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Welcome

Welcome to the December 2025 issue of RCM&E.

With nights drawing in after the long summer flying season I thought it was time to get together with some flying buddies and put some air under the wings of our LED equipped aeroplanes. Several clubmates had been posting about their newly acquired night flyers, ARTF foam versions of which are now widely available, whilst others had gone the DIY route by adding lights and LED strips to existing models. The response to my call-out was more than I had hoped for and we had quite a few brightly lit models take to the air as the skies darkened from dusk onwards.

My own steed is a venerable FMS Firefly, an almost control line style stunter with its short moment arm and broad, elliptical wings. Roll control is interesting too courtesy of moving wingtips instead of ailerons and they work amazingly well. You may be more familiar with a modern version from Durafly called the SlowPoke, although that has conventional ailerons. Anyway, the Firefly is cracking on a bit now and it is several years since I last flew her. She has lights fitted throughout the airframe, including those wingtips, which can be switched to flash in four different patterns – but only when it's dark enough to see them! You see, her lights are fitted behind her foam skin, so they are a bit subdued until it gets really dark at which time they really come alive. Contrast this with the latest generation of night flyers where the light strips are surface mounted and are much brighter thanks to advances in LED technology. I was a bit disappointed when flying her at dusk, truth be told, as all those bright modern planes flashed past. But when the sun had fully set there was barely any difference and I really started to enjoy seeing her gyrate below the stars.

Night flying is easier than you might think so why not get together with some clubmates and give it a try. Just a couple of tips: place some battery powered lights on the ground to give some ground reference when landing and don't forget to tell the owner of the land where you fly from about your night sessions otherwise they might think some little green men have landed!

So what's in store in this, the last issue of 2025? (As usual I'll be passing on my festive salutations in the next issue which comes out just before Christmas. It's barely October as I write this!)



We start this issue with another Model Magic feature as Mike Freeman locks his camera onto a 30% Farner Werke target tow plane as used by the Swiss Air Force. Then we literally 'Spin into Summer' with Rich Harris as he reports from the UK & International Autogyro Fly-In held at Winterton MFC. Mike Birch was a leading aerobatic pilot in the 1960s and 70s and Stuart Mackay reveals the history of one of Mike's pattern planes, the Capricorn, which he has recently returned to the air. In the first of our monthly columns, Danny Fenton (Make It Scale) returns to BMFA Buckminster to compete in the British Scale Nationals before Chris Williams (Scale Gliding) hits the slopes with more classic scale soaring coverage.

Tony Nijhuis takes off with the second half of this issue, proffering a Pro-Plan for his 29" span Jaguar GR.1 EDF jet. Then we hand over to Mike Freeman as he reports from what is likely to be the last ever Greenacres MAC Fly-In. Our kit review this month is from Dave Goodenough who tapes and glues together the quick build Cinnabar glider from VMC before Neil Hall returns with his latest Golden Glow musings, this time taking some small gliders to great heights with a power pod mounted Cox .049 engine. Finally, Dave Goodenough (One Man & His Shed) boils up a gummed-up glow engine, reveals some foam mega models and attends his local scale slope event.

As always, I hope you enjoy reading it all.
Happy Flying!

Kevin Crozier

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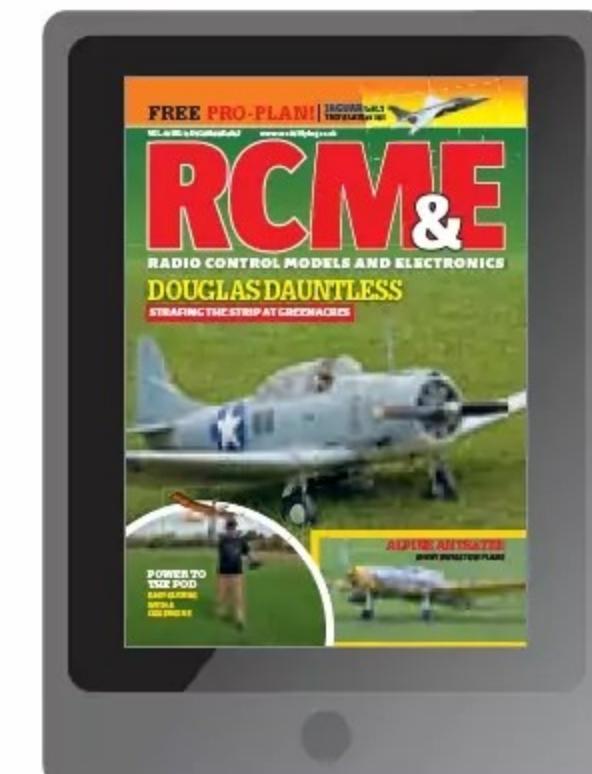
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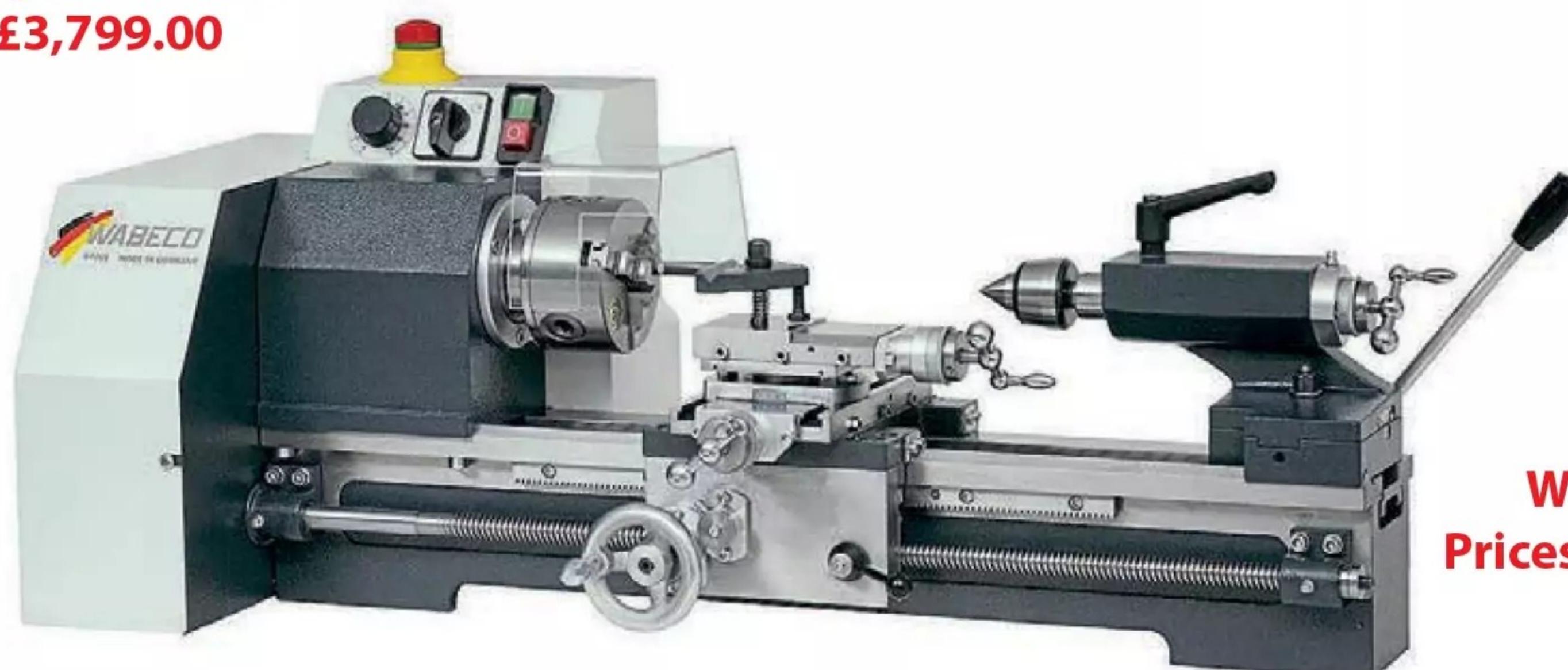
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On the cover

Photo: Mike Freeman

The Greenacres Model Aero Club flying site in the West Midlands started life as a commercial airfield but model flying there can be traced back to 1947. The airfield closed in 1956 but model flying continued until the mid 1990s when

Greenacres MAC officially started. The club has a long history of hosting Fly-Ins but sadly the club's days are numbered as the landowners have other plans for the site. Hence, the August 2025 Fly-In is likely to be the club's last, so Mike Freeman visited to record the event for posterity.





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HAPPY ANNIVERSARY JP!

If you read the October issue of RCM&E it cannot have escaped your notice that a long serving member of the UK model trade has been celebrating its 50th Anniversary this year. Step forward J. Perkins Distribution Limited, or J. Perkins as it's more commonly known.

Jim Perkins started the company in 1975 to distribute toy and model products to independent shops across London and the South East. During my first stint as RCM&E Editor in the early 1990s I was lucky enough to visit JP's warehouse in Greenwich several times, where my overriding memory was of Jim's huge fish tank mounted in one wall of the large meeting room complete with, if my memory is correct, a wave making function to

oxygenate the water. That, and of course the racks upon racks of model kits, glow engines and all the bits and bobs that we modellers devour for our hobby.

In 2000, having outgrown their London warehouse, JP moved to a new purpose-built facility on the outskirts of Lenham, a small village close to Ashford in Kent. By that time, I was working for another well-known R/C distributor so my visits to JP were curtailed and it was over a decade later, after I resumed my editorial career with a different magazine, before I was able to catch up with the JP crew in their spacious new building. Roll on a few years and it was all change again, not only for me but for RCM&E's previous editor, Graham Ashby, another two-time

custodian of this journal, who, having worked at JP after first departing from the editorial hotseat, was lured back to resume work on the company's marketing and promotional campaigns. And so, it's Graham's excellent work that you see every time you open a copy of RCM&E, presenting readers with another impressive JP double page advertisement immediately after the front cover.

So as J. Perkins 50th Anniversary year ends I am sure all our readers will wish to join me in wishing this Great British model company our very best wishes for many more successful years of model trading in the decades to come.

Kevin Crozier, Editor RCM&E

J. PERKINS CELEBRATE 50 YEARS



Jim Perkins, circa 1973, flying at the Bickley club in Kent with a Futaba M Series transmitter.

This year J. Perkins Distribution Ltd. have been celebrating their 50th Anniversary and throughout that time they have advertised widely in the pages of RCM&E. Here's a brief rundown of the history of this world-renowned model manufacturer and distributor.



It all started here! The JP warehouse in Greenwich circa 1980.



Office block frontage at the modern JP warehouse near Lenham in Kent.

50 YEARS & COUNTING

J. Perkins have been importing, manufacturing and wholesaling radio control models, accessories and materials, along with a host of other hobby items, to model businesses since Jim Perkins started trading 50 years ago. If you're interested in model aircraft, helicopters, boats and cars, plus all the model accessories, materials, tools, glues and parts you could imagine, you'll probably find them in the JP range.

J. Perkins can tot up many decades of modelling experience gained by the directors and staff in the company, experience that they draw on to help supply their customers with the products and services they want.

Starting in 1975, Jim Perkins, aka JP, initially operated out of a warehouse in Greenwich, south London. From here he was able to serve independent toy and model shops across London and the South East of England. After

25 years the business had outgrown its London location and it was relocated to the North Downs of Kent.

In 2000 J. Perkins moved into a purpose built 25,000 square foot facility in the small market village of Lenham, Kent. With great connections to Europe via the Channel Tunnel they have been serving the UK model and hobby trade, and our European partners, from this location for over 20 years



Purpose built on a large corner plot, JP's second warehouse is built at an angle to the first.



A shipment of Seagull kits awaits distribution to model retailers.

LEADING BRANDS

J. Perkins are very proud to represent some of the world's leading brands from all over the globe.

For the R/C aeromodeller they offer Top RC, Seagull, Arrows Hobby EPO aircraft, APC and Master Airscrew props, Dubro accessories, Futaba radios and servos, Hitec servos, HSD Jets, Multiplex EPO aircraft and radio systems, Planet radios and Seagull aircraft.

For R/C surface modellers they distribute Henglong tanks, Traxxas cars and trucks, and many more car products.

For plastic and balsa kit builders JP offer AMT, MPC, Polar Lights and Atlantis plastic kits, Dumas and Guillow wooden kits, the classic DRP wooden kits, and more.

And for makers, modellers, crafters and builders there's a massive assortment of workshop materials and workbench tools, glues and paints from Zap, Evergreen, Evo-Stik, Excel, Ghiant, Guild Lane, Heki, JTT, K&S, Lightcraft, MD, Milliput, Oracover, Prolux, Revell, Spraycraft, Swann-Morton, amongst others.

In addition, J. Perkins are the exclusive UK agents for many of the brands listed above, including Arrow Models, DPR, Futaba, Guillow, Hitec, Multiplex, Oracover, Planet, Radient, Twister, Seagull, RadioLink, Swiwin Turbines, Zenoah, Stinger Engines, RadioLink, Guild Lane, Oracover, SC Engines and Zap. Quite a list!



To celebrate reaching such a significant milestone JP released a 50th Anniversary Edition of the Seagull Challenger which we reviewed in the September 2025 issue.



An order for UHU adhesives is picked as many more product racks fade into the distance inside JP's huge warehouse.

Thomas Hoffmann lends scale to his impressive 30% scale tow plane.



ALPINE ANTEATER

On his tour of the Weston Park pits Mike Freeman locks onto a distinctive 30% scale model of a target towing plane used by the Swiss Air Force to train their fighter pilots

Words: **Mike Freeman**

Photos: **Mike Freeman, Al Freeman, Thomas Hoffmann**

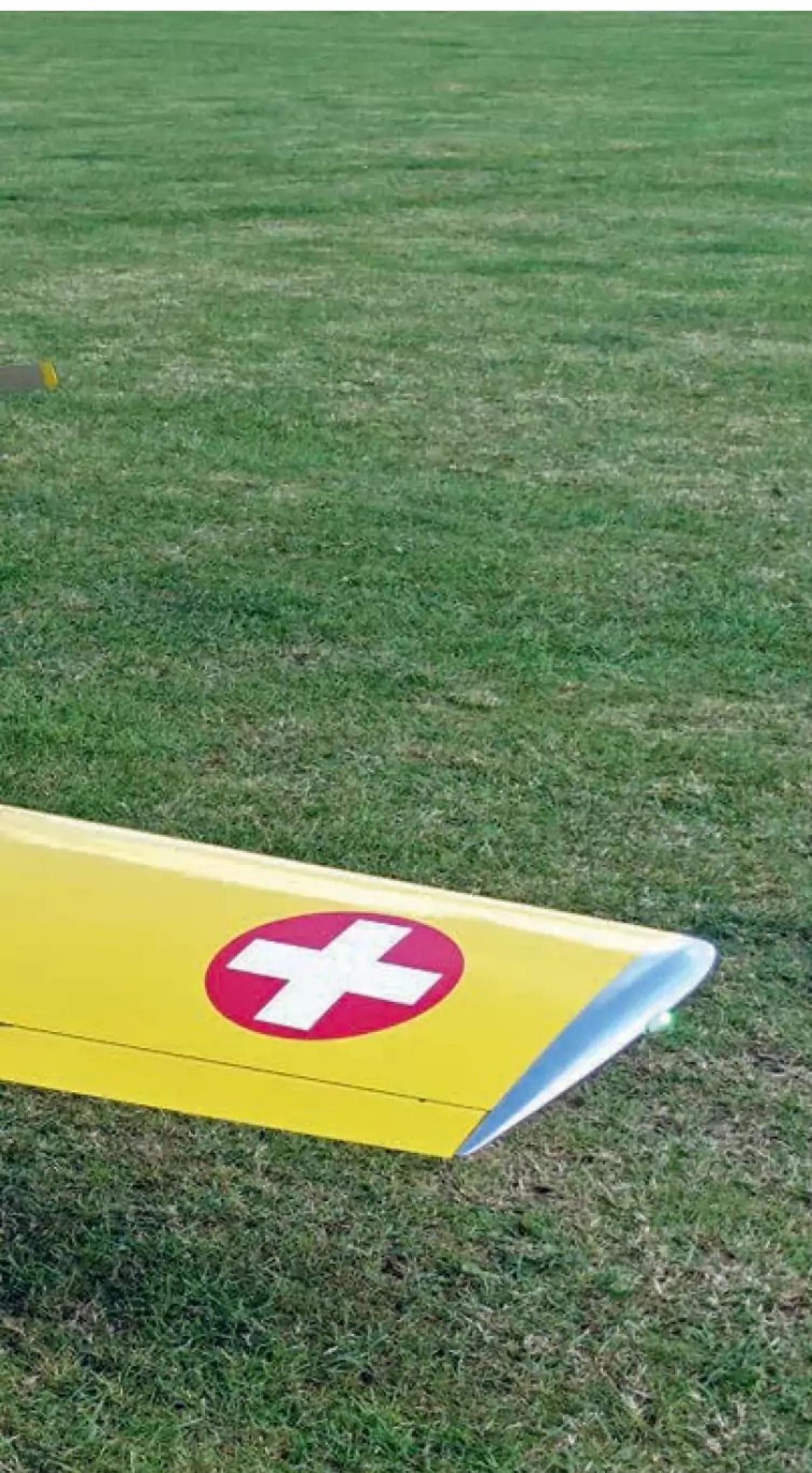
Whilst perusing the pits area at model shows I invariably find a model that jumps out and says, "Look at me!" and Weston Park 2025 was no exception. Thomas Hoffmann from Switzerland is one of the tug pilots for the Red Bull Schaefer massive twin glider display team but he also brought along and displayed his rather distinctive looking 30% scale model of the Farner Werke (F+W) C-3605, a target towing plane used by the Swiss Air Force to train their fighter pilots.

THE FULL SIZE

The C-3605 is a later incarnation of the earlier Swiss Federal Aviation Works C-3603 which was designed as a multi-purpose combat aircraft with a machine gun in each wing, plus one in



Reflections on the superbly painted fuselage show the lovely detailing that Thomas has applied.



the tail, looking back. The C-3603 entered Swiss Military Service in 1942 to defend the neutrality of Swiss air space during the Second World War but was eventually replaced by the DH Vampire jet fighter in 1952. In the late 1940s the machine guns were removed from several of the C-3603s and a winch with a 2000 metre cable added in the tail to tow targets for target practice.

By the mid 60s, although the target towing C-3603 airframes were still in good condition, the piston engines were becoming outdated and spares difficult to source. Rather than scrap the plane and replace it the manufacturers decided to re-engine the airframe and the C-3605 was born.

The engine was replaced by a Lycoming T53 Turboprop engine but as the new engine was a lot lighter than the original piston engine lump, they needed to lengthen the nose by 1.8 metres to maintain the correct Centre of Gravity. The resulting unusually long nose earned the C-3605 the nickname 'Alpine Anteater'!

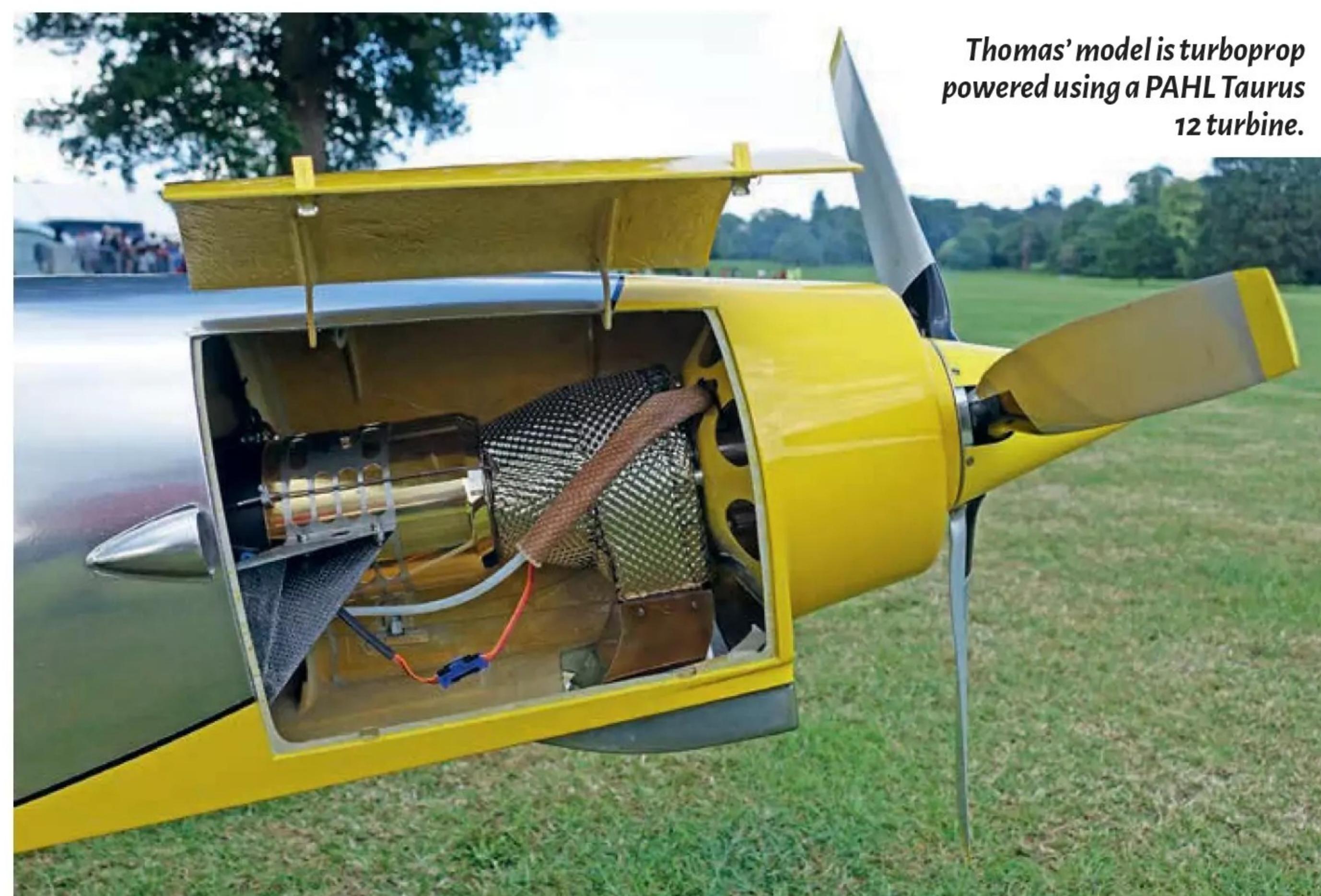
The C-3605 first flew in August 1968 and eventually twenty-three C-3603s were converted to 05s, serving the Swiss Air Force until 1987 when airframe fatigue finally became an issue and they were replaced with the target towing variant of the PilatusPC-9.

THE MODEL

The model was totally scratch built by Thomas. He spent around 5000 hours designing and building the model which had its maiden flight on 13th July 2024. It has a wingspan of 3.95 metres (155") and a 3.7 metre (145") 



The cockpit canopy is servo operated. At the flick of a switch it slides open to show some of the detailing Thomas has added to the model.



Thomas' model is turboprop powered using a PAHL Taurus 12 turbine.



The 32" diameter Ramoser 3-bladed varioPROP 32i has a variable pitch which, after flight testing, has been set at 17".

long fuselage. The two-piece wings are made from obechi covered styrofoam with a vertical plywood spar and carbon fibre spar caps. The wings are joined through the fuselage with a 40 mm carbon fibre tube with a 4 mm wall thickness.

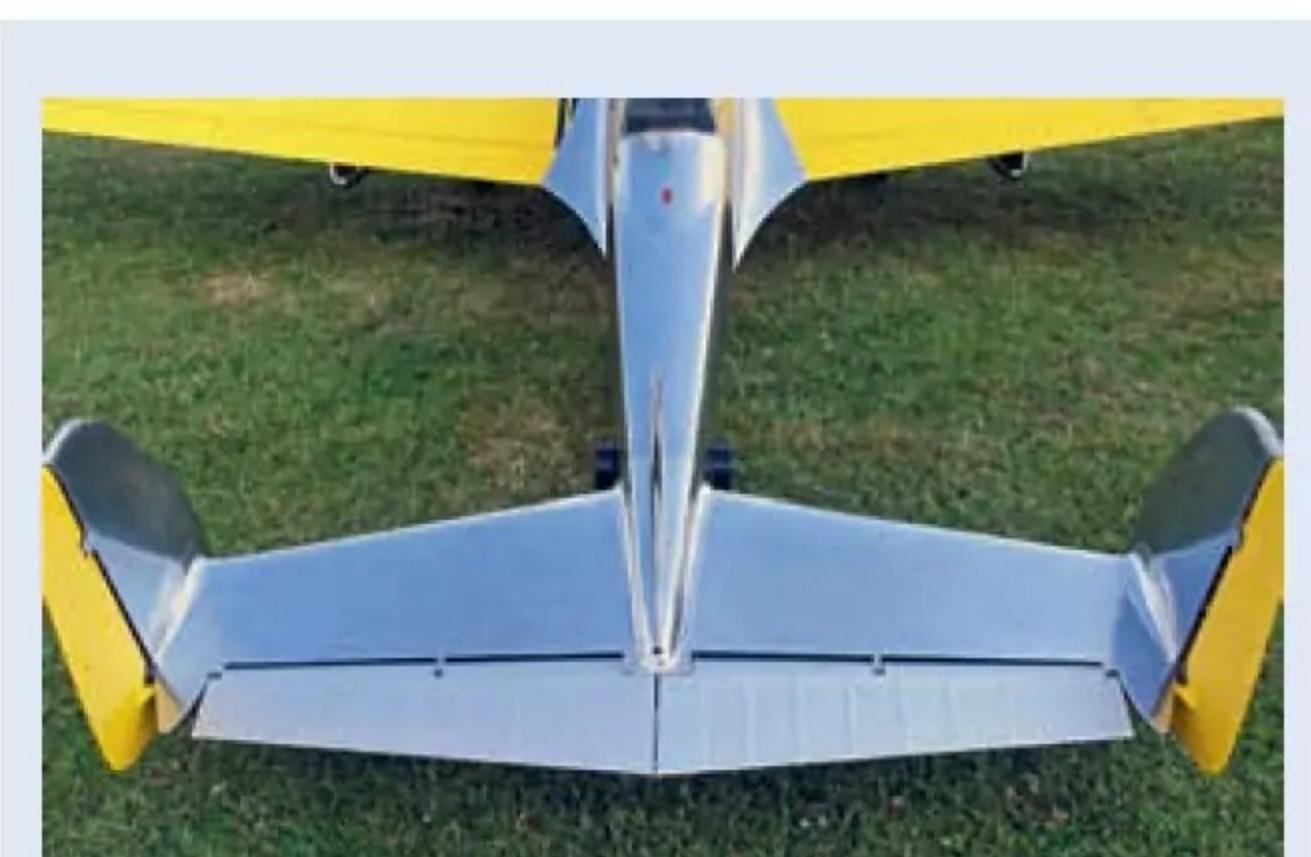
The fuselage sides are made from a GRP sandwich monocoque construction in home-made moulds using a vacuum process. The sandwich structure is made up of 1.2 mm thick PE foam board between two layers of 163 g/m² glass fibre twill weave. More heavily stressed areas of the construction use 2 mm Coremat XM foam in the sandwich. The fuselage sides were joined whilst still in the moulds with 3 mm ply



Weston Park's flight line team regularly spot check models and that the pilot's paperwork is in order before allowing it to fly. Here Andy Ellison (centre) is checking the documents with Thomas (with Tx) looking on.



Note the vertical joint line just in front of the wing LE. This is where the long fuselage splits in two for transportation.



A central tail fin was added to the C-3603 airframe to compensate for the longer nose of the C-3605.



That curious black disc is ballast that the full-size needs when the rear machine gun or target towing winch are removed. Thomas took advantage of this feature to counterbalance the turbine engine in the model's long nose!



Bright lighting shows up well around the aeroplane.



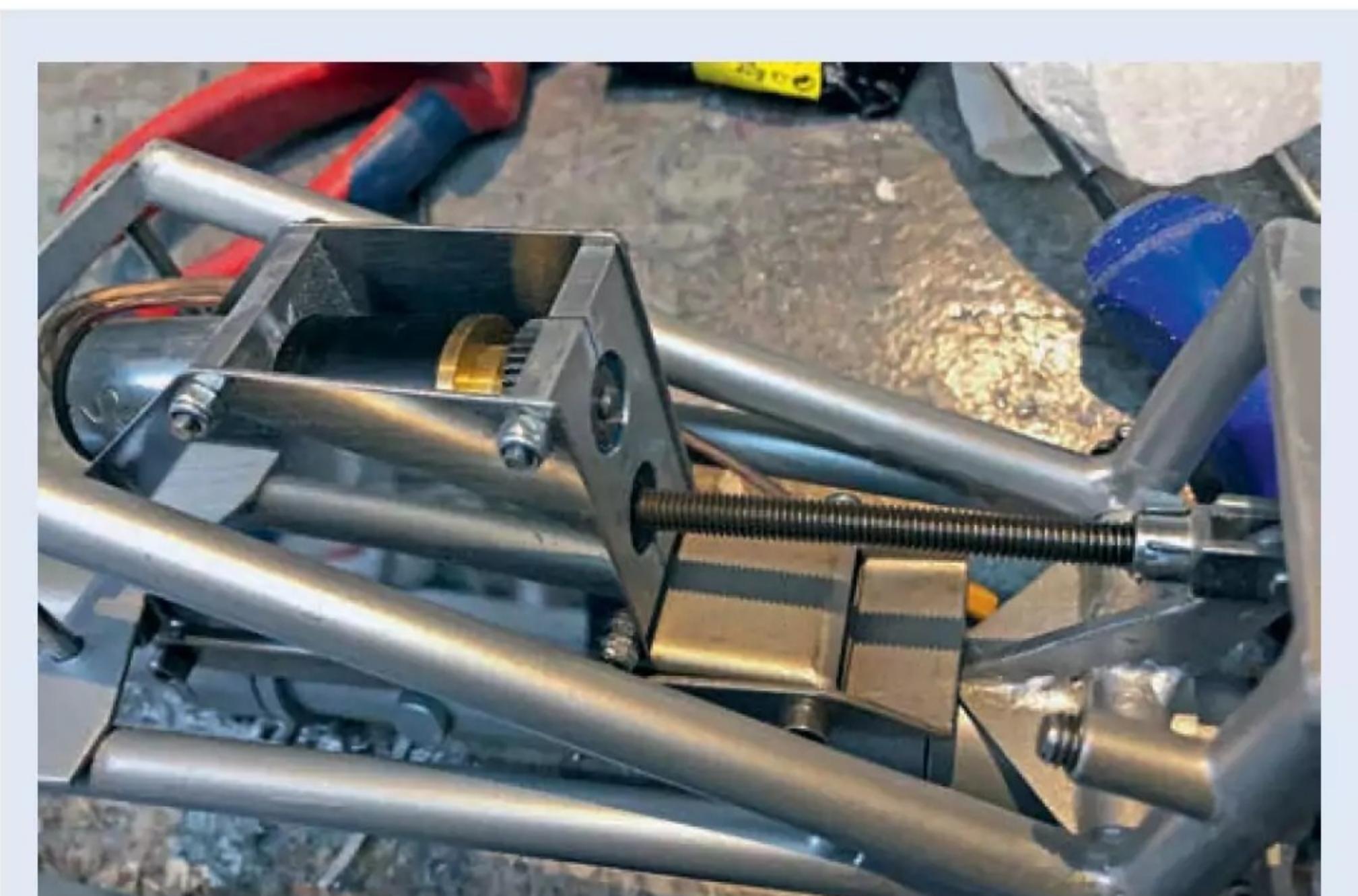
formers, themselves faced on both sides with 163 g/m² glass fibre. Thomas found it necessary to build the unusually long fuselage in two halves to ease transport. There is a join just in front of the cockpit area and the halves are held together with 4 x M6 bolts. The tail surfaces are also of monocoque construction with 50 g/m² glass skins and a 1.2 mm thick PE foam core.

The model's finish is superb with plenty of surface detailing like access panels and rivets. The canopy cover is servo operated to open up the internal detailing and Thomas' home-made electric undercarriage is an engineering work of art!

One scale detail that caught my eye are the circular discs just in front of the tailplane. These are used as ballast on the full size to compensate for when the rear gun and towing winch are removed. Bizarrely, Thomas needs ballast here on the model too, to



Main undercarriage units were designed and built by Thomas and are an engineering work of art.



Thomas very kindly sent photos of the main undercarriage mechanism before installation.



compensate for the weight of the turbine so far in front of the model's CG!

HARDWARE

Given the development of the original C-3605, Thomas' model is powered by a turboprop engine, with a PAHL Taurus 12 turbine up front

giving 12 kW output to the Ramoser 3-bladed 32" diameter varioPROP 32i; the pitch of the props is adjustable and after flight testing Thomas settled on a pitch of 17".

A fuel load of three litres gives a typical flight time of around five minutes and Thomas has the added complication of having to connect

and disconnect the fuel line between tank and turbine every time he flies the model thanks to the two-piece fuselage.

There are three 2S 2600 mAh LiPo packs on board to control the PowerBox receiver, gyro and lighting. There is also a 3S 2600 mAh LiPo to look after the homemade retracts.

It's great to see something a bit different at a model show.





An on-board gyro controls the elevator as the model is very pitch sensitive.

“Thomas’ model is powered by a turboprop engine, with a PAHL Taurus 12 turbine up front”

FLYING

Thomas’ Alpine Anteater has a take-off weight of 37 kg (81.6 lb) which gives an unusually low wing loading for a scale model of 34 oz/ft². He told me the on-board gyro controls the elevator as the model is very pitch sensitive, especially on take-off, presumably thanks to the inertia of the turbine in the nose and the ballast in the rear. Once up to airspeed and away Thomas reports that the model is a joy to fly and he treated us to an excellent scale

display over the trees at Weston Park before bringing her home for a lovely greaser landing. As the model taxied back to the pits, I imagined the pilots of the full size found that monolith of a nose in front of them a nuisance as they tried to manoeuvre the plane on the ground!

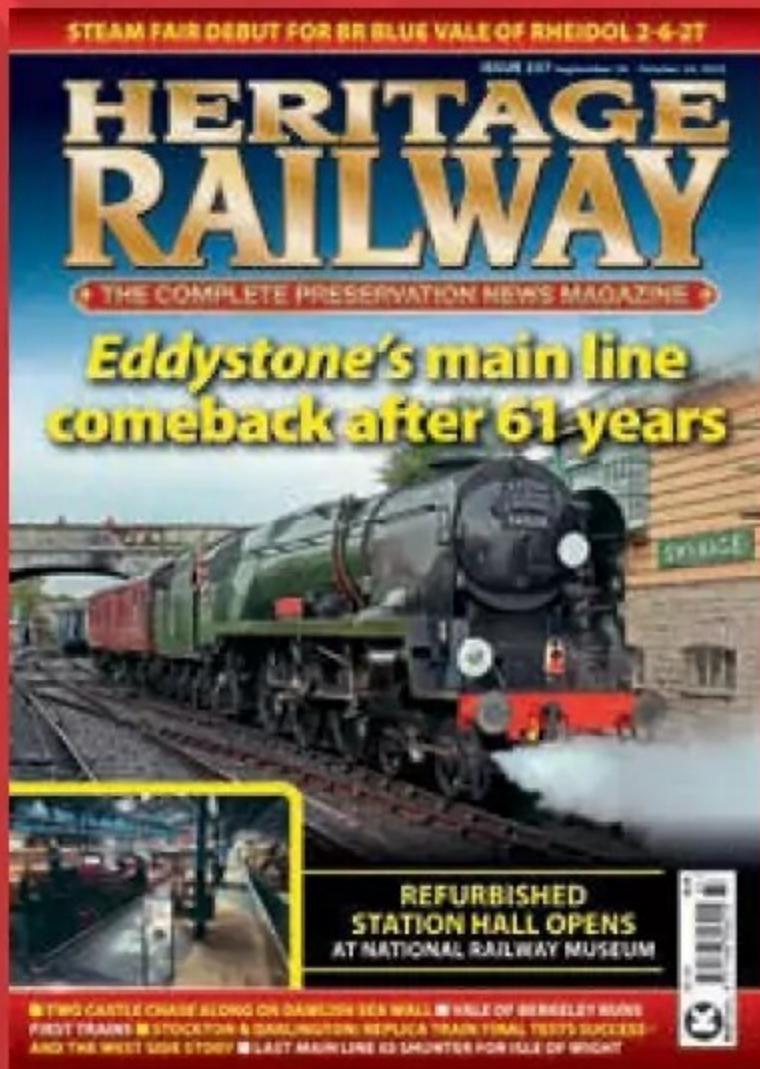
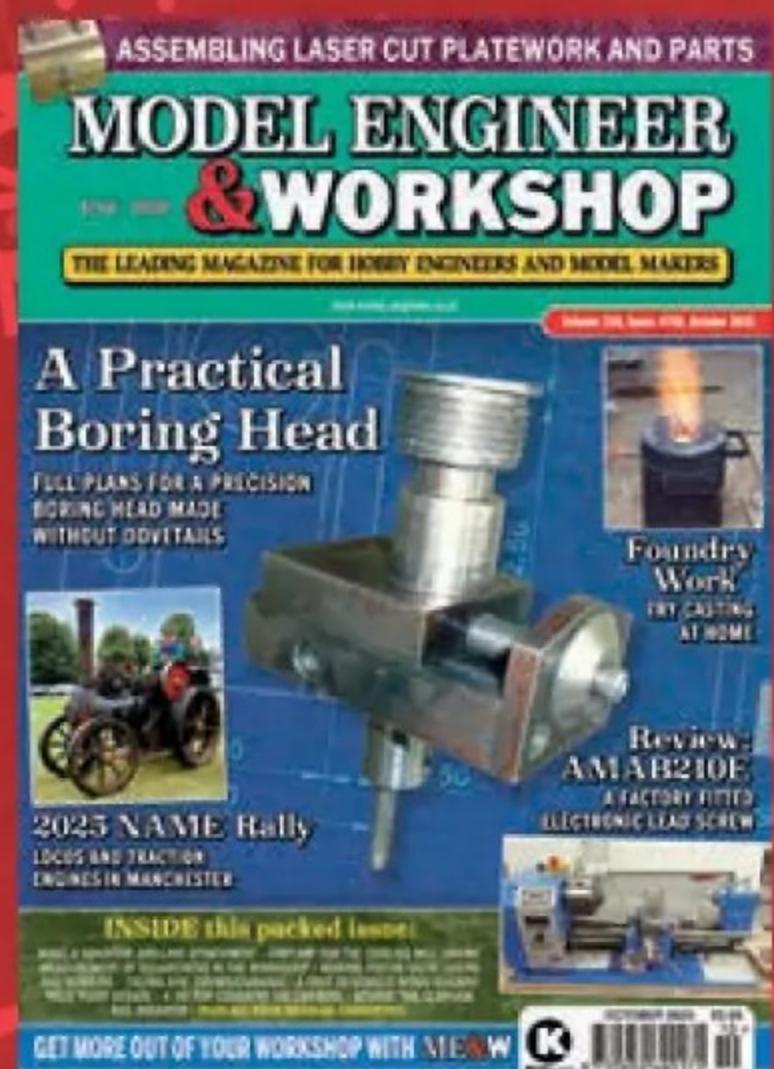
It’s great to see something a bit different at a model show and Thomas certainly came up trumps with his distinctive Alpine Anteater. A fabulous job. Well done, Thomas! ■



Thomas treated the spectators to an excellent scale display over the trees at Weston Park before bringing her home for a lovely greaser landing.

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SPINNING INTO SUMMER

The UK & International Autogyro Fly-In took place over the weekend of June 27th–29th at the superb Winterton Model Flying Club in Lincolnshire from where Rich Harris reports

Words & Photos: **Rich Harris**

Now in its 17th year this laid-back gathering has grown from its humble beginnings of a handful of dedicated 'gyronuts' getting together into what is believed to be the largest model autogyro event in the world. It draws like-minded enthusiasts from across the UK and beyond for a weekend dedicated to the unique thrills of auto rotational flight.

As is tradition the British weather played its part, with gusty winds reaching up to 30 mph in the first half of the weekend. Fortunately, these conditions are well within the flight envelope of most model autogyros and the skies remained busy with constant flying. Throughout the windy period of the weekend there was no shortage of excitement with plenty of vertical take-offs and landings, precision hovering and even a few rounds of backwards racing, a light-hearted highlight that was as much fun to watch as it was to take part in.

My Tx was passed around many for their opinion on the Whippet X, a simple design to find out the effects of a longer moment arm coupled with a larger tailplane.



This Whippet inspired C30 is constructed from EPP foam. Free plans are available to download at www.coolwind.co.uk



Andrew Nash and his Firefly. True to its name this night flyer comes alive after dark with LEDs glowing beneath the covering.

By late Saturday the winds subsided, giving way to calm, sunny conditions. Flying continued until sunset and even into the night for those whose models were equipped with LEDs.

Sunday's fine weather drew in the majority of day visitors, who had come either to watch, fly or take advantage of the trimming sessions offered by the ever-ready, experienced enthusiasts.

Taster sessions were again offered to anyone who fancied having a go on the sticks via a buddy box covering both common transmitter modes. Steve Jones, a fixed wing instructor and examiner, generously provided the gear, models and plenty of tuition time to make this possible. This gesture was eagerly taken up so hopefully we will see these pilots returning next year with their own creations.

With over 100 models on site over the three days it was no easy task keeping track of them all. There were a few ARTFs, some kit builds, own designs and plenty of built-up examples, many of them thanks to RCM&E. Luckily, I was able to catch up with some of the pilots, who were happy to share details of their impressive models.

A SECOND LEASE OF LIFE

Rich Elliot is one of those ever-reliable figures who is always ready to lend a hand to Mode 2 aeromodellers bringing along their newly built autogyros for test flights and trimming sessions. When he's not offering his guidance, he somehow manages to get plenty of airtime with his own range of impressive models he's either built, designed or cleverly converted. If you're a traditionalist, it might be best to look away now...



Josh Osborn proudly posing with his new Whippet X. He's one of the up-and-coming pilots on the autogyro scene.

Rich has breathed new life into a classic Super Sixty fuselage that was donated by one of his clubmates, rescuing it from the fixed-wing graveyard. This reimagined version boasts all the classic flying characteristics from its original format but with the added bonus of being impossible to stall! Powering this beauty is an O.S. 48 four-stroke engine, perfectly matched to the airframe. It always emerges on the calmer evenings, flying low and steady at around half throttle, leaving a trail of white puffs from its reliable power source.

THE SYCAMORE

The Sycamore, one of Rich's own designs, has made a significant mark on the autogyro circuit over the past few years. This model is unusual in that it is a tractor configuration coupled with a trike undercarriage. Due to this one



Saved from a Viking burial, Rich Elliot's Super Sixty conversion. Note the shorter fin to accommodate rotor clearance.



Low and slow. Rich Elliot's owned designed Sycamore is one of the most stable autogyros out there which gives him the confidence to fly low around the strip.

of its party tricks is executing flawless touch-and-goes where only the nose wheel kisses the ground.

JT-5

Rich's largest model is a 40 cc flat twin powered quarter scale JT-5. The full size was designed and built around 1970 by Finnish engineer Jukka Tervamaki. Plans were made available for the home build market and are now readily available for anyone to download for free.

Taking advantage of these blueprints, Rich's version closely follows the aircraft's construction, with the majority of the structure being made from aluminium. The fuselage is a work of art, being balsa planked over formers. Blade blanks were machined by AJ Blades and have 6 mm spring steel rods inset across their full length, each then being sheeted in 1/32" birch ply. Rich flies this impressive model like it's a Sunday afternoon hack and can really throw it about.



The Twister is one of my own, a sleek tractor still in its experimental stage. The sharp eyed will note the Depron fins, soon to be replaced with wooden units now that they are sized correctly.



Showstopper. The Raybouyt D2 has a unique sound and presence when it takes to the air.

RAYBOUYT D2
The Raybouyt D2 was a French autogyro that made its debut at the 1971 Paris Airshow. It

featured a unique ducted pusher propeller and was planned to have jump take off capabilities where its rotor system could be driven, enabling vertical take-off before transitioning to horizontal auto rotational

flight. Unfortunately, the prototype never got off the ground, leaving its true potential unproven - until now.

Thanks to the dedication of Steve Jones and Tim Potter this rare design has been



Here's something you won't have seen modelled before. Steve Jones with his Raybouyt D2, a French autogyro from the 1970s that never flew - until now.

RAYBOUYT D2

The Raybouyt D2 was a French autogyro that made its debut at the 1971 Paris Airshow. It

painstakingly recreated using original photos. The framework is constructed from balsa and ply, with its body/duct carved from foam before being beefed up with a coat of lightweight glass matt and epoxy.

Years of development have gone into refining this sizeable model and it now flies with remarkable precision. Steve reports that it must be flown with respect, preferring steady, co-ordinated turns, keeping the rotor disc flat with some thumb juggling between rudder and roll.

Thanks to its one-of-a-kind propulsion system the Raybouyt D2 produces a distinctive sound that gives it an undeniable presence in the air.

