1.5mm BALSA
TOP &

W3
2 REQ'D

W5
4 REQ'D

3mm BALSA

W6
2 REQ'D

W9
2 REQ'D

W10
2 REQ'D

W11
2 REQ'D

NEW STYLE

BY TON VAN MUNSTEREN

PLAN No: RC2269	No. OF SHEETS: 2 OF 2	First published in RCM&E February 2025

PLEASE VISIT WWW.SARIKHOBBIES.COM TO VIEW ALL AVAILABLE PLANS

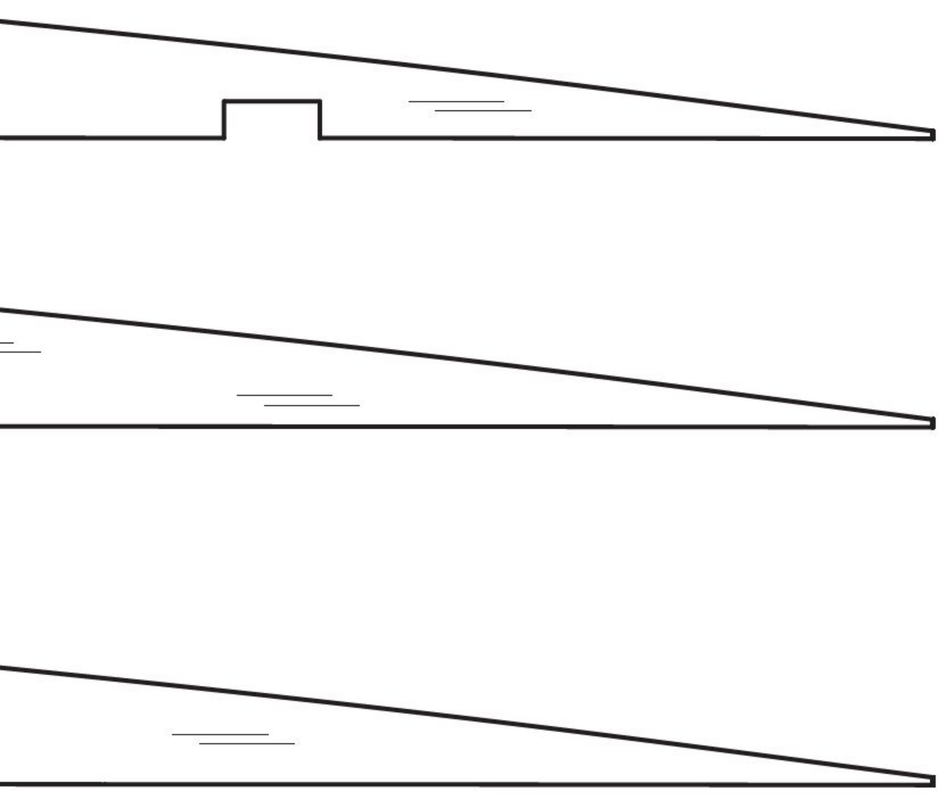
PLEASE NOTE, THIS PLAN IS COPYRIGHT OF MORTONS MEDIA GROUP LTD.
NO PART OF THIS PLAN MY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS,
ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR ANY INFORMATION STORAGE
RETRIEVAL SYSTEM WITHOUT PRIOR PERMISSION IN WRITING FROM THE PUBLISHER.