BENSON GYROCOPTER

Event organiser Cali Munroe likes them big and brought along two of his impressive models. The first was a third scale Benson autogyro, a striking tribute to the original 1960s design by Igor Benson. Based on authentic American plans from the era, these originated as a tow-line Gyro Glider that were adapted for powered flight using readily available McCulloch drone engines. Cali's model captures the spirit of the real aircraft with remarkable accuracy.

Constructed primarily from 1" aluminium box section the model combines strength with authenticity. Power comes from a robust 53 cc boxer petrol engine, while the rotor blades are high-quality composite units manufactured by SAB. With its commanding presence both on the ground and in the air this model has been a favourite at our meetings for many years.

LITTLE NELLIE

Cali's second model was a semi-scale version of 'Little Nellie', the iconic Wallis autogyro made famous in the James Bond film 'You Only Live Twice'. Whilst not a full-scale replica this model captures the essence of the original, making it a real crowd-pleaser.

Powered by an electric motor running on a 12S LiPo setup the model shares much of its structural philosophy with the Benson. The rotor blades span 2.5 metres and are hand-crafted, while the distinctive nacelle is moulded by Cali himself.



My Elfpusher is another experimental model investigating the use of a top mounted tail boom. Not a single curve in sight!



Gyro II, a pusher version of the popular Gyrocopter, is a 'not to be missed' upcoming RCM&E pull out Pro-Plan for 2026.



Shaken, not stirred. Cali Munroe with his Little Nellie, giving an idea of its size.



Dave Muir with his beautifully built Weir 2, capturing the essence of this little known 1930s prototype. The full size is on display in the Scottish Aviation Museum.

In flight the model performs beautifully, low level beat ups being the order of the day. It just needs working missiles, flame throwers and cluster bombs to outrun Ernst Blofeld!

WEIR 2

Prolific scale modeller Dave Muir seems to arrive each year with a new and impressive creation. His latest masterpiece is a 1/4 scale model of the Weir 2 autogyro, a distinctive and historically significant aircraft from the 1930s. This immaculate model is powered by an ASP 160 twin, converted to petrol using a Morris Mini Motors system, and is a close-to-scale replica of the original machine developed by C&J Weir Ltd. of Glasgow. Known primarily as an engineering company, Weir also built aircraft during the First World War and later ventured into rotary-wing aviation.

The full-size Weir 2 was developed with input from none other than Juan de la



Ian Smith with his own designed MTo3 which is 80% 3D printed using standard PLA.

Cierva, the Spanish engineer credited with inventing the autogyro. It was powered by Weir's own Dyrad II engine and, remarkably, the original aircraft still exists. It can be seen on display at the Scottish Aviation Museum.

3D INNOVATORS

Ian Smith and Joe Anderson have become true pioneers in the world of model autogyros, pushing the limits of what's possible using 3D printed technology. With innovation at the heart of their projects,

they're transforming how model gyros are designed and built.

Ian's latest creation is an impressive scale model of the German MTo3 autogyro, one of the few full-size gyroplanes type approved for flight in the UK. Remarkably, around 80% of his model is 3D printed using standard PLA and it flew reliably throughout the entire weekend. The rotor blades are particularly clever, being designed in segments that slide over a carbon spar. They are both lightweight and easily replaceable in case of damage. Currently fitted

with a three-blade rotor, Ian plans to switch to a more scale-accurate, two-blade set-up ahead of next year's event.

Meanwhile, Joe Anderson's distinctive twin-boom design is inspired by the Polish-built Xenon autogyro. The model's core is made from a combination of plywood and carbon fibre, forming a strong frame that supports all the running gear. This functional skeleton was thoroughly test flown before being fitted with its eye-catching body which was drawn up by Australian modeller Tony Audsley. Printed



Ian Smith is also a water plane enthusiast, flying one of his several water-capable autogyros. This enlarged Whippit isn't just for the lake; it'll happily lift off from wet grass too.



Back in the 1990s Autogyrros of Arizona produced a comprehensive kit of the 1930s Kellett. It featured a roll only head with and an all-moving tailplane. This well-presented model has been covered in the US Air Force training scheme. The dummy Jacobs radial finishes it off a treat.



'Catch the Pigeon!' A Mantis built from one of my own plans but with a Dastardly twist. Yes, there's even a Muttley piloted version too!



One of several 3D printed Gyros.



Harold Blooms with his outstanding giant Simplizissimus. A masterpiece in model engineering.



Differing-sized Cruisers line up on the patch. This was a free pull-out plan in RCM&E back in 2015. Incidentally, a CNC kit has just been added to the Sarik Hobbies range, making it easier than ever to build your own.

in lightweight PLA, the body is surprisingly flexible and well suited to the task.

GERMAN ENGINEERING

German modeller Harold Blooms has become a familiar face at our annual fly-in. He has been designing his own line of autogyros which he aptly names the Simplizissimus, a series of pusher type autogyros varying in size. His largest and most impressive example has a rotor diameter of 4.6 metres, a weight of 24.5 kilograms, and is powered by a Moki 250 five-cylinder radial engine.

Harold devised a custom jig system to profile his blades, using a pistol drill to which a

sanding drum is fitted. This is then run across an enlarged former that mirrors the desired aerofoil profile, compensating for the drum's diameter. This ingenious tool allows him to shape blades with remarkable accuracy. Each blade took four weeks to profile and each one has 1 kg of tungsten tip weight!

During its development Harold encountered an overheating issue with the engine due to limited airflow over the cylinders. In response he engineered a six-bladed cooling fan, mounted just in front of the propeller. The result? An impressive 40-degree drop in engine temperature.



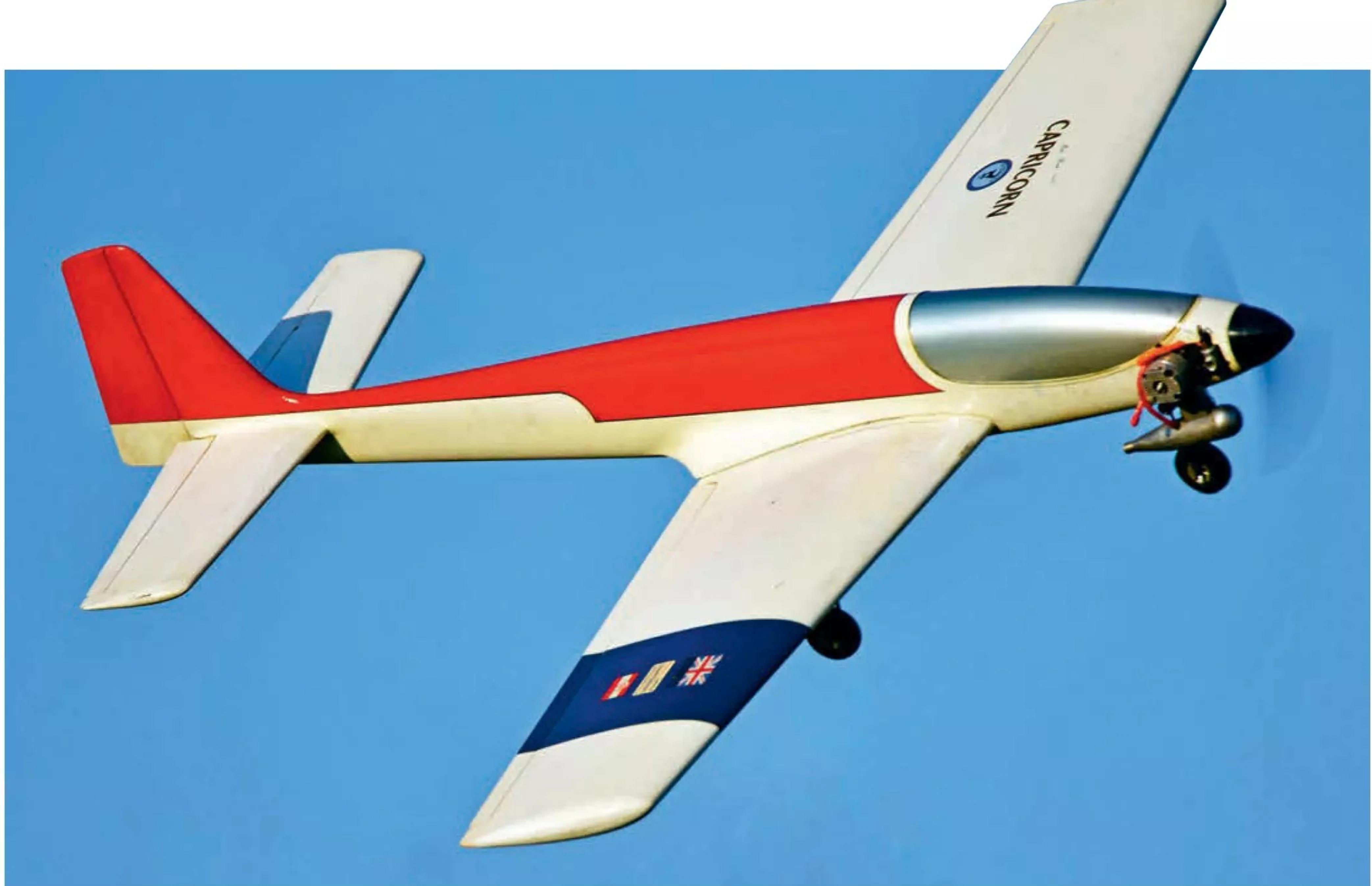
Another great conversion of an old TwinStar II, saved from the recycling bin.

With the sound of the Moki and the chirping of the huge rotors the Simplizissimus' presence is jaw dropping. It doesn't just look like a full-sized aircraft, it flies like one too.

ALL FOR CHARITY

From seasoned pilots to curious spectators, the fund-raising Autogyro Fly-In again delivered a vibrant celebration of all things autogyro and it's good to see that traditional building is still alive. All money raised from the raffle, BBQ and camping was donated to the Lincolnshire Air Ambulance, this year's total topping £550. A big thanks goes out to Cali, his clubmates and all those who support this fun weekend.

Why not come and join us next year? The dates will be released in due course. Happy rotations. ■



MIKE BIRCH'S CAPRICORN

Stuart Mackay reveals the history of a recently acquired pattern plane

Words & Photos: **Stuart Mackay**

Following my acquisition of this well-known 1970s aerobatic model in early 2025, I set about trying to find out a bit more about the model and its history. I am indebted to Kevin Caton, Graham Gooch and Nigel Brackley for their help in formulating this article. Thanks, guys!

TOP PILOT

The Capricorn and the slightly larger 'International' version were designed in the early 1970s by Mike Birch, who by then was well established as the UK's top R/C aerobatic pilot. He came to prominence in 1967 in the early days of proportional radio control.

For those who were around then, or know the history of that era, radio control had developed from the single channel (rudder only) 'escapement' systems to multi-channel reeds, where the control surfaces moved independently - but only from zero to full deflection! It is quite hard to comprehend the skill required to fly a model back then compared with using modern systems with adjustable throws and response curves, mixing and much more. Back then multi-channel radio control and the first proportional systems revolutionised

model flight control and aerobatic flying was the pinnacle of model flying. What is commonly known nowadays as FAI class F3A was originally called multi-RC or RC1 in

international competitions. Pilots then, as now, would be required to fly a sequence of aerobatic manoeuvres, each of which was judged for precision or geometrical accuracy.



Stuart proudly displays his historic second-hand find.



Jamie Cuff with his Moonglow, an earlier Mike Birch design. Photo by Dick Spreadbury.

MOONGLOW

At the time of Mike's arrival on the scene a typical R/C aerobatic model was powered by a 10 cc (0.61 cubic inches) displacement two stroke glow motor and was about five feet in wingspan and of similar fuselage length. The power available from the engines of the

era was just enough to pull a 5.5 to 6-pound aerobatic plane through the schedule.

Mike was already an accomplished control-line stunt flyer and through his love of aerobatics he went on to develop the Moonglow design for the 1968 season. This was published as a plan in Radio Modeller magazine that year.

This was normal for the time; experts designed and built their own models while others built from the plans published and sold by the model magazines. The Moonglow plan is still available online and a CNC cut kit is available amongst the Belair range from SLEC in Watton. The author has built a Merco 61 powered example and highly recommends it as a pure flying aircraft for use in GBRCAA Classic Aerobatic competitions.

Mike flew in the British team with Dennis Hammant and Stuart Foster at the 1969 World Championship, held in what was then West Germany, at Bremen and placed a highly impressive 11th.

FISH FUSELAGE

Over the next few years Mike became of the face of Skyleader Radio Control and would be often seen on their back page adverts of RCM&E and Radio Modeller. He developed the Capricorn from the Moonglow, adopting the 'fish' shaped fuselage that dominated models in the early 1970s as engines became more powerful and planes increased in size, as well as adopting obechi covered foam wings instead of the traditional built-up construction.

Retractable undercarriages became a standard feature for better streamlining in flight. However, if you compare the outline of the Capricorn with the Moonglow, the heritage is obvious, particularly the fin and rudder shape, and the wing and tailplane planform. The Moonglow wing planform was reversed and used in the Capricorn with the revised fuselage now moulded in glass fibre mat, with the wings and tail being cut from foam and the rudder added from balsa sheet.

Strangely, Mike did not publish plans for the Capricorn and it wasn't until many years later that a kit became available in limited numbers from Mick Reeves in both the .61 original size and the larger .90 powered 'International'. 



Models of this era often had 'fish' shaped fuselages.

AEROBATIC SUPERSTAR

Mike was British National Champion five times between 1968 and 1974 and he flew twice more in the British R/C Aerobatics World Championship Team, in 1971 in the USA and in 1973 in Italy.

Although Mike finished flying competitive R/C aerobatics in the mid-1970s he remained a staunch follower and was one of the founder members on the GBRCAA in 1978.

Given the prominence of R/C aerobatics in the late 1960s and early 1970s, it is fair to say that Mike Birch was one of the model flying 'superstars' of that time. So, it's a great tribute to see a plane designed and built by him still flying again today.

Mike was also a great showman. The schedule had landings scored for quality and back in the 1960s and 70s and he would go down on one knee to be able to judge the flare on landing. It was his trademark 'body English' and he would usually get great marks for his landings.



Top three aerobatic pilots at the 1973 Nationals. From L to R: Dennis Hammant (3rd) with his Warrior, Mike Birch (1st) and Capricorn, Dave Hardaker (2nd) with his Superstar 2. All three took part in the World Champs in Gorizia, Italy in September 1973 with Mike placing 11th, Dave 17th and Dennis 26th flying another Capricorn.



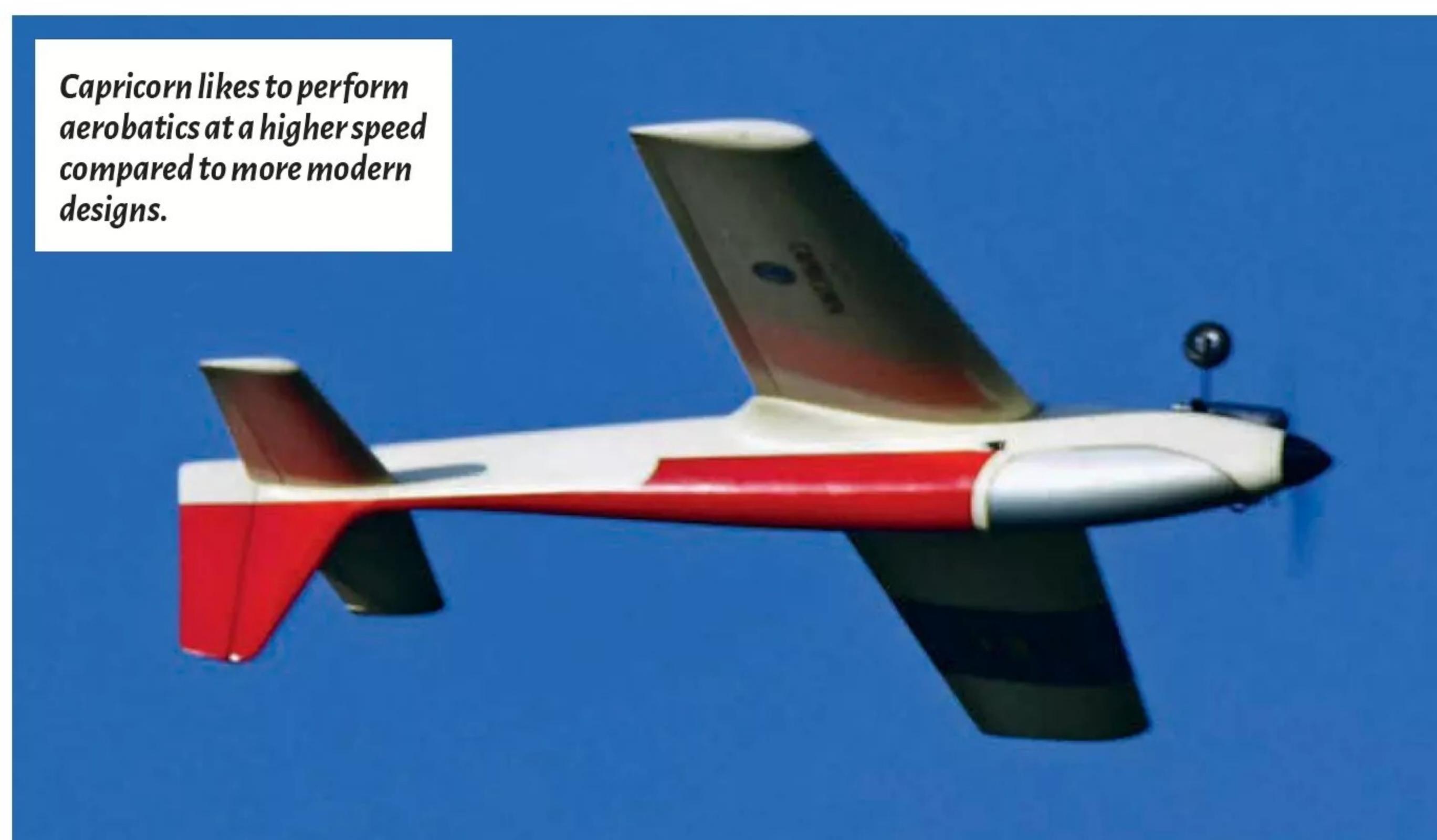
The Capricorn model featured here appeared on the front cover of RCM&E in November 1974.



The same model featured in the back page advertisements for Skyleader Radio Control.



Mike appeared with the featured model on the cover of Radio Modeller, July 1973.



Capricorn likes to perform aerobatics at a higher speed compared to more modern designs.

COVER STAR

I found the model in Lincolnshire on a well-known internet auction site being sold by a renowned used model trader. I remembered the model from my formative teenage years, when the likes of Mike Birch, Dennis Hammant, Clive Weller and Dave Hardaker were setting the standard for excellence in the UK R/C aerobatic scene. The model here featured in the back page advertisements for Skyleader Radio Control, as well as featuring on the front covers of RCM&E November 1974, modelled by Anthea Rylance, and also by Mike himself on Radio Modeller's July 1973 issue.

Luckily, the seller had the original HP61 engine and silencer available too so these were purchased as well, so that I could re-unite them some 50 plus years from when the model was built.

My thanks go to Mike's old friend, Nigel Brackley, who was able to fill in some more details

about this model. Nigel told me that he had spent many years flying with Mike and spending evenings drinking tea with him and his wife, Pat at his home in Feltham in Middlesex where they had many enjoyable times and good laughs.

Nigel had one of the first kits of the original 60" model and used it for many comps at the time. He is pretty sure that the model was built by Jack Headley, a great friend of Mike's and a regular magazine contributor of the period, for use as another test model.

Nigel is not 100% sure that Jack ever flew it and he had been pushing Mike to do a review test for Radio Modeller, but the kit went to Jack instead. So sadly it never appeared in either of the two R/C magazines, apart from featuring as a cover model on both.

Nigel remembers returning from a film location in Morocco at the end of 1986 and getting the news about Mike's recent passing. He had been working at Booker airfield near High Wycombe, restoring full size aircraft. We understand that Mike died from a heart attack in his forties, all very sudden and unexpected.

CAPRICORN INTERNATIONAL

The International was a slightly modified version but was 10% bigger at 66" span with foam wings and a planked fuselage. This later became available from Mick Reeves, along with the original size with a glass fibre fuselage. There was a plan around at the time for the International. Aerobatic contemporaries of Mike, Clive Weller and Mike Bone, built from these drawings. Mike Bone's copy of the plan was sadly destroyed by water and Nigel contacted Denis Hammant in case he might also have a copy, but it was not to be.

I understand also that Ken Binks started his competition aerobatic career using a Capricorn and we all remember what that led onto!

CAPRICORN COMEBACK

Nigel reports that the smaller model might be available again, but there's no real time frame sorted for it just yet. Paul Bardoe has moulds for the smaller design and he just needs to find time to complete it. The intention is to sell a fuselage, foam wing and tail set. Jamie Cuff is also involved with this project. It is understood that a stumbling block might be that no-one knows who owns the design's copyright, as well as finding someone suitable to mould the fuselage! Let us hope that these roadblocks are overcome in the not too distant future!

FROM SKYLEADER TO KRAFT

Nigel remarked that Mike was a superb perfectionist and he learnt a lot about finishing and painting from him, along with many other tweaks and 'secrets'. Certainly the build standard of the surviving model reflects this.

Mike originally used an RCS Digi 6 radio in his Moonglow and then changed to a Skyleader SLX6 for his early Capricorns.

Mike had a strong alliance with Geoff Franklin, who eventually persuaded him to change over to Kraft Radio, which would explain why the model has a Kraft sticker applied over the Skyleader one on the right-hand wing!



Stickers on the right-hand wing stripe include a Skyleader decal, partially covered by a Kraft logo.



On the other wing the Capricorn proudly declares its name and matching starsign.

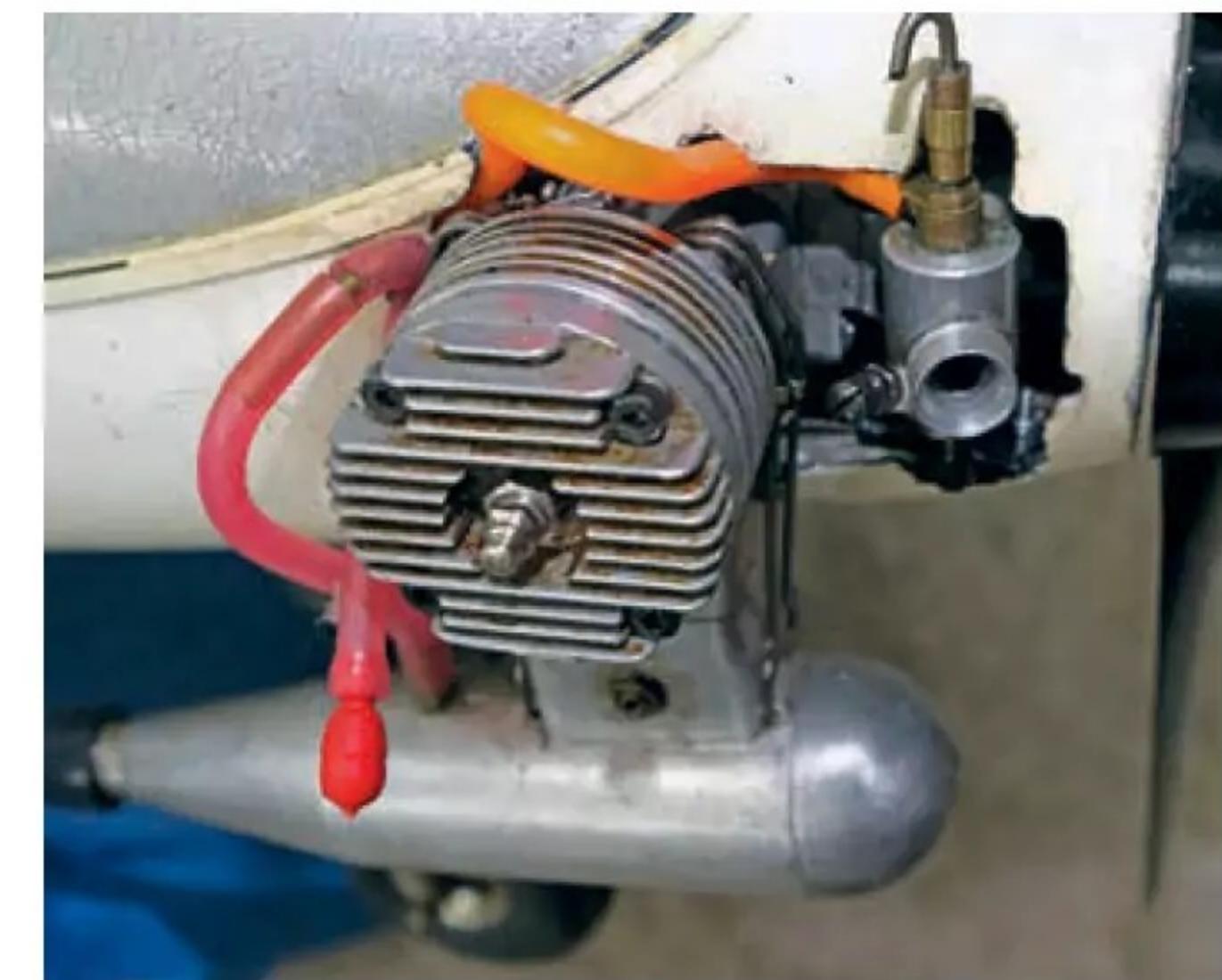
In those days the radios were remarkably simple sets and Nigel remembers fitting adjustable-rate switches to Mike's Kraft radios. The larger International was reluctant to spin cleanly so Nigel produced a way to have a switch that increased the travel more than was required for normal flight. This was to make the model stall quicker for the spin entry.

Unfortunately, the model in question never saw much action. This is the gorgeous version of all white, with red and blue trim, that also featured in Bob Symes TV programme, Model World in 1975.

The problem with the Kraft transmitter was that as you pulled the aerial out, it needed screwing into position to radiate the signal. But to lock it in place you needed to rotate/screw it in for a permanent electrical connection. On this occasion, Mike extended the aerial but forgot to screw it in place. As it took off, it instantly flew out of range, with the obvious results!

RESTORATION JOB LIST

Returning to the recently acquired model, a quick inspection of the bare airframe showed the need



The original HP61 engine and silencer were refitted but were replaced by another HP61 when the original muffler was shaken loose.



Capricorn flies superbly well, attracting positive comments from those who remember her from her heyday and from younger modellers too.



Finger crossed that Capricorn kits will make a comeback soon courtesy of Paul Bardoe and Jamie Cuff.

the period Kraft Signature series transmitter used for initial flights. These were made at the end of June 2025, over 50 years since this model had air under its wings for the first time in the early seventies!

The tank was treated to a new clunk and plumbing as I preferred not to trust 50-year-old silicone tubing and rubber bungs! The original HP 61 had seized due to castor oil solidifying after many years of inactivity so gentle heating with a hot air gun had the engine rotating again. This was followed by a precautionary strip down which showed that the twin roller bearings and piston ring were still serviceable. Once cleaned and lubricated they were all fitted back in place, as well freeing off the stuck carburettor throttle barrel and replacing the O-ring seal with new before fitting it back in place.

The HP 61, refitted with the original silencer, was fitted to a test stand and run using a Master 11 x 7 prop and tacho'ed at around 10,000 rpm on the ground before re-installing it into the airframe using stainless M4 cap head bolts and shake proof washers to replace the BA screws used originally. The original metal mount was re-tapped to suit the modern fixings. The final addition was the fitting of a SLEC black plastic spinner to match the photos of the original.

RETURN TO THE AIR

Rapidly running out of excuses, it was off to my local Watton club field in Norfolk. After range

checking the Kraft/LemonRx radio system and seeing about 100 yards on low power, it was all functioning as it should with failsafe set.

The tank was filled with synthetic 10% nitro fuel, a glow starter was applied to the plug, and a couple of turns with a thumb over the choke were made until the motor kicked and the HP61 fired up easily by hand. The needle was set for maximum rpm, then enriched by an eighth of a turn. In time honoured glow model tradition the model was held nose up to ensure that the motor would not cut, then it was time for her first take off run after many years.

I had set all the controls to neutral and after about 50 yards across the grass strip to gain plenty of speed, slight up elevator was all that was required for her to rotate. On the first climb out I found that no change to the trims were required! A few gentle circuits and a climb to height to check the stall proved that the Capricorn had no vices and a couple of inside and outside loops were flown which showed no screw out, indicating perfect lateral balance of the airframe, another of Mike's hidden tweaks no doubt! I will increase rudder throw as sustained knife edge needs more rudder. Hesitation rolls and vertical performance are entirely adequate. She likes to do high speed aerobatics compared to more modern designs. Landings are an absolute breeze and she comes in nose high as if on rails and can be set down on the main wheels with no tendency to bounce.

After several more flights I was starting to get

the hang of it when I saw the clip-on silencer vibrate loose. The sudden increase in noise meant a quick landing. The silencer was still attached by the pressure tube, but the angled spacer piece was missing so that meant an end to flying that day. Luckily, I had a spare HP61 with a silencer, so this was duly fitted at home and the clips were lock wired in place to stop a recurrence.

The model was cleaned, checked and put away for her next appearance at the Pontefract Retro Fly-In organised by Shaun Garrity and Phil Green, where it attracted a lot of attention. Mike Kitchen, Mr. Skyleader and patron of the Mode-Zero vintage radio forum, presented me with a freshly converted Skyleader SLX transmitter with his modern encoder feeding a LemonRx DIY module that will be used with the model in the future!

A SPECIAL MODEL

So, to summarise, I am so lucky to have met one of my teenage model heroes. The Capricorn flies superbly well, attracts such positive comments from those who remember her from the period and also from younger modellers too. I just hope Paul Bardoe and Jamie Cuff manage to sort out their plans to produce modern replicas as they will be very popular whether flown with original motors or with electric power.

The original is a special model and will continue to be treated as such and, hopefully, it will last another fifty years! ■

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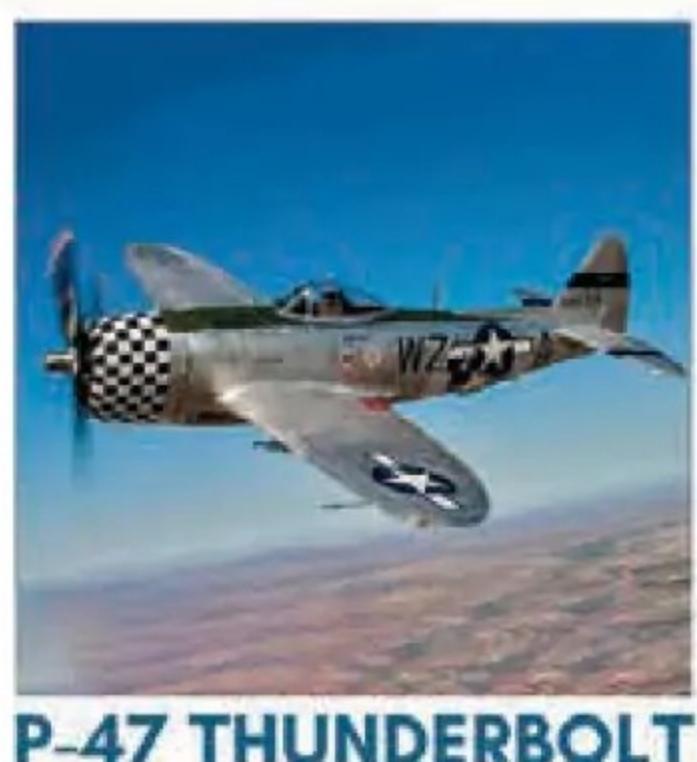


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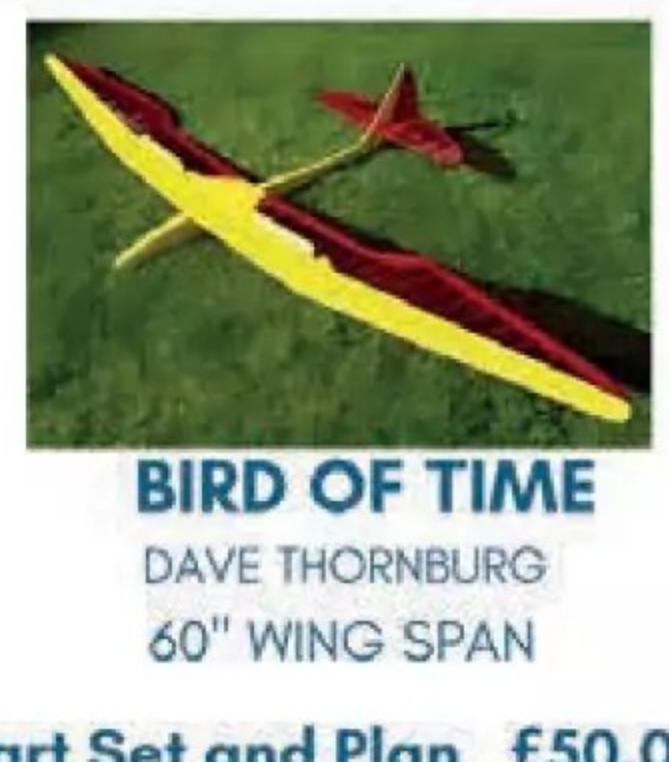
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Dave Charles flew his amazing Hawker Typhoon. Hans Dieter had a higher flight score (average of the best two flights) but the higher static score for the Typhoon meant Dave is the British F4C Champion.

BRITISH SCALE NATIONALS

Danny Fenton returns to BMFA Buckminster to compete in the UK's premier scale event

Words & Photos: **Danny Fenton**

The British Scale Nationals weekend brings together modellers to compete in several classes: F4B for control line scale, 'Profile Scale' for profile control line models, whilst 'Flying Only', as the name suggests, is for flying only, with no static judging. Then there's F4H or the 'Stand Off' class and F4C or 'Open Scale' which is the pinnacle of scale radio control modelling.

We had some rotten weather and many lightly loaded models struggled with the high winds. I had entered my DB Sport & Scale Auster J1 in the Stand Off F4H class, but the 20 mph winds kept it on the ground. The same applied to my Chipmunk in F4B. Sometimes discretion is called for.

In fact, nobody was able to put in a competition flight in F4B. Some hardy competitors did fly in the radio control classes, as did some in free flight, both brave and familiar with their models.

We have been very fortunate over the last few years that friends from across the seas have joined us for both the indoor and outdoor Nationals. Harri and Caroline Simon made the trip from Germany for the second time this year; Harri also competed at the Indoor Nationals in spring. We also saw Hans Dieter Wahl make the trip from Germany to fly his lovely Bearcat. The weekend has become International, of course, and with the World



Brian Seymour pitted for Hans Dieter Wahl. It was a real treat to see the Ziroli designed F8F Bearcat fly, powered by a Roto 85FS twin.



Graham Guest's glorious Gloster Gladiator built from the Brian Taylor plan and modified for F4B scale control line.



Traditional pre-competition meal in the Berkeley Arms 'snug'.



The weather was typically British. Sunny one moment, wet and windy the next. Here's Andy Bowman, Martin Fardell and Nina enjoying one of the sunny spells.



Andy Bowman campaigned this Seagull Models Miles Sparrowhawk in Flying Only. The wind made his flights 'interesting'.



John Carpenter flew this lovely own design Dewoitine D.501 in the Stand Off class, F4H

Championships being held at Buckminster in 2026 modellers are getting a feel for the venue.

A PROMPT START

The competition started promptly with a pilot briefing at 9 am on Friday morning. Monz Lyons (Contest Director) ran a tight ship and with a forecast that potentially meant Sunday would be a washout it meant trying to get three rounds in over just two days.

A formal lunch stop was not an option but with the excellent Flyers café open on both days this wasn't a problem. Jill and Bev were kept busy all day serving all sorts of grub and tea and coffee with a smile. If you haven't been to the BMFA National Centre at Buckminster, you are missing a real treat.

Flying commenced with the Flying Only class. This category gives those that just want to pit their flying skills against each other that opportunity. The models must be representative of an actual aircraft but are not static judged for accuracy. ARTF (Almost Ready To Fly) models are perfect for this class. 



Edwin Van der Maat enjoyed some great flights over the weekend. Ed seemed to relish the weather and enjoyed flying his Christen Husky, finishing third in F4H



Lee Smalley, always a great competitor, rescues his caller Lindsey Dickie's Zlin 50L from the downpour.



Within seconds Brian West was celebrating the sun returning! British weather can be so fickle.



Brian Seymour campaigned this foamy Spitfire in Flying Only. Brian is an excellent flyer but I do wish he would stick the cockpit hatch back in place. The poor pilot must be feeling the draught!

Andy Bowman had an interesting flight with his Sparrowhawk. The model just would not settle on the approach for landing. In the end Andy powered up for an overshoot, a very sensible decision! Of course, that meant zero points for landing. His second attempt was



Nigel Nixon flew this electric Oscar in Flying Only

perfect; the weather was cruel.

The weather remained windy for the whole weekend, but the Friday saw the wind not only strong but gusty and this was the issue. Fortunately, the wind was virtually straight down the runway. The showers were short

and sharp, and you had to keep an eye on the horizon, watching for the ominous dark clouds and taking evasive action as required.

Harri Simon was flying a Brazilian schemed Phoenix Models Tucano; interestingly the same model was the starting point for



Ady Hayward restrains Brian West's Tiger Moth.



Lindsay Dickie did really well, putting in an excellent second round flight.

Ady Hayward, flying his Super Cub, didn't have a great weekend, losing his 1/3rd scale Tiger Moth when a rigging wire came loose.



Everybody clearly enjoyed themselves. Ian Pallister, Andy Bowman and Martin Fardell look on as John Carpenter has a rest.

Nigel Nixon's Tucano. This shows what can be achieved with some clever modelling. Nigel has invested many hours in changing the outline, including making a new cowl. Both Nigel's and Harri's models flew beautifully, the wind having no real effect on either of their flights.

Harri flies full size fast jets and you can tell, with his superb power management and flying skills. A highlight was seeing him fly a full-size jet manoeuvre I had never heard of called the Clover Leaf. There are not enough column inches to properly explain the manoeuvre so I will leave it with you to do an internet search for that one.

CHANGEABLE CONDITIONS

The pictures are deceptive and make the weekend look warm and sunny. I can assure you it was far from that. The winds meant that weather fronts came in fast and the showers were sharp. Hans Dieter got caught out; he took off in sunshine and finished during an absolute downpour. Within minutes of Hans Dieter landing the sun was out and the winds dropped for Harri's next flight!



Mat Dawson flew his Carden Yak 54, a great model for the heavy weather.



Lee Smalley flew his Saito powered Corsair with aplomb. Lee always flies so smoothly it's a joy to photograph.



Edwin Van der Maat flew his Cessna 188 Agwagon brilliantly, seen here catching a gust.



Brian Seymour flying his own designed Macchi C202. This model is quite small by today's standards, but Brian has it dialled in brilliantly and took second place in F4H.



Edwin Van der Maat flying his Christen Husky. Ed picked up this model at a swap meet earlier this year and after restoring it he found it to be an excellent flyer.



Matt Caldwell braved the elements to try his own design Cessna 152 Aerobat in the control line circle. It was only a short proving flight, but it showed that the model flies well.



I had to include this picture of a stunning model. This small R/C aircraft is the work of Paul Hoey. Isn't it lovely?



This is a very poignant photograph, looking forward to the World Championships in 2026. This is Dave Charles and Harri Simon. Their fathers were the first and second winners of the F4 World Championships in 1970 and 1972 respectively.

Steve Jackson had taken notes and licked his lips when the downpour on Saturday passed, knowing the wind would drop briefly and he was flying next. Steve managed to get his Avro up for a good flight before the respite in the wind came to an end.

I was camping in my van and the overnight temperatures were around ten degrees Celsius, although it wasn't too bad during the day. The wind made it seem cooler, but I didn't need more than a light jacket.

Brian West was flying a 1/6th scale Tiger Moth and it proved it could hold its own. Brian is a great flyer and seeing the Moth whiz downwind, then spend the next five minutes fighting its way back upwind was fun and a challenge for Brian. But he was still smiling throughout.

Unfortunately, the wind meant that we were unable to fly the F4B scale control line competition. We did manage to complete the static element and if we can all get to Buckminster in the next few weeks then we will try and complete the flight manoeuvres, fingers crossed.

I think that just about wraps it up from me for today.

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

1970

Cranfield, England

Mick Charles of Great Britain.

Jurca Sirrocco

Winning Team

Great Britain.



1972

Toulouse, France

Heinz Simon of Germany

ME 163 KOMET

Winning Team

USA



It is hoped that both Dave and Harri's fathers' models will be on display in the hangar at Buckminster next year during the 2026 Scale World Championships.

ABANDONED

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NOT BY **YOU.**

Just a child herself, 16-year-old Nyabuom has been forced into the role of raising her siblings in the absence of their Mother who abandoned them over a year ago.

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As one of 50,000 other displaced and forgotten children in Uganda*, Nyabuom's hopes, like the aid and food, have dried up.

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MvM Howard DGA-3 "Pete" Rapid Build

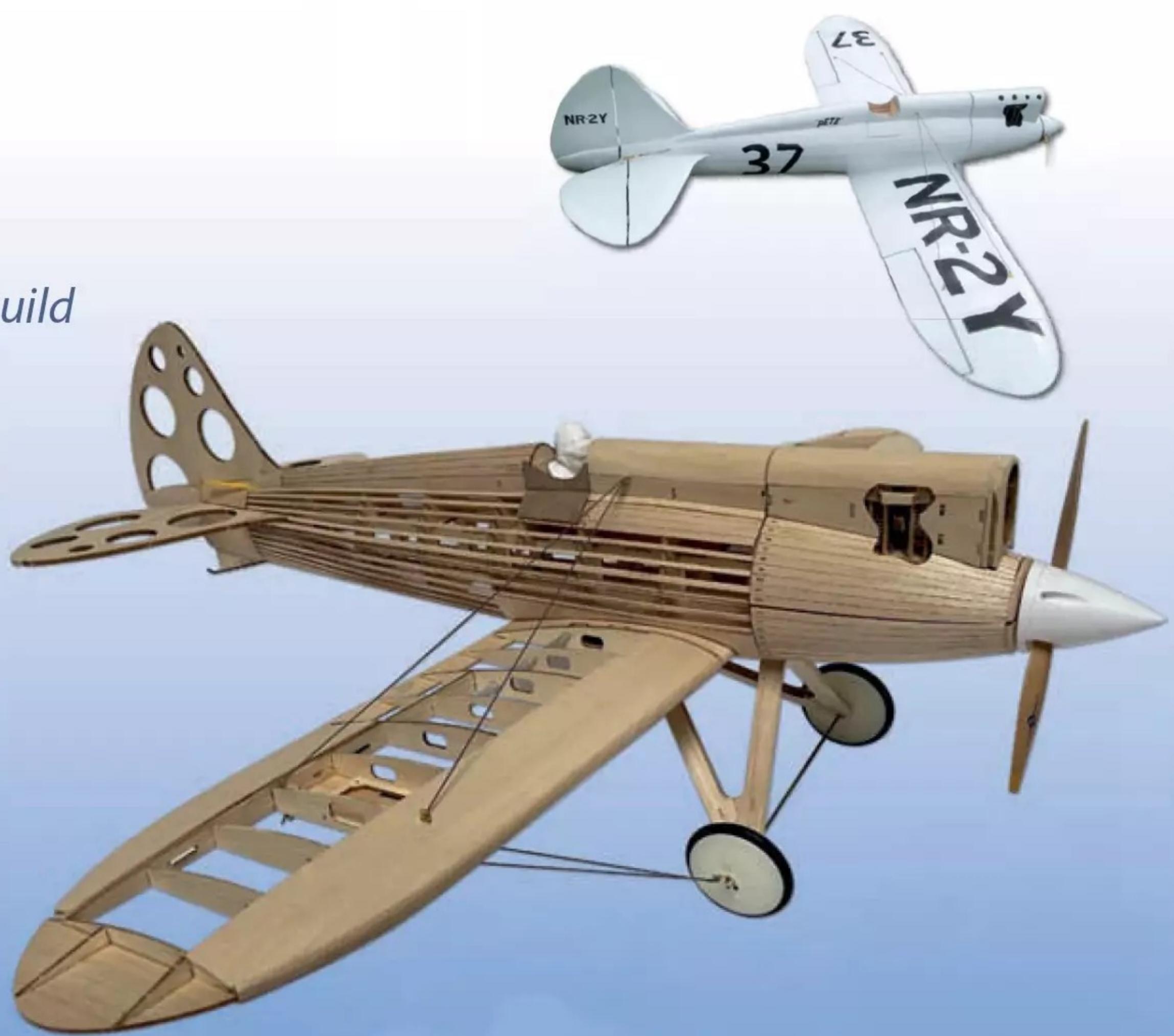
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- 4 Channel – Elevator, Rudder Ailerons, Throttle*



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Wingspan 42" – 1067mm

3 Channel – Elevator, Rudder, Throttle

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Full Kit – no electrics or engine

Wingspan 42" – 1067mm

2 or 3 Channel – Elevator, Rudder, (Throttle)

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MvM's mission is to breathe new life into some fascinating vintage models, redesigning them to better accommodate modern building techniques, materials and electronics while still maintaining the characteristics of these original models.