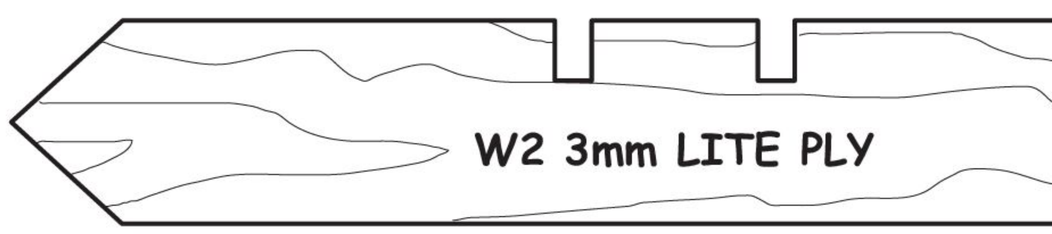
SCALE
MM

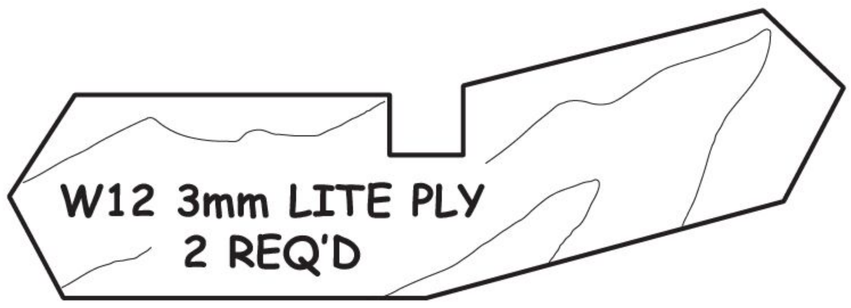
100

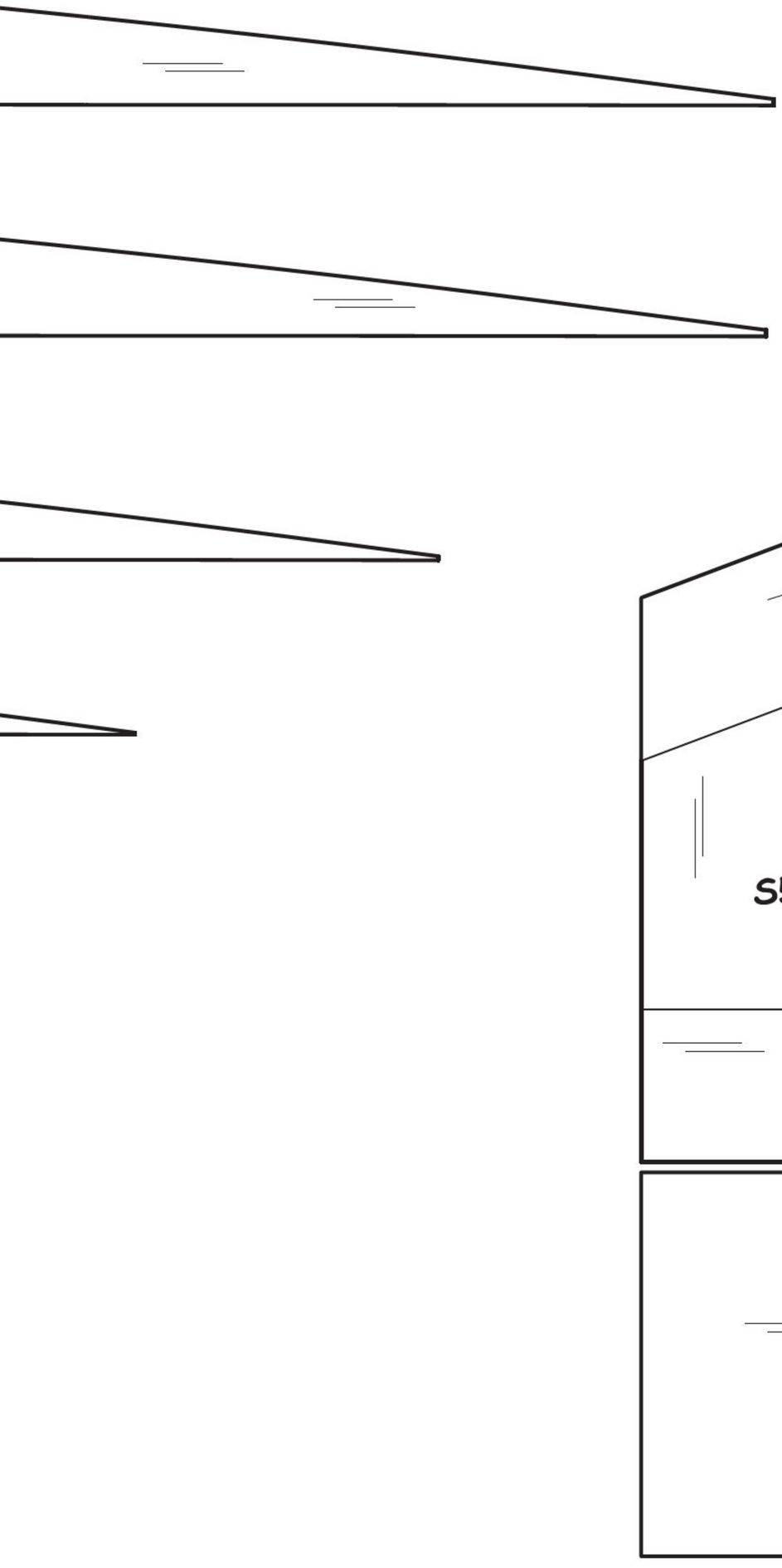
200

T.E. SHEETING
BOTTOM









300

400

W2 3mm LITE PLY