SIZE MATTERS

We catch up with Chris Williams and chums' latest batch of scale soarers, plus we find out how to build a portable fuselage building jig

Words & Photos: **Chris Williams**

I built my first Flamingo in 2009, back when I was just a lad. Thus, the five metre wingspan and 20 plus pounds in weight at 1:3.5 scale were no problem when it came to chucking the thing off the hill. Time, as it does, rapidly moved on and I was forced to build a fifth scale version to accommodate the ravages of age. Thinking maybe I had gone too far, I then built one to quarter scale. All three of these models are, for me, at the apex of all that is good and great in vintage glider performance, and they remained at the top of my all-time faves. Until now...

Feeling that there was unfinished business, I decided to build a fourth version, this time to 1:4.5 scale, and after a couple of sessions on the WSA's 'Oxo' slope this one now tops the list. As I had long suspected there is a 'sweet spot' when it comes to size where a glider is neither 'small' or 'big' in size but is both at the same time, from the OAP perspective anyway. I suppose it's probably something to do with Quantum or some such.

This latest iteration spans four metres and weighs in at nine pounds. In my estimation at

least it performs superbly. Traditionally built with a ply clad fuselage and one-piece gull wings, and covered with HK film, the working

drawings and build pics will always be available for those for whom the long winter evenings are too much to contemplate.



Bill Ebdon gives scale to the Flamingo.



Flamingo airframe ready for its film covering.

(For historical perspective, the HW4 Flamingo was a one-off design built by two European émigrés in Brazil. The original now hangs in a museum in São Paulo.)

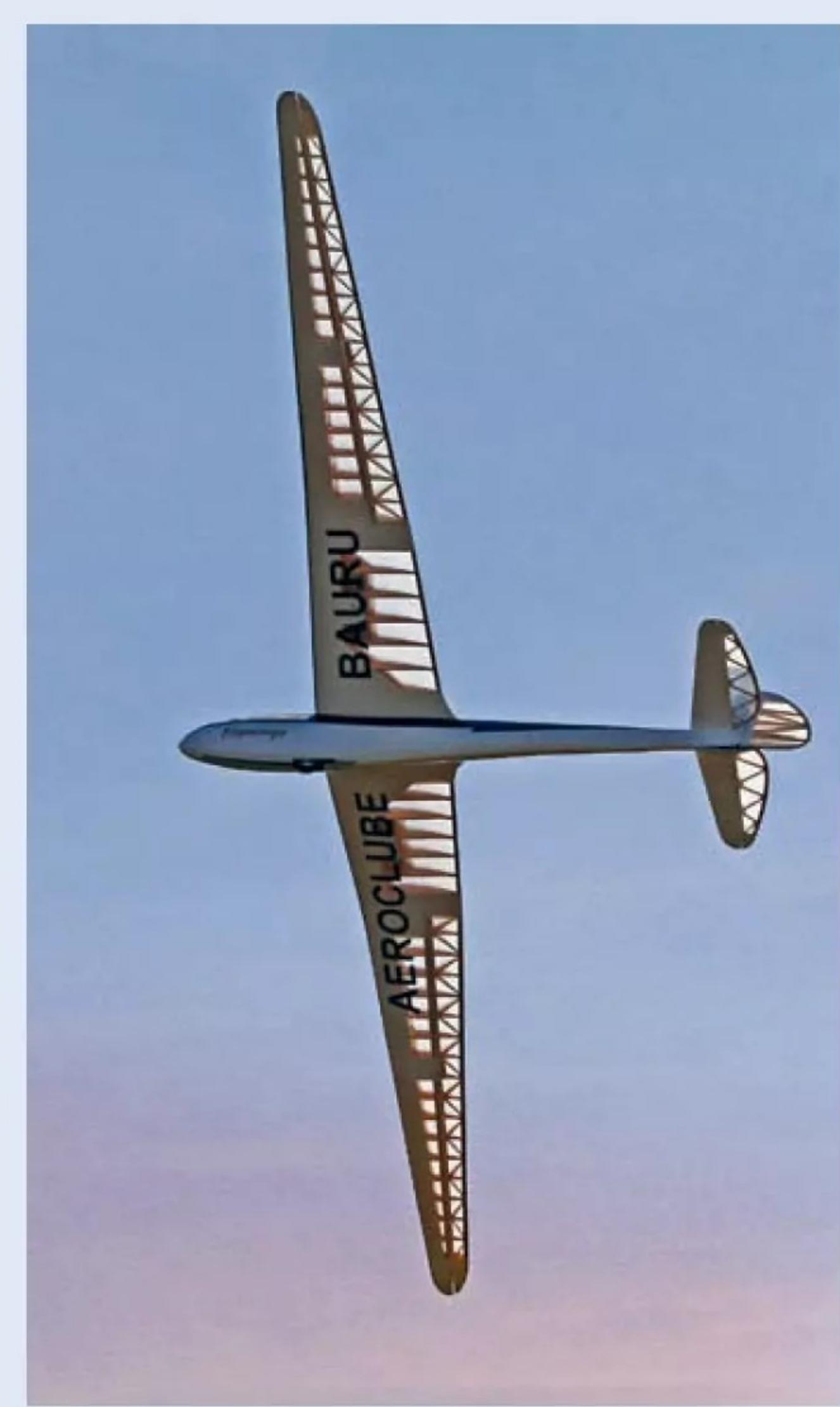
You can see videos of the first three models on YouTube. Here's the link for the original:

<https://youtu.be/UL3CeDH6UKo?si=g6aHXK4PkCL31sEc>

FIRING UP THE BRIDSON

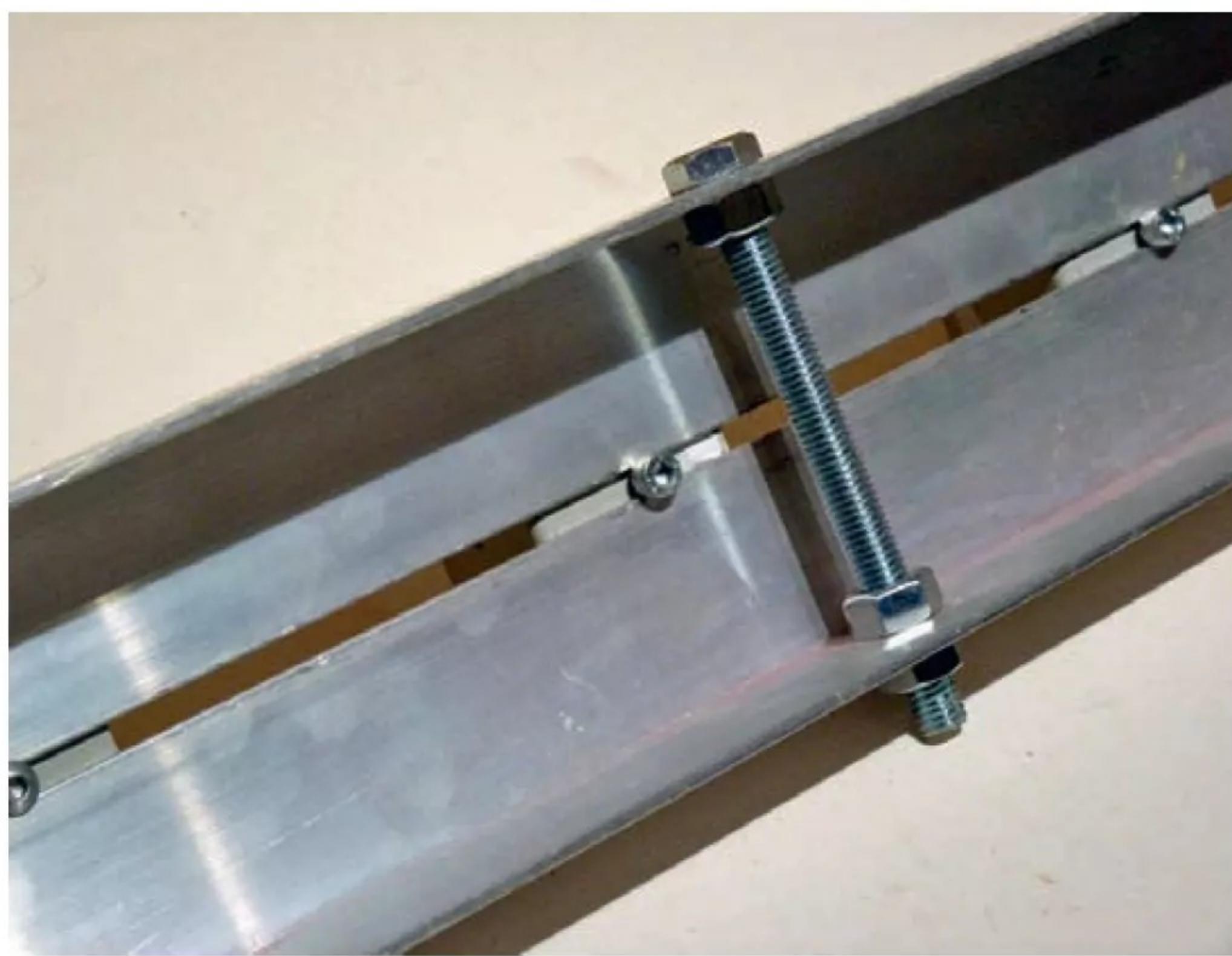
Amongst the small but very select bunch of fliers known as Mrs. Slocombe's Posse,

the phrase 'firing up the Bridson' signifies that a fuselage is soon to be born. This is an adjustable jigging device, designed to ease the problems of making a fuselage that can't be made by the more traditional methods, such as the half-shell method, and was originally

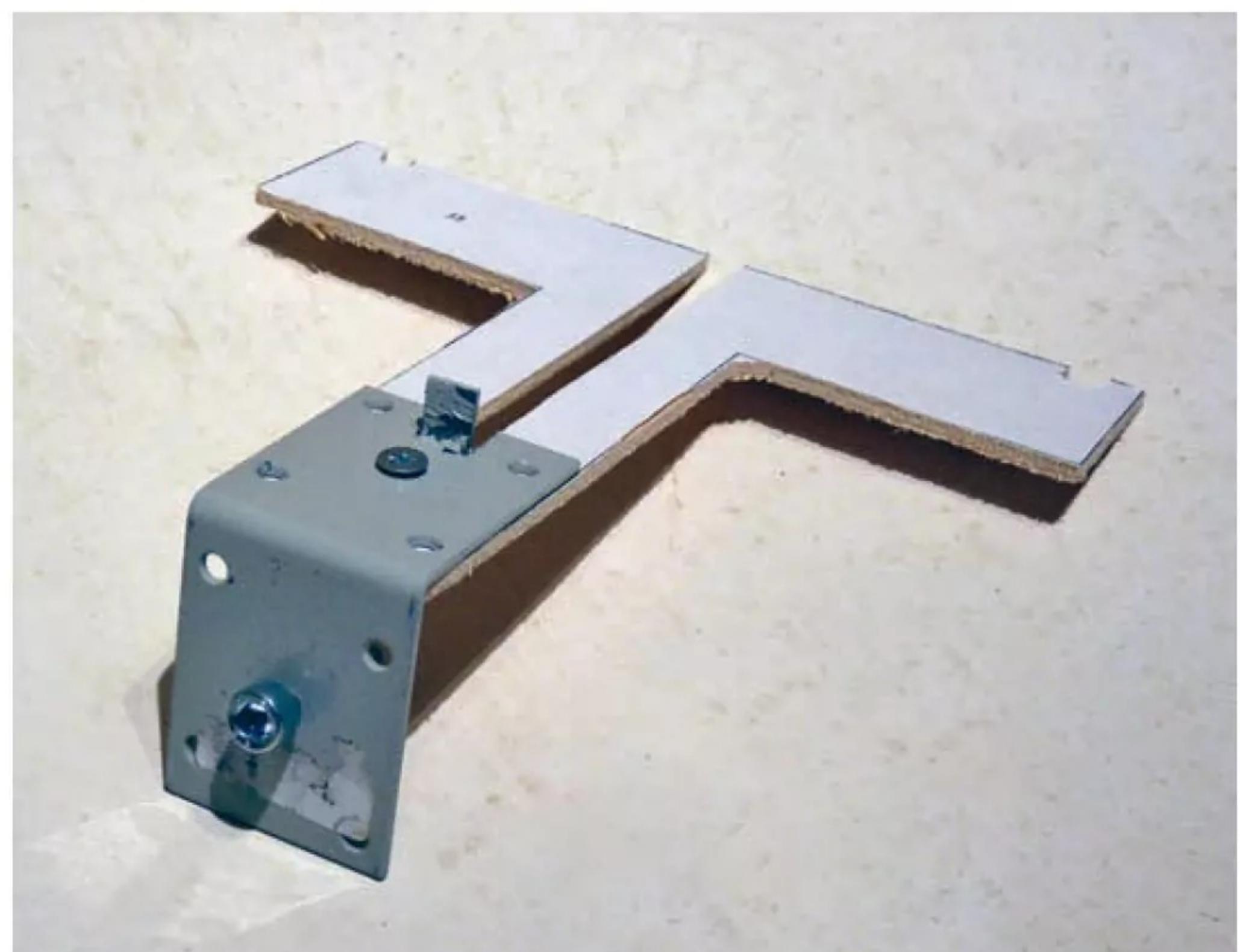


The Flamingo in action on the WSA 'Oxo' slope and at White Sheet.





A series of bolts tie the angled aluminium to the correct gap within which the support bolts can slide.



Formers supports are attached to the bracket with a single wood screw.



Butterfly nuts make for simple setting up. The fixed tape measure allows for accurate longitudinal alignment.

envisioned by long-time modeller Robbie Bridson.

Robbie explains, "I got the idea after seeing the principle applied directly to someone's bench i.e., the adjustment slot was cut directly into the bench itself, with right angle brackets presented the same way I did them in the jig. But only having one bench to do everything on and having it tied up with a fuselage on it, despite my reputation for lightning-fast building, really wasn't on. So, something on the same principle but portable was the order of the day."

This jig wouldn't be worth the effort of making for a one-off fuselage, but the logic soon becomes evident when you consider multiple fuselages over a period of time. That's just me, but you can share it around with your pals too!

My original version was built back in a time when larger models were the order of the day. Smallpiece sourced the 50 x 50 mm angled, 3 mm thick aluminium L section and B&Q supplied the brackets and bolts etc., with a



Author's third scale
Rhonspacer on the 'Bridson'.
Note the portability!



Motley Crew's 1/7th scale version of the K18.



Motley's K18 maiden flight at CMFC.

spare tape measure sacrificed for a nobler purpose. The two lengths of ali are bolted together, leaving a gap in the middle along which the bolts from the brackets can easily slide. The tape measure is fixed down the length of the jig to easily allow the necessary measurements to be made.

Setting up is simple. The former supports are

screwed to the brackets, the brackets themselves being set apart at the distances specified by the drawing. These days I use simplified lite-ply former supports and cable ties to force the fuselage down onto the base.

To be honest, having been forced by the ravages of time to downsize the scale of my models the jig is a bit too large for the smaller

stuff and a new version with half the specified dimensions of the original would be easier to use.

GO FORTH & MULTIPLY

When, a few months back, I completed and flew the near quarter scale ASK18, Bicycle Bill and Motley were quick to latch on and build one for themselves. Afterwards, as they flew



Author's near 1/5th scale K18 ready for film covering.



The moment of truth!

so nicely, we wondered why we hadn't done this years ago and it wasn't too long before they started to multiply.

First up, Motley decided he wanted an electrified seventh scale version, so the drawings were scaled down and off he went. He soon discovered that at this size his fingers seemed to be of such Brobdingnagian proportions that fitting the motor into the fuselage and the servos into the wings became extremely problematic. I could hear him muttering furiously in his workshop even though I live half a mile away!

Privately, I thought that with the 18's high aspect ratio wings, at this scale the model would prove to be lively enough to test even those with the fastest of reflexes. But I held my counsel. Come the big day the model was hand-launched on the flat by B.B. and aviation failed to take place, quite likely due to the lack of a strong enough breeze. The second time

around Motters fired up the motor and off she went at a rate of climb that Mr. Musk would have loved for his Starship.

Subsequent flights showed a model that was pretty much free of any vices and although twitchy in the initial phases, it showed a remarkable performance for a model of this type at this size. So that was me proved wrong—again!

I decided to make my electrified version at 1:5.2 scale. This allowed me to scale the original model's 5 mm spar dimensions etc. down to a convenient 4 mm and I marvelled at how Motley had managed to shoehorn everything into his model when I wasn't finding it that easy myself. In due course the nearly finished model was taken to CMFC for photographic purposes only, as it was awaiting a suitable spoiler servo. But under constant pressure from Smallpiece, I decided to emulate Motley's earlier example and tried a simple test flight from the flat. Initial short flights were encouraging and

further flight testing confirmed once again that the K18's elegant planform is a winner.

For those who like to devour stats, here they are:

To date, I've not had a chance to try her in her natural habitat on the slope. But never mind, the next project is well underway...

c_williams30@sky.com ■



Another winner.

ASK 18

Scale: 1:5.3

A.U.W.: 4.5lbs

Span: 3.07m

Wing Section: HQ35/15-12

Motor: PO-2834-1160Kv brushless outrunner from 4-Max

ESC: 50 A

Battery: 3S LiPo

Prop: 10 x 6 folding



RBC F-16 FIGHTING FALCON

£279 | www.rbckits.com

If you're in the market for a 'builders' EDF, then check out this F-16 from RBCkits. Developed in 1974 by General Dynamics and still in production today this iconic, single-engine supersonic multirole fighter became a crucial element of the USAF, with improved versions now being built for export only.

Suitable for a 100 mm Midi Evo fan and 8S (2 x 4S) 5000 mAh LiPo, the kit for this 1185 mm span model is an absorbing, traditional build (for experienced hands!) that includes 175 CNC-cut balsa and ply parts and all the required supplementary wood – five balsa and ten

lite-ply sheets, plus spruce and balsa stringers. Vac-formed canopy, nosecone and paper inlet and outlet ducts are also included, along with full-size rolled CAD plans. Instructions, construction pictures and 3D print files for gun, seat, exhaust tube, drop-in fan system and rockets are available for download from RBC's website. No hardware is included however the required items are detailed in the instructions. For 6-channel r/c - taileron, elevator, flaps, throttle, retracts, rudder & nosewheel steering – this lovely F-16 would make a perfect winter project.



RIPMAX MODEL STAND

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Tough, lightweight, fully adjustable and safe, this versatile stand from Ripmax is ideal for use with a huge variety of models weighing up to 25kg – jets, warbirds, sports models and gliders can be safely supported the right way up, upside down or on their side when servicing, testing or assembling, without worrying about wings and tails getting damaged. The stand can be quickly adjusted and employs soft, long & strong hook & loop straps to hold the model in position. Compact, portable, quick to assemble and easy to store (carry / storage bag included), this innovative stand is the perfect partner for both workshop and flying field. Available from your local Ripmax dealer.



SEAGULL LASER 200 (35cc)

£649.99 | www.jperkins.com

Purpose-designed for full-house aerobatics, Seagull's new version of the iconic 1971 Laser 200 combines outstanding performance with a sleek scale look. Featuring a 1.93m (76") wingspan this beautifully finished ARTF is suited to both intermediate and experienced pilots, the light yet rigid airframe remaining

stable and predictable throughout any aggressive manoeuvre demanded of it, with large control surfaces assuring exceptional control authority. Designed for 35 - 40cc petrol engines or equivalent high-power electric set-ups, this quite stunning model is available from your local J.Perkins stockist.



FUTABA GYA573 GYRO

£149.99 | www.jperkins.com

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Complete Pack	£271.00



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4x 200w Electric

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VAC Set	£35.00
CNC Pack	£86.00
Wood Pack	£107.00
Complete Pack	£243.00



JAGUAR GR.1

Tony Nijhuis returns with the second model in his latest series of EDF jets

Words: **Tony Nijhuis**

Photos: **Tony Nijhuis, David Ashby**

This is the second model in a series of three EDF offerings. Yet again it pays homage to a classic British jet fighter of the 1960s. Although the Jaguar didn't enter service until 1973 its manufacture and design was embedded in the 60s.

The Jaguar has always been a favourite of mine and although I would have loved to have squeezed in a nice, single 70 mm fan the size option didn't really work. So, the model started its life and remained as a twin 50 mm fan model, I guess in homage to the full-size aircraft. As with all the other prototypes in this new series of models I have been flying the Jaguar in its bare wood state for quite a few years now. I really don't like covering so it's the main reason why prototypes stay as prototypes. However, what tends to drive the prototype forward is a sudden burst of nice flying weather and maybe finding and rekindling the love for a particular model.

It was only this year that I decided to dust off the Jaguar and give it another round of

testing. It always surprises me (although it shouldn't really) that all models behave differently, whether being launched, in flight or landing. For the Jaguar the positioning of the fans and thrust tubes, coupled with the high wing configuration, does give the effect of zero sink on hand launch and she just climbs away like a homesick angel. No other jet I have designed is such a joy to hand launch. It's almost impossible to do a poor hand launch with this model.

The wing is effectively a delta with anhedral and as such the model will not stall and drop a wing. But testing this model for many years has shown up some real quirks that needed a little sorting. The C of G is quite critical so please do adhere to the position shown on the plan. Having tried a rearwards C of G, I can confirm that the model will happily drop into a flat spin, but one that was the most sedate and, dare I say, the strangest to watch. It simply fluttered towards the ground like a sycamore leaf, then, with power applied, she hovered to



Tony lends scale to the Jaguar GR.1.

the gentlest of arrivals with no damage. I was both shocked and amazed!

So, this year the love of the Jaguar was rekindled when some final testing on a lovely calm evening revealed just how nice the model was. Needless to say, with an AUW of 2 lbs 9 oz and a calm day the Jaguar is an absolute joy to fly.



Well proven! Tony has been flying the Jaguar in its bare wood state for quite a few years.

PARTS & WOOD PACK

To assist the builder, I have once again made available a vac-formed set that includes the nose cone, air intakes and the canopy. And for those who wish to make the building process a little easier and quicker there's a CNC/wood pack too. These parts will only be available through Tony Nijhuis Designs Ltd (TND) and not via Kelsey Media. The plan will only be available in this edition of the magazine, with future copies only being available through TND Ltd.

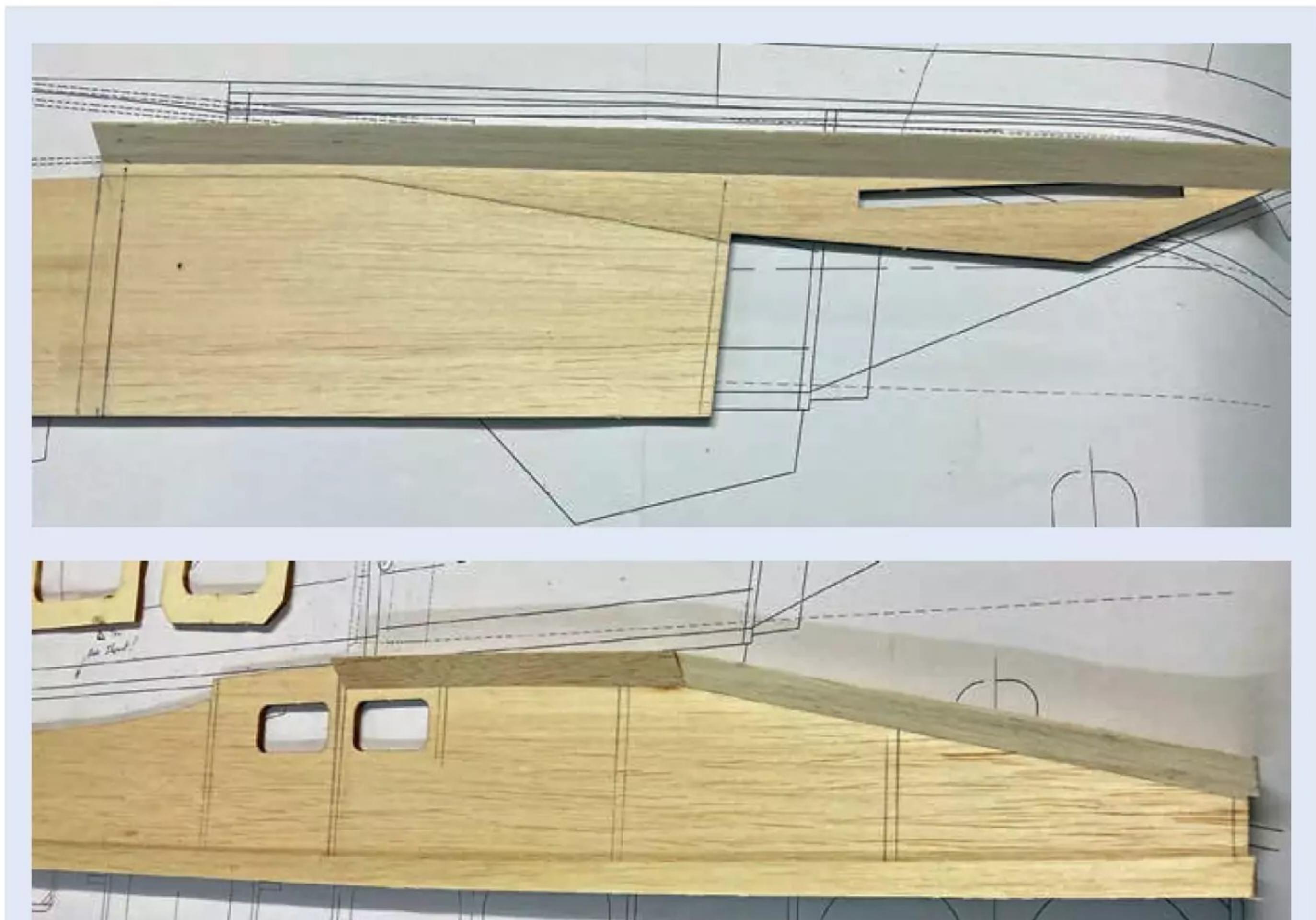
The battery used in the prototype was a 4S 4000 mAh 60C LiPo. The servos are metal geared 6 - 8 g, 1 kg/cm torque units for the ailerons and elevator. For the ESCs two 40-amp 4S controllers were used. Make sure you set the timing to High.

Lastly, and possibly the most important, a photographic build log is available as a free download to print out from [www.tonyrijhuisdesigns.co.uk](http://tonynijhuisdesigns.co.uk). These photos will be invaluable and I would suggest downloading them so you can familiarise yourself with the build before you start.

FUSELAGE

On the assumption that you have bought the CNC pack, number all the parts to avoid any confusion later. Begin by making up the fuselage side pieces, FS1, 2 & 3, as outlined on the plan. Glue together parts FS1 and FS2 to make a complete fuselage side.

Mark the positions of fuselage formers F1 through to F8 onto the fuselage sides. Now line the top rear inside edge of the fuselage sides with 9.5 mm triangular balsa. Continue to line the bottom inside edge and the top forward edge with more 9.5 mm triangular balsa. Note

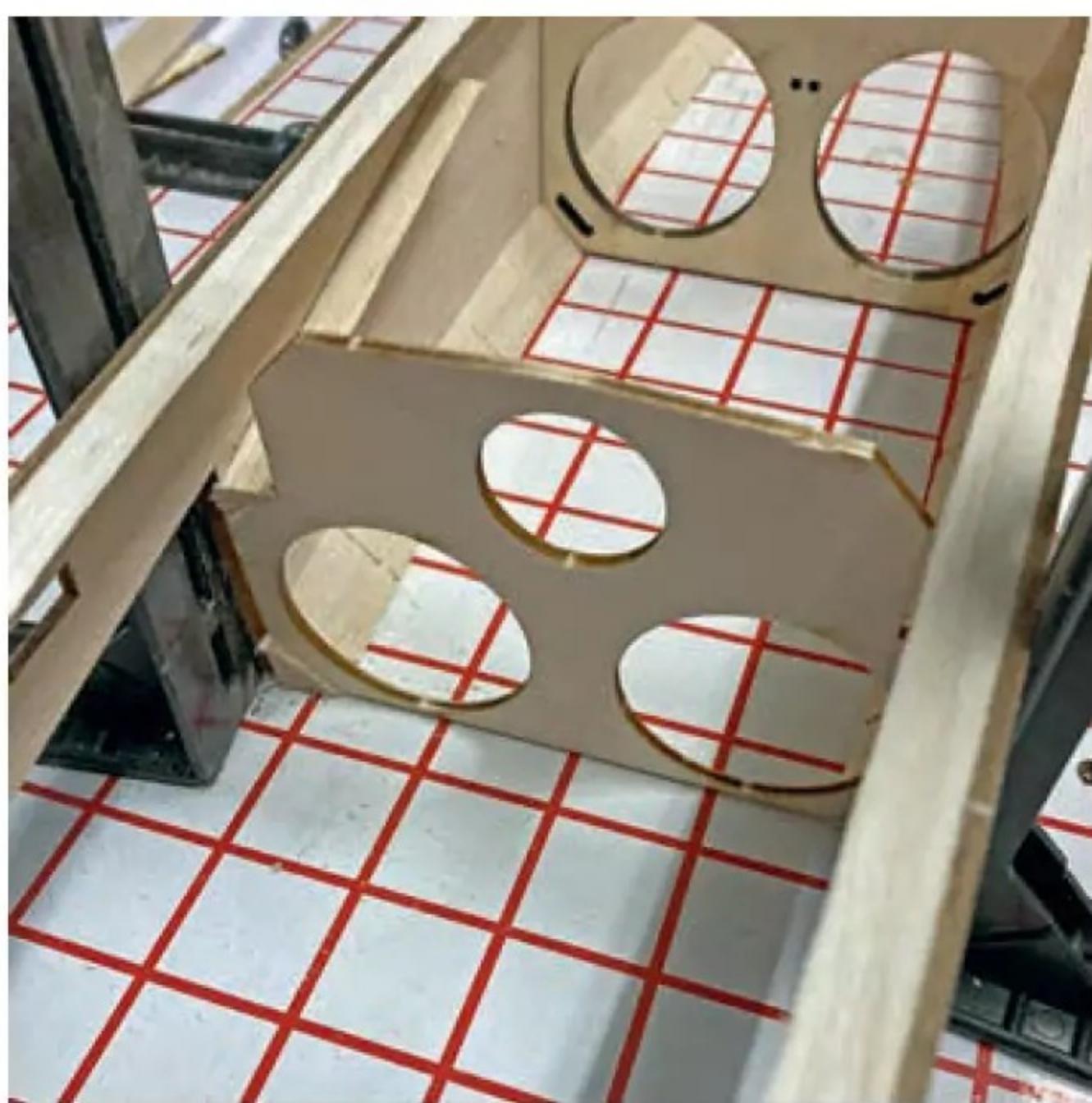


Fuselage construction begins by adding copious amounts of triangular stock to each side, front and rear.

that the lower edge between F6 and F7 is lined with 12.5 mm triangular balsa. Adding saw cuts at regular intervals will assist in bending of the fuselage sides when adding the formers

Using a SLEC building jig or similar insert and glue into position former F1 through to F5. Now add F6, F7 & F8. Add the top rear sheeting, using 3.2 mm balsa between F6 and F8. The fuselage can now be removed from the building jig.

At this point it's probably a good idea to install the two FMS fans and make up the thrust tubes. When done the bottom sheeting from F1 to F7 can be fitted using 4.5 mm balsa. The bottom rear under sheeting can then be applied using 3.2 mm balsa. Before moving onto the next stage profile the fuselage to the former profiles shown on the plan.



Adding the fan mount and thrust tube support formers.



Sheeting the rear end of the fuselage prior to shaping.

“If not already done so profile the rest of the fuselage to a smooth, flowing shape”

finished shape.

As shown on the plan cut out the battery access hatch in the under sheeting and then trim away further (towards the fan) to reveal an air intake hole. The hatch is hinged at the front with Solarfilm and will stay closed under suction pressure from the fans.

Finally, install the battery tray made from scrap 3 mm lite ply. It's worth installing the speed controllers and checking for correct rotation of the fans whilst access is good.

WINGS

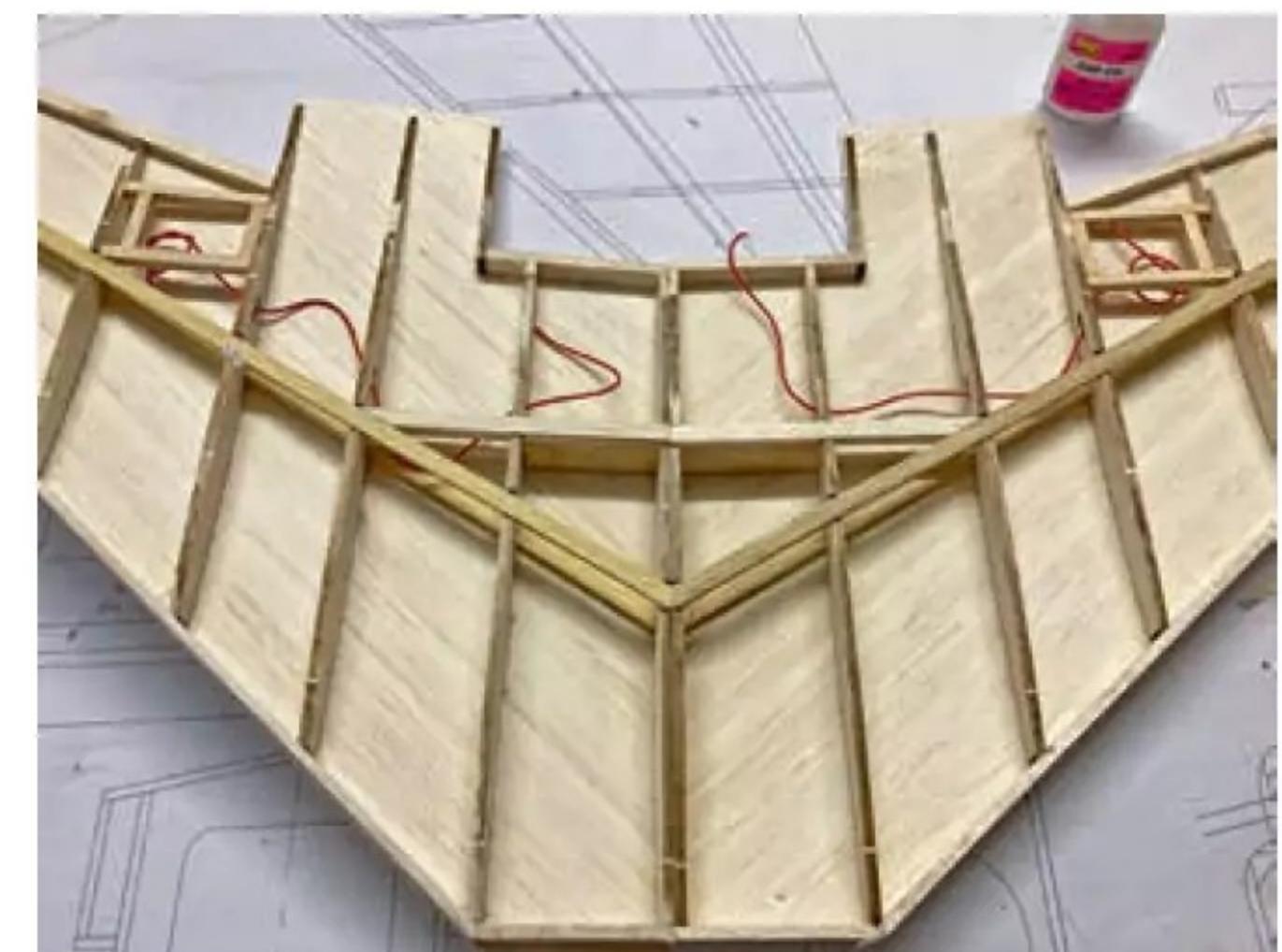
The wings are of traditional ‘built up’ construction and are made over the plan. The sequence detailed below should be followed closely to avoid construction difficulties.

Begin by taking the 6.5 mm x 3.2 mm obechi lower forward spar and pinning this over the plan. Note that the spar at W8 will need to be notched to accept the shallower slots in the rib. Also pin the 6.5 mm square stub spar over the plan and glue the chamfered end onto the main spar.

Now fit all the wing ribs remembering to use a set square against all the formers and the anhedral template against W1. Then fit the corresponding top spars.



Wings are of traditional built-up construction and are made over the plan.



Join the two wing panels together, adding the wing spar. Install aileron servo wiring and additional framework.



Aileron servo hatch after being cut out from the wing sheeting.

Using 4.5 mm sheet balsa make up the aileron section of the trailing edge and the inner trailing edge between W1 and W2. Fit the inner leading edge made from 3 mm sheet balsa. The top wing surface can now be skinned with 1.5 mm sheet balsa

Remove the wing and trim the wing sheeting edges. Make up the aileron tray support framework.

Now make up the other wing panel to the same standard. Remove the wing rib jig tabs.



Make up the thrust tubes using the template shown on the plan. Roll them around the fans and secure the overlaps with tape. Fix to the fans with blobs of hot glue.

Make up the air intakes starting by adding F9 and then adding FS3. Chamfer the mating edge of FS3 where it meets with FS1. Now add F10 and build up the fairing using 6.5 mm triangular balsa and the templated piece FS4. Only use small amounts of glue on F10 as these formers are sacrificial and will have to be removed later

Line the top and bottom of the intakes with 3.2 mm balsa. Begin to profile the intakes to shape using a razor plane and then sandpaper. The sacrificial formers F10 can be removed and discarded. Using a small round sanding tool begin to sand the inside corners of the intakes to a smooth curve to match the outer radius.

Make up the nose block made from a sandwich of 9.5 mm balsa sheet. Trim and shape this using a razor plane and sanding block to profile it smoothly into the fuselage. If not already done so profile the rest of the fuselage to a smooth, flowing,

JAGUAR-GR.1

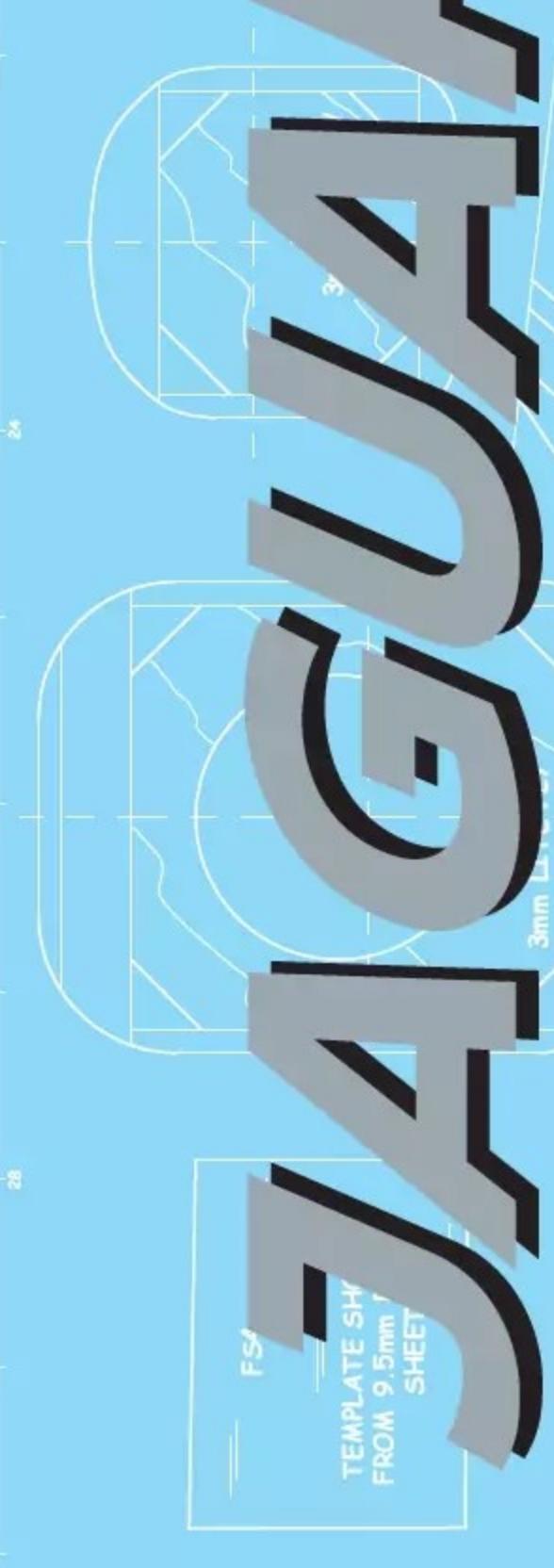
BY TONY NIJHUIS

No. OF SHEETS: 1 OF 2

Printed by REYNOLDS December 2025

JAGUAR-GR.1

DESIGNED BY TONY NIJHUIS



NOSE BLOCK FROM SCRAP
12.5mm Balsa Sandwich
FROM WINGS

4.5mm & 8mm Balsa
RAZORBACK

44mm x 73mm
AIR INTAKE
OPENINGS

SAW OUTS AT REGULAR
INTERVALS IN UPPER 3mm TRIANGLE
TO AID BENDING

3.2mm Balsa
TOP SHEETING

4.5mm MED Balsa
TAILPLANE

4.5mm BIRCH PLAY
TAILPLANE SPAR

4.5mm TAILPLANE

1mm ROLLED PLASTIC
SHEET DUMMY NOZZLES

3mm LITE PLY
FORMERS

SACRIFICIAL FORMERS F10
(3mm LITE PLY)
TO BE REMOVED AND
DISCARDED AFTER INTAKES
ARE CONSTRUCTED

VAC FORMED CANOPY

6.5mm TRIANGLE

6.5mm TRIANGLE

F4

F5

F6

F7

F8

F9

F10

F11

F12

F13

F14

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The prototype was covered using light grey Oracover and painted parts were covered in corresponding Orapaint.



Decals, canopy, pilot and other parts are available from TND Ltd.



Fin mounted Radar Warning Receiver housing is a distinctive feature of the Jaguar...

JOINING THE WINGS

Join the two wing panels together, adding the wing spar WS1.

Install the aileron servo wiring and any additional framework needed to support the servo trays.

Sheet the bottom of the wing and trim the edges flush. Make up the outer leading edge from 6.5 mm balsa sheeting. Make up the ailerons and the wing tips and sand the wing smooth.

Mark out the locations of the elevator servos and cut the openings in the fuselage sides. Use ply doublers to reinforce the servo openings as shown. Thread the servo extension leads through F6 and F7.

The wing can now be glued onto the fuselage and blended into the fuselage as shown on the plans.

FIN & TAILPLANE

Make up the fin parts as shown on the plan. Glue them together and profile the fin leading

“Put the fin aside and only glue it into position once the model is nearing completion”



...as are the two ventral fins.

edge. Add FN3 and FN4 and make up two small strips of 3.2 mm balsa to sit across the fin. Put the fin aside and only glue it into position once the model is nearing completion.

Now make up the tailplane parts. Round off the tailplane leading edge. Join the tail halves using the ply brace TS1 to set the correct angle.

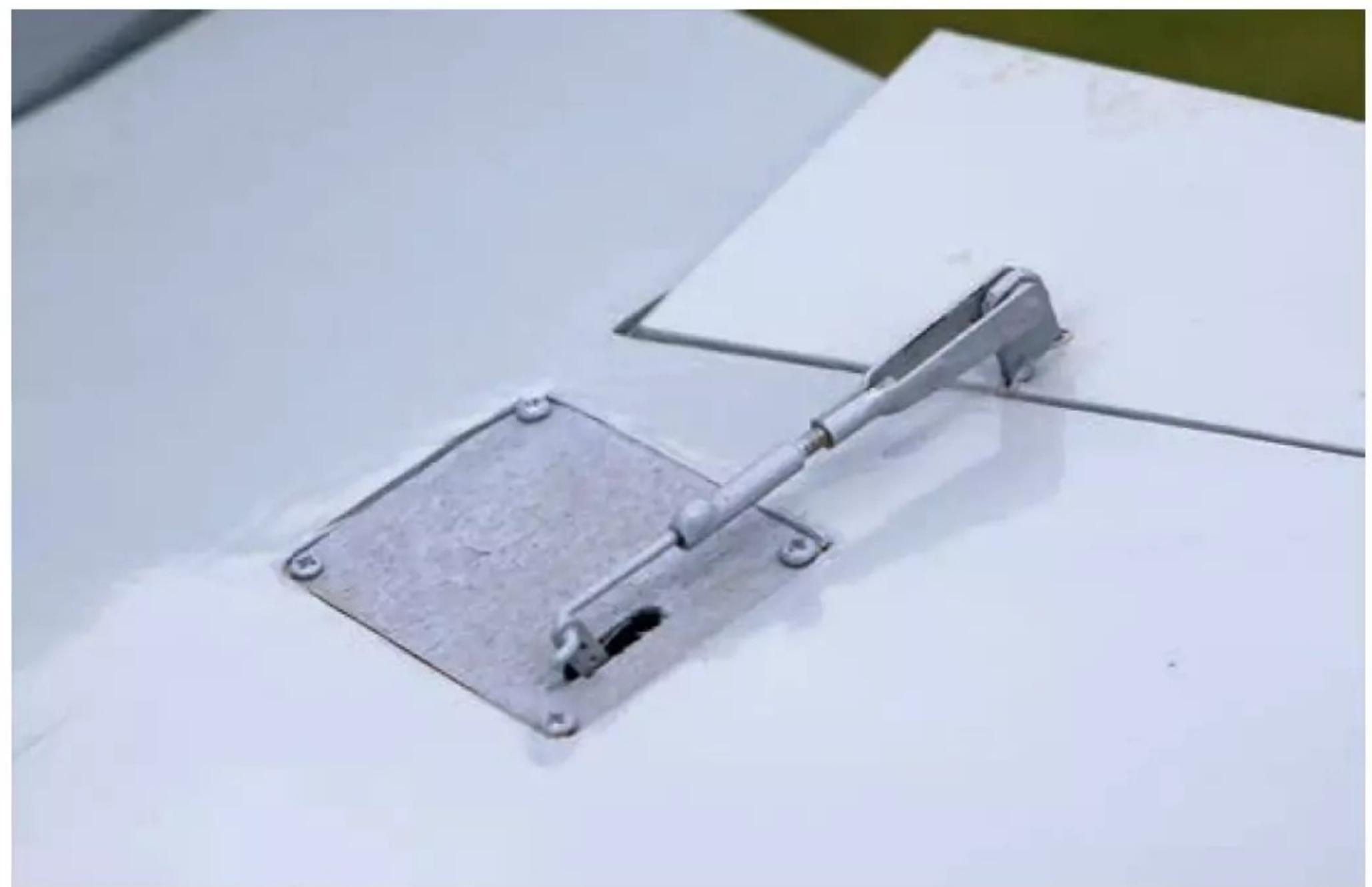
FINISHING OFF

The fin slot in the top of the fuselage can be cut and the fin inserted. The razor back pieces RB1 and RB2 can be added. The position of these two pieces determines the location of the canopy so trim the canopy to a good fit against the fuselage.

Since the razor back flairs on to the canopy the RB4 pieces should be glued on RB3 at the front. I would suggest shaping the radius curve of RB3 before they are fitted just for ease.



Elevator linkages are commendably short. Note also the ply doublers to reinforce the servo openings.



There's no potential for any aileron pushrod flex here!



As with any EDFjet it's important to build in the correct size and locations of the air intakes.

Finally, glue the two FB3 pieces into position and blend this into the rear of the canopy

The canopy can now be fitted. I prefer to detail the cockpit, fit the canopy and then cover the model around the canopy. The finlets shown on the underside of the fuselage can be either fitted before or after covering. Note that there are additional vents to go into the sides of the fuselage, just in front of the fans.

COVERING

The prototype was covered using light grey Oracover from J Perkins. The vac formed intakes were painted in the matching Orapaint. Allow the Oracover to cover the canopy end by 3 mm to allow a smooth

contrast between the film and the canopy and then paint, using matching Orapaint, the canopy lines and edges.

A decal set, intake air vents and a pilot are available from www.tonynjhuisdesign.co.uk.

Fit all the control surfaces with SLEC flat flock hinges and secure with glue. Fit all the servos and all the control horns.

The C of G position is achieved by adjusting the position of a 4S 4000 mAh LiPo. Do not be tempted to move the C of G back from the stated position; it is tolerant of adjustment, but I have spent many hours finding the sweet spot. The battery is secured using self-adhesive Velcro and a securing strap.



Hand launching the Jaguar is easy. Just throw it and she will happily climb away with no elevator input.



The Jaguar does have a few quirks but what a lovely flying model it has turned out to be.



The wing is effectively a delta with anhedral and as such the model will cope with a bit of high alpha.



Tony recommends saving the Jaguar to fly on calmer days as it really does make the flying performance much more enjoyable.

FLYING

As I mentioned in the opening few paragraphs, hand launching the model is incredibly easy. Just throw it and she will happily climb away with no elevator input. However, I would suggest that for its maiden flight you get a trusted helper to launch the model for you.

Once the hand launch is mastered and the Jaguar is trimmed for flight, the model will get away with little fuss every time and with very little control input. Even on calmer days the Jaguar will always get away cleanly.

When you get the Jaguar airborne you will notice how nippy it is. Once the initial climb out has been executed you can pull back the throttle to around half stick and enjoy what is a very scale flying performance.

You'll find the model simply grooves and flies on rails, especially on a calm day. However, if you fly on a windy day the model will be thrown around a bit and will balloon a little so be prepared to fly with more throttle. I would only recommend flying the model on calmer days as it really does make the flying performance much more enjoyable.

All the classic jet manoeuvres can be done with this model, but you will need full throttle and speed on some as the model doesn't have the momentum to carry through manoeuvres such as big loops etc. Just remember to keep the routine smooth and keep what little momentum it has going. Landings are very straightforward and generally you will run out of elevator control before the model will stall.

The two 50mm 4S FMS units do give an amazing punch and flight times are surprisingly good. Expect a good five minutes plus depending on throttle use.

JAC-TASTIC!

I have to say the Jaguar does have a few quirks, but what a lovely flying model this has turned out to be. Dare I say it, it is one of the prettiest models in my collection. It's small enough to sit in the back of the car, ready to go, but it looks, feels and flies like a turbine model.

All in all, this twin EDF Jaguar is a cracking little model and flies incredibly well. I do hope it is going to be a popular model as it is such an iconic aircraft. You really will enjoy flying this one!

ADDITIONAL PARTS

Additional plans, a vac-form set, combined CNC/wood pack, pilots and decal set are available from: www.tonynihuisdesigns.co.uk

Email: sales@tonynihuisdesigns.co.uk

DATAFILE

Name:	Jaguar GR.1
Model type:	Hand launch EDF jet
Designed by:	Tony Nijhuis
Wingspan:	29" (735 mm)
Length:	43" (1091 mm)
Weight:	41 oz (1.16 kg)
Wing loading:	22 oz /sq. ft. (6.5 kg /sq. m)
Functions (servos):	Ailerons (2), Elevators (2), Throttle (ESC)
EDF unit:	2 x 50 mm 4S FMS
ESC:	2 x 40A
LiPo:	4S 4000 mAh 60C

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The prices include a brushless outrunner specifically designed and developed to work with these units. All of the fans are dynamically balanced at the factory and are therefore vibration free and very efficient. All fans have either 11 or 12 blades which gives them a great "turbine" like sound which adds to the experience of owning a "jet" model.

The 50mm FMS and 70mm PowerFun fans are those as used in the Tony Nijhuis "Mini and Midi Jet" series, as recently published in the RCM&E.

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64mm	FMS 3900kv (3S LiPo)	TBA	£53.99
64mm	PowerFun 3500kv (4S LiPo)	1,072g	£39.20
64mm	FMS 3150kv (4S LiPo)	1,162g	£53.99
70mm	FMS 2750kv (4S LiPo)	1,253g	£70.20
70mm	PowerFun 3400kv (4S LiPo)	1,435g	£47.50
70mm	PowerFun 2300kv (6S LiPo)	1,816g	£53.49
70mm	FMS 1900kv (6S LiPo)	TBA	£75.59
80mm	V3 FMS 2000kv (6S LiPo)	TBA	£129.99
90mm	PowerFun 1450kv (6S LiPo)	2,924g	£95.00
90mm	FMS 1850kv (6S LiPo Metal Case, Inrunner)	4,000g	£172.99
90mm	PowerFun 1100kv (8S LiPo)	3,360g	£95.00
90mm	FMS 1500kv (8S LiPo Metal Case, Inrunner)	4,800g	£183.59



Complete Electrical Setup For Jaguar GR.1 by Tony Nijhuis



<https://www.4-max.co.uk/tn-midi-jet-JaguarGR1.html>



Description	RRP
2pcs of FMS 50mm, 4S EDF Units with motors	£83.16
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Transmitters

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* XT60, ** XT90 on battery side



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4-Max	4M-045DH-005	Sub Micro	4.5g	0.5Kg @ 4.8V - 0.10sec/60° 0.6Kg @ 6.0V - 0.08sec/60°	Digital, Light Weight, High Speed	1pcs £4.72ea 5pcs £4.25ea
EMAX	ES9051	Sub Micro	4.1g	0.8Kg @ 4.8V - 0.09sec/60°	Digital, High Torque, High Speed	1pcs £7.69ea 5pcs £6.92ea
4-Max	4M-056DHVMG-009	Sub Micro	5.6g	0.90Kg @ 4.8V - 0.14sec/60° 1.05Kg @ 6.0V - 0.12sec/60° 1.20Kg @ 7.4V - 0.10sec/60°	Digital, High Voltage, Metal Geared, 8mm Thick	1pcs £9.94ea 5pcs £8.95ea
4-Max	4M-053HVDMG-010	Sub Micro	5.3g	1.0Kg @ 4.8V - 0.09sec/60° 1.5Kg @ 6.0V - 0.08sec/60° 1.8Kg @ 7.4V - 0.07sec/60°	Digital, High Voltage, Metal Geared, 8mm Thick, High Speed	1pcs £11.10ea 5pcs £9.99ea
EMAX	ES9052MD	Sub Micro	5.5g	1.1Kg @ 4.8V - 0.11sec/60° 1.3Kg @ 6.0V - 0.09sec/60°	Digital, Metal Geared, Coreless Motor	1pcs £13.83ea 5pcs £12.45ea
4-Max	4M-094DMGB-014	Wing	9.4g	1.4Kg @ 4.8V - 0.12sec/60° 1.9Kg @ 6.0V - 0.10sec/60°	Digital, Metal Geared, Ball Raced, Wing, 8mm Thick	1pcs £11.54ea 5pcs £10.39ea
EMAX	ES08A II	Micro	8.6g	1.5Kg @ 4.8V - 0.12sec/60° 1.8Kg @ 6.0V - 0.10sec/60°	Analog, Light Weight, Great Value	1pcs £5.34ea 5pcs £4.81ea
EMAX	ES08MA II	Micro	12g	1.2Kg @ 4.8V - 0.12sec/60° 1.8Kg @ 6.0V - 0.10sec/60°	Analog, Metal Geared	1pcs £8.35ea 5pcs £7.52ea
4-Max	4M-090AH-017	Micro	9.0g	1.7Kg @ 4.8V - 0.09sec/60° 1.9Kg @ 6.0V - 0.07sec/60°	Analog, Basic 9g Servo	1pcs £3.99ea 5pcs £3.59ea
EMAX	ES3301	Micro	10.6g	2.0Kg @ 4.8V - 0.12sec/60° 2.2Kg @ 6.0V - 0.10sec/60°	Analog, Metal Geared, 9mm Thick	1pcs £8.79ea 5pcs £7.91ea
4-Max	4M-100AMG-022	Micro	10g	2.2Kg @ 4.8V - 0.12sec/60° 2.5Kg @ 6.0V - 0.10sec/60°	Analog, Metal Geared, High Torque	1pcs £7.49ea 5pcs £6.74ea
4-Max	4M-100DMG-022	Micro	10g	2.2Kg @ 4.8V - 0.12sec/60° 2.5Kg @ 6.0V - 0.10sec/60°	Digital, Metal Geared, High Torque	1pcs £9.05ea 5pcs £8.15ea
4-Max	4M-125HVDMG-028	Micro	12.5g	2.8Kg.cm @ 4.8V - 0.144sec/60° 3.4Kg.cm @ 6.0V - 0.111sec/60° 4.5Kg.cm @ 7.4V - 0.105sec/60°	Digital, High Voltage, Metal Geared, High Speed, Dual Ball Raced	1pcs £12.21ea 5pcs £10.99ea
4-Max	4M-130HVDMG-040	Micro	13g	3.8Kg.cm @ 5.0V - 0.112sec/60° 4.0Kg.cm @ 6.0V - 0.096sec/60° 4.5Kg.cm @ 7.4V - 0.083sec/60°	Digital, High Voltage, Metal Geared, High Speed, High Torque, Very Low Play in Gears	1pcs £11.10ea 5pcs £8.15ea
4-Max	4M-094DHVMG-026	Mini	9.4g	2.0Kg @ 6.0V - 0.09sec/60° 2.6Kg @ 7.4V - 0.07sec/60°	Digital, High Voltage, Metal Geared, Ball Raced, 8mm Thick	1pcs £14.99ea 5pcs £14.17ea
4-Max	4M-160AH-027	Mini	16g	2.7Kg @ 4.8V - 0.13sec/60° 3.0Kg @ 6.0V - 0.11sec/60°	Analog, Great Value Mini Servo	1pcs £6.29ea 5pcs £5.66ea
4-Max	4M-175AMG-030	Mini	17.5g	3.0Kg @ 4.8V - 0.13sec/60° 3.5Kg @ 6.0V - 0.11sec/60°	Analog, Metal Geared	1pcs £8.73ea 5pcs £7.86ea
4-Max	4M-175DMG-030	Mini	17.5g	3.0Kg @ 4.8V - 0.13sec/60° 3.5Kg @ 6.0V - 0.11sec/60°	Digital, Metal Geared	1pcs £9.99ea 5pcs £8.99ea
4-Max	4M-183HVDMG-044	Mini	18.3g	4.4Kg @ 4.8V - 0.101sec/60° 6.5Kg @ 6.0V - 0.078sec/60° 7.3Kg @ 7.4V - 0.059sec/60°	Digital, High Voltage, Metal Geared, High Speed, High Torque	1pcs £14.99ea 5pcs £13.49ea
4-Max	4M-253AB-028	Standard/Mini	25.3g	2.8Kg @ 4.8V - 0.12sec/60° 3.3Kg @ 6.0V - 0.10sec/60°	Analog, Ball raced	1pcs £6.79ea 5pcs £6.11ea
EMAX	ES3004	Mini	17g	3.0Kg @ 4.8V - 0.15sec/60° 3.5Kg @ 6.0V - 0.13sec/60°	Analog, Metal Geared, Ball Raced	1pcs £12.09ea 5pcs £10.88ea
EMAX	ES3054	Mini	17g	3.0Kg @ 4.8V - 0.15sec/60° 3.5Kg @ 6.0V - 0.13sec/60°	Digital, Metal Geared, Ball Raced	1pcs £17.59ea 5pcs £15.83ea
4-Max	4M-455AH-033	Standard	45.5g	3.3Kg @ 4.8V - 0.15sec/60° 4.0Kg @ 6.0V - 0.12sec/60°	Analog, Great Value Standard Servo	1pcs £6.99ea 5pcs £6.29ea
EMAX	ES3001	Standard	37g	3.5Kg @ 4.8V - 0.17sec/60° 4.8Kg @ 6.0V - 0.14sec/60°	Analog, Ball Raced	1pcs £7.69ea 5pcs £6.92ea
4-Max	4M-410ABH-052	Standard	41g	5.2Kg @ 4.8V - 0.20sec/60° 6.5Kg @ 6.0V - 0.16sec/60°	Analog, High Torque	1pcs £4.73ea 5pcs £4.26ea
4-Max	4M-556AMG-087	Standard	55.6g	8.7Kg @ 4.8V - 0.15sec/60° 9.4Kg @ 6.0V - 0.13sec/60°	Analog, Metal Geared	1pcs £12.59ea 5pcs £11.33ea
4-Max	4M-556DMG-087	Standard	55.6g	8.7Kg @ 4.8V - 0.15sec/60° 9.4Kg @ 6.0V - 0.13sec/60°	Digital, Metal Geared	1pcs £15.74ea 5pcs £14.17ea
4-Max	4M-490AMG-108	Standard	49g	10.8Kg @ 4.8V - 0.13sec/60° 13.8Kg @ 6.0V - 0.11sec/60°	Analog, Metal Geared, Waterproof	1pcs £17.76ea 5pcs £15.98ea
4-Max	4M-620DHVMG-112	Standard	62g	9.35Kg @ 6.0V - 0.15sec/60° 11.2Kg @ 7.4V - 0.13sec/60°	Digital, High Voltage, Metal Geared, Dual Ball Raced	1pcs £18.89ea 5pcs £17.00ea
EMAX	ES3005	Standard	42g	10Kg @ 4.8V - 0.16sec/60° 12Kg @ 6.0V - 0.14sec/60°	Analog, Ball Raced, Waterproof	1pcs £27.49ea 5pcs £24.74ea
4-Max	4M-556AMG-118	Standard	55.6g	11.8Kg @ 4.8V - 0.20sec/60° 13.2Kg @ 6.0V - 0.18sec/60°	Analog, Metal Geared	1pcs £14.69ea 5pcs £13.22ea
4-Max	4M-556DMG-173	Standard	55.6g	17.3Kg @ 4.8V - 0.18sec/60° 20.4Kg @ 6.0V - 0.16sec/60°	Digital, Metal Geared	1pcs £17.84ea 5pcs £16.06ea

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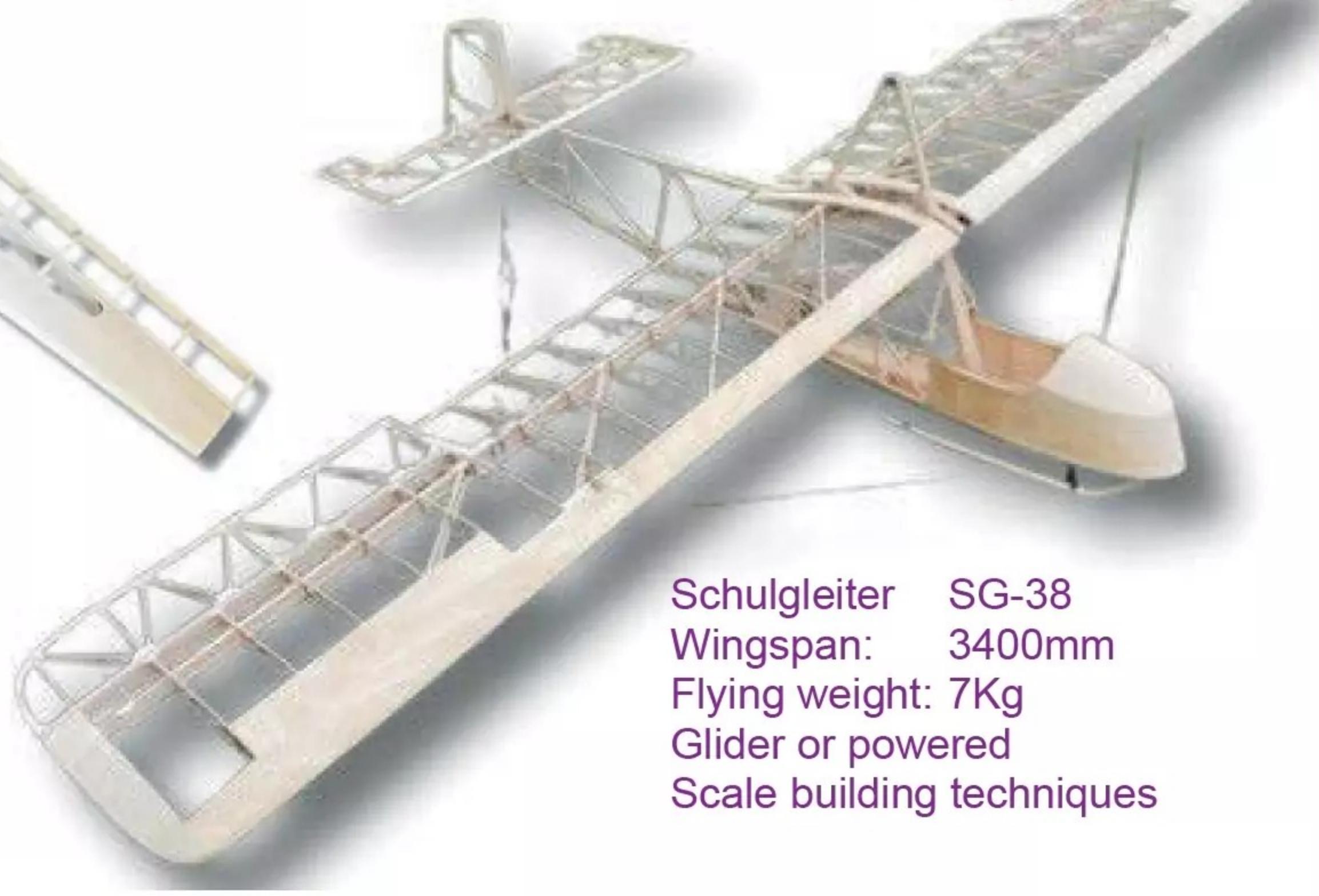
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Adam Johnson's SBD-3 Dauntless looked fabulous doing strafing runs up and down the strip.



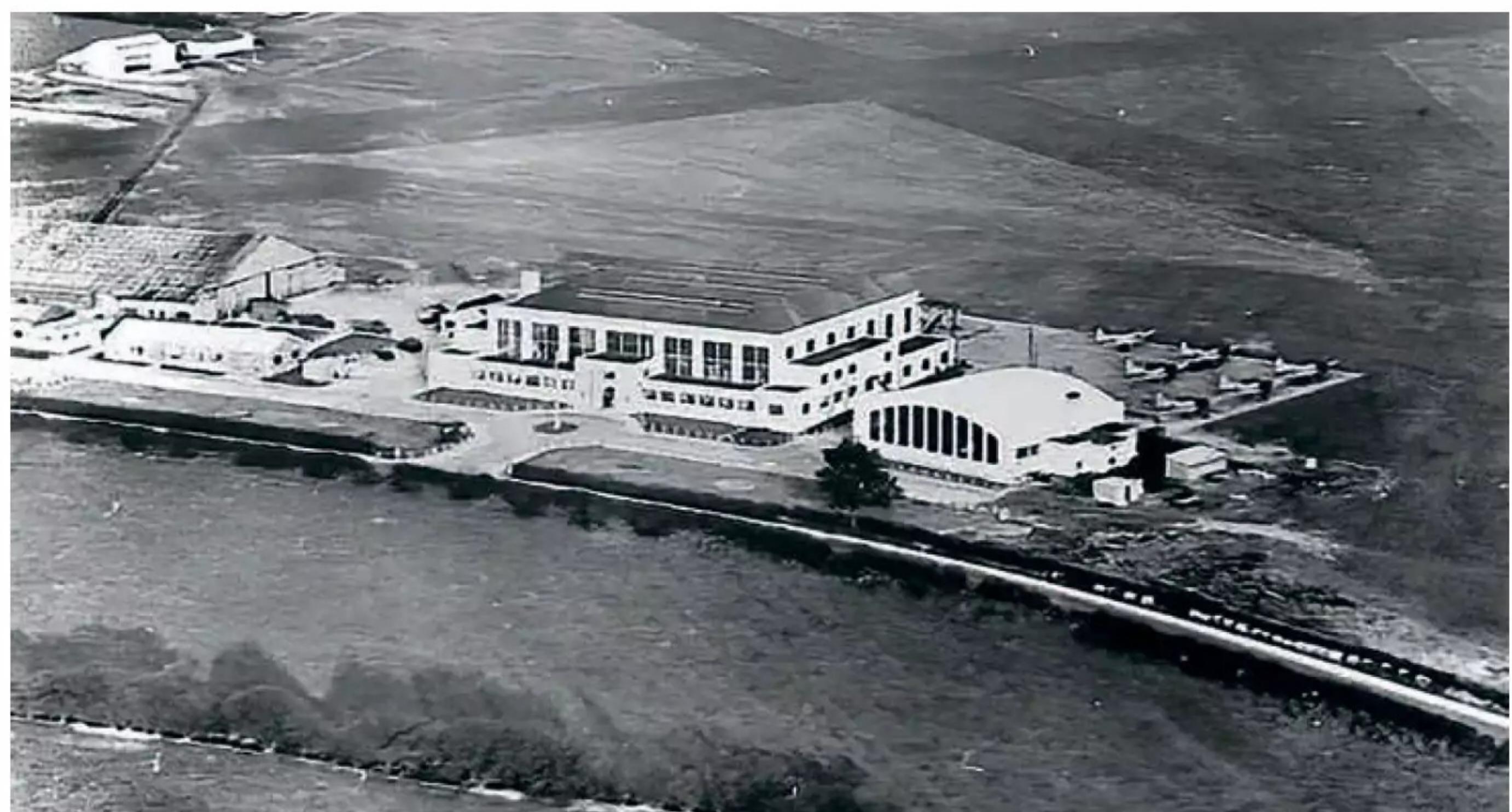
GREENACRES 2025

Mike Freeman bids a sad farewell to a popular flying site in the West Midlands

Words & Photos: **Mike Freeman**

The Greenacres Model Aero Club (MAC) flying site in the West Midlands started life as the Walsall Municipal Aerodrome which opened in 1935. It was a commercial airfield but model flying on the site can be traced back as far as 1947 when the SMAE organised the 'Midland Rally', an early incarnation of a modelling Fly-In. The airfield closed in 1956 but model flying continued on an ad-hoc basis until the mid 1990s when Greenacres MAC officially started. They even took their name from the bar/restaurant in the main terminal building of the original airfield.

Greenacres MAC has a long history of hosting club Fly-Ins but sadly the club's days are numbered as the landowners, Walsall Metropolitan Borough Council, have other plans for the site. Hence, the August 2025 Fly-In is likely to be the club's last so it would have been rude not to pop along and record the event.



Aerial photo of Walsall Municipal Aerodrome in 1945. The main Terminal Building in the centre housed the Greenacres Bar & Restaurant from which the model club took its name. Photo courtesy of Jim McHugh (GMAC Chairman)



Adam Johnson and his beautifully detailed Douglas SBD-3 Dauntless.



Close up of Adam's club-mate, Stewart Lunny's scale detailing and weathering on the Dauntless. The dummy 9-cylinder Curtiss Wright Cyclone radial hides the Zenoah 74cc Twin engine perfectly.



Split flaps on the Dauntless are actually dive brakes which pilots used to eliminate tail buffeting during dive bombing targets, most notably during the Battle of Midway in June 1942.

STONKERS

There were two memorable flying displays that stuck in my mind as I was driving home. The first to take was Adam Johnson and his gorgeously finished Douglas SBD-3 Dauntless warbird which he has owned for around a year. The model is fifth scale, giving a wingspan of 100" and it was built around 10 years ago from the Nick Ziroli plan. Adam has added the Zenoah 74cc Twin, 24 x 10 prop and Jeti

gear. Adam's club-mate, Stewart Lunny, is responsible for the super detailing on the model including panel lines, rivets and weathering.

Later in the day I spied Luke Oliver's F-16 in the queue. It looked rather unassuming with its grey livery in amongst the more brightly coloured jets in the pits, but Luke put on a stunning display for my camera. The crowd seemed to enjoy it too as it was one of the few

times during the day I heard applause when a model landed. Luke is a display pilot for Az Aerosports who import and sell the model. Owner, Azza Stephens, has loaned the F-16 to Luke for the year to show it off at model shows and Luke certainly did that at Greenacres. The model is manufactured by JET Ruler. Luke's example is the 1/8th scale, 1344 mm span PNP version which has the servos, undercarriage and lights already fitted. A KingTech K-86



Luke Oliver and his handy sized 1.34 metre span F-16 after a stunning display. It's on loan to him but I think he likes it and would like to keep it!



There's a lot of sophistication under the canopy of a modern jet turbine model.



Luke treated us to some fabulous low level fly pasts which my camera and the crowd loved!



The underslung air intake meant that a lot of grass cuttings got sucked in during take-off but, thankfully, the KingTech K-86 turbine has a built in FOD screen for such eventualities!

turbine and two litres of fuel give Luke around eight minutes flight time.

SCRIBES

I bumped into fellow RCM&E scribes Danny Fenton, retired 'Bench Blog' columnist Tim Hooper and prolific free plan designer Rich Harris. It was great to chew the modelling fat with them throughout the day.

Danny had brought along a rather lovely yellow coloured quarter scale Tiger Moth which was built from the Duncan Hutson kit by Roger Pegg, who many will know from the LMA circuit before he passed away. Danny said the model came with lots of lovely patina and didn't need much of his scale detailing. He prefers to fly it as it is as a tribute to Roger although, sadly, the



RCM&E scribes past & present: Rich Harris, Danny Fenton and Tim Hooper.



Danny Fenton's immaculate 1/4 scale Tiger Moth, built by the late Roger Pegg. Danny says it has lots of lovely patina and is a credit to Roger's building skills. A Laser 180 is hidden in the cowls driving the 20 x 6 wooden prop.



There's a lot of lovely detailing on the Tiger Moth, mostly done by the original builder, Roger Pegg.



Tim Hooper ran a feature on the 55" Antares in his 'Bench Blog' columns and he still enjoys flying it.

gusty wind precluded any airtime this visit. Tim had brought along a good selection of his models with not a molecule of ARTF foam or composite material to be seen anywhere. Just traditional wood construction and iron on covering. He flew his plan built 55" span Antares EP which I remember reading about in his 'Bench Blog' columns. The model was originally published as a feature plan in Radio Modeller magazine in 1973. Tim's much more recent example looked super sleek with its colourful scheme and flew just as well. Power comes from a Turnigy 3548 1100 kV outrunner, 10 x 6 prop and 60A Turnigy Plus ESC. A 4S 4000 mAh LiPo brings the all up flying weight to 5 lbs

Amongst the other models in Tim's collection were two rather interesting scale representations of a Renard R.17. Designed in the early 1930s the original was quite revolutionary with its cantilever wings without any bracing struts. The original was used to transport fresh flowers around its native Belgium but wasn't very successful probably due to its then revolutionary wing fixing. Only one was ever built.

Tim's wife, Netty built the smaller 1/10th scale model from a Peter Rake plan which appeared in RCMW in 2009. This was Netty's first build experience and a smashing job she's made of it. There is a photo of Netty and the model in the September 2010 issue where Netty gave it its first public display at the



Antares, from the Radio Modeller plan in 1973, takes to the air for a nostalgic display.



Little and large! Tim Hooper's 1/5th scale Renard R.17 dwarfs wife Netty's 1/10th scale version. Both have nicely made five-cylinder engines.



Tim's model of the Belgian designed Renard R.17 with novel, for the period, cantilever wings with no struts!



Close up of the larger R.17 five-cylinder engine. See text for details.



Tim model has functioning telescopic suspension using internal springs. He made the aluminium bracket on his recently acquired mini milling machine.



Rich Harris proudly displays his latest Gyro II autogyro design which will be a free pull-out plan in RCM&E soon.



Gyro II flew brilliantly. I was quite taken with it. I might build one when the free plan comes out!



Rich Harris also flew his Mercury Galahad, converted to electric power and with increased rudder throw to improve handling. It was aerobating like no self-respecting R/E model should perform – very entertaining!

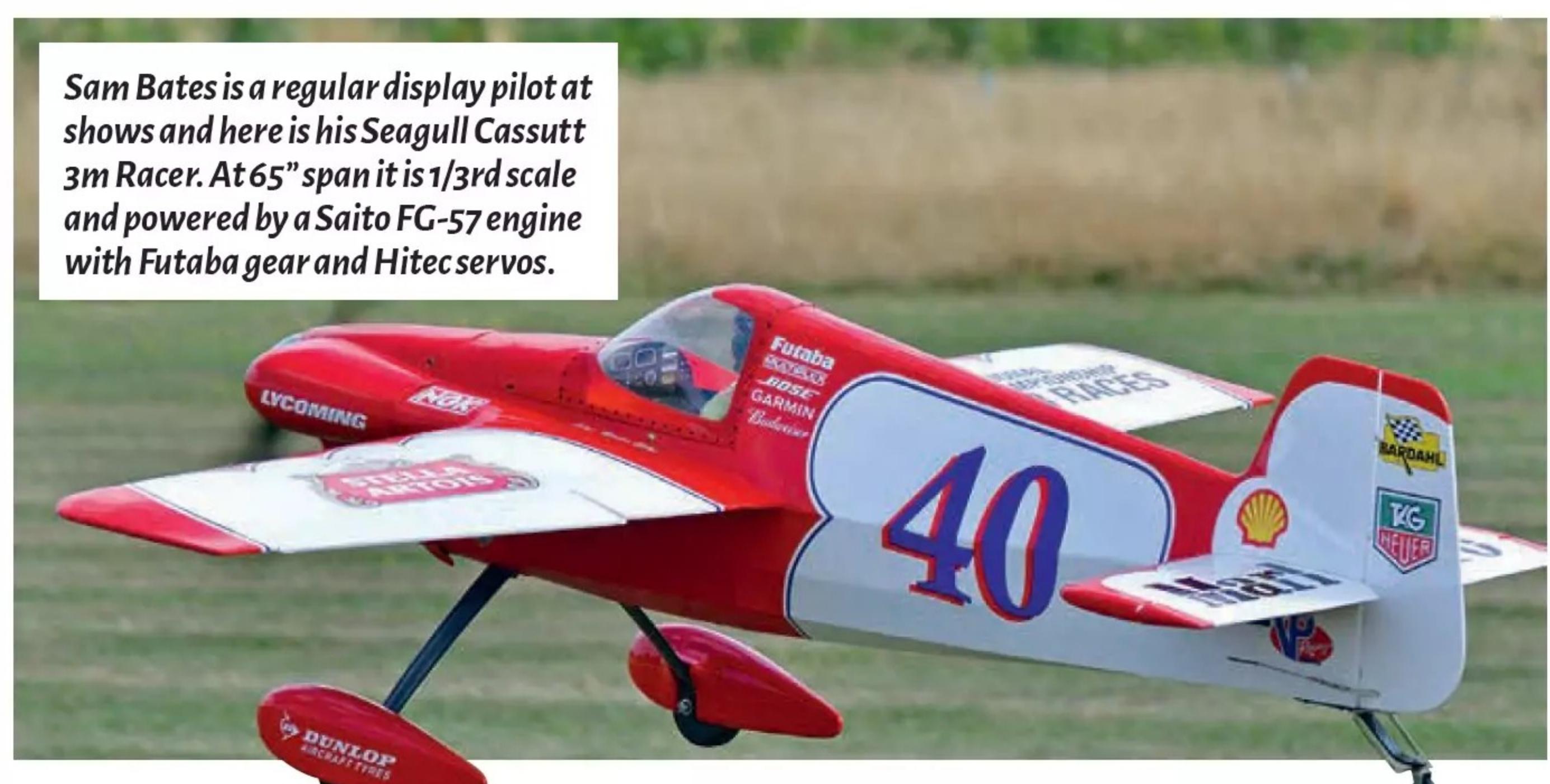
RCM&E Golden Anniversary Fly-In, hosted by Greenacres MAC. I particularly liked the scale five-cylinder engine. Those cylinder heads are round balsa blocks wrapped in thick string and painted silver. So clever and super light too! With a wingspan of 40" this model is powered by a Bell-type outrunner, a 9 x 6 slow fly prop, 15A ESC and a 2S 1300 mAh LiPo and flies beautifully in gentle winds.

The larger, 1/5th scale, 80" version came about when Tim was looking for a home for his newly acquired 10 cc PAW 60 R/C diesel engine. He up-scaled Netty's R.17 and made up his own bespoke scale five-cylinder engine which is a work of genius! The upright cylinder head is the active head of the engine. The others are dummy heads made from aluminium tube with the cylinder fins cut with a lathe. The two either side of the engine's cylinder head are the fuel tanks, each holding 55 ml of fuel, giving Tim around six-minute flights. The bottom two were going to be used to hold ballast for CG adjustment but no additional ballast was required. Unfortunately, neither Renard flew due to the windy conditions.

Rich Harris is best known in these pages for his autogyro exploits. He had a couple of examples, including his latest autogyro design 'Gyro II' which will be appearing as a free plan in the future. This lovely looking autogyro is a pusher version of his 'Gyro' design which was a pull-out plan in the May '22 issue. Power comes from a



Kevin McNaughton on the left with his lovely example of a Piper Pawnee which was a free RCM&E plan designed by Rich Harris (right).



Sam Bates is a regular display pilot at shows and here is his Seagull Cassutt 3m Racer. At 65" span it is 1/3rd scale and powered by a Saito FG-57 engine with Futaba gear and Hitec servos.



Also flown by Sam was this Hangar 9 Viking based on the real Pitts Model 12 display scheme. Sam's only had a dozen flights with it but still managed a faultless 3-D display! DA100 engine.



Rob Gardner's Pilot RC Extra 330. The DLE55 engine and 23x8 prop pulled it through the 3-D manoeuvres with ease. 89" span and PowerBox gear.



Josh Eaton's Elite Aerosports EA Viper Sport climbs out for another aerobatic display powered by its KingTech K102 turbine.



Henry Homer's 1220 mm span E-Flite Beechcraft Bonanza 15E on a dirty, flaps down, fly past. Just look at the flap throw! Henry said only a small amount of elevator compensation is required...



Rob Nason's 1/5th scale Top Flite Giant Scale P-47D Thunderbolt. Evolution 61 engine swings a 22x10 prop. Guidance is via MacGregor HV servos. Rob is a member of the 'Old Boys RC' team.

4-Max PO-28341680 kV motor, 7x5 APC-E pusher prop, 40A ESC and a 3S 2200 mAh LiPo pack. Something a little different and it flew really well!

Rich has also had fixed wing models published and Kevin McNaughton was flying his rendition of Rich's Piper Pawnee design which was a free plan in the March 2019 issue. Kevin fitted a 22 mm diameter brushless motor, 30A ESC and 3S 850 mAh LiPo. The simple colour scheme suited the model perfectly and it looked lovely cruising up and down the strip.



Rich Harris' prototype gyrocopter called 'Whippet X'. 1100 mm rotor, 4-Max PO-3535-1090 kV motor, 11x5.5 prop, 40A ESC and 3S 2200 mAh LiPo. Rich is experimenting with moment arms and tail areas. You just can't keep a good designer from trying new things!



The entry level jet turbine 'Baby Boomerang' was a perfect way to get started in jet turbine modelling. Here is Stephen Davies' example setting off for a spirited display. Sadly, only second-hand examples are available now but still expect to pay £1k plus!

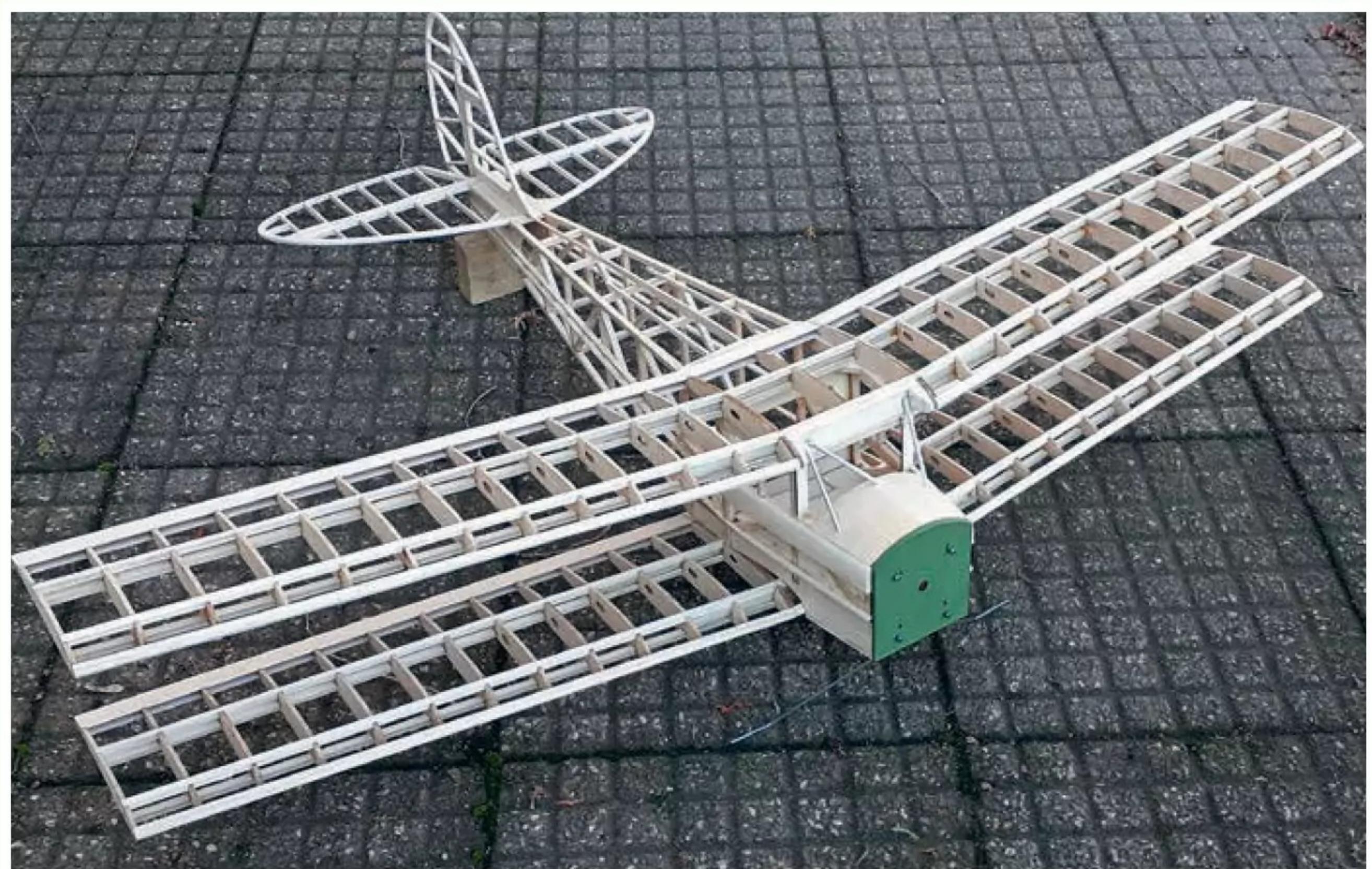


Just your average collection of models that arrived in the back of a van at the Greenacres Fly-In! I had a good chat with the owner of this little lot but didn't get his name or see him on the flight line - sorry!

HORNET MOTH

This is my own design, scratch built de Havilland Hornet Moth biplane that I recently completed. It's a 'sport scale' model for electric or IC power. Wingspan is 53" (1.36 m) and it's a classic three-channel (rudder, elevator, motor) design. I considered a .45 four-stroke during construction but in the end I used electric power on a 4S 2200mAh battery which gives over 10-minute scale-like flights. Ailerons could have been added but with the dihedral just a little over scale I decided that they were not necessary. Handling is very positive without. Flying weight is right at 4 lbs (1.8 kg) without any nose weight. The windscreen area lifts out to access the battery. From the outset I wanted to keep the cabin area as clear as possible to allow me to add scale details and a pilot. Flying is as good and easy as it looks.

Graham McAllister



PROLIFIC WARBIRD

The Shturmovik IL2 was the most-produced warbird ever with 36,400 having been made. It was specifically designed by Ilyushin as a ground-attack aircraft. Armament was comprehensive, including twin 38 mm cannon, machine guns, rockets, bombs and hand-grenades on parachutes to ward off attacking fighters. My specific aircraft, built from a 1970s plan, is finished in an authentic 1943 scheme and was 'manned' by a husband-and-wife team. The slogan on the side means 'From Lenochka, For Papa' and relates to a story from The Great Patriotic War, as the Russians called WW2. When her father was killed flying a Shturmovik seven-year-old Lena sent her pocket money to Stalin and asked that he buy a replacement. It was not nearly enough money of course, but a great propaganda opportunity, so the slogan was painted onto a new Shturmovik. Many Russian aircraft carried slogans, usually just daubed onto the fuselage. The pictures are by David Ovenden.

Jeff Barringer



MAIDENED UPBEAT

Finished last week, I have now maidened my Upbeat from the 2022 RCM&E plan. It runs with a 3548-motor powered by a 4S 3300 mAh

LiPo. There is ample power and it flies superbly. I took it up high to check for a stall and thought I had a glider! It does all the

usual manoeuvres and will fly slowly for a nice landing.

Graham Moore



NIEUPORT HACK

This is my Maxford ARTF Nieuport 17 of 60" wingspan. I rebuilt it from a crashed model purchased from APOB. I made some modifications such as providing suspension to the undercarriage, brackets to stop the lower wing twisting and an improved rudder hinge because it forms the whole fin as well. They made a huge improvement. It is powered by a 4-Max set up and battery.

After joining Northampton MAC, with thanks to my instructor and examiner to achieve my A certificate, this is my first model after my trainer. Although it looks good in the pictures it has suffered many a bad landing whilst learning to fly a biplane and tail dragger. It gets flown most weekends and all through the winter as well, so it's a bit of

a hack if you like - mend it and fly. It loops, Immelmann turns and Cubans beautifully but rolls awfully. More practice needed!

If anybody out there is hesitating in joining a club and getting flying, then don't. I wish I had done so years earlier!

Bruce Doughty



Trimmed 'just so' for the light breeze, Cinnabar is well-mannered and easy to control. This is a model for light conditions.