S4

S6

S1 - S9
4mm BALSA

S3

S8

S7

S2

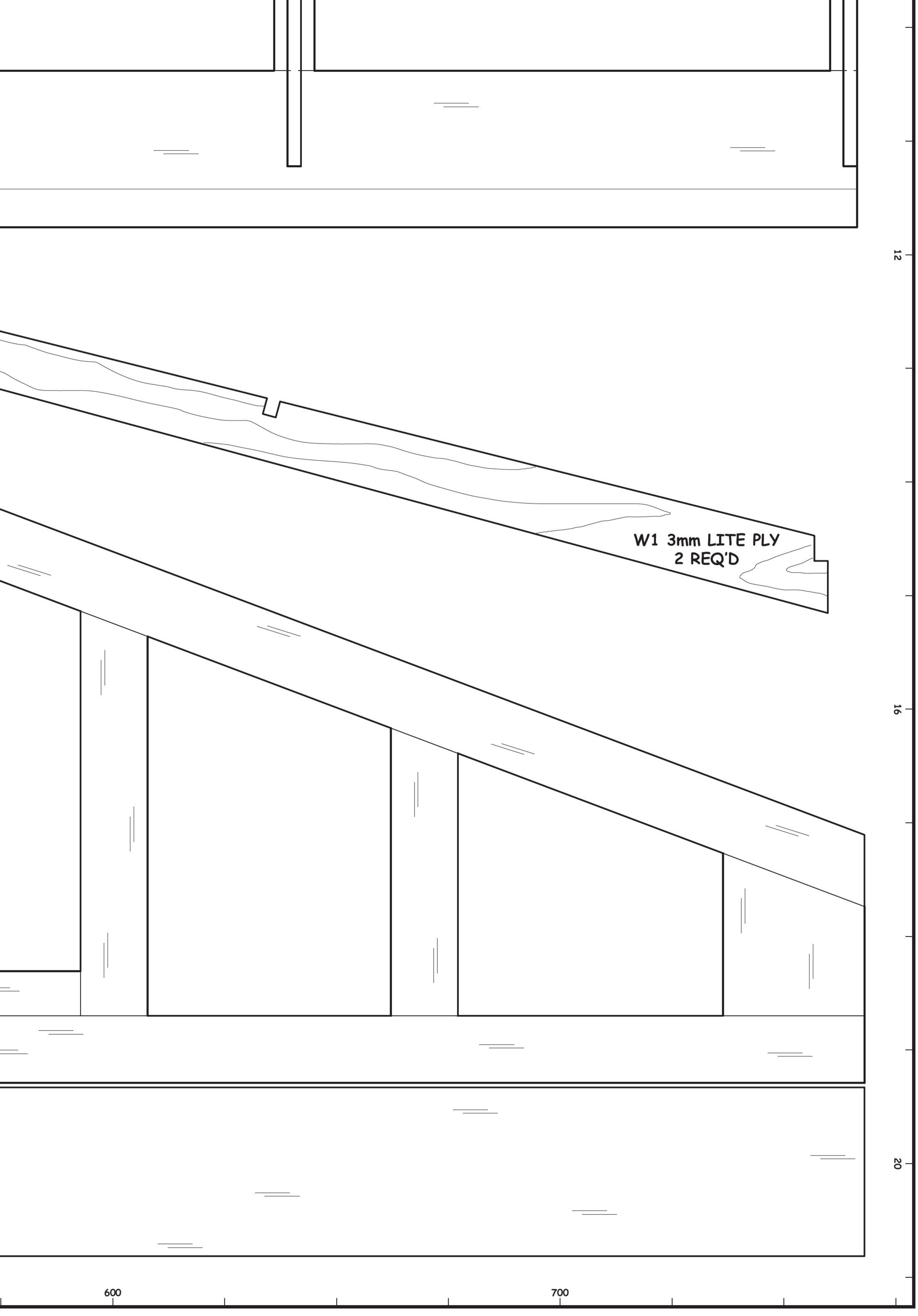
S1

ELEVATOR CONNECTOR
Ø2mm STEEL WIRE OR
Ø4mm CARBON

S9

400

500


W1 3mm LITE PLY
2 REQ'D
12
16
20
600
700