CINNABAR

Dave Goodenough clears his building board to make way for The Vintage Model Co's 63-inch span 'Balsa Basics' glider

Words: **Dave Goodenough**

Photos: **Dave Goodenough, Hadi Kanan**

As entomologists out there will know the Cinnabar Moth 'Tyria Jacobaeae' is a striking example of a day flying moth. It was introduced in many countries to control a poisonous plant, Ragwort.

Using the name, the Vintage Model Company have expanded their range to not only produce dozens of well-known kits of 'yesteryear' models, but they have also brought us their larger 'Balsa Basics' radio control models. Most are scale, with 'Cinnabar' being the first glider in that range. It's designed to be a 'first build' model for a beginner. This lovely and traditionally constructed balsa/ply model owes only its name and manner to the moth genus, as gentle day flying is the model's forte, whether under moderate electrical power or as a glider.

So, what did I find in the box. What delighted or dismayed me. Let's have a look...

A CUT ABOVE

A great deal of thought has gone into this kit, from Chris Long's design (now in its third version) to the box contents. Environmentally aware, the only plastic parts are the control snake, covering and a tiny parts pouch. Everything else is recyclable. The laser cutting is superb and there's a lot of well-chosen wood in the box. Also found inside is the Ver.3 third size plan and a building guide, all 28 pages of it! A small parts carton holds all the screws, etc. needed, including both types of Velcro tape and some black film for the 'cockpit'. I added nothing.



The man from VMC himself! Hadi holds the 'Balsa Basics' Cinnabar after wielding the camera for air shots. New to the transmitter and R/C flight, he acquitted himself well later with my 'La Senorita'.



Just some of the VMC kit stock waiting to fulfil orders. I was so tempted to indulge myself by buying some. Perhaps later?



That's a well filled box! Cinnabar kit is very complete, right down to the two rolls of Kavan covering film.



Hadi hands over the Cinnabar kit, with one of the company's show display cabinets behind. He's tapped into a market that's needed invigoration. More power to his elbow!

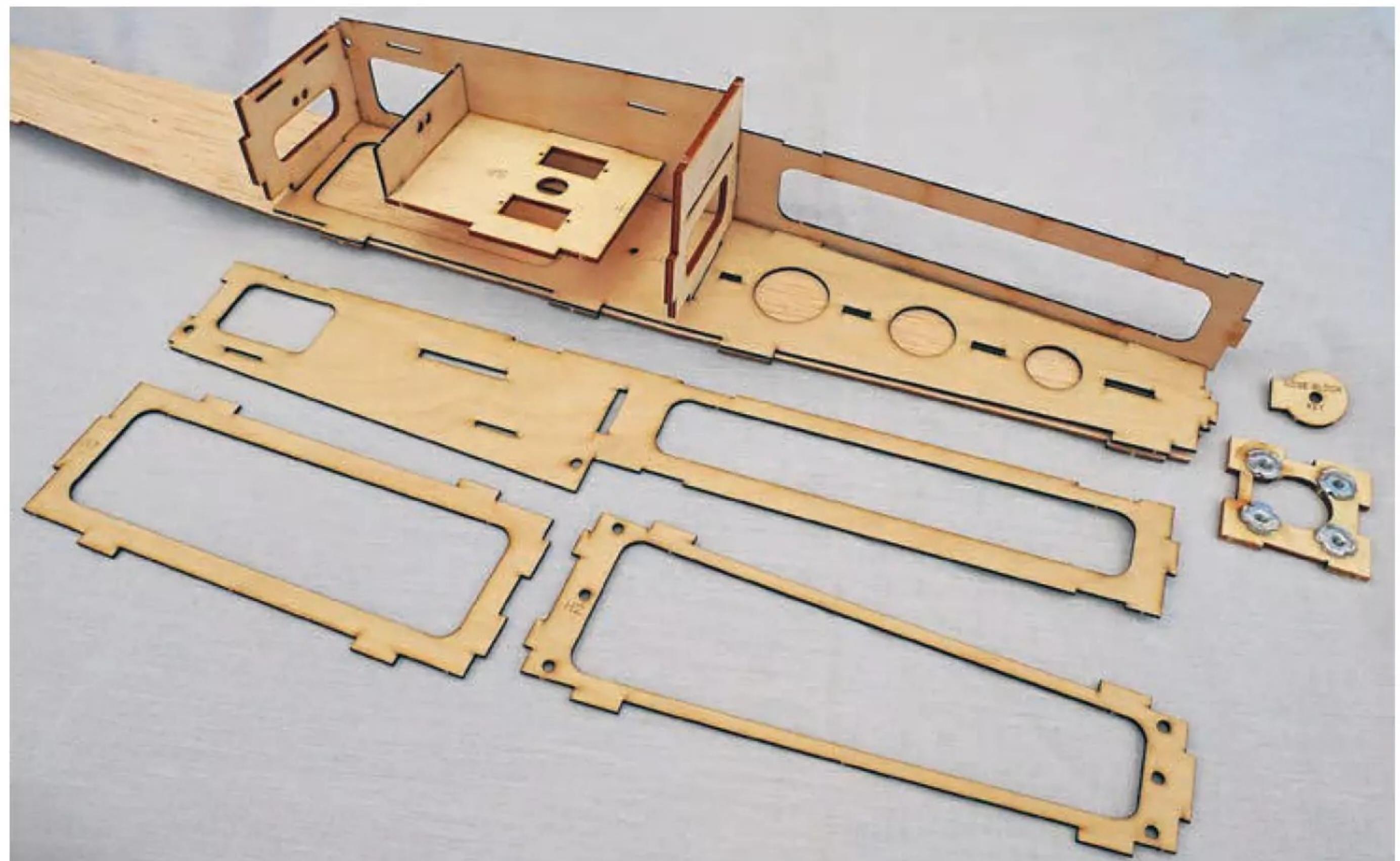
Another surprise was finding two rolls of Kavan film covering, along with a sheet detailing specifically how to use the material. Allowing for the cost of the covering, the price of the kit suddenly seems to be a bit of a bargain!

I may be a long-standing devotee of balsa bashing and the many varied methods of model assembly, but I decided to follow the instructions 'to the letter', just as any beginner should. A first read-through of the build notes is a must-do to acquaint yourself with the construction sequence and (to me) the novel method of assembly and gluing. Much of the assembly is done 'dry', wicking in cyano glue to secure assembled and temporarily taped together parts.

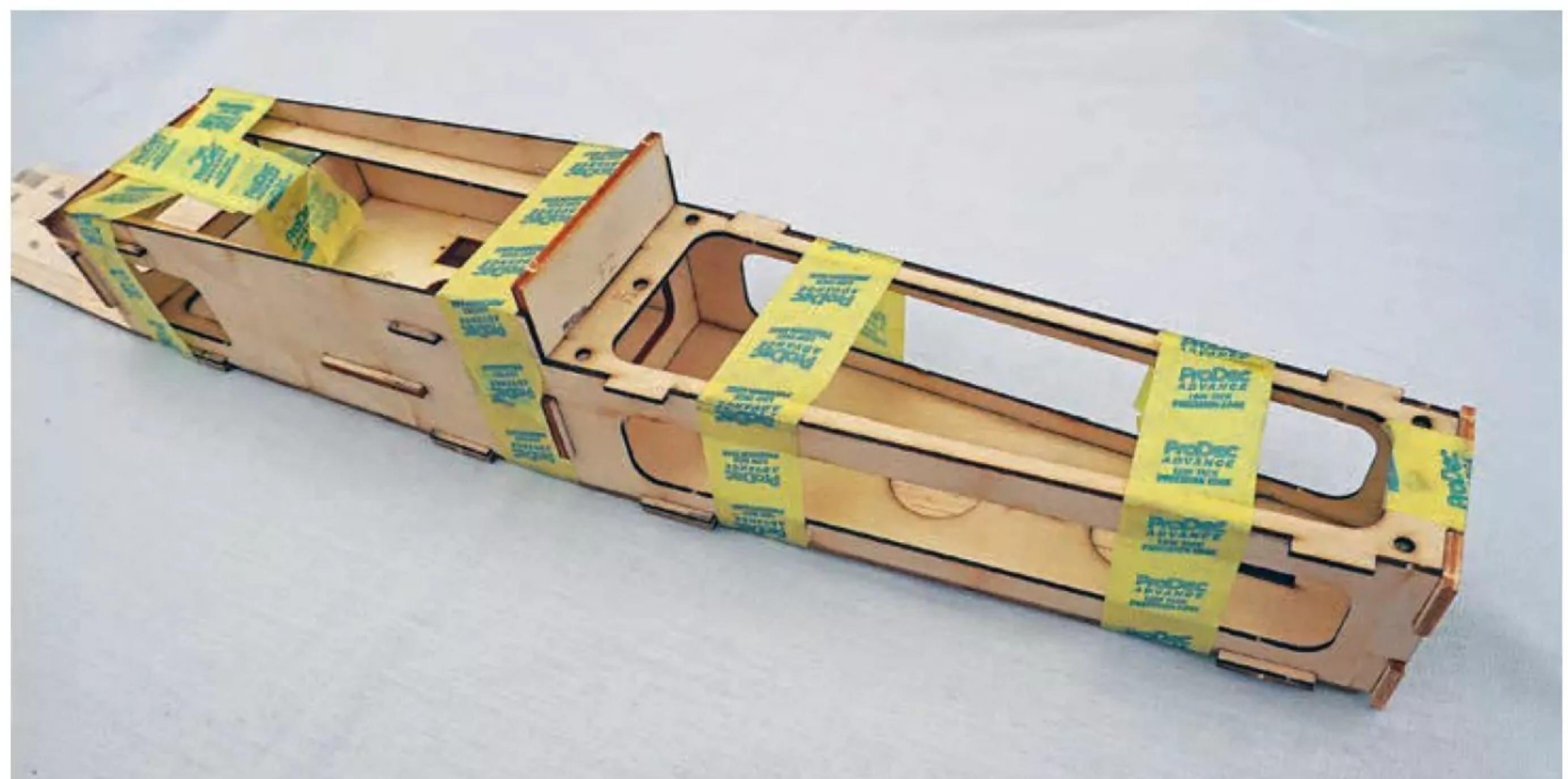
Not everyone can use 'straight' cyano as the fumes can sensitise you. I have that problem so I used thin odourless/foam-safe glue instead. The adhesive tape used for temporary assembly purposes was a good quality low-tack roll and it prevents the lifting/tearing of wood fibres when being removed.

IT'S JULIE ANDREWS AGAIN...

'We'll start at the very beginning...' I won't use lots of column inches in describing 'how to build



Initial fuselage assembly starts without glue. It's a well thought out method that works surprisingly well.



With the basic fuselage parts assembled and held with low-tack tape, simply tack the parts together with drips of thin cyano to hold the assembly stable.

this model as that's attempting to reinvent the wheel. The brilliant part-pictorial guide covers the whole process admirably and should be followed throughout the build. I'll say right now

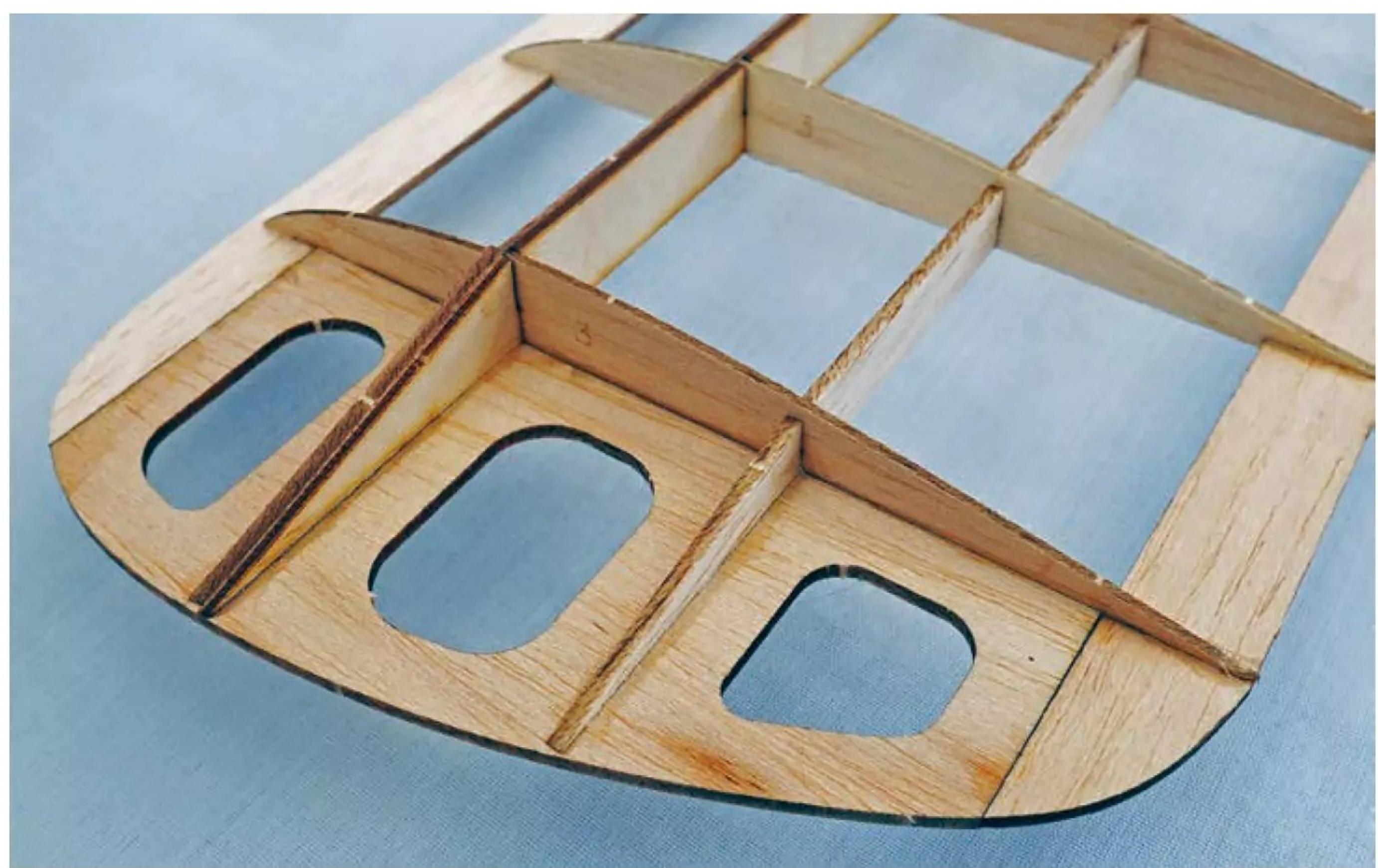
that I found the kit to be very accurate indeed, with everything fitting together exactly right. This means that if you find problems with parts fit or glaring misalignments, it's down to

you! However, I will add my fourpenny worth wherever there may be ambiguity or the need to highlight a particular part or process.

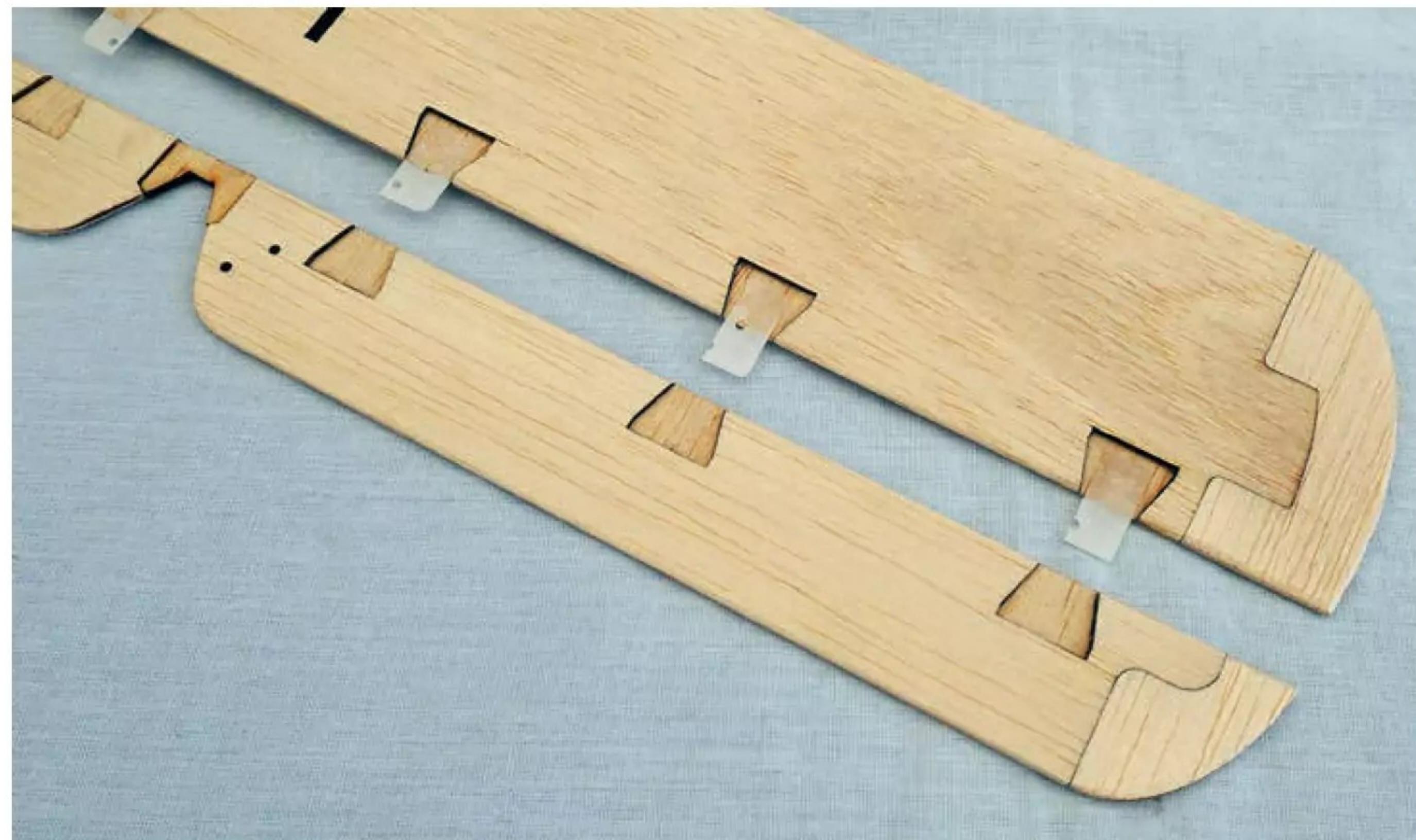
Keep a small sanding tool or disposable nail file handy to remove the tiny 'pips' left on the laser cut parts. It helps to keep joints 'tight' and stops cyano glue from leaking through.

'Dry' assembly of the ply fuselage front section went well, if a bit fiddly. But I stayed with it and used low tack masking tape at times to stabilise the assembled parts before suddenly realising it was done. Some small dabs of cyano, as directed, readied the section for the remaining parts, all of which came together exactly as instructed. I used thin/medium odourless cyano to wick into all the joints and overlaps, using 'just enough' to wick without leaving blobs and runs. Thin applicator tips help control glue flow. Using a small 'dripper' bottle of accelerator speeds setting of slower setting odourless cyano.

The canopy/battery access cover is assembled in the same way and care needs to be taken when using epoxy glue to secure the



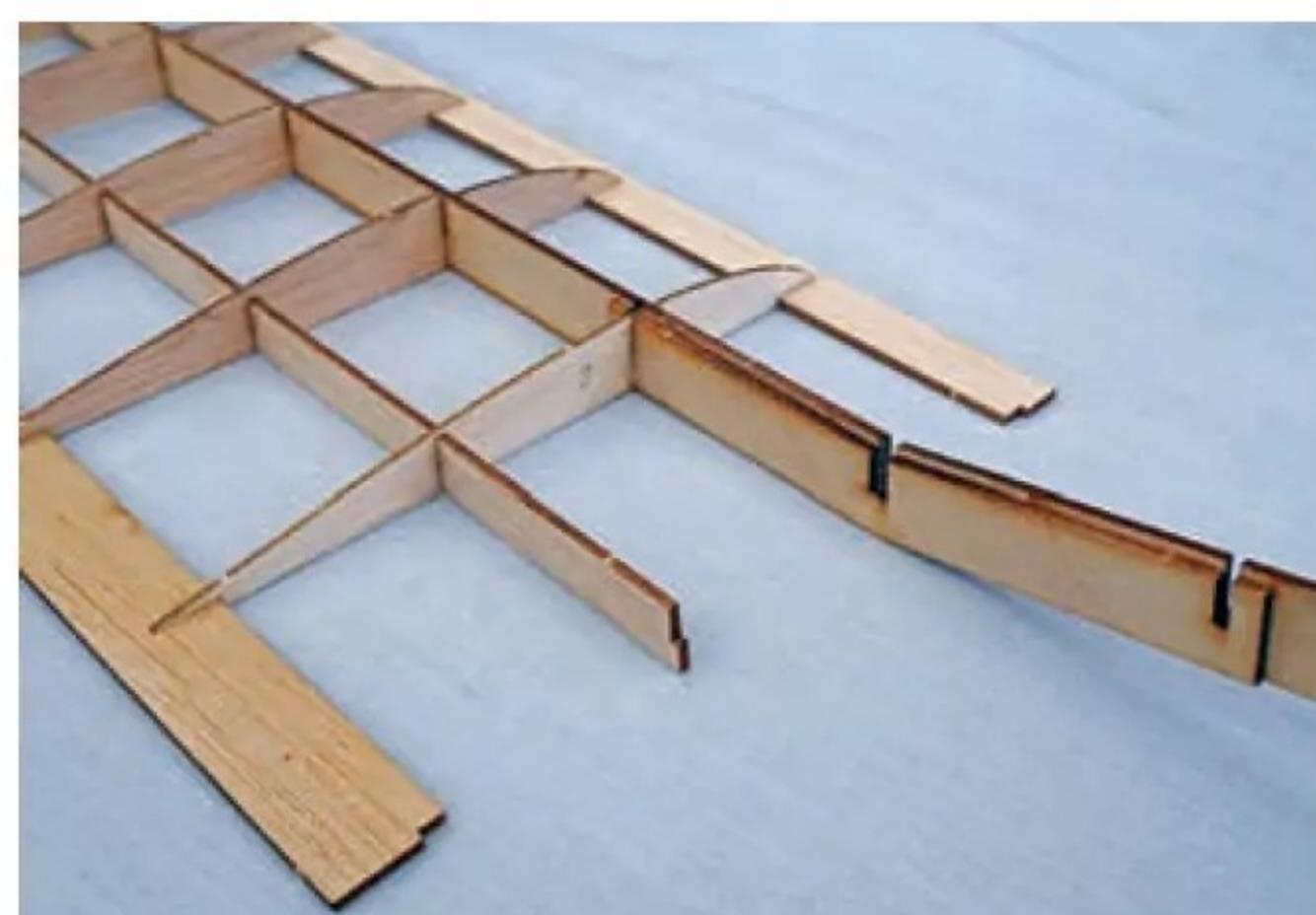
Wingtips are light but strong constructions. Be sure to sand off the laser cutting 'pips' to ensure a close-joined fit.



Control surface hinge fixing method is novel and works very well. It results in positive and solid attachments for the control surfaces.



Covered over hinge points are neat and tidy but be sure to sand all surfaces flat before covering.



Building the initial wing structure is logical and easy if you follow the instructions and build it absolutely 'square'.

tiny retaining magnets. The instructions tell you how, but they are a bit fiddly. The locating pegs need accurate, square positioning, then just a wisp of cyano to secure. You might need to 'ease' the peg location hole in the fuselage a tad with a needle file.

THINK SIDEWAYS

The few tailplane and fin parts came together quickly and I began to fit the, to me, novel hinge recess inserts. Following the instructions implicitly it was a careful but rapid process to lay the tailplane, elevator, fin and rudder over a piece of polythene, then fit each of the initial inserts, securing them with a wick of cyano. Don't use too much as the thin glue will run through and spread under the parts, needing a good sanding to clean off. Sanding the parts and rounding the edges gives a neat finish.

When I glued the hinges in place I used thin card spacers cut from cereal box cardboard to maintain the 0.5 mm gap that allows full and free hinge operation of the control surfaces.

A final surface sand with a fine sanding block gave a smooth finish, ready for covering.

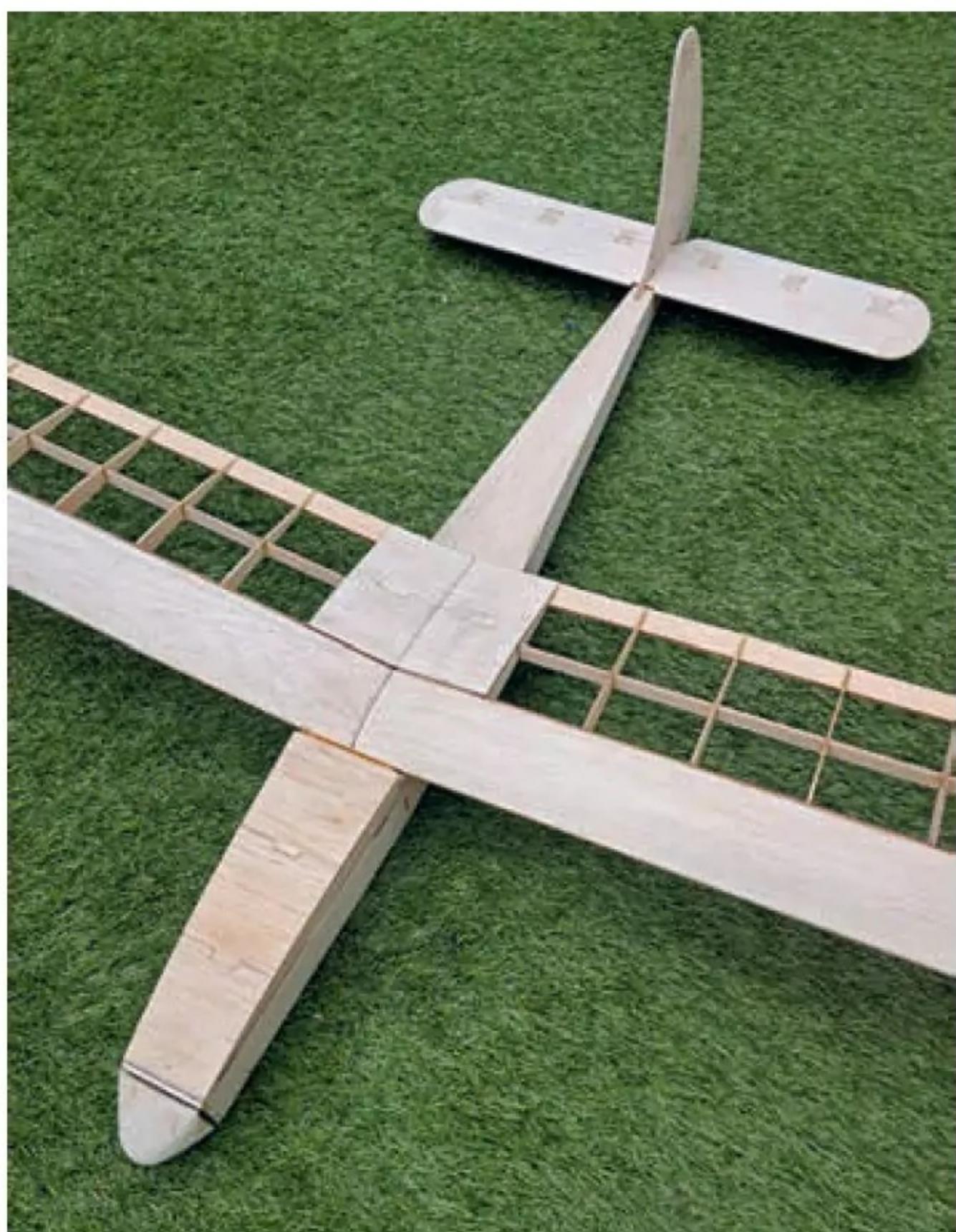
WINGING IT

Again, the wing construction method is different to what I've been used to, but it works well. Your mantra should be to follow the instructions carefully, work methodically and keep the various assemblies 'square'. Squareness and accuracy are of paramount importance as the wing is built. Four 90 degree triangular 'try-squares' are included and are invaluable; use them to ensure all is correct before you begin to wick in the cyano.



Sheeting the wing is simply done using 'low-tack' tape to keep it all in place. Be absolutely sure to identify and fit the slightly angled wing root end of the sheet correctly.

First test assembly before covering.
It looks really nice, don't you think?



Only basic modelling equipment is needed for most of the Cinnabar kit build, seen here with the glider nose option in place

Assembled and lightly pinned over a piece of thin polythene 'decorator's plastic', the wing halves come together quite quickly, providing all the parts are carefully aligned and any reluctant slotting-together is 'eased' with a little sanding. As before, rub off any pips

left by the laser cutting as it prevents minor misalignments.

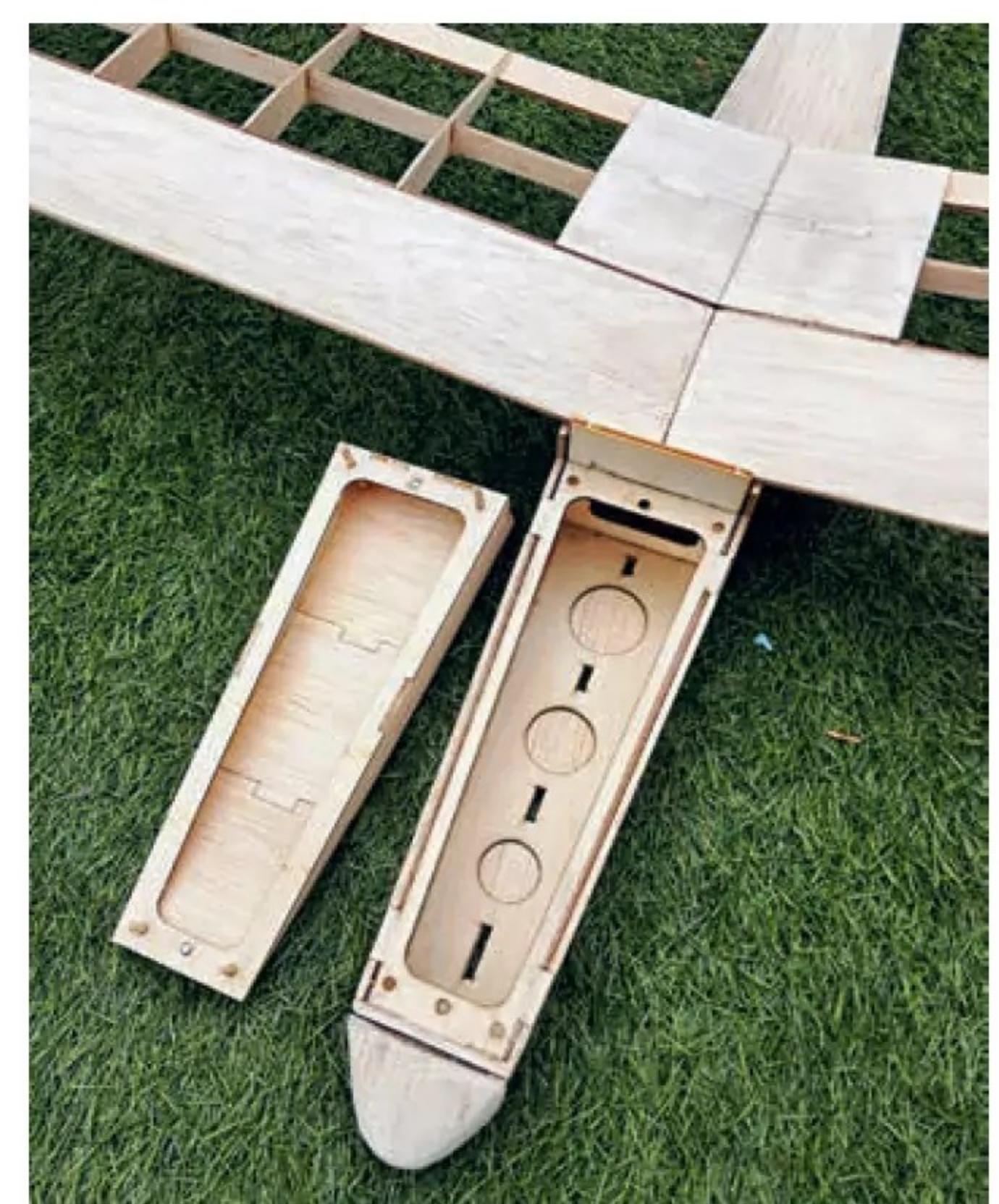
The main-spar doubler is a slightly stiff fit and care should be taken when sliding it in place. Ensure that it's fitted properly, with the top edge sitting approximately 1.5 mm below the main-spar's top. When directed by the instructions wick in glue to secure everything and make certain to glue ALL the joints - it's easy to miss some if you're trying to speed along the construction. Your motto is *Festina Lente*, 'make haste slowly!' I was amazed at how quick the process was, even when I wasn't trying too hard.

The centre section and wing sheeting are very specific. You won't 'see' the difference at first, but the sheets are very slightly angled to give the correct 'fit'. Follow the instructions closely, identify the correct way round that they fit and don't mix them up. The four centre section pieces needed the merest wisp of sanding to butt together perfectly, as did the wing sheeting centre section butt joint. I'll admit that this was probably my own fussy and pedantic nature showing but the result looks 'just so'. Don't forget to sand the sheet edges to a taper where directed and marked. It makes all the difference by giving the correct profile and glue joins.

With the wing fully assembled check all the rib and spar joins for glue. How many have you missed? I managed to skip only a

couple, which were soon corrected with a wick of cyano.

Although you might get away with not sanding the edges of the flying surfaces, don't ignore this simple process. Use a fine sanding block, lightly rounding all the wing/tail/fin extremities. A quick and gentle rub over the

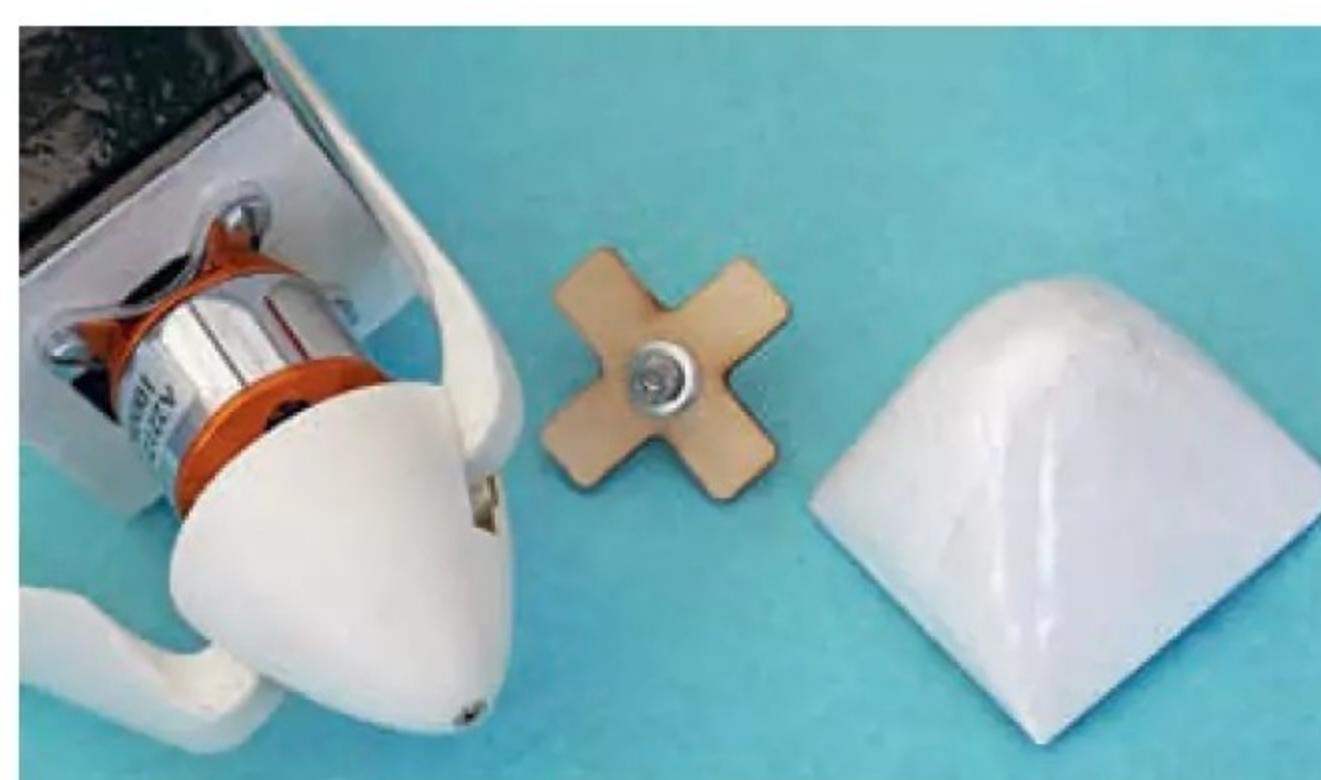


Lots of space in the forward fuselage for any permutation of avionics and battery. The 'canopy' shows the peg and magnet method of fixing.

rest of the structure takes off any glue drips, 'pips' and slight misalignments.

POWER PACKAGE

VMC supply a complete power package to suit this model but as I had lots of spare equipment available, I opted to use my own. A 2212-1000 kV outrunner, a 30A ESC and an 8" x 5" folding prop assembly were quite adequate, powered by an 1100 mAh 3S LiPo battery, positioned to achieve the right balance point. The prop spins at around



If you want to use the model as a glider only just remove the motor and fit the demountable nose.



Servos are simple to fit and access for adjustment. It makes finishing the model that much easier.



Supplied Kavan covering film is easy to apply and tauten, but care must be taken not to inadvertently build in warps. A cotton 'sock' on the iron prevents scratching the film surface.

12,000 rpm at 'full chat' with this set-up and passes a lot of wind whilst doing it, plenty for a good climb out.

PARTY DRESS

Covering the model is very easy if you take the process slowly and methodically. I always use a film glue around the extremities of any model parts, Oracover adhesive for preference as it's very sparing in use and prevents 'edge creep' if you overheat the covering. Follow the film application instruction sheet in the kit and you won't go wrong by 'cooking' the covering film. Ideally, use a model covering iron but if one is not available then a cheap travel iron will do the job. In all cases it's best to use a cotton 'sock' over the iron's sole plate as it prevents scratching the film and making inadvertent marks.

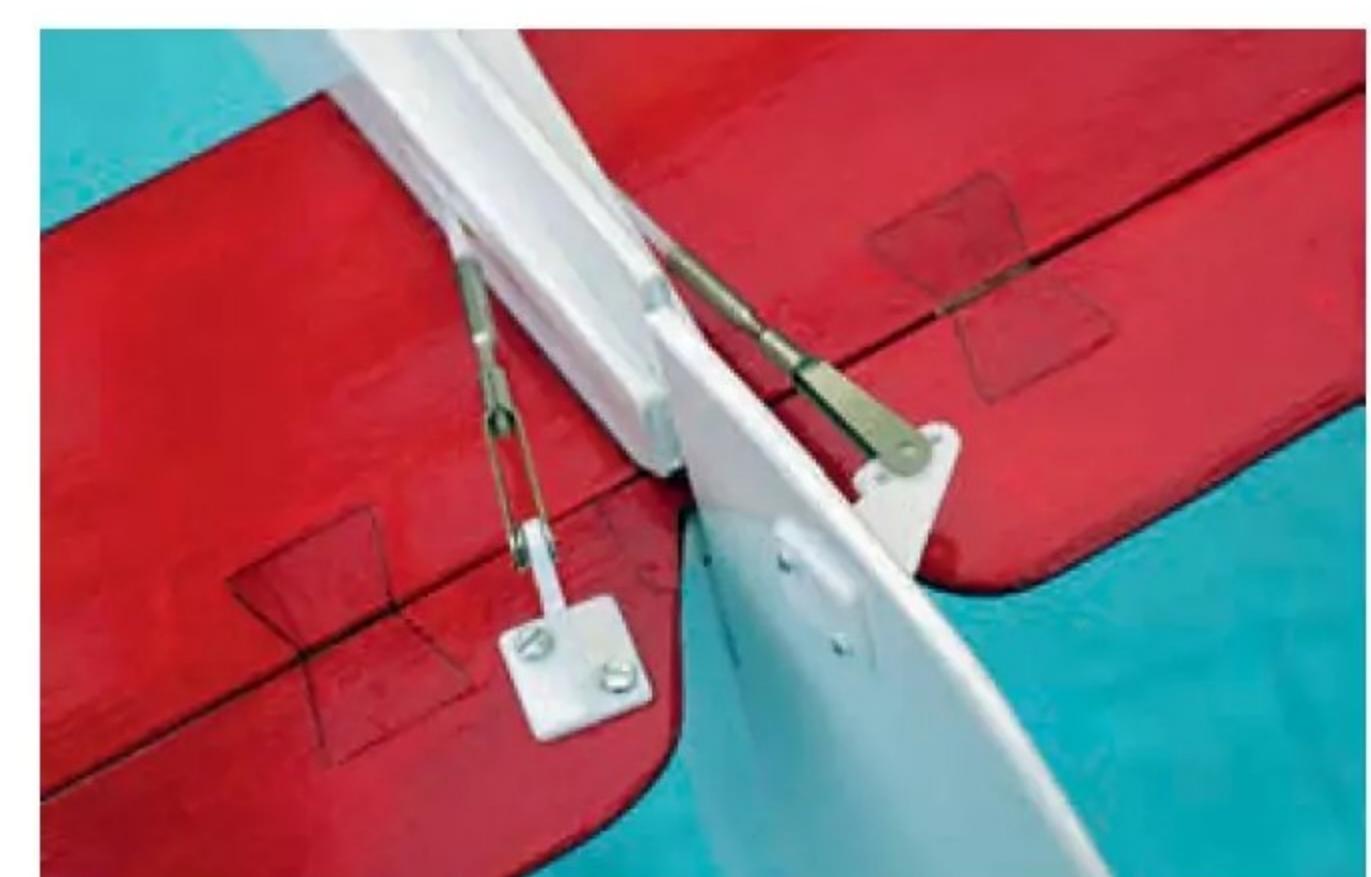
The wing is flexible in its uncovered state and care should be taken to avoid twisting the structure as you apply, then tauten the covering. Slight warps can be 'eased' out by twisting the warp in the opposite direction whilst heating the film with the iron. Tedious, but it works well. If you have a large warp, strip the film and start again as no model will ever fly well with bad wing warps. If you do use the twist/heat method to remove warps leave the wings for a couple of days and check again. Sometimes the wing will relax a bit and a small warp might return.

With care, and some extra heat and stretching, you can cover the wing and wingtips with a single top panel of covering film. But if the process is new or difficult for you, use a separate piece to cover the angled tip. It makes life a little simpler and is only noticeable if you look hard.

I found the Kavan covering film great to use and it has an easily controllable shrink, providing you are careful with temperature control. For my own pleasure I added the name of the model to the starboard wing, sourcing the rose gold logo from an online vinyl lettering supplier.

TESTING, TESTING

I'll bet you came here first! Testing a newly built model is always stressful, especially if you are a pilot 'new to the game'. It's best to have an experienced clubmate trim out the model and settle the flight characteristics by adjusting the model, radio or both. Whether you opt for a straight glider or electric power, start with a test glide over long grass in mildly breezy conditions. First, recheck the balance of the model according to the instructions, switch everything on then check the controls for correct deflections in the right direction. A glide straight ahead into the wind with no dive or rise/stall/dive is your aim - adjust the model's trims until you achieve this. Don't be tempted to test or



Both pushrods and control horns are easy to install and give positive movement with limited possibility of 'binding'.



Yourscribe in a heroic, if cold, stance and 'ready for the off'. No problems as it happens and simple slope pleasures ensued.

fly in the lee of trees or hedgerows. This light model will be tossed about in the turbulence. Glider towing or bungee launching is best done with an assistant, allowing you to concentrate fully on controlling any slight waywardness. Power releases should also be made by a knowledgeable mate, able to properly launch a model.

If you use the power option, be advised that you need to set downthrust in the motor mount, between two to three millimetres under the two top arms. I settled on 2.5 mm using metal washers. Use half power to start with, with only a little more if the model doesn't rise once launched. 'Feel out' the controls and become comfortable with their reactions before 'giving it the beans'.



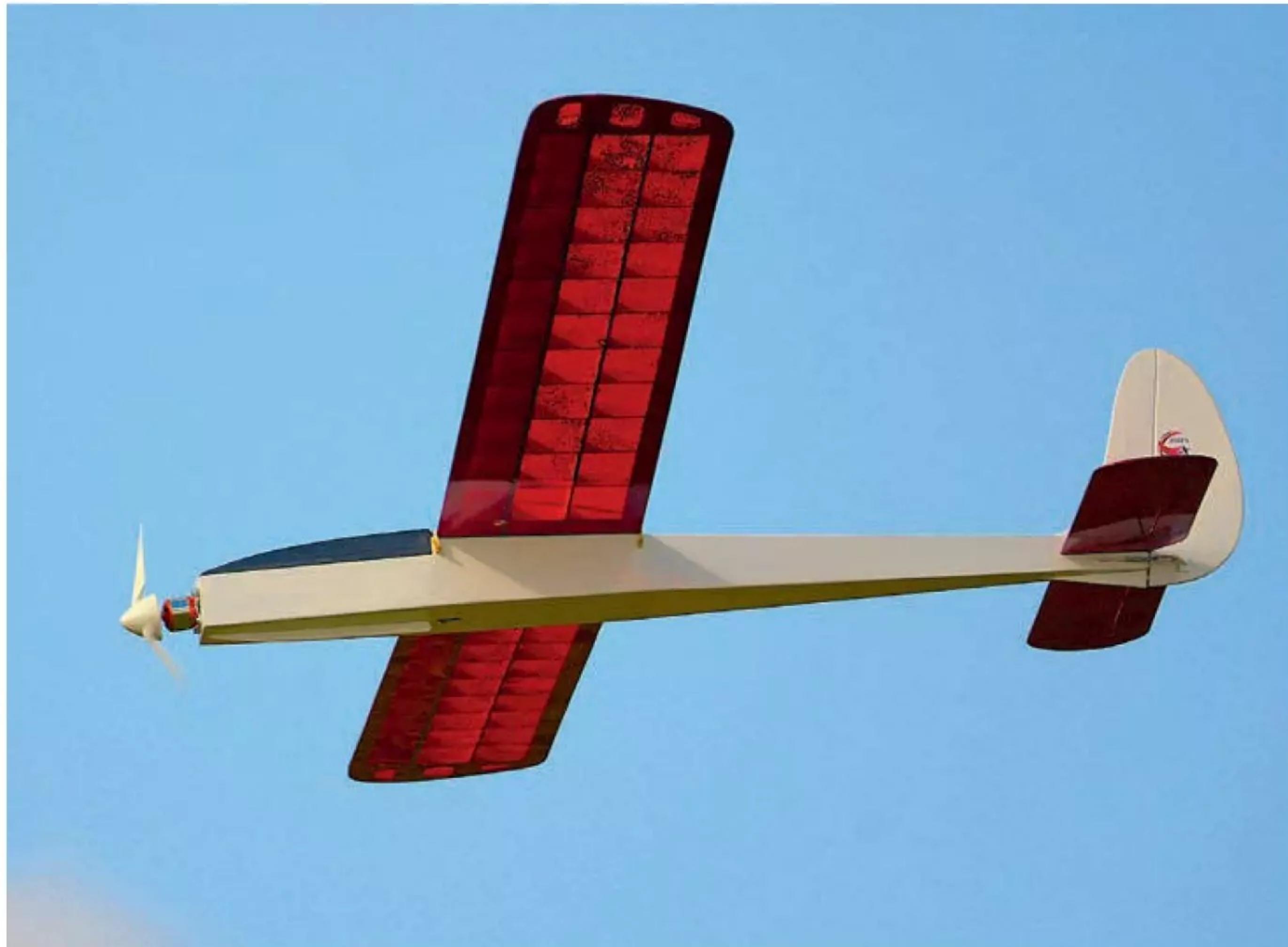
Just a little squirt of power is needed when the breeze drops a bit. Even on the advised mild power the Cinnabar climbs well.

Whilst testing it, I found the 'Cinnabar' to be a lovely model to glide in mild conditions on our local 'Mermaid' slope in steady breezes of less than 10 mph. For a simple rudder-elevator-motor model it responds well to transmitter inputs, but if you get a little 'crossed up' it

will usually settle down if you ease up on the controls. I set the control deflections according to the instruction leaflet but also configured my transmitter to give 60% travel on 'low rates' for simple lazy day flying when conditions allow. Cinnabar is great for wafting about and

sniffing for thermal lift. A slight twitch up of one wingtip indicates rising air and turning towards the lifting wing will almost always see the model climb. As this is a lightweight glider for its size it responds well and it has found lift in conditions that heavier models find challenging. Be sure to configure the ESC to its 'brake' setting as an unfolded and windmilling propeller will act like an airbrake and limit glide times.

If you think it sounds as though I've enjoyed flying this model you would be absolutely right! Going 'back to basics' can be a thoroughly enjoyable experience and I'll be spending lots more time with the Cinnabar. I love it! ■



After the first power test I gave the outrunner motor some downthrust which quelled the tendency to claw for height under power. It worked a treat!

DATAFILE

Model:	VMC Cinnabar
Model type:	Glider or electric glider
Manufacturer:	Vintage Model Co.
	https://www.vintagemodelcompany.com
RRP:	£150.00
Wingspan:	1610 mm (63")
Length:	940 mm (37")
Weight, as reviewed:	592 g (1.3 lb)
Motor size:	2212–1000 kV
ESC:	30 A
Prop:	10" x 5"
Servos:	8.5 g x 2
Functions:	Rudder, elevator, throttle
LiPo:	3S 1100 mAh



GOLDEN GLOW

Liven up your small glider flying by fitting a small glow engine to a power pod. Neil Hall shows the way.

Words & Photos: **Neil Hall**

What came first, the chicken or the egg? Glow engines or model aeroplanes? I have memories of being a young boy up the shed in winter, with snow on the ground, a paraffin heater burning away in the corner and my Dad running in some Cox 'Black Widow' .049s. I can't remember if he had model aeroplanes at this point or just a couple of .049s which I think he acquired from a friend at work.

So, was it a case of 'I need a model for this engine' or 'I need an engine for this model'. I really cannot remember. But I can remember Dad being in the doorway of his shed, winding back the springs on these little engines, and I remember the paraffin heater. But I can't remember seeing a model.

Either way, what happened next is brilliant. The first model I remember was a DB Rookie Major, a two-channel glider (rudder and elevator). The fuselage and vertical stabiliser were red, and the wings and horizontal stab were blue. Later another Rookie was built but this time the blue was replaced with black and the radio was a two channel Acoms set. We were lucky to have a model shop just a five-minute drive away, Apple models in Quinton, if anyone remembers



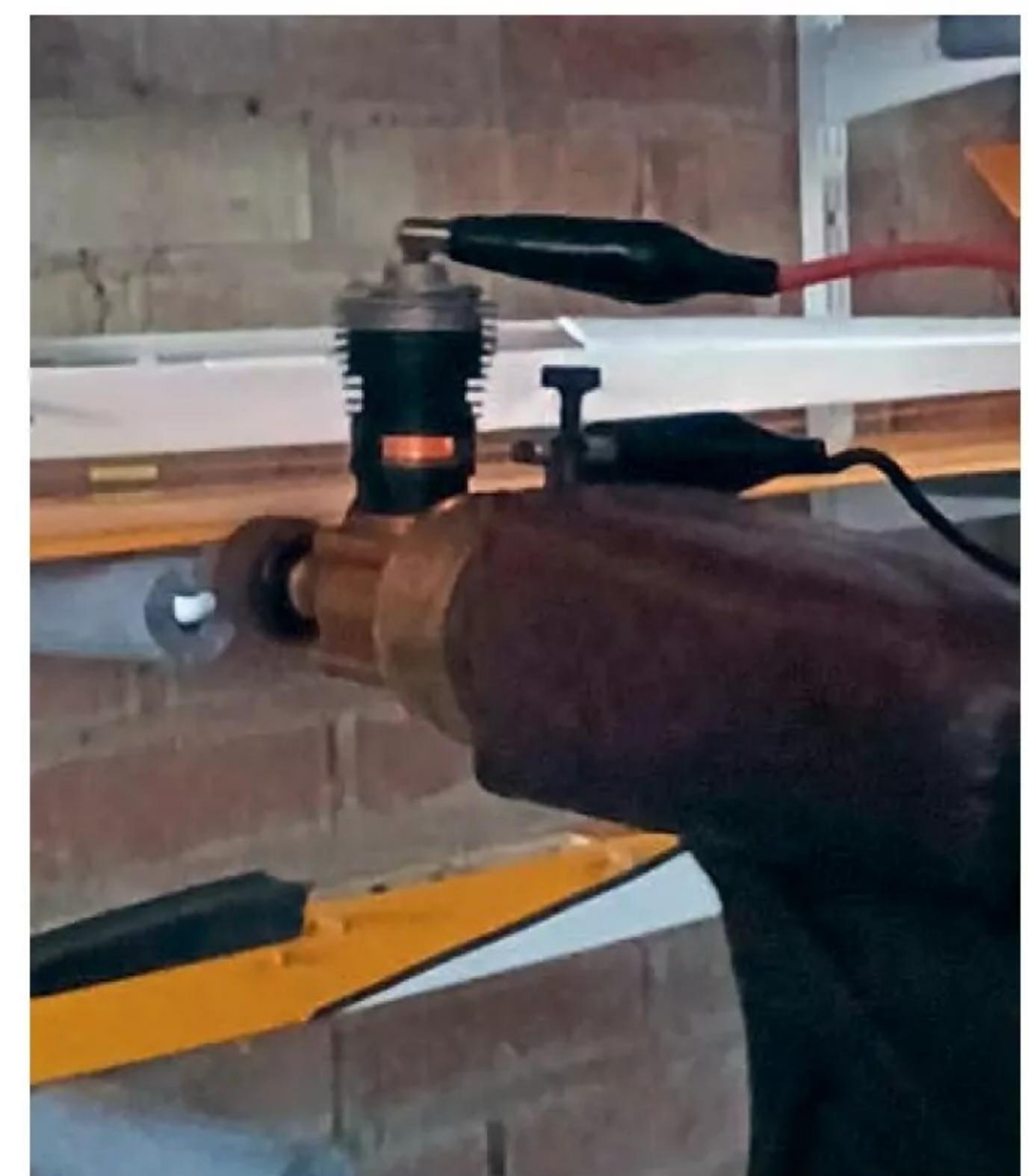
it. It's long gone now but at the time it was well stocked, with kits a plenty and Rookies were always available and well-priced. With money being a bit tight they were the perfect choice.

With Dad being new to the hobby and me being just a young boy the most we got from

these gliders was a hundred yards or so from a hand launch at the local park. Then Dad joined the model flying club and it wasn't long before he was back up the shed, cutting, carving and sanding until he produced a power pod. This was a wooden structure that he would mount



My scratch built Hi Fly, originally electric powered but much more fun with glow.



With the open exhaust ports on a Cox .049s in low light you can see the chemical reaction between the methanol and the platinum in the glow head. That warm orange light is why we call it glow.



My Cox .049 Golden Bee mounted to a power pod made from lite ply and balsa wood, painted with artists' acrylic and fuel proofed with Guild satin fuel proofer.

one of the Cox .049s to, attaching it to the model via the wing bands.

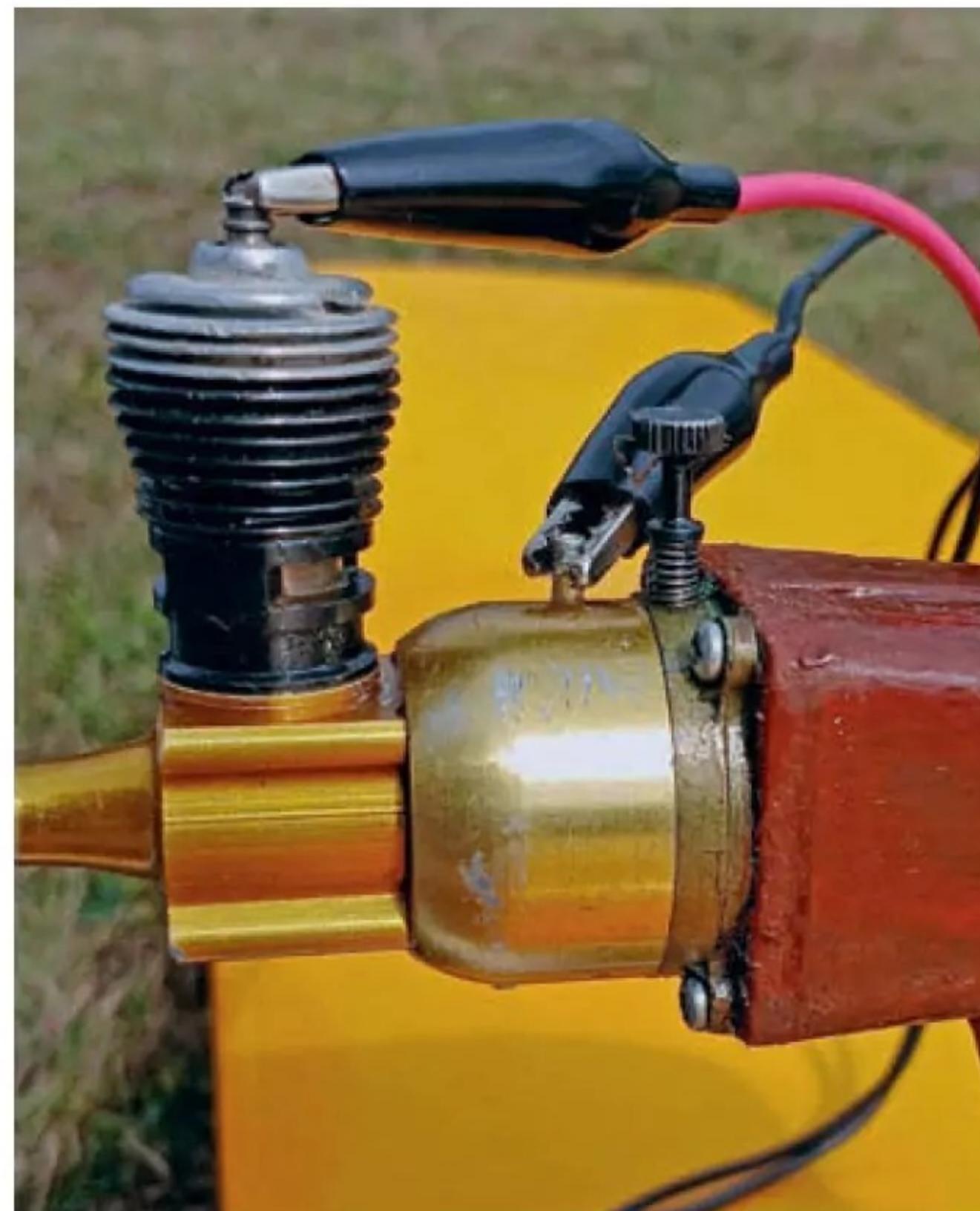
It was a game changer, the fun-o-meter smashed past maximum, and with the help of an experienced modeller Dad's Rookie glider was on its way to space, being rocketed up there with Cox .049 power.

Well, that's how my young imagination saw it anyway. It's funny really because in reality they sort of plod and splutter their way up. And as for going to space, well only if space is a couple of hundred feet above ground level!

Coffee stirrers or lollipop sticks were used to adjust the thrust angle by placing them under the base of the power pod. That's how I learned about thrust angles.

HI FLY

A few years back a fellow aeromodeller was giving away a three-channel trainer with an Enya 15 two stroke glow engine. I took the generous offer for Elle, my stepdaughter. But she never got into flying; Army Cadets is her thing and as she wants a career in engineering with the British Army, I fully supported her using her free time for the Cadets. But in the box of this three-channel trainer, a Tristar, were the plans



Crocodile clips are used to light up the glow head.

for a Precedent Hi Fly glider. And as I love the old Precedent designs, and I love gliders, I thought it rude to not start cutting balsa. Fuselage sides, and a top and bottom, were cut from lite ply and

the ribs and tail sections were cut from balsa. It wasn't long before I had a new glider covered in purple film.

A fellow modeller from my previous club convinced me to put an electric motor on the power pod. It's actually drawn on the plans with the Hi Fly. Knowing nothing of electric set ups, I took the glider to my local model shop and my good friend Luke set me up with two batteries (Overlander 3S LiPos), a speed controller, motor and prop.

Its summer 2023 and on a beautiful day with blue skies and a slight breeze, I take my Hi Fly for its maiden flight. Battery connected, throttle set and pointed into that slight breeze, away she went. She flew beautifully, the electric motor pulling her into the blue. But after two batteries and with two flights done, for some reason I didn't enjoy it as much as I would have thought. It was too easy, too predictable. I didn't get the rush of enjoyment I knew I would get from using a Cox .049.

The following morning the electric power pod was removed and the sheeting and covering patched up. As I didn't own a Cox 0.49 at the time I put a message on the club's WhatsApp group asking if anyone wanted to swap two new Overlander 3-cell batteries, a motor and ESC for a little Cox 0.49. (I can't believe I didn't have one already as I have a large collection of glow engines. All those purchases at swap meets and not once did I pick up a Cox 0.49!)

Within minutes I was offered an un-run, brand new Golden Bee - my favourite of the little engines! I couldn't wait to get my new Cox and get started on my new power pod. Just as my Dad did all those years ago, I cut and carved myself a power pod, with lite ply, balsa wood, some varnish and Guild fuel proofer being my materials of choice. I guess nowadays they could be 3D printed but computers and I have a mutual agreement - I stay away from them and they stay away from me! I'm really not very good when it comes to technology - just ask our editor!



My HK Sunbird is well used and a great glider for Cox powered fun. Having ailerons really helps when climbing most efficiently, using the Golden Bee's power to attain the most altitude.



After writing this article I built the New Style glider from plans inside the February issue of RCM&E, adding to my small fleet. It's a fantastic little glider and really lends itself to some .049 fun.

I mounted my little Golden Bee and with .049 glow ignitors being hard to get at the time (I couldn't purchase one anywhere) I got out my soldering kit and with two banana plugs and two crocodile clips I fashioned myself a way of igniting the glow head, with one clip to the tip of the head and one to the body of the engine. This time it was summer and with no paraffin heaters in sight I set about running in my new engine.

The engine came with a 5 x 5 wooden prop. It was a bit of a struggle at first as it still wanted to run a bit a bit rich. But after a few tanks of fuel and fitting a new APC 6 x 3 prop, I had the engine running perfectly. My Hi Fly was up and away again, only this time it was fun to fly. Yes, it was unpredictable, but I couldn't stop smiling - it was just as much fun as I remembered.

When my Hi Fly was electric powered, I had power at my fingertips whenever I needed it. I could climb, glide, then climb again and repeat. It was all a bit too easy. But with the .049 I can only climb once each flight. Every

flight is different and some runs will give you more altitude than others. I always fly nice rectangular climbing circuits and keep control inputs to a minimum, maximising the RPM and getting every inch of height I can. But that little fuel tank at the rear of my .049 is going to run out of fuel at some point and I will need to glide back to terra firma. But when is it going to run out? Will it be not long after launch, keeping me on my toes and ready for a good, safe landing. Or will it be after two or maybe three minutes, taking my glider to a dot in the sky. Two minutes is a long time while you are watching your glider climb to the heavens!

That's the unpredictability and the fun of flying gliders fitted with Cox .049 glow engines!

THERMAL FUN

It was in the summer of 2009 when my Dad launched another .049 powered glider at the flying field. I can't remember exactly what model it was, but it was around a two-metre

span sailplane type glider. Anyway, off she went, climbing to a dot with an engine run of around three minutes.

She came back to us nearly two hours later, riding thermals and just having fun up there. I think it was six different pilots who took turns on the transmitter that day and I'll never forget the fun, laughter and banter that went with it.

FLAT FIELD OR SLOPE

There are only three ways I will power a glider, the first being turbine (one day, hopefully), the second being nature (I love the slopes) and the third is with my beloved glow engines because it is the best fun ever. I can guarantee that any aeromodeller who has just had a good flight with an .049 powered glider will be very happy. It's a similar thing if you fly vintage type models with diesel engines or Cox glow engines; no throttle, climb until it's out of fuel and glide safely back. Those guys always seem to be having loads of fun.



Airwolf is a typical example of the Cox range of flying toys.



I'm not looking for high performance, just enough to get my gliders to altitude. For that my favourite Pro-Synth glow fuel is fine. But for a high revving performance I would recommend using a fuel with castor oil as it has a higher flash point. I'm only using a 10% nitromethane content but with higher content fuels these little engines really can come alive.

At the moment I only have two gliders (now three, see pictures—KC), my Hi Fly and a Sunbird that was a gift in kit form from a friend as a thank you for building him a Precedent T180. The Sunbird wasn't the best kit; the fuselage sides were different and some wings ribs didn't fit. But I cut a new fuselage side to match the one that looked correct, sorted the ribs and the model turned out to be a fantastic flyer, both with an .049 and on the slopes. Last summer it, and my Cox .049, got their fair share of use (possibly

abuse!). I really did have some fun. I put dowels through the fuselage so I could use wing bands to hold my power pod on the model; the plans call for a wing bolt, but I altered it slightly. This is the beauty of this method. With just one power pod and one Cox .049 you can fit the engine to multiple gliders. You don't need to have a permanently attached power plant, meaning you can still have pure gliders for flying from the slopes.

MULTIPLE CHOICE

Multiple variations of the .049 were produced by Cox, the Golden Bee, Baby Bee, Tee Dee, Black Widow to name just a few. By experimenting with different heads, nitromethane content (usually high, 30% plus!) and different props, aeromodellers have achieved performances of over 25,000 RPM which is incredible from such a small piece of engineering. They have been described as



Just behind the prop is the sprung SnapStarter fitted to the Airwolf's .049 engine.



Various drawings for power pods have been published but a quick and easy way to put one together is the Flightplan Models pod. Laser cut from 6 mm ply it glues together in minutes ready for painting and includes foam strips to protect the wing: <https://flightplanmodels.co.uk/product/power-pod/>

wasps with a drug addiction! Yes, they scream because they produce such high RPMs but, wow, they are great fun!

In 1996 Cox was sold to Estes but the Cox division was shut down in 2009 and the inventory sold to several parties including <https://coxengines.ca> Internet searches throw up an abundance of new and used Cox .049s and spares. You can find add-ons such as mufflers and throttle bodies.

The company was founded by Leroy M. Cox in 1945 and modellers have been enjoying Cox engines ever since. There are other sizes of engines too, such as the Cox .051 and the Cox .010.

Cox engines were used in free flight and control line model aeroplanes and tethered cars, but there were also some amazing toys that were powered by Cox engines, like the Attack Cobra and Huey helicopters. There was the Star Wars Luke Skywalker's Land Speeder and one of my favourites, the Cox UFO, along with many others.

Let's be honest our hobby is cool. I mean, we fly model aircraft and when you stop and think about it that really is cool. Cox engines are cool too; I can't imagine anyone not enjoying a Cox engine! My friend and professional model builder Paul Dudley, who is sadly no longer with us, wouldn't part with his little Cox engines and with Paul everything was for sale. In fact, most the time he was trying to sell you something. But not his Cox engines. They were under lock and key, which says a lot about what he thought about his Cox engines.

ANOTHER ROOKIE?

This hobby started with Cox .049s and gliders for me, well over 30 years ago. I had fun with my Cox .049 then and I still have fun with one now. I tend to fly with it more in summer as I like to



New Style hoisted aloft for a test glide. She's a fun glider and perfect for a Cox.049 on a power pod. I've really had some fun with this one.

search for thermals. But to get up there in order to find those thermals it's got to be by using Cox .049 glow power. Even now at the age of 42, I still imagine that glider on its way to space!

After a quick internet search, I found that the

DB Sport & Scale Rookie Major is still available to buy. Now where is my credit card...

You can contact me via email at bareknuckleflying1@gmail.com



FOR THE COLD SEASONS!

SUPER EXTRA INDOOR

ABOUT THE SUPER EXTRA INDOOR

The Super Extra is our most revolutionary model to date. Co-designed by Jan Votava and Jan Sedlacek, it targets both flight performance and structural rigidity: a strong, precise airframe built to withstand the violent manoeuvres this aircraft enables.

Reinforced, torsion-rigid monster ailerons deliver unprecedented roll rate, while a full-flying stabilizer—rare in this indoor class—enables ultra-tight, CG-centric loops (flips). The result is a truly unique airframe and one of our most attractive designs so far. With control throws limited to ~30° to match pilot skill, it remains well-behaved and predictable.

SPECIFICATIONS:

- Wingspan: 865 mm / 34.06 in
- Length: 930 mm / 36.61 in
- Take off weight: 180 g / 6.35 oz

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XFly-Model and CML's latest collaboration is for a 1200 mm wingspan Hawker Hurricane. Nice!



XFLY HURRICANE MAKES LANDFALL

Kevin Crozier gets a sneak peek at XFly-Model's latest warbird

Words: **Kevin Crozier**

Photos: **Kevin Crozier, XFly-Model**

At the end of last year I was privileged to be given regular updates on the development of XFly-Model's 1200 mm span Supermarine Spitfire, which was a co-operative project between XFly and their UK distributor CML. Jason Varley, CML's MD, recognised a gap in the market for a foam British warbird at this size and so he made a shared investment with XFly to develop

a new Mk.IX Spitfire kit, as well as providing the background information for two versions, one in desert livery and the other a D-Day version.

We were lucky enough to be passed on a pre-production prototype of the new Spitfire in its desert scheme to test, the assembly and maiden flights of which were described in *Switch On* in the March 2025 issue. The test

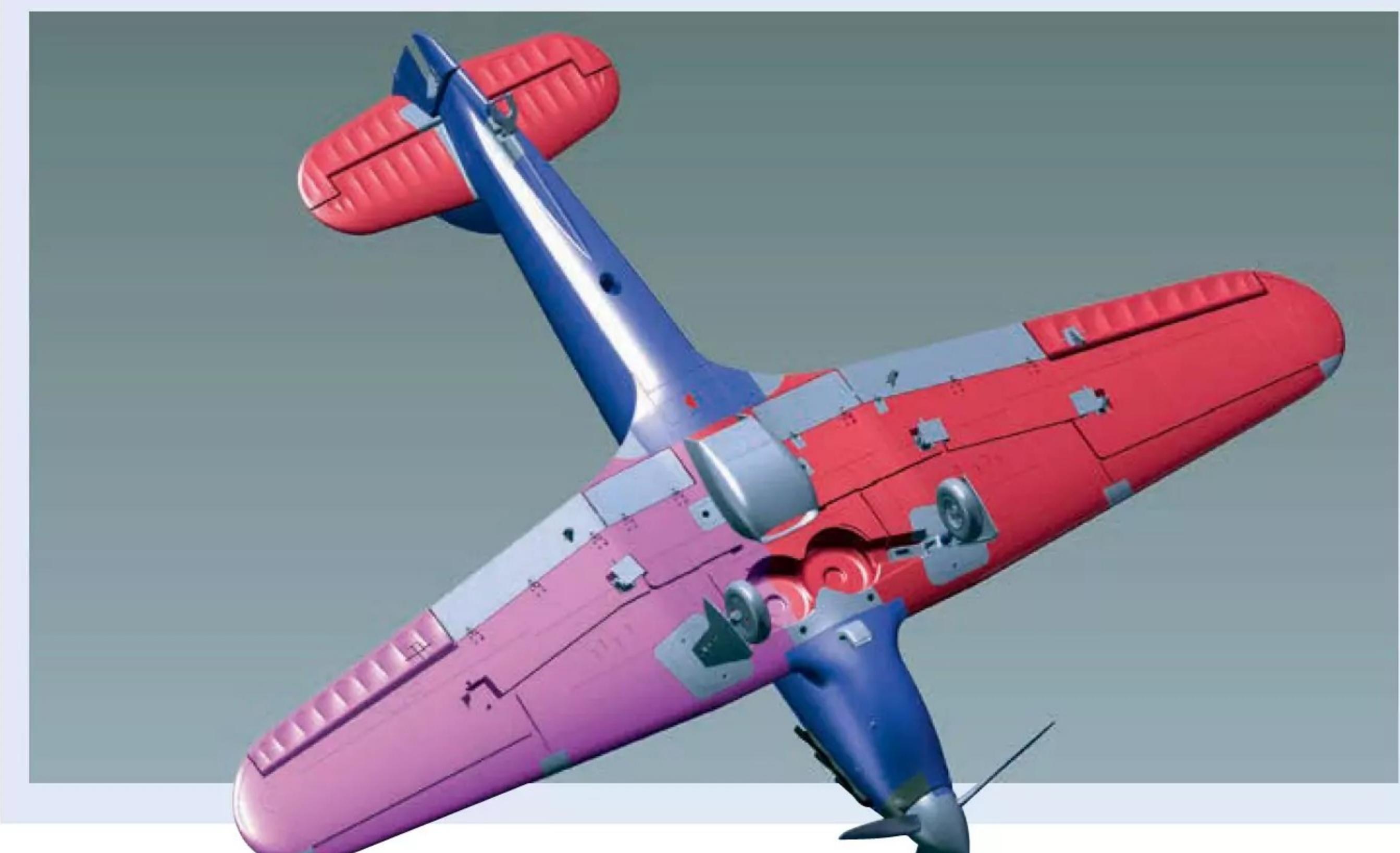
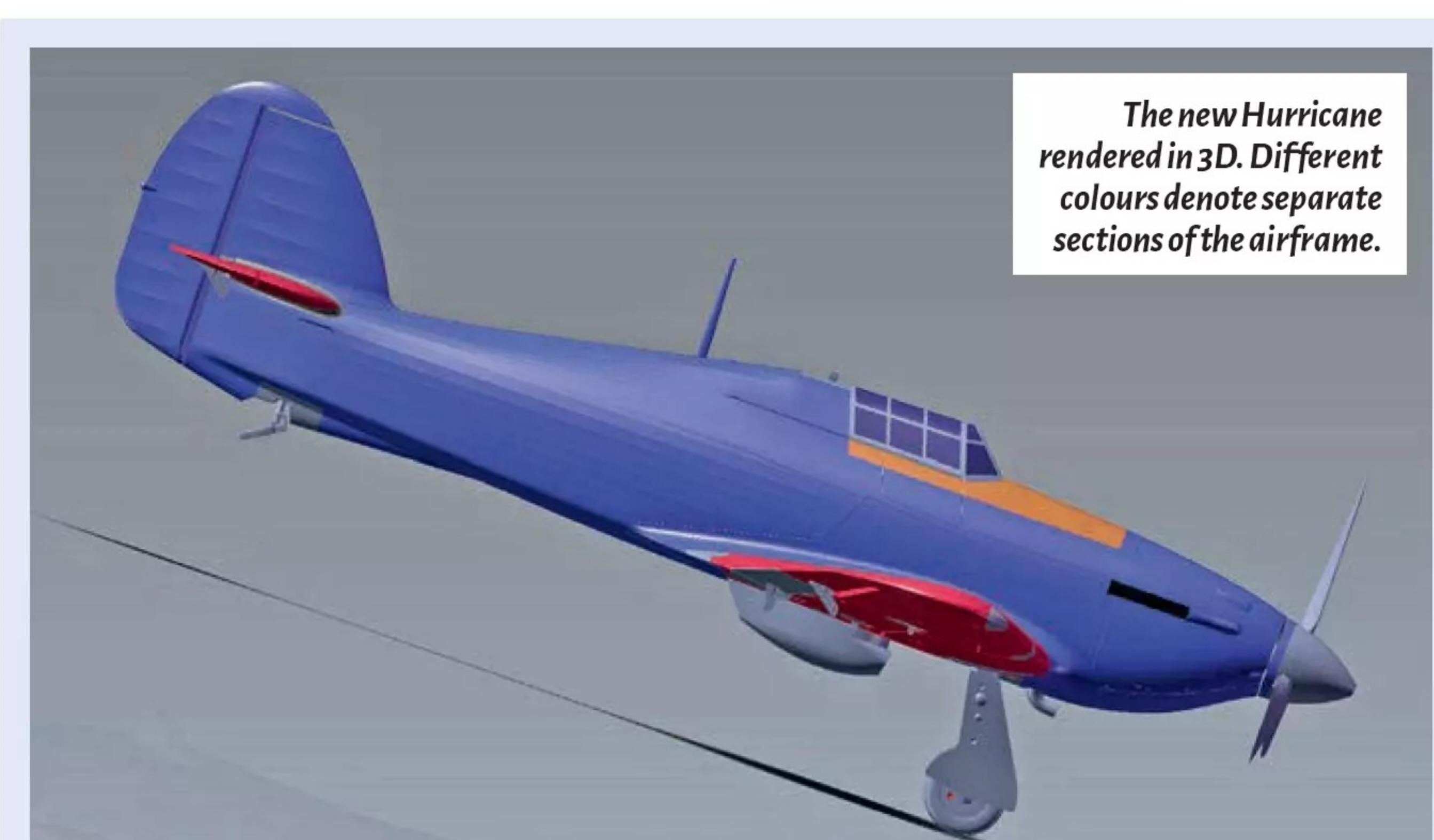
model went together really well, with a flying performance to match.

A production kit soon arrived, this time in D-Day colours, the build and flying of which I described in the April and June issues, with an enforced gap in-between waiting for decent weather for flying photos. Fingers crossed the weather will be kinder for flying this winter and spring! Again, I was very impressed with



XFly-Model and CML's first RAF fighter kit was for the iconic Spitfire, seen here in the striking desert colour scheme.

The new Hurricane rendered in 3D. Different colours denote separate sections of the airframe.



“The choice of their next WW2 fighter wasn’t really in doubt – it had to be the Hawker Hurricane!”

the D-Day variant, the only issue being to recommend the fitment of a gyro to help pacify a strong swing on take-off, which is characteristic of many taildragger warbirds, especially those with a powerful electric set up such as fitted to the Spitfire. This can be reduced by opening the throttle slowly on take-off and is easily managed using the rudder, especially with the assistance of the gyro.

At the end of the final article I signed off with, “Could this be the first in a new line of WW2 warbirds from XFly-Model? I certainly hope so.”

WARBIRD NUMBER TWO

I am very pleased to report that my wish has now come true as the result of another combined project by CML and XFly. The choice of their next WW2 fighter wasn’t really in doubt – it had to be the Hawker Hurricane!

As before, Jason was kind enough to let us follow the development of the new kit, from selection of the mark to be modelled and its two distinctive colour schemes. We have watched this model evolve from on screen 3D renderings to a ‘naked’ flying test model. CML then received a pair of pre-production prototypes so that Jason could sign off on the final colour schemes and →

A difficult choice but in the end we opted for the prototype of P2961/LE-A of No. 242 Squadron RAF as our first Hurricane build.



A 'naked' prototype was used to fine tune the flying characteristics of the new fighter.

once again he kindly offered to send one over to us to assemble and fly before the first shipment of kits arrives, hopefully later this year.

As with the Spitfire prototypes, he gave us a free choice between the two liveries. So, was it to be P2961/LE-A, a Hurricane Mk.1 of No. 242 Squadron, with its distinctive 'Reaper' logo alongside the cockpit? Or maybe Sea Hurricane 1b, Z7015, a well-known resident of the Shuttleworth Collection.

I elected to be sent the P2961 first, with Jason kindly offering to send a full production kit of the Sea Hurricane to review as soon as the first kits arrive in the UK.

REAPER

P2961/LE-A was flown by Flying Officer William Lidstone 'Willie' McKnight, DFC and Bar, who is credited as being one of Canada's most outstanding fighter pilots at the start of WW2. No. 242 Squadron RAF was an all-Canadian unit, apart from its CO who was none other than Douglas Bader.

However, this model actually represents a more modern interpretation of the 'Reaper', replicating the colour scheme applied to the Vintage Wings of Canada's Hawker Hurricane XII RCAF 5447/CF-TPM. This machine first took to the air in its new livery on April 23rd,



CML will be sending a production kit of the Sea Hurricane for a full review just as soon as the first shipment arrives in their warehouse.



A prototype Hurricane on a high-speed flypast as the spooky 'Reaper' points the way.



Assembly starts by sliding each stabiliser half into cuffs on either side of the fin and securing with short hex headed screws.



The Hurricane sports a nice pair of scale like wheels fitted to electric retracts.



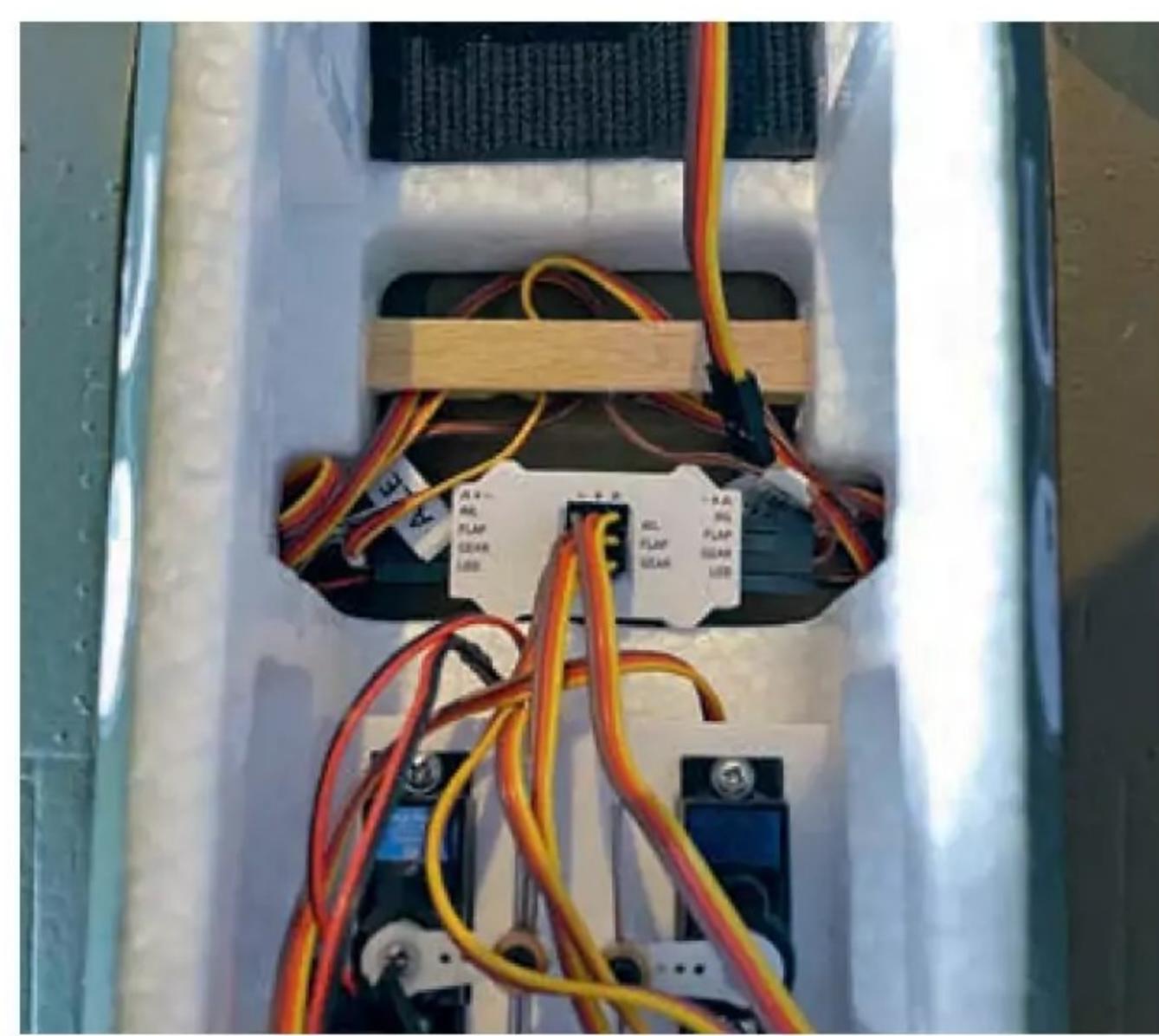
The scale effect continues at the back with a steerable yoke mounted tailwheel.

2022, completing a successful test flight from Gatineau Executive Airport, Ontario.

UNBOXING THE PROTOTYPE

The prototype Hurricane, as with the Spitfire, arrived in a plain brown cardboard box. The box artwork is one of the last pre-production jobs still to be finished, as is the instruction manual. I know I carp on about the lack of instructions in some kits (RTFM and all that!) but in this case it didn't faze me, especially as I have put together quite a few XFly models now, so I have a good grasp of the process. But when the production kits do arrive, I am certain they will each include a well-illustrated instruction manual.

Although the outer box wasn't present, the foam inner tray was and this is another masterclass of precision moulding from XFly, snugly protecting the Hurricane's separate airframe parts from damage whilst being shipped from the factory, assisted by



When fitting the wing make sure that none of the leads connected to the servo distribution block are trapped between the wing and fuselage.



Wingtip and aileron detail. Note the navigation and landing lights courtesy of very bright LEDs!

strategically placed pieces of thin foam sheet and moulded foam inserts.

Assembly was a doddle. I fitted the horizontal stabiliser panels first, sliding each onto a slim carbon joiner rod before inserting their roots into cuffs on each side of the



Inside the radio and battery bay of a prototype Sea Hurricane.



Close up on the neat three blade prop and spinner, just forward of the dummy Merlin exhausts.

fuselage at the base of the fin. They are locked in place with a pair of small, countersunk, hex headed screws.

The wing panels similarly slide onto a longer, fatter carbon tube joiner. The panels overlap by quite some margin at their roots to make allowance for the electric retract wheel bays. The assembly is then slid into place on the wing mount on the underside of the fuselage. Care needs to be taken at this stage not to trap any of the servo leads entering and exiting the white plastic connector block which provides an all-in-one Y-lead function for the ailerons, flaps, retracts and LED wing lights. Flipping the model over whilst supporting the still loose wing will allow all those leads to be pulled gently aside if any are trapped before tightening up the wing mounting screws. This uses longer versions of the same countersunk, hex headed screws, two on each side.

That's it really. All that remains is to install a receiver, and maybe a gyro if you have one, set up the controls and check the Centre of Gravity. Oh, and fit the dummy radio mast at the back of the cockpit, a small but important detail which is so characteristic of the Hawker Hurricane.

TAKE A BREAK

That's as far as I've got at the time of writing. Although I could easily guess a safe CG position and suitable control movements, I think it's best to wait for XFly's recommendations which I have requested via Jason at CML. Of course, if

you build one of these fabulous fighters then all those important details will be contained in the instruction manual, which is still being worked on.

In the meantime, I'm going to concentrate on make a neat installation of my receiver, as well as fitting a Pulsar gyro. I'm also going to set the controls up using a copied model memory from the Spitfire as I'm sure those settings will be

fairly close. I can tweak them as necessary when I receive specific settings for the Hurricane.

One thing to note is that the flaps were supplied with their pushrods connected. This keeps them pulled up against the wing during transit to ward off any travel related damage. But default flap settings on radios can often be a bit out so there's a real risk of the flaps being overdriven as soon as their servos are powered up for the first time, possibly causing damage to either the servo gear trains, the pushrods and even the flaps themselves. The easiest way to avoid this is to simply disconnect each flap linkage before powering the servos up for the first time. Also, I would strongly recommend reducing the flap servo travels to a minimal amount before reconnecting the linkages. Servo travel can then be increased slowly, keeping a close eye out for any binding as you do so.

More on the all new XFly-Model Hawker Hurricane next time, hopefully with a flying report if the weather allows.

S CUB FLAPS & TYRES

In my flying report of Top RC's lovely S Cub in the October issue I promised to follow up on my intention to make the landings less bouncy by taking some air out of the pneumatic tyres. To



'Reaper' flies overhead to show the two-colour underside applied to RAF aircraft during the early stages of WW2.



Sea Hurricane on a dirty pass with its wheels and flaps down.



Minimise the bounce on S Cub landings by taking some air out of the chunky balloon tyres.

“Subsequent landings have been a joy and Tigger like bounces are a thing of the past”



All bunged up! The white valve stoppers are a tight fit so you may need to gently pull them out with a pair of pliers.

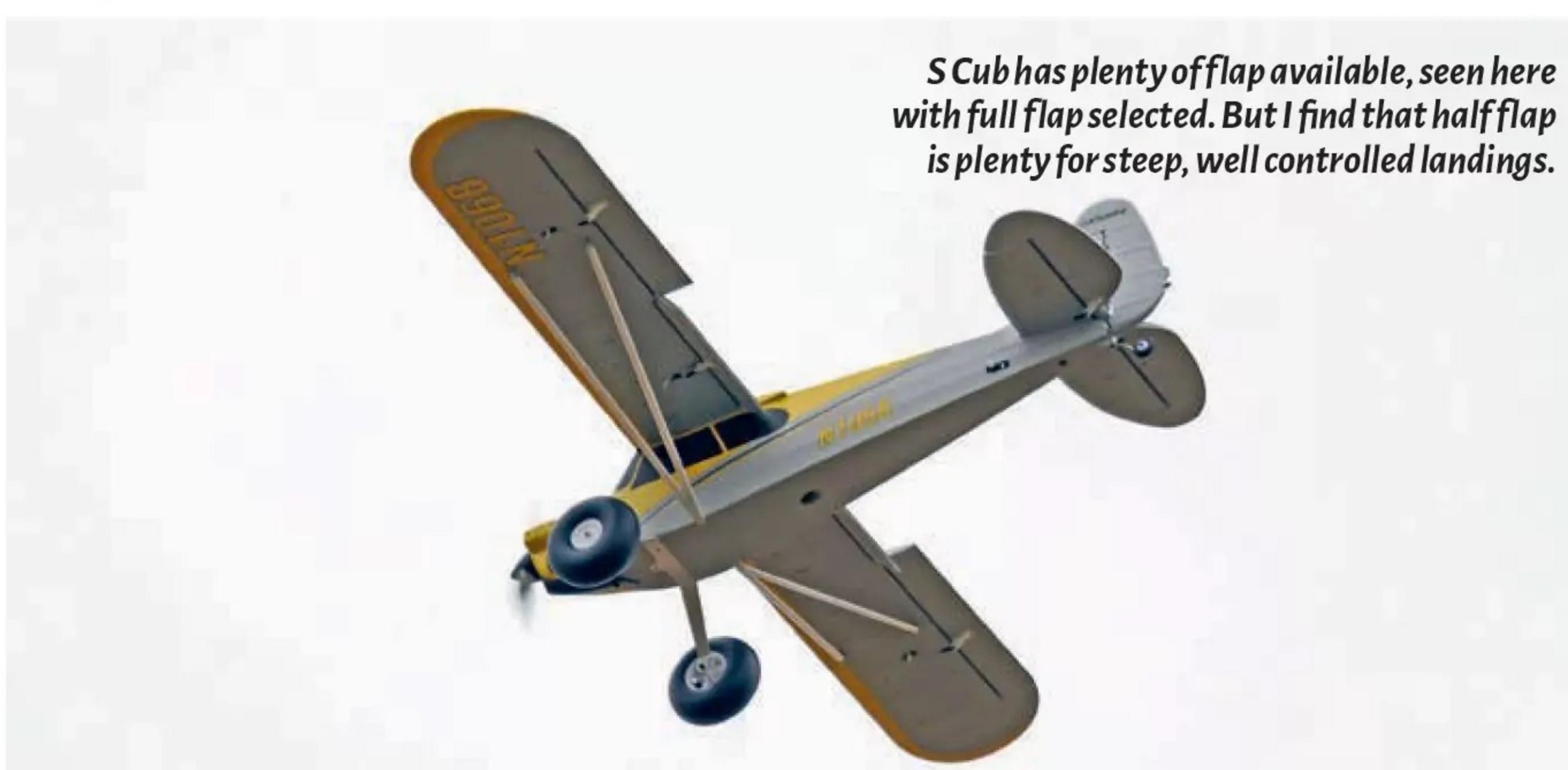
do this I needed to pull out the white stopper fitted to the valve mounted on the inner hub of each air wheel. But they are sensibly a very firm fit to stop leaks, so I ended up gently grasping and pulling them out with pliers. I then inserted the inflation nozzle supplied with the kit to let most of the air out before attaching the nozzle to an air pump and filling each tyre until the dimples in the tyres just popped out. You don't need any more air in those big donuts than that, making sure that each tyre is still spongy to the touch.

Subsequent landings with this model have been a joy and Tigger like bounces are a thing of the past. Well, most of the time, anyway!

This little exercise also gave me a chance to put my air retract pump back into action, long abandoned in favour of electric retracts. There was a slight mismatch between the existing pneumatic fitting and the nozzle supplied with the kit, but this was easily bridged using a short piece of silicone fuel tubing. I knew that pump would come in handy again someday!

Back to the S Cub, I can now also pass on my recommendations regarding the best flap settings. In my opinion landings are best made at the full rates indicated in the manual and with half flaps. This gives just

S Cub has plenty of flap available, seen here with full flap selected. But I find that half flap is plenty for steep, well controlled landings.



The kit comes with a tyre inflation nozzle which needs to be inserted into the valve to release some air.



My old retract pump has found a new lease of life after being fitted with the air-wheel inflation nozzle.

about enough elevator to perform a nice flare. Low rates work well in the air but do not give enough elevator throw to perform a decent flare, leading to firm arrivals and more kangaroo bounces, especially with the tyres pumped up as supplied!

THE SPY WHO TICKLED ME

In my Welcome piece in the last issue, I referred to, 'Johnny English, who was well known for having feathers in his hat band.' This was in reference to using a long feather pinned to my hat to ward off dive-bombing flies at the flying field. However, it seems that I got my Johnnys' mixed up, confusing Rowan Atkinson's humorous spy with the filmmaker Johnny Kingdom.

My thanks go to John Davidson for pointing out my mix-up:

"I think it may be Johnny Kingdom you refer to with a pheasant feather in his hat. An amusing fellow and film maker for sure!" ■

Top letter

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



GREEN FOAM CREATIONS

Having returned to model flying after a 30-year break around ten years ago, I have been less active for a couple of years because life is like that. Anyway, I have been getting back to building and flying this summer, my first build being a small balsa Ugly Stik from an internet plan. It was chosen because there was a CAD file which I could import into LightBurn and hence cut myself a kit with my laser cutter. Anyway, at the flying field the summer brought out an interest in gliders and old timer models. So, I was thinking of a lively glider as my next build.

As luck would have it, I was in the local newsagents and happened to pick up the only RCM&E on the shelf. The free plan was the BMAC Easy Glider. Just what I was looking for. Roy Thompson, you are a star!

The Easy Glider is made from Vitrex green foam, my favourite material for making foamies. Okay, it is not a nice colour and it looks scruffy with packaging tape covering. However, it is cheap and quick to build with. I love experimenting, designing and making fun planes.



I went home and programmed the Easy Glider dimensions into LightBurn and started cutting my glider kit. It's almost built - it's the fiddly linkages that take my time these days.

I've included a picture of a few of my green

foam creations. The Zagi style flying wing is a club favourite and is great for combat or other competitions.

Paul Evans

TRIALS & TRIBULATIONS



I have a few old projects which have been going for decades and I interrupted them to build this Percival Gull 6 as I like civil aircraft of the 'Golden Age'. It was originally published by RC Model World (before your time as Editor). Let's just say it's not a plan for beginners. The most interesting thing is that the plan shows a one-piece model but with the outer wings folding back as per the full size and there was no indication of dihedral or any aileron detail. I modified it to a one-piece wing and got the dihedral by extending the wing outline from the front view of a 3-view drawing and measuring the dihedral angle with a protractor.

It is designed for a .40 two stroke, inverted so it fits in the cowl. I wanted to use a .46 equivalent electric motor that I had on hand. Surprisingly, this did not fit as the nose narrows markedly and the X-mount was too wide to fit. So, I dug out my old HP40 and mounted it so that the muffler is under the engine and completely enclosed. It wasn't easy to shoehorn in though as you need to be able to get to the mounting bolts. Ah well, problem solving is good to keep an old brain from going senile, or so they say.

Mounting the R/C gear was the next challenge. It's a large cabin but needs to be kept clear of visible gear. It looks good but a full body pilot of the right scale was too

big, so the cabin remains empty. I have heard of this phenomenon, i.e. a pilot of the right scale not fitting – very frustrating! Although a three-seater the front pilot's seat is on the left, not central, and the dual controls are in the centre of the rear bench seat. This one is modelled on an aircraft owned by the National Museum of Australia in Canberra. They were most helpful with photos etc.

Back to the R/C stuff, the servos fit under the back seat, but the rest of the gear had to be put in where I could fit it, mainly in the nose.

This model fought me all the way. The last item was to mount the prop and spinner. The plan specifies a 1.1/4" spinner so I purchased the usual quality brand of white plastic spinner from my local hobby store and cut it to fit the prop. Do you think I could get a .40 size prop hub to fit inside that spinner?



I solved the problem by replacing it with a 1.1/2" spinner. Hardly noticeable, but it fits the prop. Just.

Peter Kraus

IT'S GOOD TO RECYCLE

Recently I recommissioned an ancient Phase 6 by sawing off the nose and installing a ply firewall to support a 1000 kV brushless motor. The result, with a 3 cell 2200 LiPo battery, is a great success. It's fully aerobatic with rolls, loops, spins and

even outside loops. The old plane has a new lease of life!

Like all of Chris Foss's designs it flies beautifully with the motor on or off.

It occurred to me that many old slope soarers similar to my Phase 6 might be languishing in

the corner of modellers' workshops throughout the country and could provide inexpensive models for those on a tight budget. After all, we are meant to recycle whenever possible!

Paul Hirst

IC TO ELECTRIC

Just a note to follow-up on Peter Wilson's letter with which I empathise (IC to Electric Comparisons, July 2025).

As a now retired engineer it will be no surprise to you that I like to research a topic and form an opinion before embarking on what might be a costly error of judgement.

Your answer to Peter's question was quite correct, the subject matter being a minefield. Based on my personal experience, I thought the following would help your reader.

I can recommend the following documents, available online, which may give your reader the information he is looking for in one place, in advance of approaching George Worley at 4-Max.

Lucien Miller is President & CEO of Innov8tive Designs Inc., a model hobby business in the USA. Lucien has been extremely helpful, and I would add patient, in answering the questions I raised with him by email on his articles.

I looked at what I would need to convert to electric my old Marutaka F4U Corsair kit (still to be constructed). The model was intended for an OS Max 60F-SR. Although I do have this engine from circa 1976 (it powered my

Wolfgang Matt Super Star back then) I thought an electric conversion might be a better bet for reasons of noise, vibration and the ability to utilise more efficient larger diameter two or three bladed propellers. I looked at three motors, two from Innov8tive Designs and a recommendation from George at 4-Max. In fact, I gave George my calculation sheet and asked him for his views on my selections and for his most appropriate propeller selections. George kindly followed up with a full electric drive system quotation including two and three-blade options - great service and support!

George is local to me and talking to him following a presentation to the Fleet Model Club he said that he had performance data for many of his motor/propeller configurations. If interested, you need to request the specific performance data you want.

Something not mentioned with IC to electric comparisons is that the IC engine performance is expressed in terms of shaft output power and torque versus rotational speed for a given test propeller. With electric drive systems the focus is the electrical input power which determines

the electric speed controller, motor ratings and conductor size. Therefore, for a direct comparison of power one needs to apply the electric drive system efficiency to the IC output power to determine the required electric motor power on a like for like basis. One should also consider the output power of the IC engine when fitted with a decent silencer rather than unsilenced.

I do hope the foregoing is of help to Peter.

Keith Cherrington

Author	Title
Innov8tive Designs, Inc.	2-Stroke Glow to Electric Motor Conversion Chart
Lucien Miller	Glow to Electric Conversion Guide
Lucien Miller	What Size Motor Do I Need
4-Max	Sizing a Direct Drive Power Train

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-njiiri@kelsey.co.uk

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

NOVEMBER

Nov 16

Horam Swap Meeting at the Horam Village Hall, A267, Horam East Sussex, TN21 0JE. What3Words: self.planting.brave. Doors open to sellers 08.00 - 12.00 and buyers 09.00 - 12.00. Tables and one seller £9.00 and buyers £3.00. Refreshments including bacon butties available. For bookings (ESSENTIAL) contact Robert Richardson: rob.richardson@talktalk.net.

Nov 16

Southern Counties Autumn Swapmeet at 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, under 16s free. First table costs £10 (including one admission), additional tables cost £6 each. Refreshments will be available. More details at hmfa.bmfa.org/. To pre-book tables only call Mike Stokes on 07702742647

Nov 23

White Sheet RFC F3F Event. Please check with the WSRFC before travelling: <https://whitesheet.bmfa.club>.

DECEMBER

Dec 7

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>.

2026

FEBRUARY

Feb 7

Chobham Common Model Flying Association Swapmeet at Tringham Hall, Benner Lane, West End, Woking, Surrey, GU24 9JP. what3words: ruler.pipe.cake Hall open for sellers at 08:15 am. Hall open for

buyers at 08:45 am. Table(s) must be booked in advance. Table(s) £7 each, includes 1 entry. Buyers £3 per person. Please contact Jordan Smith for table bookings: ccmfswapmeet@hotmail.com

APRIL

April 18

CADMAC Swapmeet at Stannington Village Hall, Stannington, Northumberland, NE61 6EL. Aeromodelling items only. Sellers fee £7 per table plus the entrance fee, all tables are provided. Admission £2, ladies and under 16s free. Sellers set up at 12:00 pm. Buyers enter at 12:30 pm. Doors close at 3:00 pm.

All proceeds go to Northumbrian Air Ambulance. Please contact Bob Brown on rwbrown17@gmail.com or 07515 682543 to book a table.

SEPTEMBER

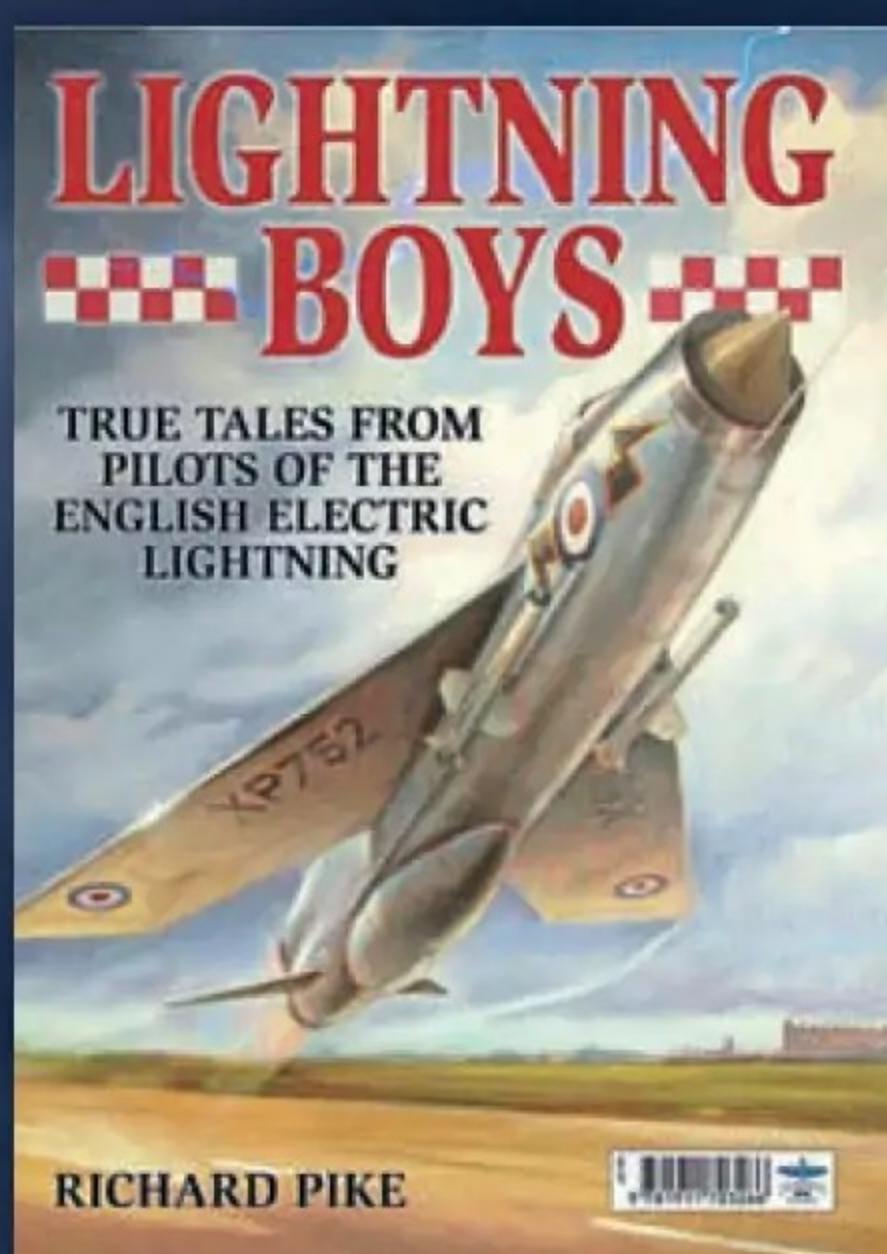
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Southern Model Show at Headcorn Aerodrome, Kent. More details to follow.

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Next issue

MITE EP

Aerobic, easy and inexpensive to build, plus it fits in the car fully assembled. What's not to like about this compact 37" wingspan mini multi-model blast from the past. Originally featured as a plan feature in Radio Modeller, August 1971 by David Lyall, our retro models correspondent Shaun Garrity has modified the design to incorporate electric power.

David designed the Mite to overcome some perceived drawbacks in a well-known 38" span aerobatic design of the time when powered by an O.S. 19 glow engine. These related to the C of G position and the width of the fuselage preventing the fitting of more than two servos. Also, the tricycle undercarriage gave too much drag on grass when taking off so all take-offs were made from a hand launch. To overcome these issues David designed the Mite with the following in mind: low weight, wing area of at least 2 sq. ft., a taildragger undercarriage and a fuselage wide enough to accommodate three servos.



KING OF THE CATS

Our next Model Magic feature concentrates on a 1:4.4 scale Tigercat produced by the Scalewings company in Germany around 2010. This example was built, painted and completed by Andrew Crosby and flown for several seasons on the UK show circuit. The model then changed hands but suffered damage in a heavy landing. Glenn Masters acquired the damaged airframe as a restoration project in 2017. The aircraft is adequately powered by two Zenoah

ZG62 engines and she has proved to be an excellent flyer, with many successful sorties completed since the first post restoration flight in 2018. Although the Tigercat looks a complex beast, Glenn reports that she is a 'pussy cat' to fly. His skill at performing endless slow barrel rolls with her is a joy to behold.

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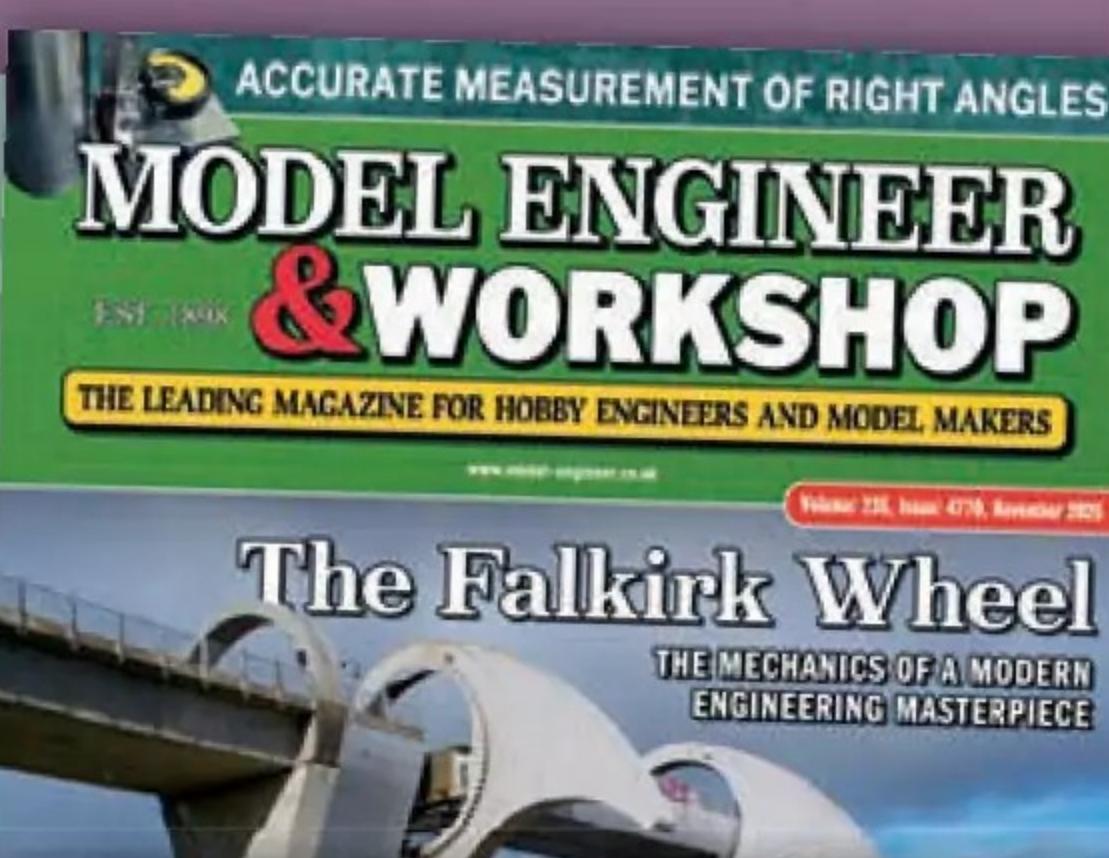


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PARTING SHOT



SUNSET AUTOGYRO

As evening descends, a slow fly-by frames the silhouette of this Cierva C-30 against a picture-perfect sunset. Rich Harris caught this evocative image at the 17th UK & International Autogyro Fly-In, which took place over the weekend of June 27th–29th at the superb Winterton Model Flying Club in Lincolnshire.

Gusty winds, reaching up to 30mph, dominated the first half of the weekend but fortunately such conditions are well within the flight envelope of most model autogyros and the skies remained busy with constant flying. But by late Saturday the winds had subsided, giving way to calm, sunny

conditions. Flying continued until sunset, as can be seen here.

DATAFILE

Photo:	Rich Harris
Camera:	Canon EOS 700D
Lens:	Canon EF 75-300mm f/4-5.6L USM
Exposure Mode:	Normal
Aperture:	f/7.1
Shutter Speed:	1/400 sec
Focal Length:	300 mm
ISO:	200
Metering:	Pattern



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Required Engine: .46 (2-Stroke) / .70 (4-Stroke) or electric equivalent

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RRP:
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Wingspan: 60.6in (1.54m)

Required Engine: .46 - .55 (2-Stroke) / .72 - .82 (4-Stroke) or electric equivalent

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'German - Red/White'



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Electric or Glow Power

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£229.95

P-51B MUSTANG

'Tuskegee Airman'



Wingspan: 58in (1.47m)
Electric or Glow Power

VQA05
RRP:
£249.95

Wingspan: 60in (1.54m)
Electric or Glow Power

AT-6 TEXAN



VQA02
RRP:
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PILATUS PC-6

'Skydive Marche/Tiger'



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VQA125

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Electric or Glow Power

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DOUGLAS DC-3

'Lufthansa'



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VQA129

Wingspan: 70.8in (1.8m)
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PILATUS PC-6

'Skydive Marche/Tiger'



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OFF**

VQA0361

Wingspan: 62in (1.58m)
Electric or Glow Power

£229.95
£169.95

YAK-9

'Soviet - Winter Camo'



**£50
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VQA055

Wingspan: 59in (1.52m)
Electric or Glow Power

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PIPER PA-18 SUPER CUB

'Burda'



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VQA084

Wingspan: 106in (2.7m)
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T-28 TROJAN

'US Airforce - Red/White'



**£70
OFF**

VQA162RW

Wingspan: 69.7in (1.7m)
Electric, Glow or Gas

£399.95
£329.95

A-24 BANSHEE



VQA120BS

Wingspan: 60in (1.54m)
Electric or Glow Power

£249.95

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VQA163US

Wingspan: 74.8in (1.9m)
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YAK-1

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VQA054

Wingspan: 59.8in (1.5m)
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KA-7



VQA058

Wingspan: 100in (2.5m)
Length: 51.18in (1.3m)

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Optional e-retracts, struts and accessories are available to purchase separately.

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NEW!



Battle of Britain & Sea Hurricane Editions

Relive aviation history with XFly's stunning 1.2m wingspan Hawker Hurricane Mk I – the legendary British fighter that turned the tide in the Battle of Britain and safeguarded Atlantic convoys. Crafted with precision and passion, this scale model captures the spirit of the RAF and Royal Navy's most iconic warbird.

Built from durable EPO foam with an authentic matte finish, the Hurricane is available in two classic liveries – Battle of Britain (Brown/Green) and Sea Hurricane (Grey/Green). Each variant tells a unique story:

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From smooth take-offs to graceful landings, this warbird combines history, craftsmanship, and performance in one beautifully balanced model.

Take to the skies and recreate the legend – the XFly Hawker Hurricane Mk I delivers authentic scale flying that impresses both on the ground and in the air.

Features:

- Functional features: electric retracts, shock-absorbing metal landing gear, four-panel split flaps
- Scale details: 3-blade propeller, canopy, pilot figure, exhausts, LED wingtip lights
- Power system: 3541-KV810 brushless motor, 40A ESC
- Battery: 4S 2600–4000mAh LiPo for flexible flight times
- Wingspan 1200mm, Length 938mm



XFly 1.2m Hawker Hurricane Mk I

Part No: XF126-B Battle of Britain Brown/Green

Part No: XF126P-N Navy Grey/Green

RRP: £279.99

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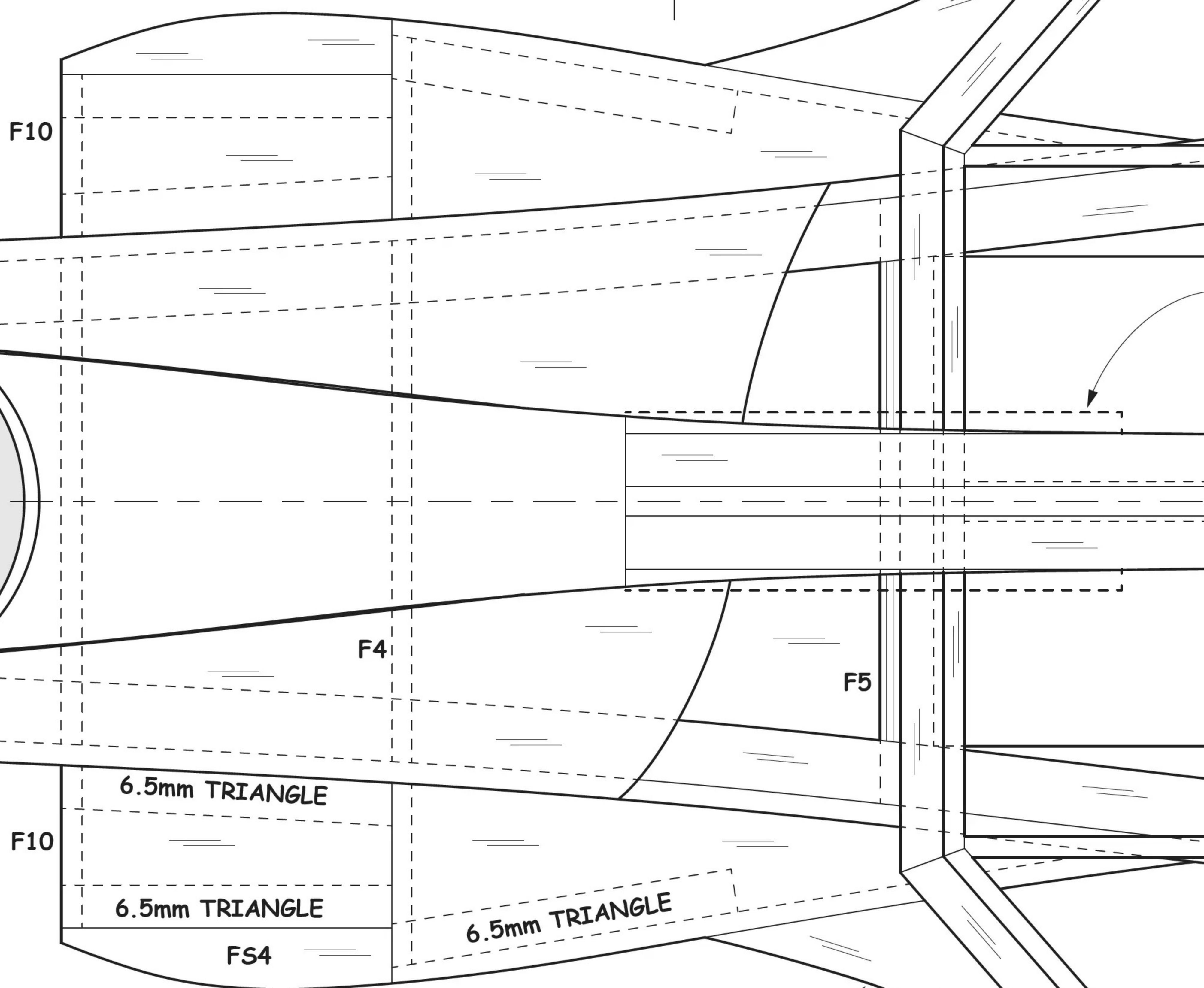
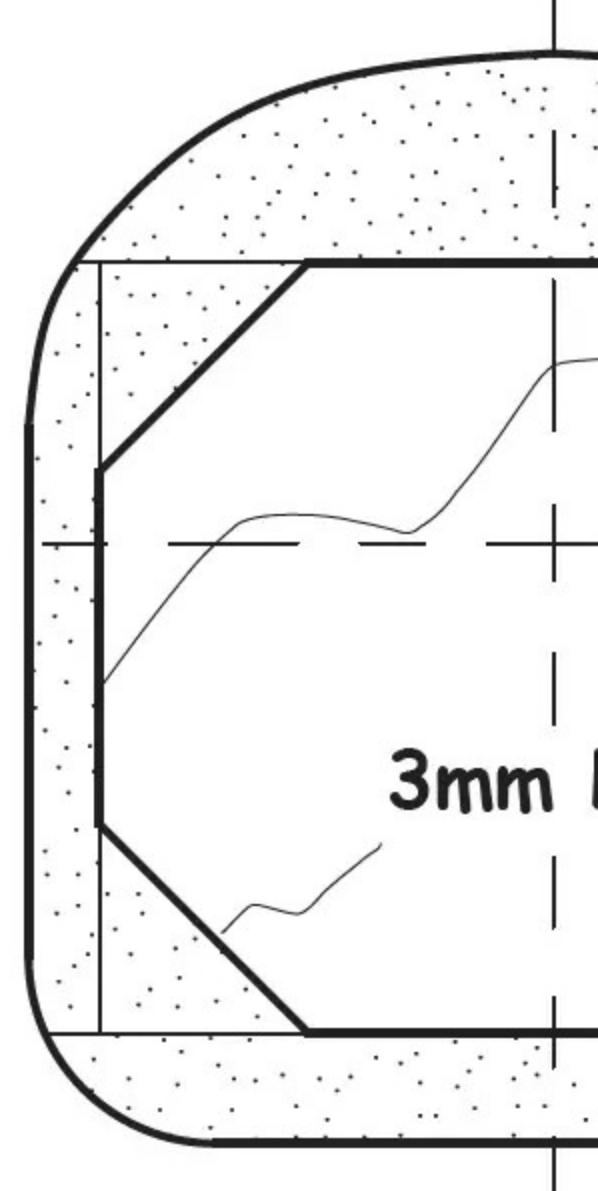
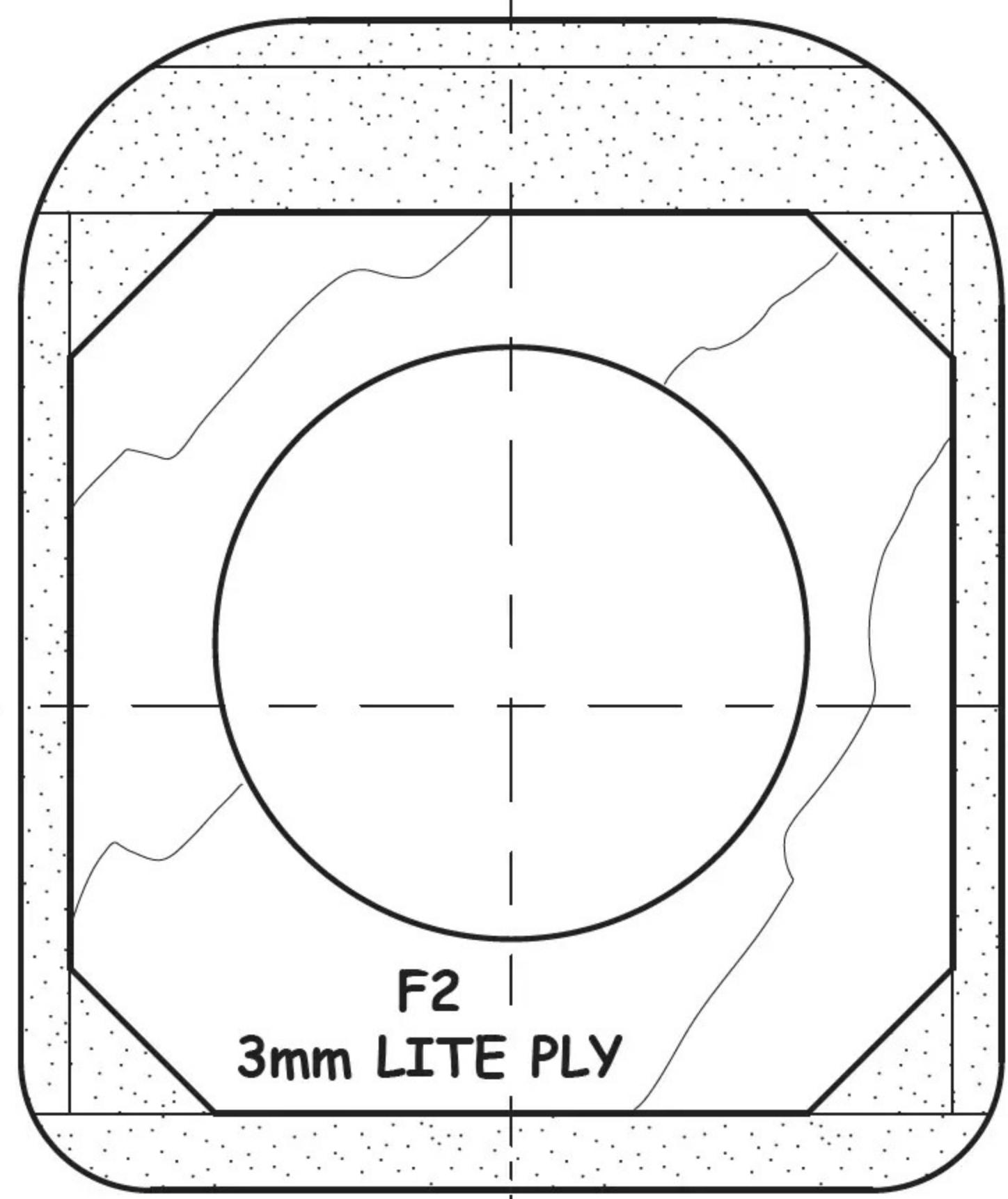
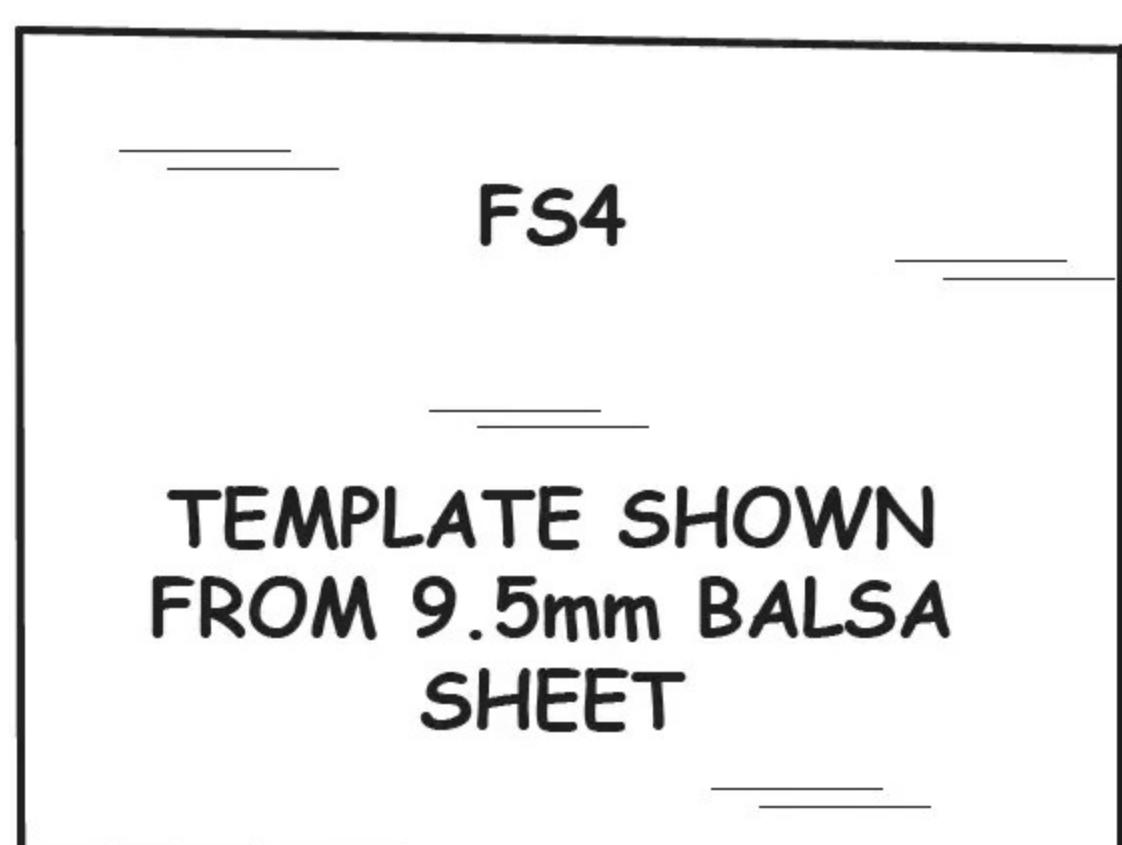
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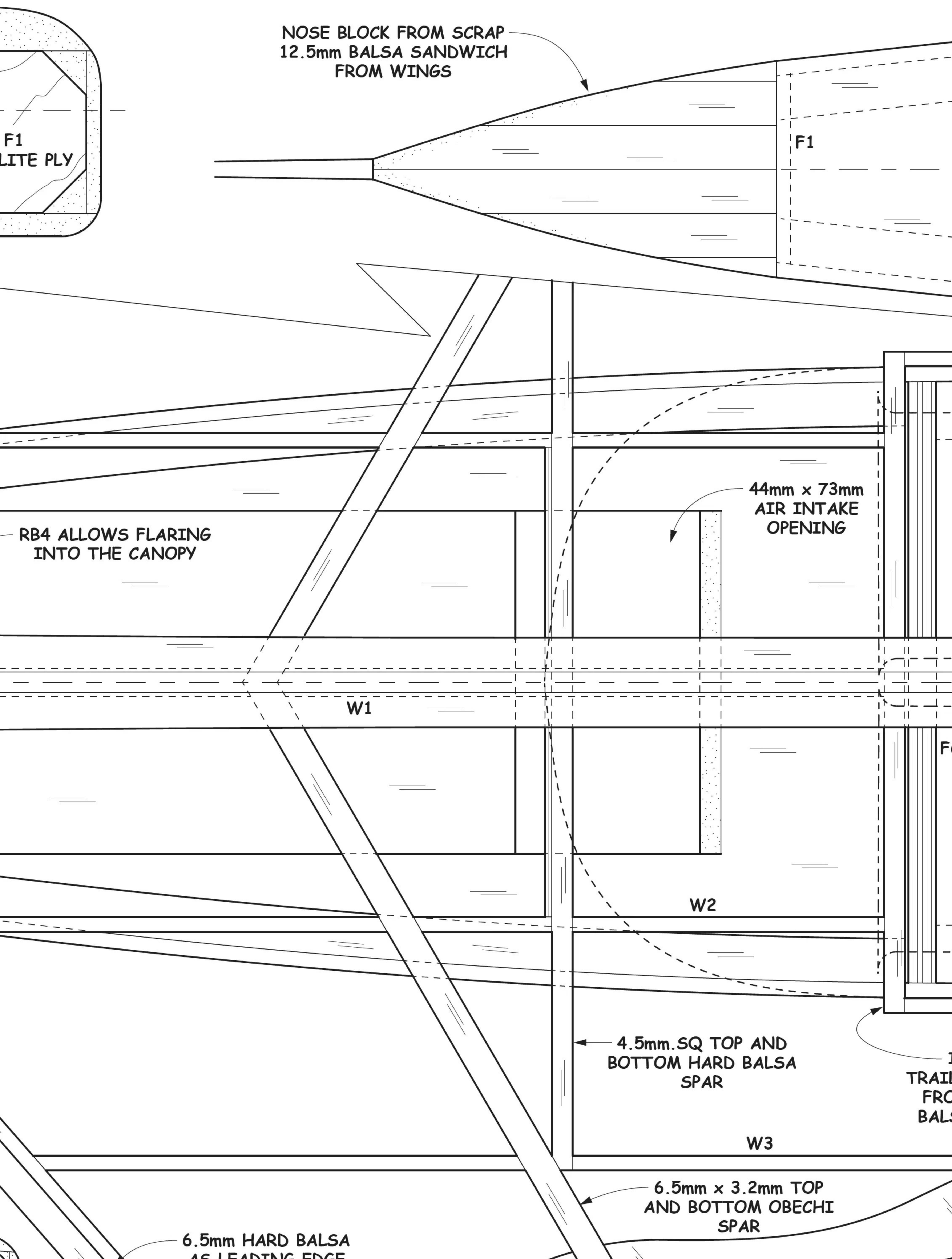
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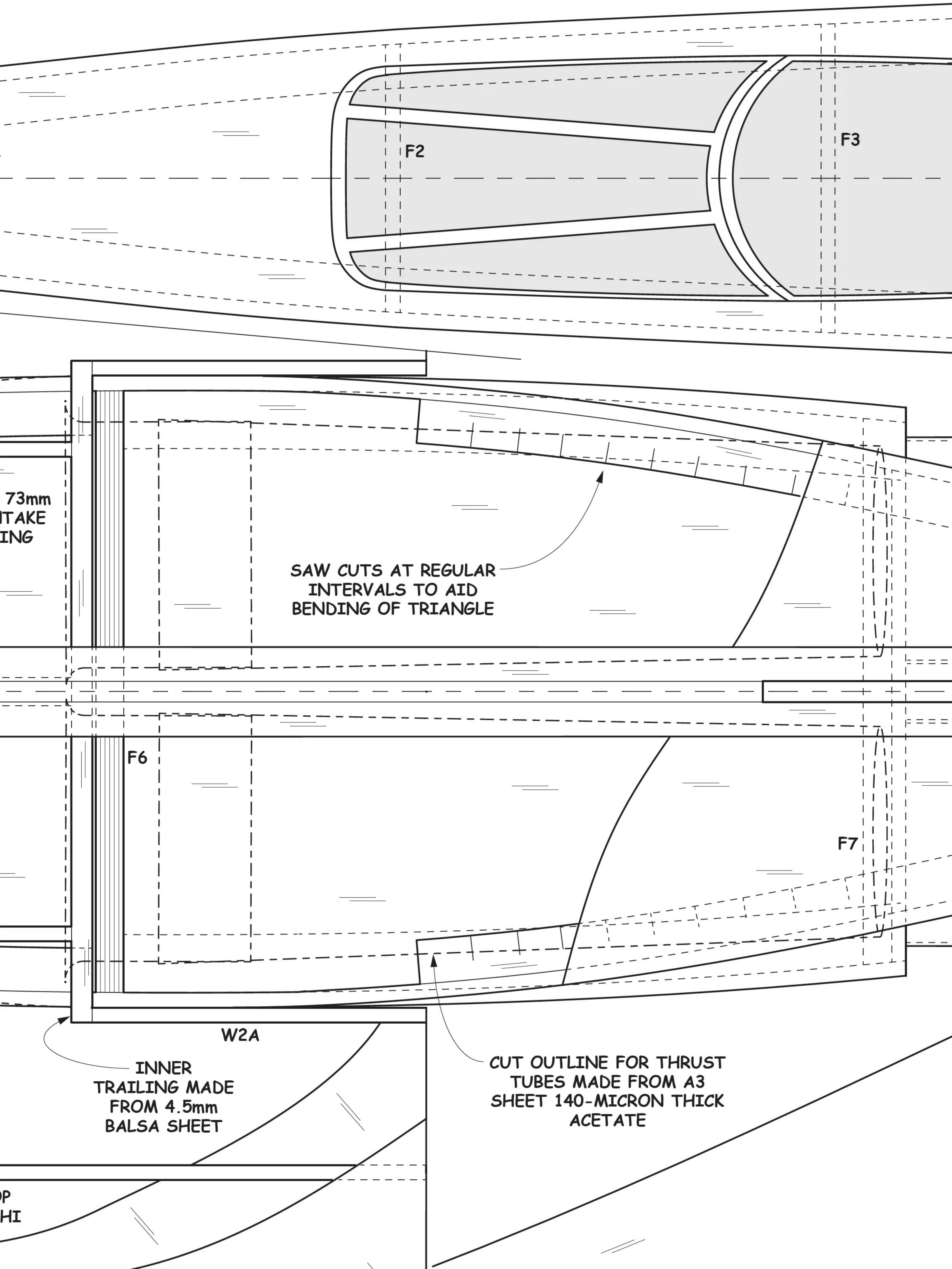
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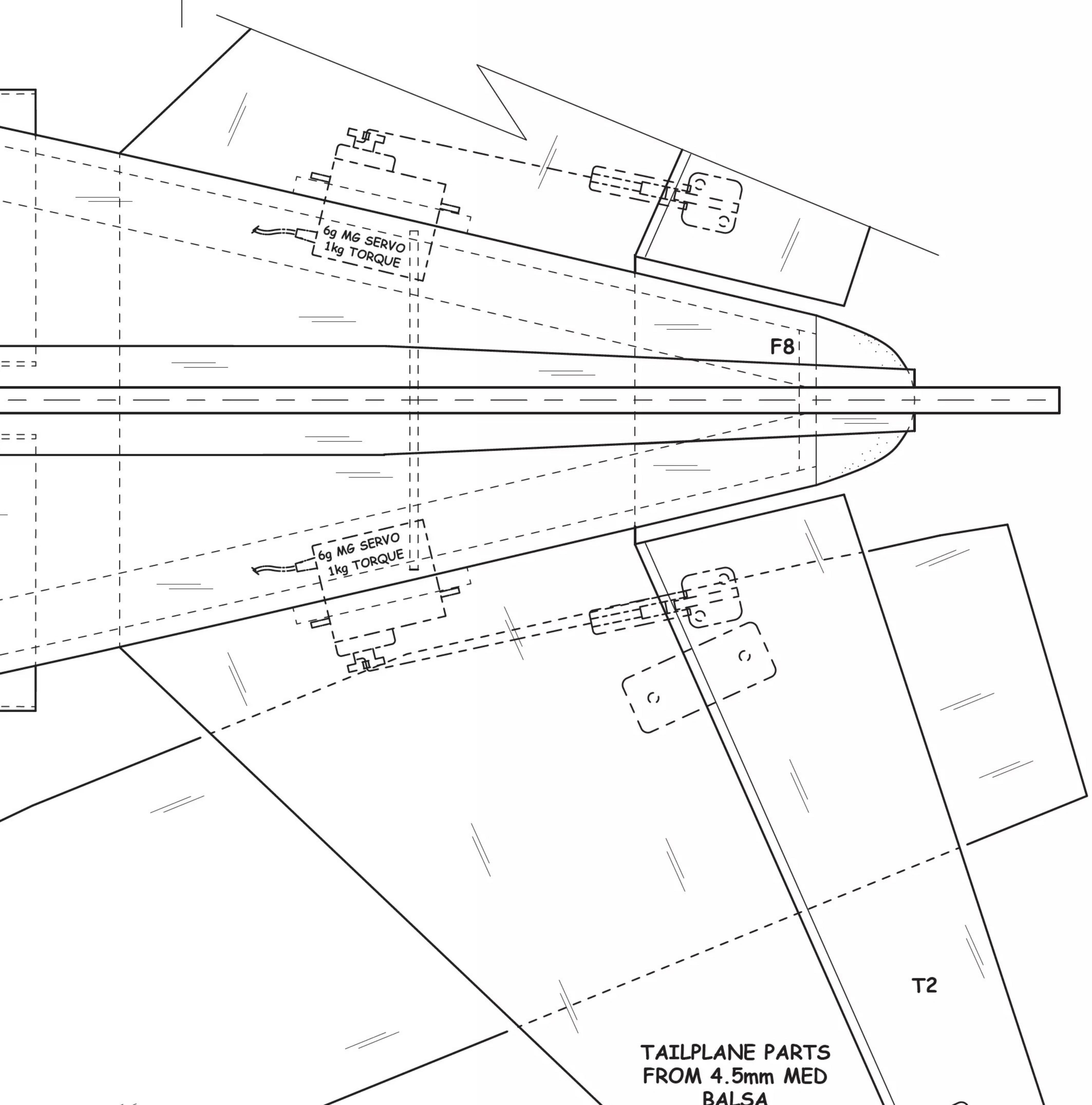


JAGUAR-GR.1

BY TONY NIJHUIS

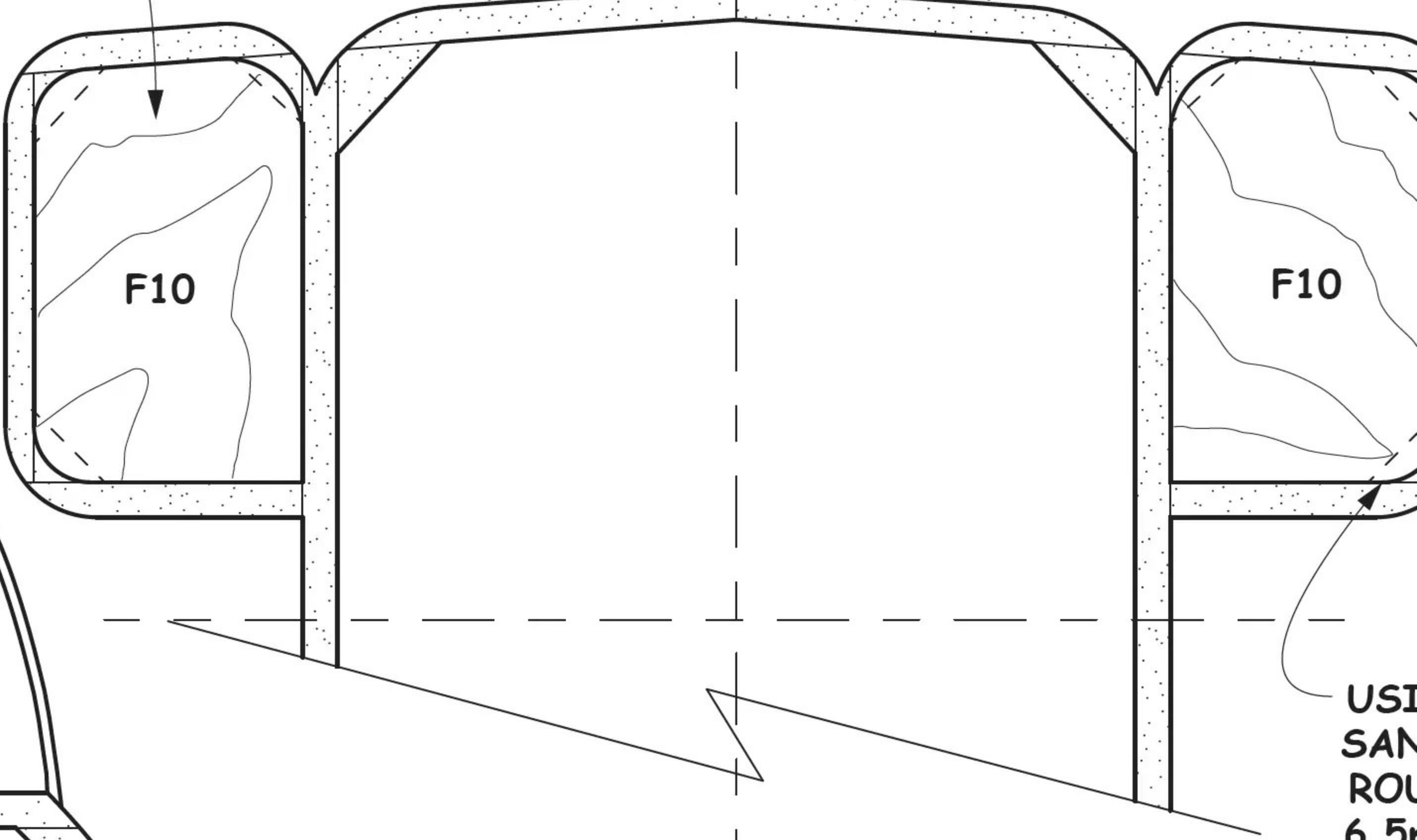
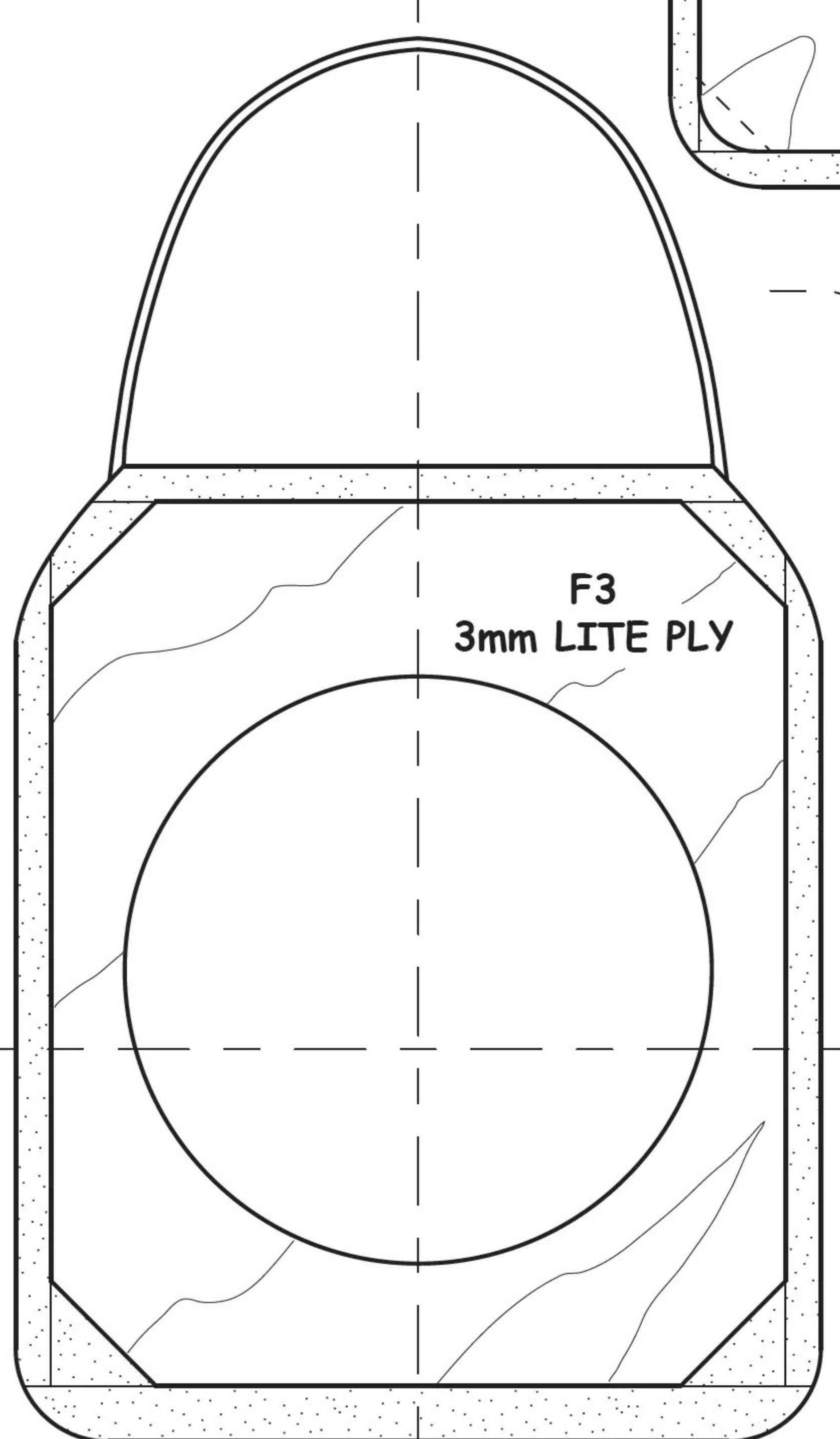
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TAILPLANE PARTS
FROM 4.5mm MED
BALSA

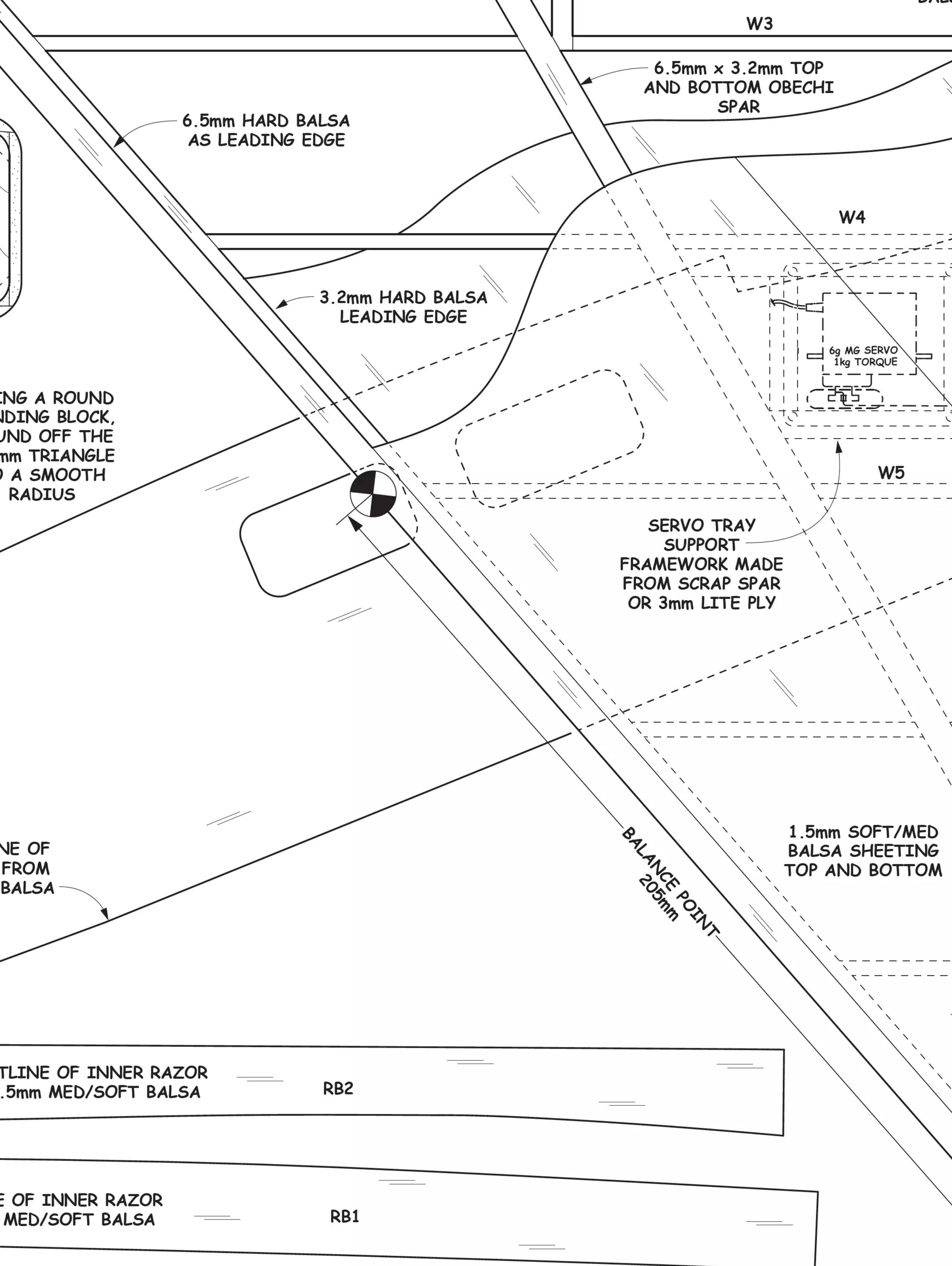
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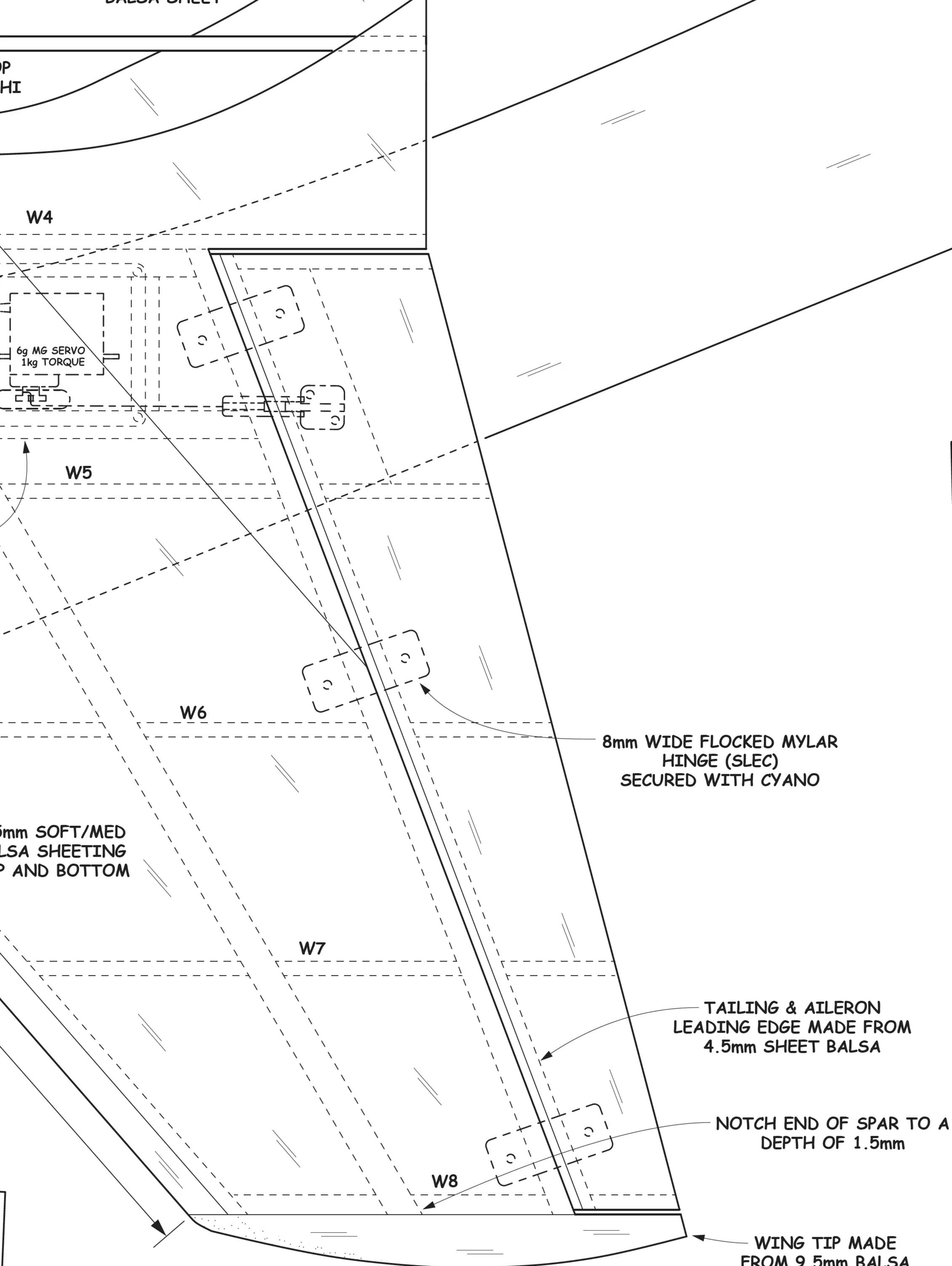


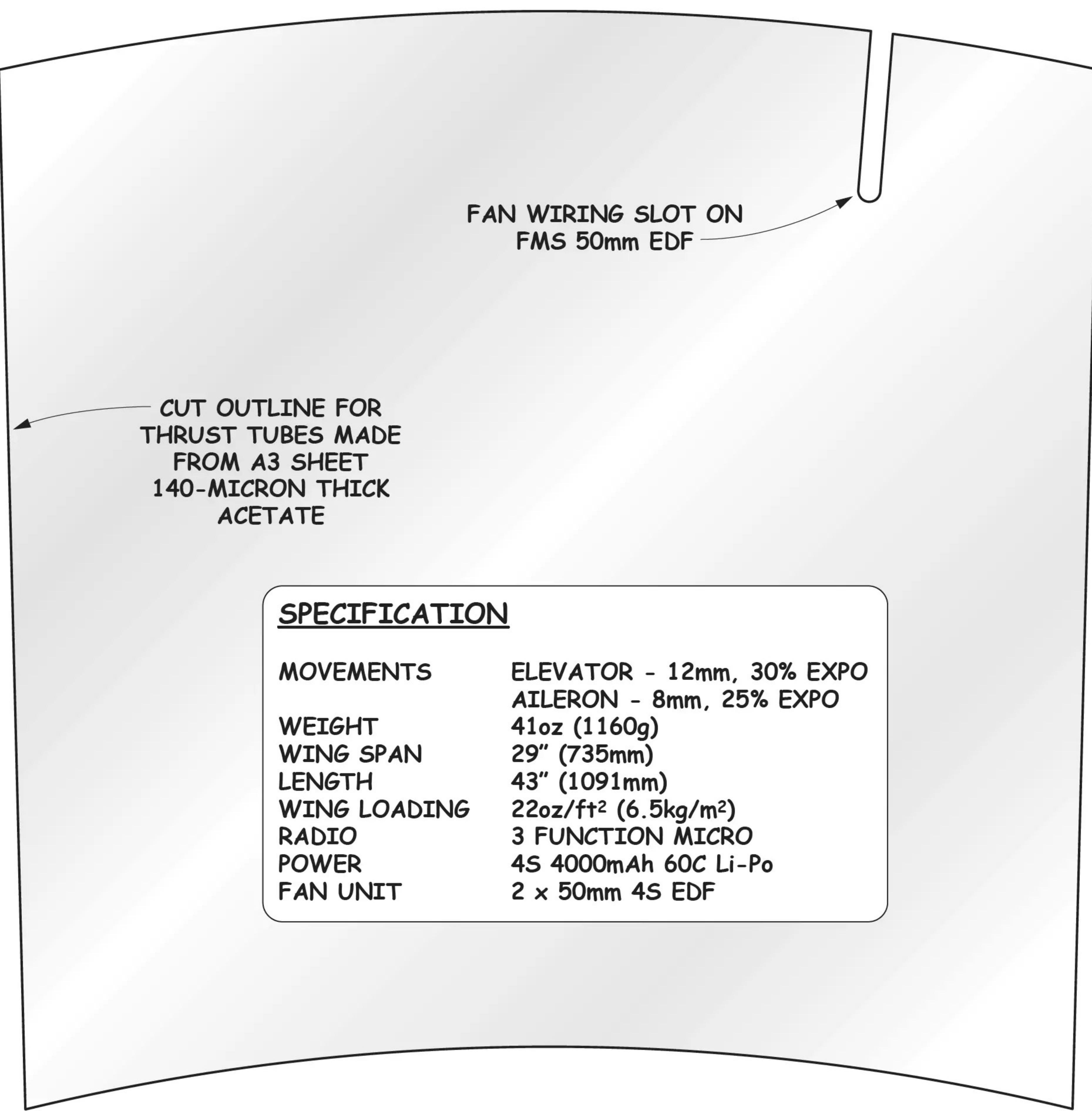
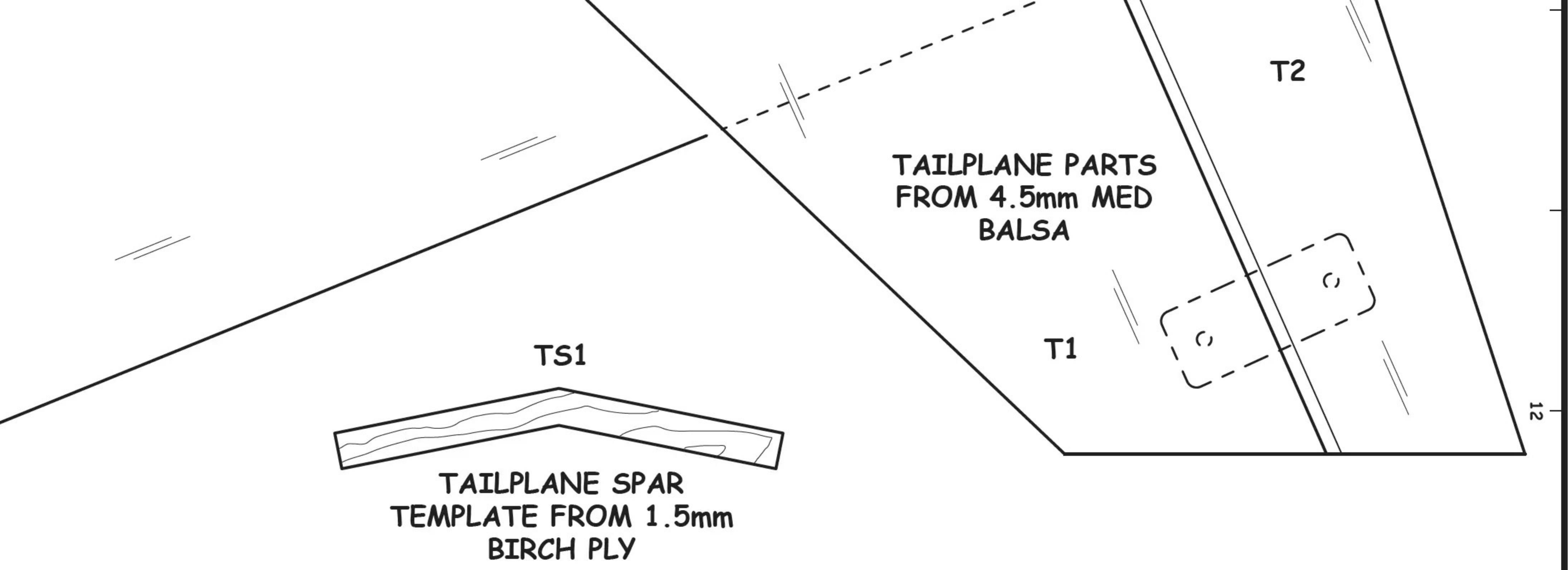
FS1
TEMPLATE OUTLINE
FUSELAGE SIDES
3.2mm MED/SOFT

TEMPLATE OUTLINE
BACK FROM 4

TEMPLATE OUTLINE
BACK FROM 4.5mm





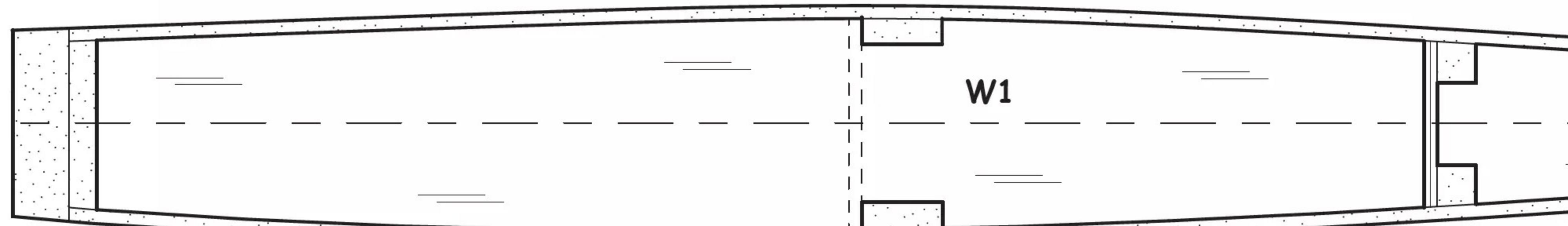


JAGUAR-GR.1

BY TONY NIJHUIS

No. OF SHEETS: 2 OF 2

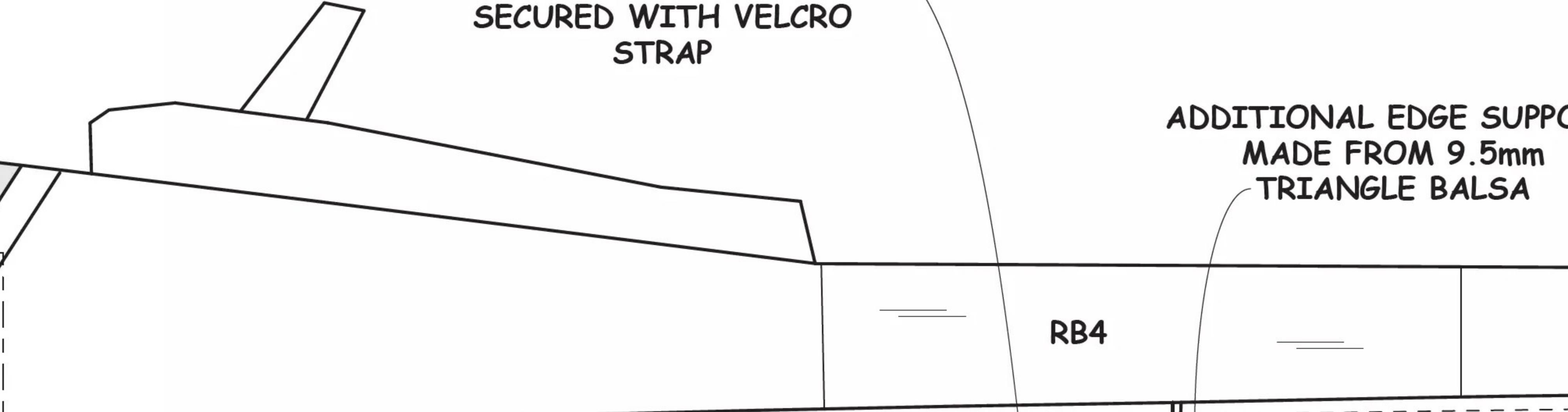
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W1

3mm LITE PLY BATTERY
SUPPORT. BATTERY
SECURED WITH VELCRO
STRAP

ADDITIONAL EDGE SUPPORT
MADE FROM 9.5mm
TRIANGLE Balsa



RB4

FS3

3250-4000mAh
4S Li-Po

F10

F4

F5

4.5mm MED Balsa

EXTERNAL
SOLARFILM
HINGE

HINGED BATTERY

VAC FORMED CANOPY

TEMPLATE OF FIN DOUBLERS
2 OFF MADE FROM SCRAP 3.2mm
BALSA

9.5mm & 3.2mm SHEET
BALSA LAMINATED
9.5mm TRIANGLE

F1

F2

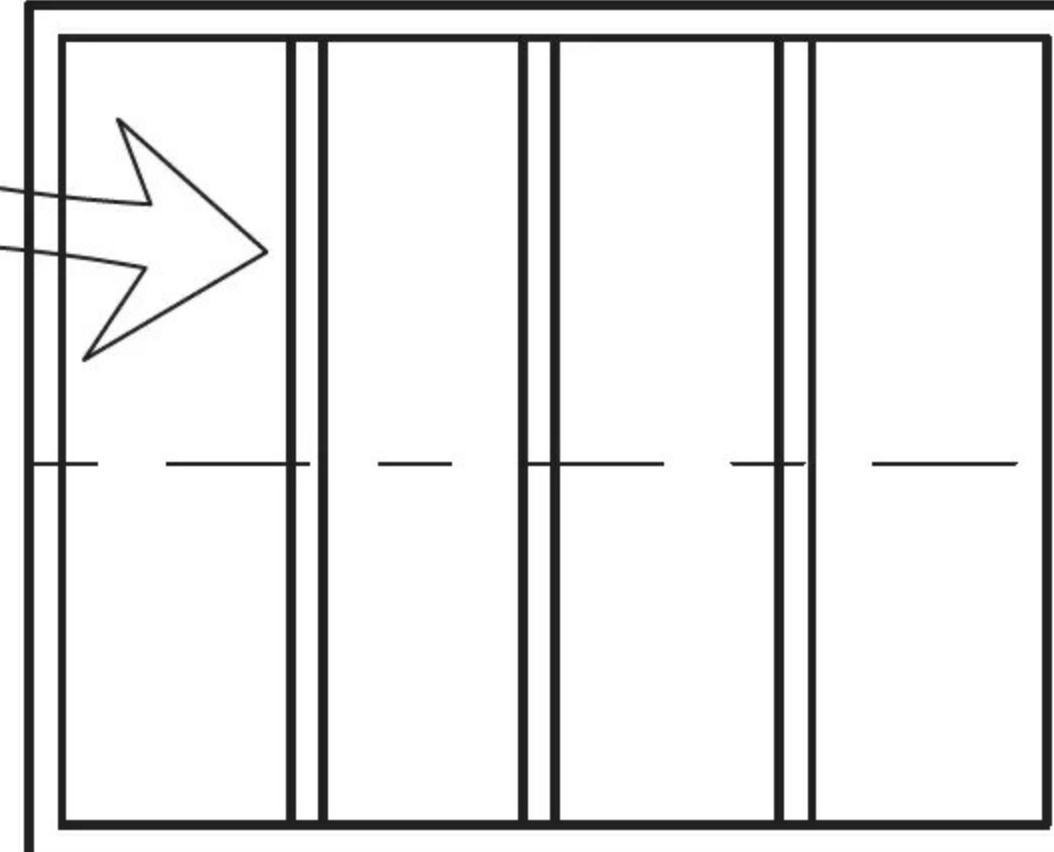
INFILL FAIRING
FROM SCRAP
3.2mm BALSA

4 CHANNEL
RX

BALANCE
POINT

40A BRUSHLESS
SPEED CONTROLLERS

AIR IN

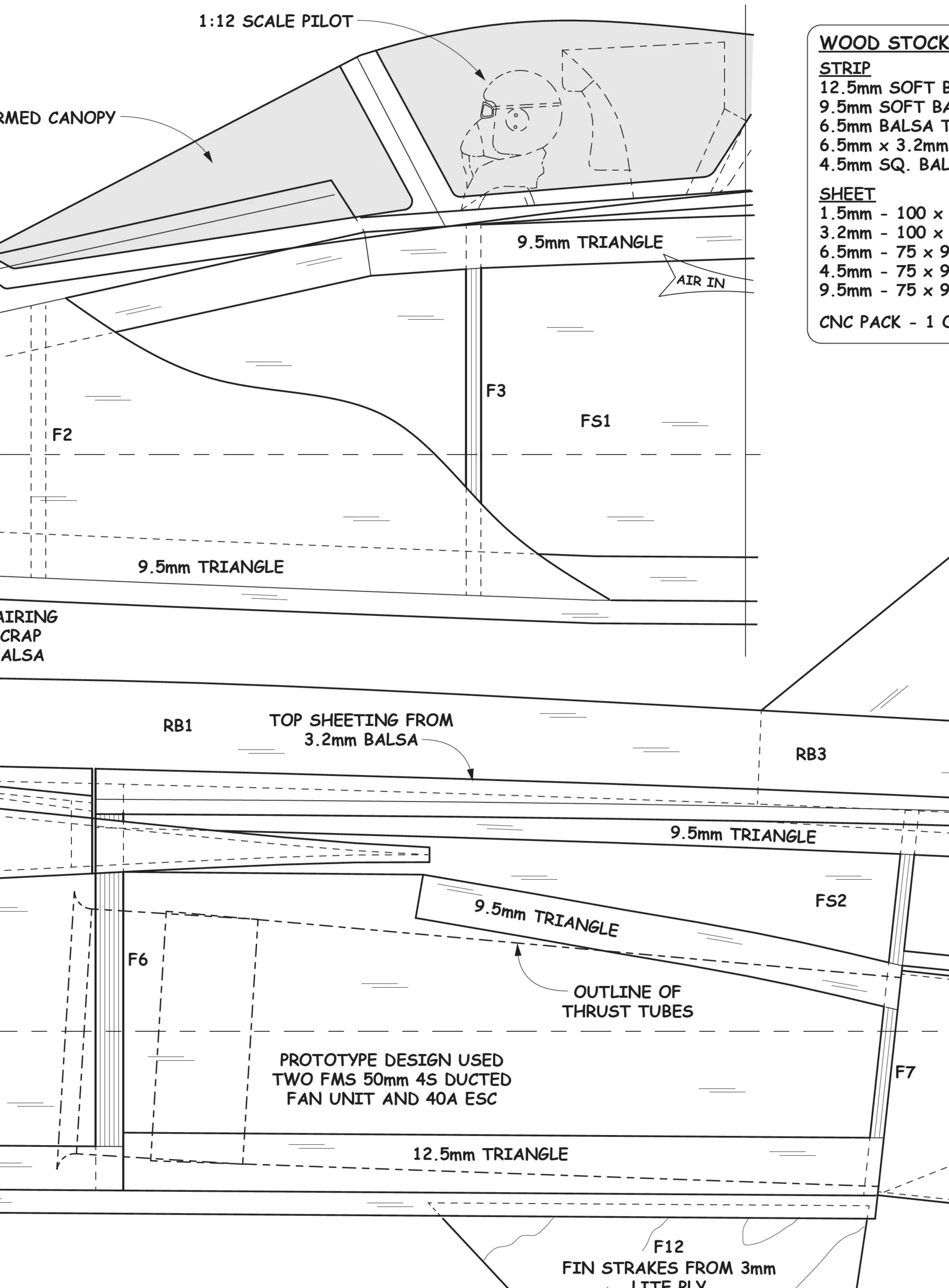


AIR IN

AIR IN

ORT

RB2



BALSA TRIANGLE - 1 OFF
BALSA TRIANGLE - 3 OFF
TRIANGLE - 1 OFF
OBECHI STRIP - 2 OFF
SA - 1 OFF

900 SOFT BALSA - 4 OFF
900 SOFT BALSA - 2 OFF
00 SOFT BALSA - 1 OFF
00 SOFT BALSA - 2 OFF
00 SOFT BALSA - 1 OFF

OFF

FN1

FN3

FN4

FN2

FIN PARTS FROM
4.5mm MED BALSA

TAIL CONE MADE
FROM SCRAP
SOLID BALSA

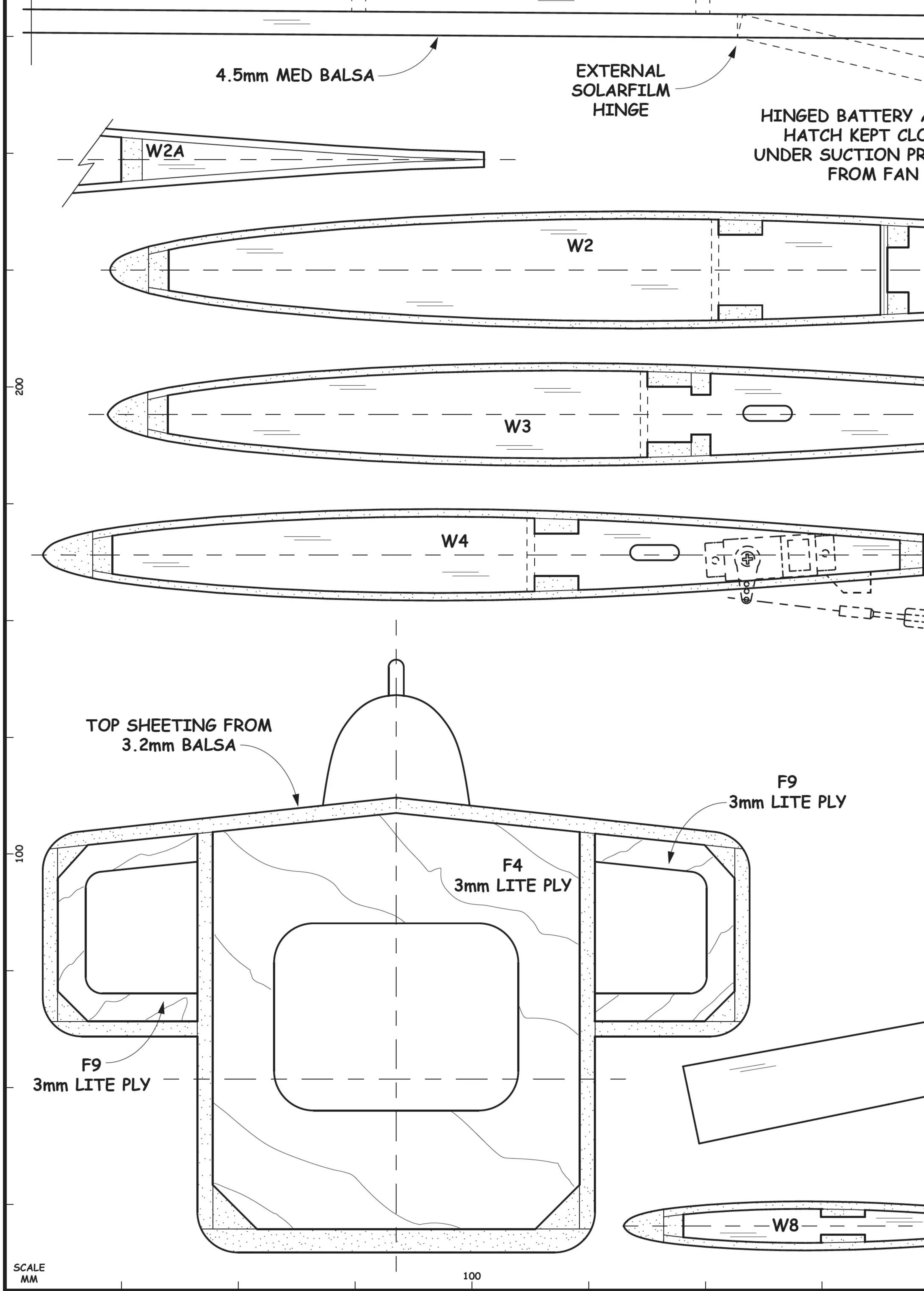
F8

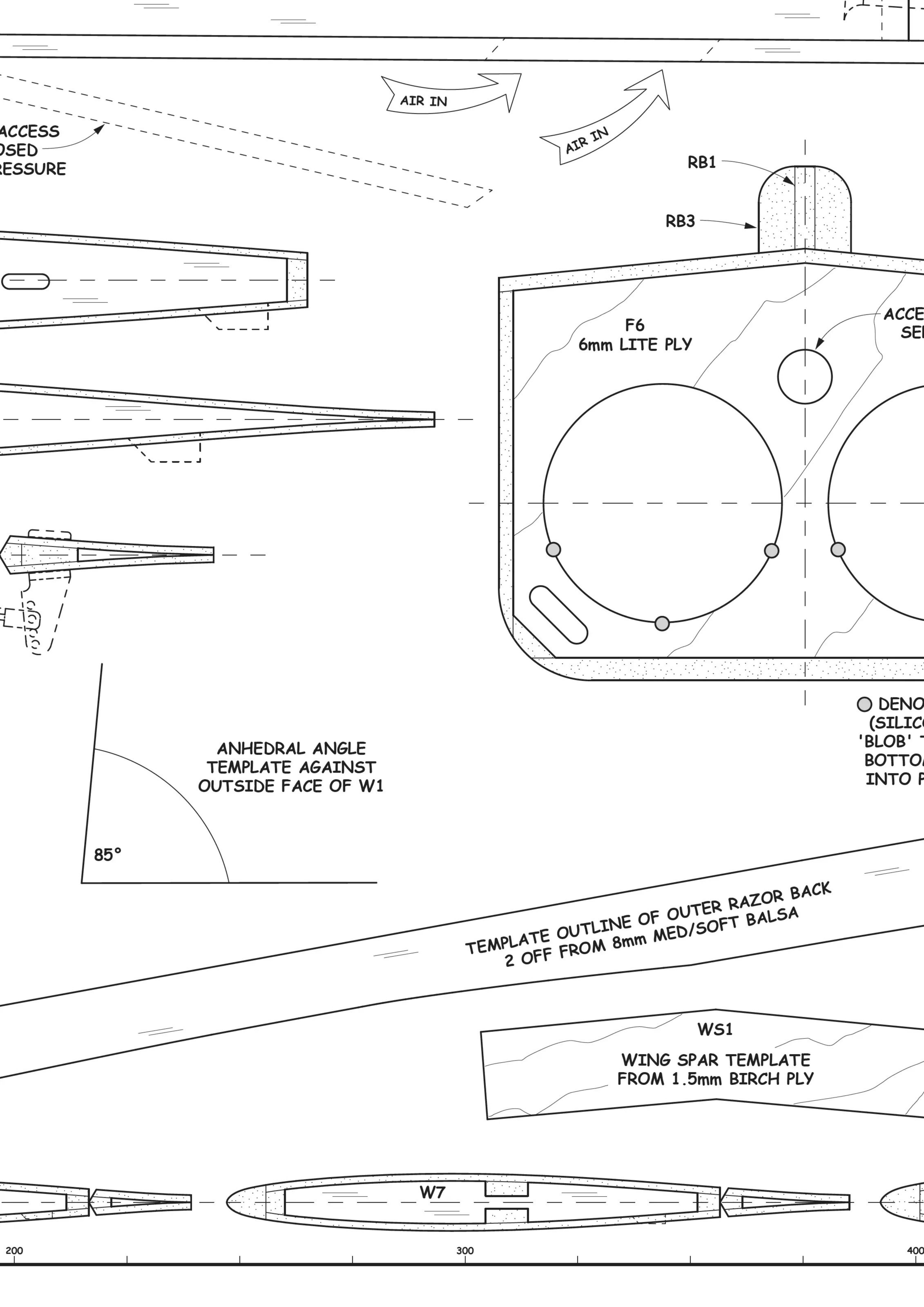
F11

SERVO
REINFORCEMENT
PLATES

UNDER
SHEETING
FROM 3.2mm
BALSA

1mm ROLLED
PLASTIC SHEET AS
DUMMY JET
NOZZLES





12.5mm TRIANGLE

F12
FIN STRAKES FROM 3mm
LITE PLY

RB4

F5
3mm LITE PL

ACCESS HOLES FOR
SERVO WIRING

ACCESS HOLES FOR
FAN POWER WIRING

○ DENOTES TACK
(SILICON) GLUE
'BLOB' TO SECURE
BOTTOM OF FAN
INTO POSITION

RB3

BACK
A

TE
PLY

TEMPLATE OUTLINE OF
REAR FUSELAGE SIDE
FROM 3.2mm MED/SOFT
BALSA

W6

400

500

